



# Health Psychology for a Sustainable Future

## BOOK OF ABSTRACTS

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## Facilitating adjustment to long term medical conditions: A bench to (almost) bedside story

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People with long-term medical conditions (LTCs) compared with the general population are 2-3 times more likely to experience anxiety and depression. Mental health comorbidity in LTCs is associated with poorer health outcomes and a 60% increase in health costs. Evidenced-based cognitive behavioral therapies (CBT) for anxiety and depression are less effective for those with a LTC than those without. This may be because cognitive-behavioural mechanisms targeted in these protocols are based on empirical models of primary mental health disorders. This raises important theoretical and clinical issues, including the difference between primary mental health disorder and distress in the context of LTCs. To address this issue, we developed and published a theoretical model of adjustment to LTCs. We used this model, alongside input from people with LTCs and health care professionals to develop a transdiagnostic digital CBT program for distress in LTC called COMPASS: Navigating your LTC. One of the biggest challenges for health psychology researchers is addressing the evidence-implementation gap. Few of our effective interventions become part of standard care. Consequently, our next step was to embed implementation science and normalization process theory (NPT) into an early evaluation (n=74) of COMPASS within existing hospital services, to explore fit within routine care and acceptability to patients, therapists, and payers. The next step was a randomized controlled trial of COMPASS (n=194 people with LTCs). Intention-to-treat analysis showed significantly greater reductions in distress at 3-months post-randomisation in the COMPASS group compared to standard charity support (SMD=0.71; 95% CI, 0.48 – 0.95). Health economic modelling suggested a high potential for COMPASS to be cost-effective. Our current research is creating and implementing in health care services, illness specific versions of COMPASS for multiple sclerosis and inflammatory bowel disease. I will outline this work and our Industry collaboration developing an App based version for wider implementation.

# Development of the Guide to Disseminating Health Services Research (GuiDeR): An evidence-based framework

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## Background

Less than one third of research is translated into policy or practice. Knowledge translation (KT) requires effective dissemination, adoption and implementation. Existing guidance provides little and disparate information about the requirements for effective dissemination.

This study aimed to unify evidence-based guidance for dissemination into one framework.

## Methods

We identified KT models and frameworks from a scoping review and dissemination webtool and synthesised them into a prototype framework. Models and frameworks were eligible if they fulfilled at least one of three criteria for dissemination: intending to generate awareness of a message; incorporates targeting an audience; tailoring communication. An initial coding framework was created to organise data into dissemination steps.

We invited authors of the included models and frameworks (experts), plus health service researchers (end users), to review the framework at a workshop.

## Findings

From 48 models and frameworks reviewed, 32 were included. Six dissemination steps formed the initial coding framework which upon refinement yielded the Guide to Disseminating Health Services Research (GuiDeR) comprising five steps, each including two or more activities:

- 1) Identify target audiences and dissemination partners
- 2) Engage with dissemination partners
- 3) Identify barriers and enablers to dissemination
- 4) Create dissemination messages
- 5) Disseminate and evaluate

No single model or framework represents all steps and activities in GuiDeR.

## Discussion

GuiDeR unifies dissemination guidance and harmonises language from KT models and frameworks into an accessible format. It outlines for researchers, funders and practitioners the expected steps of dissemination and details the activities required within each step for effective dissemination.

## **How does tailoring work to produce successful implementation strategies?**

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**Background:** Tailored implementation strategies have been shown to be effective for improving professional practice. However, little is known about how or why tailoring works to produce more effective strategies. This study aimed to explore the mechanisms by which tailoring may work in practice. In this study we analyse data from a mixed method evaluation of a tailoring process to develop strategies to support the implementation of Dose Adjustment for Normal Eating (DAFNE), a patient education programme for type 1 diabetes. We explored healthcare professionals' experiences and perceptions of the tailoring process to understand how tailoring works in practice.

**Methods:** 16 DAFNE centres participated in the project. Healthcare professionals (HCPs) completed surveys and discussion sessions to identify and prioritise barriers to implementation of DAFNE at their centres and select strategies to address these. We analysed data from 42 HCPs who participated in semi-structured evaluation interviews after the tailoring exercise. Thematic analysis of these interviews is ongoing to identify mechanisms of action.

**Findings:** Preliminary analysis suggests participants valued the structured and deliberate approach to service planning and the opportunity to reflect on practice. The tailoring process provided a safe space for group discussion and promoted consensus-building. Enabling contextual factors included an external facilitator and multidisciplinary team engagement.

**Discussion:** Initial findings support the value of tailoring to develop implementation strategies and suggest features of this process that are useful to HCPs. These insights will be valuable in identifying the mechanisms involved and can inform best practice for the development of tailoring implementation approaches.

## **Co-developing an implementation stakeholder engagement toolkit to enhance the impact of behavioural sciences**

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**Background:** The literature calls for theory-informed tools to engage stakeholders in implementation. We have developed an empirically derived model for Implementation Stakeholder Engagement (I-STEM) to advance knowledge exchange. I-STEM was developed in the context of an international, large-scale implementation study (ImpleMentAll). We aim to co-develop a practical toolkit, which is based on the I-STEM, and supports knowledge mobilisers in the planning, delivery, and evaluation of stakeholder engagement activities.

**Methods:** Mixed methods study comprising three interlinked work packages: 1) scoping review to identify existing approaches to implementation stakeholder engagement and to refine the I-STEM; 2) review of relevant quality improvement tools to generate the content and specification of the toolkit; 3) six co-design workshops with knowledge mobilisers working within the regional Integrated Care System. Data will be analysed using framework analysis with reference to the I-STEM.

**Expected results:** A user-friendly and accessible toolkit that will be theoretically informed and flexible, so it supports both novices and experts in conducting implementation stakeholder engagement activities. An interactive web-based version of the toolkit will include case studies, worksheets, and videos.

**Current stage of work:** The rapid review is in the screening stage. The review of quality improvement tools is at the data extraction stage. Co-design workshops are scheduled to take place between March and May.

**Discussion:** Effective stakeholder engagement can lead to a better understanding of local needs and barriers and increased behavioural research implementation. The I-STEM toolkit represents potential avenues for effective stakeholder engagement activity across key phases of an implementation process.

## **A pilot study examining the use of conversational AI-powered chatbots to collect qualitative data**

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**Background:** Surveys are a common tool to obtain quantitative data but lack the data richness from qualitative methods such as interviews and focus group discussions. However, qualitative methods tend to be labour-intensive and are difficult to administer at a large scale. Artificial intelligence (AI) tools offer a novel approach in collecting qualitative data as they can simulate human-like conversations by asking open-ended questions, interpreting responses, and probing for elaboration.

**Methods:** We conducted a pilot study (N=16; 21-64 years-old) to test the feasibility of using an AI chatbot in the context of understanding consumer perceptions of alternative proteins in relation to their impacts on health and the environment. We implemented a browser-based chat interface powered by OpenAI's GPT language models and administered it alongside an online questionnaire. The AI chatbot was programmed with a topic guide to mimic a semi-structured interview.

**Findings:** Participant preferences were mixed between the two methods. Some participants preferred the online questionnaire format as this was more familiar, whilst others appreciated the opportunity to elaborate on their answers following the prompts. From a researcher's standpoint, there were strengths and limitations of the AI chatbot. The AI chatbot was effective in running human-like conversations with participants while sharing new information on alternative proteins and eliciting deeper responses to understand their perceptions. However, it was difficult to maintain consistency in the way the chatbot responded to inputs across the participants.

**Discussion:** Overall findings suggest that with further improvements, AI chatbots have the potential to efficiently solicit high quality data.

## **Machine Assisted Topic Analysis (MATA) of open-ended survey responses reporting health and wellbeing during COVID-19**

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**Background:** Digital methods of data collection can generate substantial qualitative data, however, analysing this is very resource intensive. This study explored the use of Machine Assisted Topic Analysis (MATA) to support a thematic analysis of COVID-19-related freetext data.

**Methods:** MATA was used (in R) to analyse 2,177 freetext survey responses collected 3, 6, 12 and 24 months after the COVID-19 pandemic started, among UK study participants, asked to identify factors influencing their health behaviours and wellbeing. 762 participants submitted at least one freetext entry (mean 2.9 entries). MATA employs the Structural Topic Model (STM), which discerns latent topics within texts. Two researchers independently labelled STM topics and collaboratively organised topics into broader themes, with additional researchers 'sense checking' labels and themes. Plots were generated showing change in prevalence of topics by time and deprivation.

**Findings:** Fifteen topics were generated by the STM, then labelled and integrated into five themes by researchers: three examined the influences of and impacts on health behaviours, physical health and mood respectively, with external influences of control, and reflections on wellbeing and personal growth as the final two themes. Topics showed varied patterns of change over time and by socioeconomic status. Themes were generated (not including write up) with 2.5 days of combined researcher time and perceived topic validity was high.

**Discussion:** MATA shows promise as a resource-saving method to support thematic analysis of large amounts of qualitative data whilst maintaining valuable researcher insight. It was found feasible, perceived as valid and took little researcher time.

# Investigating the potential harm of high-grossing health apps using Machine Assisted Topic Analysis

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**Background:** With billions of health applications (apps) downloaded, the efficacy and potential adverse effects on health and well-being are poorly understood. The lack of evaluation of health applications prompts the use of social media as a valuable source of insights from thousands of users' feedback. This feedback has the potential to highlight significant usability, safety, and efficacy issues. This study aimed to explore the potential negative impacts of high-grossing health apps through evidence from Twitter

**Methods:** The sample comprised the top 5 grossing apps worldwide, which were: fitness, mental wellbeing, and menstrual tracking, as listed by Statista on the 7th of February, 2023. Tweets pertaining to these applications were collated using search queries that included various permutations of the app name. Content analysis of the tweets was conducted through machine-assisted topic analysis (MATA) which combines machine learning with human-led qualitative thematic analysis.

**Findings:** The number of tweets meeting the inclusion criteria totalled 33,379 for fitness applications, 25,325 for mental well-being applications, and 33,897 for menstrual tracking applications. The MATA analysis identified several issues reported by users, such as usability issues, reliance on inaccurate algorithms, challenges with self-tracking and feedback, and distress associated with not meeting app-prescribed goals.

**Discussion:** This study employs social media as a tool for social listening, shedding light on the prevalent issues encountered by users of publicly available health applications. Furthermore, the application of MATA provides an opportunity to investigate health-related experiences by analysing large volumes of qualitative feedback.



# Assessing algorithmic fidelity: framework-based qualitative analysis of free responses of Large Language Models

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## Background:

Algorithmic fidelity describes the ability of a large language model (LLM) to accurately reflect the ideas, beliefs, and attitudes situated in sociocultural contexts of various population groups (Argyle et al., 2023). We report the assessment of fidelity through comparative qualitative analysis of an LLM and human participants in free-form, language-mediated beliefs about behaviour change.

## Methods:

We generated semi-structured interviews with "silicon participants" based on demographics, matching human participants (2 to 1). Using the Theoretical Domains Framework, we compared LLM-generated responses (n=32, active vs. sedentary) with human interviews (n=16) on physical activity influences. Our evaluation focused on: (1) indistinguishability from humans in content, structure, and tone, (2) consistency with input context, (3) natural context progression, and (4) reflection of behavioural patterns (active vs sedentary).

## Findings:

Human and silicon participants shared the five most relevant domains (Goals, Beliefs about Consequences, Environmental Context and Resources, Beliefs about Capabilities, Social Influences, and Behavioural Regulation), and 86 (68%) belief statements were qualitatively similar between these two groups. We observed differences in structure and tone, "hyper-accuracy distortion", and "echo-chamber" effects, where the LLM reinforced dominant psychological theories and constructs absent in the human data (e.g., reasoned action).

## Discussion:

Although LLM aligned with human belief statements in key domains, nuances in structure and tone revealed gaps in algorithmic fidelity. 'Hyper-accuracy distortion' and 'echo-chamber' effects suggest the LLM may over-represent prevailing psychological theories, thus skewing responses. Hence, it is necessary to address conceptual issues, refine fidelity assessment methods, and understand its boundaries and ways to improve it.

## **European actions to support research on cancer survivors in work and employment : a strategy**

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Due to the psychological, social and economic stakes involved, research in the field of return to work (RTW) after cancer is a major focus of European policies. That is one of the conclusions of the French European Presidency's cancer control strategy. It is against this backdrop that a European multidisciplinary consortium has drawn up a White Paper (WP) to develop research in this field.

This collaborative work brought together some fifteen European experts. The consensus conference approach adopted has led to the development of a research strategy hinged around four main focuses: These focuses concern: 1/ the individual and his or her entourage (facing up to the psychological, physical and social barriers to RTW); 2/ the healthcare system &#40;preparing healthcare professionals to support cancer survivors in RTW&#41;; 3/ employers (adapting existing interventions to the specific needs of each cancer survivor); 4/ the social security system &#40;reducing inequalities in support&#41;;.

In conclusion, this work proposes a research roadmap produced following an unprecedented level of collaboration of the scientific community on this theme. It has implications for research, proposing ways of reducing inequalities in Europe. It highlights the challenges for health psychology research, particularly in terms of the definitional framework and intervention research to support cancer survivors' return to work/maintenance in work.

## **Are the Impacts of chronic pain on engagement in work correctly reflected in current measures?**

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### **Background:**

Chronic pain can affect the ability to engage in work. Historically the focus has been on measuring and reporting reduced productivity including sickness absence, although the impact of chronic pain on work is now known to be far wider. This review aims to identify the full range of impacts to support the development of a new questionnaire that will assess a wider range of impacts of chronic pain on work.

### **Methods:**

A mixed-methods systematic review was carried out which included impacts assessed in existing quantitative measures, and qualitative studies where individuals described impacts of their chronic pain on work. A thematic analysis was carried out on both quantitative measures and text from qualitative studies, and a thematic framework developed.

### **Findings:**

Impacts were described within five areas: changes at work and to working status; aspects of the workplace and work relationships; pain and related symptoms at work; psychological factors; factors and impacts outside the work environment related to work. Quantitative measures primarily assessed impacts related to the quantity and quality of work (29 of 42 measures). Seventeen aspects were only discussed in the qualitative studies.

### **Discussion**

This study identifies that current quantitative measures of the impact of chronic pain on work are limited in comparison to the multidimensional range of impacts that individuals working with chronic pain experience. This highlights the need for a new questionnaire assessing a wider range of issues.

## **Event sampling of failure experiences at work: associations with self-conscious emotions, support-seeking, and self-reproach**

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**Background:** It is well established that moving towards one's goals is associated with positive affect and moving away from them with negative affect. Not accomplishing goals at work may induce negative evaluation by superiors, but also pose a threat to one's self esteem. Stress-as-Offense-to-Self Theory considers threat to the self as a core element of many stressful experiences. Failure experiences should be accompanied by stress reactions in terms of negative emotions, notably self-conscious emotions, such as guilt or shame, and possibly foster social withdrawal. Repeated failure experiences are likely to impair sustainability of health and well-being.

Drawing on Stress-as-Offense-to-Self Theory, we suppose that failure experiences trigger guilt and shame, and reduce seeking support (which may be associated with disclosing one's weaknesses). Furthermore, we assume that these effects are indirect with self-reproach as the intervening variable.

**Methods:** Event data was collected as part of a three-wave project (six months apart) conducted in two Swiss companies. For six working days (two per wave), N = 157 employees (60% male/40% female; age: 40.60, SD=11.64) reported 778 relevant work events; 284 of these were failure events.

**Findings:** For participants reporting at least one failure event (n = 48), multilevel path analyses (Mplus8.8) revealed experienced failure to be related to negative self-conscious emotions, experience of incompetence, and reduced seeking of social support. Moreover, we found indirect effects of failure on these outcomes through self-reproach.

**Discussion:** Our findings underscore the need for a positive error culture in organizations, which supports psychological safety and constructive support.

## **Silence withdrawal from work: How and when does work intensification influence quiet quitting behaviours**

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**Background:** In the post-COVID-19 era, "Quiet Quitting" emerged as a concerning workplace trend, lacking empirical understanding of its causes and preventive measures. Grounded in the Conservation of Resource Theory, our study suggests work intensification directly contributes to quiet quitting and indirectly influences it through negative work-home interaction and burnout as serial mediators. We also propose servant leadership as a mitigating factor in this indirect relationship.

**Methods:** In a six-month study involving 234 participants from diverse Ghanaian organizations, we employed a three-wave time-lagged design, administering online surveys every two months. Key variables were measured using standardized scales: work intensification, servant leadership, negative work-home interaction, burnout, and quiet quitting.

**Findings:** Results from SPSS PROCESS Macro revealed that work intensification, surprisingly, negatively impacted quiet quitting (-.20\*\*). However, the indirect effect (Effect = 0.032, 95% CI: 0.009, 0.064) revealed that work intensification contributes to an increase in quiet quitting by increasing negative work-home interaction (.52\*\*\*), leading to heightened burnout (.22\*\*), which positively contributed to quiet quitting (.25\*\*). Servant leadership acted as a mitigating factor, reducing the indirect effect of work intensification on quiet quitting (Effect = 0.021, 95% CI: 0.003, 0.047).

**Discussion:** Our study underscores the detrimental impact of work intensification on employee negative work-home interaction and burnout, highlighting the potential emergence of quiet quitting behaviours as a coping mechanism and emphasising servant leaders' role as mitigators in this process.

**Keywords:** work intensification, negative work-home interaction, burnout, quiet quitting, servant leadership

## **Enabling or cultivating? Association between provided social support, self-efficacy, and physical activity in adolescent friends-dyads**

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**Background:** Establishing a routine of regular physical activity (PA) is challenging. Social support and self-efficacy are important predictors for health behaviour changes. Two competing hypotheses describe the bidirectional character of these two constructs with behaviour: The cultivation hypothesis assumes that self-efficacy facilitates social support, whereas the enabling hypothesis assumes that social support fosters self-efficacy. The aim of this study is to investigate both hypotheses in friend—friend dyads including adolescents of the same gender, intending to increase their physical activity. **Methods:** A total of N = 325 dyads (Mage = 16.0, SD = 1.2) were enrolled in a randomized controlled trial (ClinicalTrials.gov: NCT03575559), with six months between the baseline and the last follow up. Moderate to vigorous PA was accelerometer-assessed; self-efficacy and provided social emotional support were self-reported. **Findings:** Multilevel models based on the Actor-Partner Interdependence Model showed no confirmation for the enabling or the cultivation hypothesis. However, significant actor effects indicated that own provided social emotional support was a predictor of subsequent own PA ( $b = 1.48$ ,  $p = .02$ ) and self-efficacy ( $b = 0.06$ ,  $p = .04$ ). **Discussion:** By examining the associations between social support and self-efficacy in friend-friend dyads, the study sheds light on adolescent health behaviour and its social cognitive-predictors. Data collection partially overlapped with the COVID-19 pandemic, which may have impacted adolescents' social interactions and PA, and contributing to the data variability and the observed results interpreting the results.

## **Positive impact of psychosocial resources on mental health transitions in persons with spinal cord injury**

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A significant amount of persons with spinal cord injury (SCI) do experience psychological distress during initial rehabilitation and also in the community setting. However, the impact of psychosocial resources on mental health during the transition from the clinical to the community setting is unclear. Thus, we aim to describe the longitudinal course of mental health load profiles from the clinical to the community setting in persons with SCI and to examine the impact of psychosocial resources. Survey self-report data from a population-based longitudinal cohort study was used consisting of a sample of N=240 persons with SCI.

Three profiles were identified for each the clinical and the community setting: low, medium, and high mental health load. Individuals were most likely to stay in the same profile from discharge of initial rehabilitation to community, followed by a decrease from a high mental health load to a medium mental health load and an increase from a low mental health load to a medium mental health load. Individuals staying in the low mental health profile showed significantly higher levels of psychosocial resources compared to individuals increasing to the medium mental health load profile, whereas individuals who stayed in the high mental health load profile showed lower levels of psychosocial resources compared to individuals decreasing to the medium mental health load profile. We demonstrated a positive impact of psychosocial resources on mental health transitions, underlining the need for strengthening psychosocial resources beyond initial rehabilitation.

## **Stress and well-being among persons with spinal cord injury and their caregiving partners**

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**Background:** Stress has become a significant health issue, with associations to various adverse health outcomes. Approximately 34% of the general population reports experiencing negative effects due to stress, with work-related stress emerging as one of the most prevalent stressors. This number increases to about 49% among individuals with long-term health conditions like spinal cord injury (SCI). Similar effects are often observed among informal caregivers. However, the link between work-related stress and emotional well-being remains unclear, especially concerning long-term health conditions, particularly SCI. Therefore, this study aims to explore the association between work-related stress and emotional well-being among individuals with SCI and their caregiving partners. **Methods:** Dyadic data from the pro-WELL longitudinal survey study (N= 123 dyads) were utilized, comprising individuals with SCI and their caregiving partners. Work stress was evaluated using the effort-reward imbalance (ERI) model, while well-being was assessed using the positive and negative affect schedule (PANAS). Data were collected at two measurement time points, spaced 6 months apart, and analyzed within the framework of the Actor-Partner Interdependence Model (APIM). **Findings:** In people with SCI, positive affect was associated with less work-related stress, while negative affect was associated with more work-related stress. Similar effects were found for their caregiving partners. Moreover, no partner effects were found. **Discussion:** The current study demonstrates that work-related stressors might reduce emotional well-being in persons with SCI and their caregiving partners. Dyadic interventions targeting the reduction of work-related stress might be promising for enhancing well-being among persons with SCI and their caregiving partners.



## **Compendium of Dyadic Intervention Techniques for health behavior change: results from a Delphi study**

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**Background:** Although accumulating evidence indicates benefits of dyadic health behavior change interventions, the precise involvement of partners often remains unclear. Systematically reviewing 122 dyadic interventions, we developed a comprehensive Compendium of Dyadic Intervention Techniques, which allows a systematic description of who is doing what for whom during an intervention and subsequent implementation and provides links to theoretical determinants of behavior change and associated theories.

**Objectives:** The aim was to validate and refine the first version of the compendium through a Delphi study with international experts in dyadic health behavior change.

**Methods:** Two rounds of the Delphi study were conducted (N=20 experts). The first round concluded in August 2023. Experts evaluated the compendium's utility and provided detailed feedback on subsets of 14 to 16 intervention tasks (total Ntask=74). The revised compendium was sent to the same experts for round two (expected to conclude in spring 2024).

**Results:** In round one, experts rated the compendium's utility as positive for intervention development (M=3.35) and description (M=3.53) on a scale from one to four. Experts provided 603 comments on dyadic intervention techniques, theoretical determinants, and associated theories, leading to a revised compendium with 76 distinct intervention tasks linked to 40 theoretical determinants of behavior change.

**Discussion:** The positive evaluation of round one underscores the compendium's utility to enhance precise reporting of dyadic interventions and guide the development of theory-based dyadic behavior change interventions. Based on the feedback of the Delphi study's final round, a refined Compendium of Dyadic Intervention Techniques will be proposed.

## **If it's healthy, it's also sustainable and vice versa? Results of a food label study**

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**Background:** Studies show that foods that are perceived as healthier are also perceived as more sustainable, which points to a "healthy=sustainable" heuristic. However, the direction of effect is still unclear. The present study therefore investigates (1) whether perceived healthiness has an influence on perceived sustainability or whether the reverse influence exists and (2) if inter-individual differences, such as health interest, moderate these effects.

**Methods:** The sample consisted of N=712 participants representative of the Austrian population. In an online study with mixed design, the participants saw pictures of foods with high or low healthiness indices and rated their sustainability. Conversely, they also saw pictures of foods with high or low sustainability indices and rated their healthiness. In addition, interest in health and sustainability and the belief that there is a relationship between the healthiness and sustainability of foods were measured.

**Findings:** Foods with a higher healthiness index were perceived as more sustainable (effect size:  $\delta=0.39$ ; [CI: 0.36; 0.41]). The effect was neither moderated by the interest in health or sustainability nor by the belief that there is a relationship between healthiness and sustainability. Furthermore, higher sustainability indices led to higher health ratings (effect size:  $\delta=0.22$ ; [CI: 0.2; 0.24]). Neither the belief in a relationship between healthiness and sustainability nor the interest in health influenced this effect. Only a higher interest in sustainability strengthened the effect ( $\beta=-0.14$ ; [CI: -0.28; 0.01]).

**Discussion:** The results support the assumption of a "healthy=sustainable" heuristic, whereby the effect is apparently bidirectional. Implications for food labelling are discussed.

## **The youthful plate: When adolescents promote healthier, more sustainable family meals**

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**Background:** The average person in Germany eats six times more meat than recommended. Yet, there are stark age differences: About 20% of adolescents refrain from eating meat, but only 4% in their parent's generation. Can eating preferences of children make family meals healthier and more sustainable? We examine decision-making processes in the context of cultural transmission theory.

**Methods:** Fifty-six parent-child dyads decided on a joint family meal through discussion, which was videotaped. Before and after this joint decision, both separately stated their preferred family meal and the proportion of food groups it should contain (e.g., meat). Data were analyzed using Kullback-Leibler-divergence, t-tests, and correlations.

**Findings:** Parents and children's individual preferences equally influenced the joint meal decision. Children's age was not relevant for the joint decision; yet mother-son-dyads preferred a 2.5 times larger proportion of meat in joint meals than mother-daughter dyads. Children with a stricter diet style in tendency affected decisions more strongly. Dyads who mentioned sustainability arguments in their discussions agreed on lower proportions of meat in their joint meal.

**Discussion:** Children can influence meat consumption at family meals, especially if they are vegetarian or when girls decide together with their mothers. Children as drivers of healthy change have been largely ignored in health psychology, yet have high potential to promote healthier, more sustainable diets across generations.

## **Live from the table: A qualitative examination of 'in the moment' plant-based consumption**

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**Background:** In order to produce behaviour-change interventions that can effectively reduce the harmful environmental and health impacts of mainstream diets, it is important to explore expectations, assumptions and evaluations of sustainable foods in immediate consumption contexts. This qualitative project examined in-depth experiences of plant-based foods before, during and after consumption among customers at a University of Glasgow cafeteria.

**Methods:** Omnivore participants (N = 27) were provided with a plant-based meal from the cafeteria and asked a series of questions, via semi-structured interviews, regarding their experiences of the meal, and their attitudes towards sustainable eating in general.

**Findings:** Reflexive thematic analysis showed that some participants were able to elucidate their cognitive representations of plant-based foods better than others, and many struggled to conceptualise what 'plant-based' referred to. Nonetheless, most participants enjoyed their plant-based meal during-consumption more than expected pre-consumption, and reported post-consumption intentions to try plant-based foods again in future. Common barriers to sustainable eating were identified as being too expensive, negative taste expectations and dislike for meat alternatives. Reflections from cafeteria staff (N = 4) also revealed practical difficulties for plant-based food promotion in this setting, such as the rising costs of plant-based ingredients, allergen restrictions and counter space issues, despite increasing demand for plant-based offerings.

**Discussion:** This project broadens the scope of previous quantitative research on sustainable consumption by providing further detail on how plant-based foods are experienced 'in the moment', and outlines the barriers and opportunities for promoting sustainable food choices in cafeteria contexts and other commercial settings.

## **Psychosocial predictors of downloading a smartphone app promoting healthy and sustainable eating**

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Due to their affordability and ubiquity in people's everyday lives, a new trend is to develop digital tools to raise awareness of the health and environmental benefits of a healthy and sustainable diet. However, few scholars have investigated whether and why people are interested in using these digital tools. Therefore, this study aimed to find out the psychosocial motives behind using a smartphone app promoting healthy and sustainable eating.

At the beginning of the study, the participants were given a brief description of the app's functions. They then completed a questionnaire measuring the variables of the extended theory of acceptance model (effort expectancy, performance expectancy, social influence, facilitating conditions, hedonic motivations, desire, relative advantages, perceived reliability, intention to download the app, and behaviour of downloading the app). The final sample consisted of 193 participants. Structural equation modelling was conducted using Mplus 8. The goodness of fit was adequate ( $\chi^2(1) = 1.938$ ;  $p = 0.16$ ). The main results (all  $p = 0.001$ ) showed that app download was directly predicted by intention ( $\beta = 0.54$ ) and indirectly by desire (Ind. = 0.41). In turn, participants' intention was predicted by desire ( $\beta = 0.57$ ) and relative advantages ( $\beta = 0.11$ ). Participants' desire to download the app was predicted by social influence ( $\beta = 0.20$ ), facilitating conditions ( $\beta = 0.24$ ), performance expectancy ( $\beta = 0.27$ ), and hedonic motivation ( $\beta = 0.13$ ). These results offer relevant suggestions for the design of apps to promote healthy and sustainable eating through the use of psychosocial dimensions.

## **A paradigm shift from disease management to perception management of chlamydia infections**

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Infections with chlamydia, a sexually transmitted infection (STI), may lead to long-term complications (e.g., infertility). Since treatment appears to have no effect on complication risk, chlamydia policies in the Netherlands may change from disease management (i.e., testing and treatment) to primary prevention. Our study aimed to identify behavioural and psychosocial correlates of diagnosed chlamydia infections on a national level to provide more insights for primary prevention efforts.

We performed a national population-based probability sample survey among people aged 16.5–34 years in the Netherlands (November 2022-February 2023). The survey included questions on sexual behaviour and psychosocial variables, such as perceived severity and risk of chlamydia, and people were tested for chlamydia. Multivariable logistic regression analyses were done to explore the association between 1) sexual behaviour and chlamydia infection, 2) psychosocial correlates of chlamydia adjusted for sexual behaviour.

Of 1,149 participants, sixty-three (5%) tested positive for chlamydia. Condomless sex, and reporting  $\geq 2$  partners in the past six months (versus 0-1 partners) were associated with chlamydia infection. Psychosocial correlates were not directly associated with chlamydia, but in multivariable models with behaviour as the outcome, lower perceived severity was associated with condomless sex, and higher perceived risk with  $\geq 2$  partners in the past six months.

People at higher risk of chlamydia seem to be well aware of their risk, and do not perceive chlamydia as a serious infection. We hypothesize that perceived severity in the population may decrease due to policy change, which could potentially influence condom use and transmission of other STI.

## How short video-based interventions promote vaccination intentions and trust: A comparison of empathetic communication techniques

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**Background:** An effective interaction with health care professionals (HCPs) can have an important influence on vaccination intentions. The “Empathetic Refutational Interview” (ERI) is a novel communication technique for HCPs to empathically interact with vaccine-hesitant patients and debunk misinformation during the conversation. This multi-component intervention is based on responding emphatically to patients’ concerns and tailoring the conversation to the underlying root cause of their hesitant attitude.

**Methods:** In this preregistered study, we tested the effectiveness of ERI in a large representative UK sample (N = 1700). Participants were randomly assigned to one of six conditions and watched a 90-second-long video presenting a conversation about the measles, mumps and rubella vaccination between a mother and a paediatrician using either ERI, the well-established motivational interviewing (MI), or no specific communication technique (control).

**Findings:** ANOVAs show that participants in the ERI and MI conditions reported higher trust ( $\eta^2 = 0.05$ ) and would more often recommend the paediatrician to friends ( $\eta^2 = 0.09$ ) compared to participants in the control group. Further, participants in the ERI condition would more often recommend their friend to vaccinate her children compared to participants in the other groups ( $\eta^2 = 0.004$ ).

**Discussion:** Watching short interactions using an empathic communication technique (ERI, MI) increased patients’ vaccination intentions and strengthened their trust in doctors. This suggests the usefulness of such empathy-based techniques in conversations with vaccine hesitant patients. Further, the results strengthen previous evidence showing that the novel ERI is a promising intervention in addressing vaccine hesitancy.

## **Covid-19 risk perception and prevention practices in a sample of French people affected by cancer**

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Unit "Radiation: Defense, Health Environment" (U 1296), France

**Background:** From 17 March to 11 May 2020, a population lockdown was implemented in France, combined with several recommendations, in order to slow the progress of the Covid-19 pandemic. Several studies have since shown that people's perception of the risk associated with this pandemic fluctuates from one individual to another, as does their perception of social distancing measures. The aim of this study (RAR2C study) is to observe whether the perception of and compliance with recommendations are associated with the perception of Covid-19-related risk in people who are more or less directly affected by cancer.

**Design:** The data presented are from the RAR2C study, conducted during the French first lockdown period on a sample of 748 participants recruited via a collaborative research platform bringing together people concerned by cancer (The Seintinelles). The questions used concerned the representation of the risk associated with Covid-19 (6), the trust placed in different targets (3) and the perception of or compliance with recommendations (7).

**Results:** An initial Latent Profile Analysis (based on questions on risk perception) identified four distinct risk perception profiles. A series of bivariate analyses showed that a very threatening representation of Covid-19 appeared to be associated with lower confidence in government bodies and more scrupulous compliance with recommendations for social distancing.

**Discussion:** These results suggest that for people affected by cancer, compliance with preventive recommendations is more related to individual strategies for managing a threatening risk than to trust in institutions.



## **Co-design of a substance use intervention: Using a community based participatory approach**

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**Background:** There is a current public health crisis driven by the growth in substance use. The rise in substance use reflects an increased demand for aligned supportive services, with more people seeking and engaging with services presenting with more complex issues, for example, co-occurring mental health concerns along with drug and alcohol misuse. Evidence suggests that research should focus on development of interventions that empower individuals and communities, reduce risk, or prevent harm. This study aims to co-design a substance use intervention using a community based participatory approach.

**Methods:** The co-design process comprised 30 residents from a local community in Northern Ireland. Community based participatory co-design was used to address community level challenges to generate a tailored intervention focussed on supporting unmet substance use information needs (e.g. stigma reduction, help-seeking, mental health, prevention, and health promotion) from identification of need, through to intervention (prototype) design. The research team employed an adapted, evidence-based 6-step co-design model.

**Findings:** Results highlighted key themes and categories to inform substance use intervention content, including: 'Begin with the basics', identifying supports, understanding addiction, mental health, family cycles in families, stigma, and 'what works'? Programme format and tailored delivery mechanisms were also co-designed.

**Discussion:** This study underlines the importance of lived experience as a key resource to engage and empower communities to tackle and address complex health issues. The findings provide a 'place-based' framework by which communities, academics and policy makers can generate collaborative, lasting solutions to persistent health challenges.

## **“For me, the ads are background noise”: Inaction following Cancer Council’s Find Cancer Early campaign**

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**Background:** With high cancer incidence in regional Australia, cancer screening and detection are priorities. Find Cancer Early seeks to increase awareness of common signs and promote screening and early detection of common cancers (skin, bowel, breast, prostate, lung). While the campaign shows promise for improving awareness for early cancer detection, many regional Western Australians exposed to the campaign do not take action.

**Methods:** A mixed methods exploration of the rate and reasons for inaction following exposure to the Find Cancer Early campaign was undertaken. Computer-

assisted telephone interview (CATI) surveys were completed with rural Western Australians (n = 814) age 40. Items included whether action was taken following exposure to Find Cancer Early campaign materials, along with closed-ended and open-ended response options for reason for inaction. Data collection took place in 2020 and data were coded into categories based on most common reasons for inaction.

**Findings:** The rate of inaction following campaign exposure is substantial, at ~70%. Frequencies data and content analysis of open-ended responses suggest some reasons for inaction are practical, such as accessibility. Yet, often personal beliefs, mistrust, and superstitions about medical and healthcare systems were cited as reasons, which appears amplified in regional and remote cohorts.

**Discussion:** While there are practical hurdles to cancer screening and detection processes, many reasons for inaction are personal or related to fatalistic beliefs. Subsequent initiatives should incorporate components targeting personal and cultural perceptions, and focus on culturally responsive approaches to fostering health literacy and knowledge in higher risk populations.

## **Systematic review and critical discourse analysis of research on HIV PrEP programme use among gbMSM**

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**Introduction:** HIV pre-exposure prophylaxis (PrEP) is a pill frequently taken by gay, bisexual, and other men who have sex with men (gbMSM) to prevent the transmission of HIV. PrEP is often provided through formal PrEP programmes. Research on these programmes may employ problematic discourses; given that expert language influences how HIV prevention is understood and delivered, problematic discourses in research likely extend into PrEP programme implementation. We explored interpretive repertoires used to discuss gbMSM; the subject positions afforded to gbMSM; and the implications of these interpretive repertoires and subject positions for gbMSM engaging with PrEP programmes.

**Methods:** Relevant sources were identified through timebound searching (2012-present) in six databases and Google Scholar. Independent screening of titles, abstracts, and full text was conducted by two reviewers. Data was analysed and synthesised using critical discourse analysis informed by critical realism.

**Findings:** We identified discursive tendencies that described PrEP programme access as a risk reduction strategy for gbMSM; this neglected the range of factors that may influence engagement with PrEP programmes. These discourses also moralised the sexual and protective practices of gbMSM. Myopic understandings of PrEP programme uptake positioned gbMSM as limited in their ability to make autonomous and informed decisions about PrEP access.

**Discussion:** Problematic discourses in research on PrEP programme implementation may restrict the capacity of this research to ethically inform healthcare services for gbMSM. Equitable delivery of PrEP requires catering to the diversity of gbMSM; diverse and inclusive perspectives in PrEP research may inform interventions to enhance programme acceptability and implementation.

## **Inequalities in exclusively mobile interventions targeting weight-related behaviours: Systematic review of observational studies**

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**Background:** Mobile health interventions are promising behaviour change tools, but they might benefit deprived populations less. Evidence so far mainly stems from analyses of clinical trial data, which may suffer from selection bias. This systematic review investigated differences in uptake of, engagement with, and effectiveness of exclusively mobile interventions for diet, physical activity, sedentary behaviour in real-life contexts.

**Methods:** The protocol was registered on PROSPERO (CRD42021290769). Five databases (CINAHL, EMBASE, PsycINFO, PubMed, Web of Science) were searched, identifying 6466 individual records. Records were independently screened by two authors. Observational studies were eligible for inclusion if they reported on uptake, engagement, and/ or effectiveness of an exclusively mobile intervention, and examined outcomes by at least one inequality indicator included in the PROGRESS-Plus framework.

**Findings:** Thirty-six publications reporting on 37 studies were included. Most studies examined multiple inequality indicators, with the majority studying age or gender (each k=33), and uptake (k=22). Furthermore, studies investigated indicators of socio-economic position including education (k=15), income (k=9). Other inequality indicators were less frequently studied. Younger age and higher socio-economic status were mostly associated with increased uptake. Results for other inequality indicators were mixed, as were results regarding engagement and effectiveness.

**Discussion:** This review provides additional evidence in favour of a digital divide, especially regarding age and socioeconomic status, in mHealth interventions for weight-related behaviours based on observational studies by investigating the uptake of exclusively mobile interventions outside of clinical trials. More research, however, is needed on potential differences in engagement and effectiveness in real-life contexts.

## Using the Diversity Minimal Item Set in Academic Medicine - First Results and Lessons Learned

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**Background:** European academic institutions lack systematic data on diversity across career levels to guide organizational development in line with the UN sustainable development goals. We aim to demonstrate the feasibility of using a multi-domain diversity framework in academic medicine and to better understand which groups are underrepresented at higher career levels.

**Methods:** We conducted a quantitative survey study in students and staff in academic medicine (N = 3059), using the Diversity Minimal Item Set to conduct single-domain and intersectional analyses across career levels and health professions.

**Findings:** We were able to conduct the survey with good uptake rates across career levels and health professions. Support from university leadership and expert advice for navigating data protection and approval processes were essential. Participants reported self-identifications across multiple diversity domains, including gender (female in students: 73%, in staff: 71%), sexual orientation (in students: 69%, in staff: 81% heterosexual), ethnicity (in students: 15%, in staff: 17% non-White), care responsibilities (in students: 14%, in staff: 34%), and living with disabilities (in students: 3%, in staff: 8%) and chronic conditions (in students: 31%, in staff: 35%). We replicated the underrepresentation of women in higher career levels and were able to conduct intersectional analyses with the other diversity domains.

**Discussion:** The data allow a detailed characterization of the “leaky pipeline” of representation across hierarchical levels for gender and other diversity domains in academic medicine. Addressing the diversity data gap is the basis for developing and evaluating targeted interventions to promote equality, diversity, and inclusion.

# **Men eat meat, women eat sweet? A systematic review of eating- and food-related gender stereotypes**

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## **Background:**

Prior research indicates the existence of food- and eating-related gender stereotypes. For example, savory and meat-heavy dishes are associated with masculinity, whereas light dishes like fruits or sweets are associated with femininity. However, a systematic overview of existing gender stereotypes concerning eating, food, and food-related activities is lacking to date.

## **Methods:**

The review was preregistered (CRD42023429956). We conducted a systematic search in ten databases (WoS Core Collection, MEDLINE, Business Source Premier, EconLit, Psychology and Behavioral Science Collection, APA PsychInfo, SocINDEX, CINAHL, Scopus, PubMed) up through June 2023. Two raters independently screened and coded the records, resulting in the inclusion of 93 articles.

## **Findings:**

The studies suggest that eating and food can serve as a means for doing gender and judging an eater's femininity and masculinity. Certain foods, their preparation, and consumption modes are associated with femininity or masculinity, reflecting gender stereotypes along several dimensions (e.g., food category, portion size, packaging, and labeling or ingredients). Red meat, large portions, or the macronutrient protein, for example, are perceived as masculine. Contrarily, vegetarian dishes, small portions, or labeling as "light" are associated with femininity. However, the literature also highlights tensions and individual reinterpretation processes. For example, meat-free diets are reinterpreted by vegetarian men with elements of stereotypical masculinity.

## **Discussion:**

The results show a range of food- and eating-related gender stereotypes with potential societal and individual consequences. The strong meat-masculinity link for instance can be an obstacle to the reduction in meat consumption, which is necessary both in terms of health and sustainability.

## **Rethinking habit strength: 'behaviour frequency x context stability' and an objective measure of context stability**

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### **Objective:**

This study had two aims: i) to highlight the limitations of the 'behaviour frequency x context stability' habit strength measure; ii) to explore how a context stability metric could be derived from objective data.

### **Design:**

Properties of 'behaviour frequency x context stability' measures were critiqued using examples from the literature. Then, empirical studies designed, selected and tested the validity of an objective measure of context stability, derived from secondary medication adherence data.

### **Methods:**

Variables describing context stability were derived using simple statistics and recurrence quantification analysis to summarise time-stamped medication adherence data from 608 people with cystic fibrosis. The face validity of each of these measures was assessed.

### **Results:**

'Behaviour frequency x context stability' conflates frequency and context and produces a scale which is non-continuous and results in non-uniform changes and issues of duality. Objective behavioural data (time of day of behavioural initiation) can be used to derive a metric of context stability.

### **Conclusions:**

The 'behaviour frequency x context stability' measure as it has been used is not appropriate as a measure of habit strength until we have more understanding of the roles of frequency and context in future behaviour. It is possible to derive an objective measure of context stability using systematic methods.

## Evidence Inhibitory Self-Control Moderates the Effects of Habits on Complex but Not Simple Health Behaviors

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**Background:** Self-control has often been theorized as a key factor in the development and execution of habits. However, there remains contention on whether self-control is better conceptualized as a determinant or moderator of habit, and how such relationships are likely to occur.

**Methods:** The current study sought to test whether self-control, conceptualized into inhibitory and initiatory facets rather than as a single construct, would predict healthy habits or moderate their relationship with behavior, and whether these effects differed in complex as compared to simple behaviors. Three samples completed measures of self-control and habit, followed by a prospective measure of behavior (bootcamp attendance, physical activity, and flossing). Data were fitted to PLS-SEM models.

**Findings:** Both inhibitory and initiatory self-control predicted habit in all three samples ( $\beta$  .167 to .315), and habit in turn predicted each health behavior ( $\beta$  .289 to .632). However, inhibitory self-control only moderated the effect of habit in the bootcamp attendance ( $\beta$  = .303) and physical activity samples ( $\beta$  = .223), but not in the flossing sample ( $\beta$  = -.006). Initiatory self-control did not moderate effects in any sample.

**Discussion:** Findings indicate both initiatory and inhibitory self-control skills play a role in habit development. Further, as the moderating effect of inhibitory self-control was only present in complex behaviors, results suggest the moderating effects of self-control on the habit-behavior relationship may be best represented by the effect of inhibiting competing cues from disrupting automatically activated behavioral sequences, rather than a global moderating effect of self-control on habit.



## Identifying self-directed habit-promoting techniques for physical activity: A qualitative study

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### Background:

Habits, postulated to strengthen through context-dependent repetition, can promote the maintenance of physical activity (PA). In this study, we aimed to identify effective self-directed strategies individuals intuitively adopt to form and maintain PA habits.

### Methods:

Novice, intermediate, and expert exercisers (n = 24) with varying backgrounds and levels of PA participated in interviews on their current and previous PA, beliefs and strategies they use to promote PA habit. Interviews were transcribed and content analyzed to identify beliefs and self-enactable strategies participants reported using to support PA habit development.

### Findings:

Participants described using multiple strategies to promote PA habits. The most common techniques reported were goal setting (behavioral and outcome) and action planning. There were no obvious differences in the content of the goals set, or specificity or stability of action planning. However, novices with low PA habits were rigid about their goals and plans, expressed last-minute re-evaluations on PA urgency, and unintended attention shifting upon PA initiation. Successful novice, intermediate and expert exercisers expressed self-commitment, problem solving and use of strategies to minimize inertia and focus attention on initiating the planned PA.

### Discussion:

This study highlights the importance of successful initiation and enactment of plans for promoting PA habit maintenance. Self-enactable techniques including goal setting, action planning, self-commitment, problem solving, strategies to minimize inertia and focus attention on planned PA initiation are suggested as useful.

## **Temporal dynamics of habit decay: An intensive longitudinal study on four health-risk behaviors**

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Background: Established habits may impede changing unwanted behavior in the long-term. In the absence of research on habit decay in daily life, this study aimed to (1) describe how habit decays over time as an individual attempts to break an existing habit related to sedentary behavior, unhealthy snacking, alcohol consumption or tobacco smoking, (2) identify what models best describe this process of change at the idiosyncratic and nomothetic level, and (3) investigate whether habit decay differs by target behavior. Methods: This study is an online-based observational intensive longitudinal study with four parallel non-randomized groups, i.e. the four health-risk behaviors (N = 194). Habit strength was modelled over 84 days with 6 models (constant, linear, quadratic, cubic, asymptotic, and logistic). Results: Person-specific modelling revealed that the asymptotic and logistic models were the most common best fitting models, which together accounted for 54% of the sample. A conservative estimate suggested that 22% of the analyzed sample succeeded in disrupting their habit, where the time needed for habit disruption to occur ranged from 1 to 65 days if limited to the observed days. Multilevel modelling indicated large between-person heterogeneity and suggested initial habit strength to vary by behavioral group. Discussion: Habit disruption may be described by a decelerating negative trend that over time stabilizes at a lower bound and is a highly idiosyncratic process. The confidence in evidence when modelling temporal habit dynamics is impacted by model selection, absolute fit of model predictions, and the presence of long gaps of missing observations.

## Substituting an old commuting habit with a more active and sustainable commuting habit

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**Background:** 'Habit substitution' refers to the replacement of an old, unwanted cue-response link (e.g., taking the car to work in the morning) with a new, alternative cue-response link (e.g., cycling to work in the morning). Whether an old habit persists or degrades while habit substitution remains unknown. We explored such habit substitution processes in the context of replacing an old less active with a new, more active and sustainable commuting behavior to work.

**Methods:** We report preliminary results of a smartphone-based ecological momentary assessment study. After creating an action plan for a more active and sustainable commuting behavior, n=42 participants (60% female, M(SD)=32.3(11.8) years old) reported their daily automaticity levels for old and new commuting behaviors and theory-based, psychological determinants, such as experienced reward and experienced regret, during six burst weeks of daily workday assessment (i.e., 5 workdays each) over 14 weeks. Multilevel models were fit.

**Results:** Whereas automaticity of the old commuting behavior decreased ( $p < .001$ ), automaticity of the new commuting behavior increased ( $p < .001$ ) over time. We found significant links of within-person experienced reward and between-person experienced regret with automaticity levels of the new commuting behavior.

**Discussion:** Habit formation of a new commuting behavior seemed to be successful. Results suggest that automaticity of an old commuting habit degrades when replacing it, at least in part, with a new commuting habit. Higher-than-usual experienced reward following the new commuting behavior and higher overall experienced regret following the past commuting behavior seemed to facilitate the formation of a more physically active commuting habit.

## Unmet need for autism-aware sexual health care

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**Background:** Autistic people are more likely than neurotypical people to have unmet healthcare needs. Healthcare professionals (HCPs) often have insufficient training to work with autistic adults, and often lack the skills or confidence to discuss gynaecological and sexual health with patients. Consequently, autistic people may experience particular difficulties when seeking gynaecological and sexual healthcare.

**Methods:** This was a cross-sectional mixed-method study. Online questionnaires were completed by 136 autistic adults in the UK assigned female at birth. Tick-boxes and free-text boxes focused on experiences of gynaecological and sexual healthcare in primary care. Quantitative data were analysed using standard parametric tests; qualitative data underwent thematic analysis.

**Findings:** Quantitative data revealed that participants: (a) gave low ratings comfort discussing menstrual issues, menopause, or sexual wellbeing; (b) felt that HCPs rarely accommodate their sensory needs, check that they are using preferred communication modes, or give enough time for information processing; (c) felt that HCPs are generally aware of how autism affects sexual health, or experiences of menstruation or menopause. Analysis of free-text responses revealed broad agreement that HCPs must be more aware of the impact of autism on healthcare experiences in general, and in the specific domains of gynaecological and sexual wellbeing.

**Discussion:** This novel study highlighted widespread unmet needs for autism-aware gynaecological and sexual healthcare. Further research is required to explore HCPs' knowledge about how autism affects gynaecological and sexual wellbeing. Such research - combined with our findings – could inform the development of resources and training to improve autism-aware healthcare.

## **Barriers and facilitators to cancer screening among people with intellectual disabilities: an accessible interview study**

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Cancer screening can save lives if people participate when invited. People with intellectual disabilities have lower uptake than the rest of the population for cervical, breast, and colorectal screening. This study explores the cancer screening experiences of people with intellectual disabilities and identifies barriers and facilitators to cancer screening.

### **Methods**

Participants were recruited from across the UK through support organisations for people with intellectual disabilities and their families. People with mild to moderate intellectual disabilities eligible to participate in cancer screening (women aged 25+ and men aged 50+) and carers of people with intellectual disabilities eligible for cancer screening were invited to participate in semi-structured interviews. Talking mats were used to increase accessibility of interviews for participants with intellectual disabilities. Data were analysed using the framework method, with themes based on the Integrated Screening Action Model.

### **Findings**

Participants were 29 people with intellectual disabilities (21 women aged 25-79; eight men aged 55-70) and nine carers. Eighteen participants with intellectual disabilities used talking mats. Six themes included: automatic motivation (e.g. fear), reflective motivation (e.g. weighing up possible harms), psychological capability (e.g. accessible information), physical capability (e.g. transportation), social opportunity (e.g. support during screening), and physical opportunity (e.g. availability of accessible equipment).

### **Conclusion**

People with intellectual disabilities experience unique barriers to cancer screening in addition to barriers found in the general population. Some participants also identified facilitators to cancer screening. These findings suggest potential intervention approaches to increasing accessibility of cancer screening programmes and ultimately their uptake by people with intellectual disabilities.

## **Challenges in implementing a community-based participatory research approach between researchers and gender-diverse migrant communities**

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**Background:** Community-based participatory research (CBPR) aims for a collaborative approach between researchers and communities in all steps of the research. CBPR starts with a topic of importance to the community, and aims for translation of knowledge into action to eliminate disparities. We reflect on the challenges to implement this in a qualitative study to identify barriers to access care for migrant gender-diverse (mTGD) people.

**Methods:** Our approach comprised of involving four persons closely connected to the mTGD community, who conducted interviews and were involved in recruitment, data interpretation and validation, community dissemination, and identifying action points.

**What went wrong:** The research question was not community-initiated, but was a response to the observation that mTGD persons were often not seen in regular care, which led to this study's goal to be able to advocate for change. Power imbalances however affected the extent to which community members could be equally involved in all steps. This was most prominent after data collection and showed we lacked equitable partnership in analysis, dissemination and follow-up. Volunteer contracts with lacking means for remuneration for continuous involvement after data collection exacerbated this inequity.

**Possible solutions:** To achieve an equitable status of mTGD people in research, all individuals should be involved and fairly compensated throughout the research cycle (e.g., money or trainings), and structural involvement of communities that is not limited to single studies (e.g., paid advisory boards) should be implemented. This requires a change of mindset in research setup, funding and organizational efforts for a fair payment.

## **Perceived barriers of flu vaccine uptake in ethnically diverse communities in North West England**

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**Background:** Influenza vaccine uptake is lower in ethnically minoritised communities. It is important to understand their experiences/views within a localised setting, to guide targeted intervention.

**Methods:** A qualitative study is ongoing in Merseyside and Cheshire. We are conducting semi-structured interviews via purposive recruitment of policy professionals, primary healthcare staff, community engagement workers, and individuals from ethnically diverse communities who are eligible for influenza vaccination. Data are being analysed using reflexive thematic analysis.

**Findings:** Preliminary findings from 17 interviews indicate four themes: 1) Trust between patients/public and healthcare providers has eroded due to systemic racism, low diversity among visible staff, and inconsistent interpretation/translation and contact; 2) (Mis)information, as communities trust different sources, but no consistent/relevant messaging is being shared across these – though misinformation spreads quickly; 3) Access, people in lower income areas have travel/time constraints, and experience issues with translation/literacy; 4) Low Priority, influenza is considered low risk/priority, even by some clinicians.

**Discussion:** Data collection will continue until May 2024, which will inform results/conclusions to be presented. Currently, it appears that interventions should focus on building trust via consistent/supportive contact between patients and healthcare or community engagement workers (ideally from a similar background). Additionally, vaccine messaging should be consistent, relevant, and accessible, with sharable video options in relevant languages/dialects to combat misinformation and low literacy levels. Physical access to vaccines should be improved by 'taking them to the community', and improving quality of interpretation/translation in primary care. All intervention levels would benefit from utilising and supporting existing community groups/networks.

## Science, Art and Co-Design: Scripts and Films to Encourage Black Blood Donors

Eamonn Ferguson<sup>1</sup>, Richard Mills<sup>1</sup>, Erin Dawe-Lane<sup>2</sup>, Angela Wood<sup>3</sup>, Emanuele Di Angelantonio<sup>3</sup>, Barbara Masser<sup>4</sup>, Abiola Okubanjo<sup>5</sup>

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**Background:** The WHO designate blood as an essential medicine. To meet the needs of diverse societies, blood donors need to represent healthcare users. Arts-based behaviour change offers a novel alternative to engage diverse people in health-based behaviour change via activating an emotional connection with the behaviour. We test arts-based campaigns compared to traditional approaches.

**Methods:** This programme of co-design research progressed through two phases. Phase 1 comprised four-stages: (1) needs-analysis (n = 42 Black people); (2) workshops (n = 12 Black people, actors, and musicians); (3) refinement interviews; and (4) online experimental evaluation of co-designed scripts (n=826: 345 Black people, 481 White people). Phase 2 comprised co-developing/-producing and experimentally evaluating four community-based films relative to the NHSBT/Black Panther collaboration film (n=1,237: 638 Black people, 599 White people. We assessed affective responses as a mediator.

**Findings:** Four narratives (1) Comedy - challenging misconceptions; (2) Reciprocity - donating for mutual benefit; (3) Donor-Recipient - linking donors and recipients; and (4) Sliding Doors - reversing a narrative timeline were co-developed. For White people, a slogan (give blood, save a life) enhanced propensity-to-donate via positive affect. For Black people, the Donor-Recipient narrative script increased propensity-to-donate via enhanced positive affect. Phase 2 showed that the community-based films (barring Reciprocity) were evaluated similarly in terms of propensity-to-donate to the NHSBT/Black Panther films, with the comedy emerging as a standout.

**Discussion:** A co-designed arts-based approach offers a novel alternative to engage people in behaviour change. We detail how art-based approaches can be adopted in public health context



## **(Im)practical health psychology: Successes, failures and everything in between**

Dominika Kwasnicka<sup>1</sup>, Stephan Dombrowski<sup>2</sup>, Tracey Revenson<sup>3</sup>, Keegan Knittle<sup>4</sup>, Gill ten Hoor<sup>5</sup>, Ainslea Cross<sup>6</sup>, Sebastian Potthoff<sup>7</sup>

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**Purpose:** This session will present examples of practical and not so practical application of health psychology in applied health promotion settings. Our panel will use storytelling and real-life examples to demonstrate how they applied psychology to solve real life problems very effectively and how they failed trying to do so. We will not use typical PowerPoint presentations, just photographs to accompany the stories of triumph and failure when applying Health Psychology in practice.

**Objectives:**

- 1) To demonstrate how useful Health Psychology can be when applied well in real life settings;
- 2) To showcase failures and what we can learn from them in trying to implement practical health science;
- 3) To invite our audience to reflect on the stories presented and to share their own stories.

The overall aim of this roundtable is to rethink how health psychology can effectively improve practice and what lessons past mistakes can teach us.

**Rationale:** Brought to you by the Practical Health Psychology Blog Team, this session is an honest representation of how our science can improve practice, also showcasing when we attempted to do so and failed.

**Timetable:** There will be a line-up of presenters showcasing their Health Psychology work, based in Canada, the US, Finland, the UK, and the Netherlands.

**Introduction (5 mins):** To introduce the panel and outline the objectives of the session.

**Panel (30 mins: 5 speakers x 6 mins each):** Panellists will describe examples of practice-focused health psychology research (Stephan Dombrowski, Tracey A. Revenson, Keegan Knittle, Ainslea Cross, and Gill ten Hoor) sharing examples of success, failure, and everything in between.

**Audience participation (20 mins):** Questions from the audience will dive deeper into the panellists' examples. We will also ask the audience what their practical and (im)practical applied psychology stories are.

**Final remarks (5 mins):** Chair will offer a summary, conclusions, and lessons learned.

This session will provide an open forum to the participants who want to hear about and share their experiences of working in applied health promotion settings. We will use real life examples to showcase the successes and struggles that top-researchers faced when attempting to make health psychology practical. We hope to see you there!

## **Special Interest Group Meeting: Equity, Global Health & Sustainability**

Gudrun Sproesser<sup>1</sup>, Nadja Contzen<sup>2</sup>, Philipp Kadel<sup>3</sup>, Josianne Kollmann<sup>2</sup>, Lucia Rehackova<sup>4</sup>, Claudia Teran-Escobar<sup>5</sup>, Daniella Watson<sup>6</sup>, Jennifer Inauen<sup>7</sup>

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### **Purpose:**

The purpose of this lab series is to facilitate the meeting of the Special Interest Group (SIG) "Equity, Global Health and Sustainability". Its aim is to bring together EHPS members interested in research and practice related to health psychology and equity, global health and sustainability. The SIG currently has 60+ members and is open to new members as well.

### **Objectives:**

- Introduce the SIG to interested EHPS delegates.
- Share progress of the SIG on the topics of equity, global health and sustainability.
- Facilitate networking among EHPS delegates interested in the topics of the SIG.
- Define goals and activities for the following year.

### **Rationale:**

In current times, our society faces multiple global challenges, including issues of climate change and inequities. As these challenges impact human health, health psychologists are predestined to contribute to studying and solving those issues. The SIG "Equity, Global Health and Sustainability" contributes to the EHPS strategic goals by promoting rigorous health psychology research, and informs practice by connecting EHPS researchers who are working on these topics.

## **Promoting equality, diversity, and inclusion in health psychology research: Development of a practical guide**

Michèle Denise Birtel<sup>1</sup>, Laura König<sup>2</sup>, Joanna Semlyen<sup>3</sup>, Christine Emmer<sup>4</sup>, David Healy<sup>5</sup>, Becca Krukowski<sup>6</sup>, Alea Ruf<sup>2</sup>, Leanne Tyson<sup>3</sup>

<sup>1</sup>University of Greenwich, United Kingdom; <sup>2</sup>University of Vienna, Austria; <sup>3</sup>University of East Anglia, United Kingdom; <sup>4</sup>University of Mannheim, Germany; <sup>5</sup>University of Galway, Ireland; <sup>6</sup>University of Virginia, United States

### **Purpose:**

Addressing persistent health inequalities is an important focus for health psychology research. To achieve this, it is important to foster awareness, understanding, and actionable steps toward a more inclusive and equitable research environment for health psychology research. Despite ongoing equality, diversity and inclusion (EDI) efforts, we continue to struggle with reaching diverse samples in our research, addressing unequal power relations within the research process, considering social determinants and marginalization in our theories and methods, and engaging target groups with interventions who 'need' them the most (e.g. individuals with extreme views or with low levels of literacy). These processes often contribute to the reinforcement of health inequalities. This Lab Series aims to discover and share best practice for inclusive health psychology research through small group discussions, to identify priorities for and barriers/facilitators to EDI, leading to the development of a practical guide to promote more inclusive practice within the health psychology community.

### **Objectives:**

- 1) To share knowledge of EDI considerations in health psychology research
- 2) To discover barriers and facilitators to considering EDI that health psychology researchers face
- 3) To collect best and poor practice examples for promoting a more inclusive research practice
- 4) To outline key themes for a collaborative White Paper that provides practical guidance to considering EDI in health psychology research
- 5) To provide networking opportunities with the aim to continue the discussions beyond the conference through new collaborations on research, practice and policy related to health inequalities

### **Rationale:**

Addressing health inequalities is crucial for advancing the field of health psychology and ensuring the well-being of communities worldwide. As the field of health psychology continues to evolve, inequalities and biases persist in research practices hindering the advancement of knowledge. By addressing this issue explicitly within the context of the EHPS conference, we aim to leverage the diverse expertise of our members to foster innovative approaches and solutions, with a focus on the promotion of more inclusive research practices. The Lab Series format offers a unique opportunity to engage in open, collaborative discussions that can lead to substantial advancements in how we research and address health inequalities. Being inclusive and integrating the perspectives of EHPS members interested (not necessarily experienced) in studying and reducing health inequalities, challenges, and potential solutions is essential for achieving meaningful progress within the community.

## **Beyond Boundaries: Strategies for Integrating LGBTQI+ Perspectives in Health Psychology Research**

Thomas Gültzow<sup>1</sup>, Udi Davidovich<sup>2</sup>, Neil Coulson<sup>3</sup>, Chantal den Daas<sup>4</sup>, Chris Noone<sup>5</sup>, Siobhan Thomas<sup>6</sup>

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**Purpose:** In health psychology, individuals who are lesbian, gay, bisexual, transgender, questioning, and those who hold other marginalised sexual or gender identities (LGBTQI+) often face significant health disparities, stemming from intricate interactions among social, cultural, structural, and political factors. Despite these challenges, the European Health Psychology Society (EHPS) has given limited attention to these groups, particularly beyond the context of gay men and men who have sex with men. To address this gap, a dedicated roundtable was conducted during the 2023 EHPS conference, aiming to explore the reasons behind the underrepresentation of LGBTQI+ issues in health psychology. While the roundtable initiated thorough discussions, it revealed a notable absence of solutions. This upcoming roundtable seeks to actively identify and address solutions for enhancing LGBTQI+ representation in health psychology research.

**Objectives:** This roundtable has one main objective, namely, to identify and address solutions for enhancing LGBTQI+ representation in health psychology research.

**Rationale:** A significant portion of the world's population identifies with at least part of the LGTBQ+ umbrella, so health psychology as a field and the EHPS in particular should play a role in providing solutions to help them maintain optimal health and well-being.

## **The Psychedelic Renaissance: Opportunities for behavior change and psychological well-being**

Talea Cornelius<sup>1</sup>, Pedro Teixeira<sup>2</sup>, Laura Cabral da Ponte Carvalho<sup>3</sup>, Jorge Encantado<sup>4</sup>

<sup>1</sup>Columbia University Irving Medical Center, United States;<sup>2</sup>Universidade de Lisboa, Portugal;<sup>3</sup>Faculty of Human Kinetics, Portugal;<sup>4</sup>Lisbon University, Portugal

### **Purpose:**

This multidisciplinary roundtable discussion aims to provide an overview of the current state of psychedelic research, focusing on the association between psychedelic use and changes in health-related behavior and psychological well-being. Additionally, we aim to engage the audience in discussing the acceptability, safety and applicability of psychological health theories and methods to psychedelic research and practice.

(1) Present the latest research on psychedelics in behavioral health psychology and psychiatry. (2) Engage the audience around perceptions of psychedelic treatment acceptability and offer opportunities for Q&A. (3) Discuss mechanisms of change in psychedelic interventions and applicability of theories in health psychology. (4) Explore what psychedelic science can unveil about social mechanisms influencing health and wellness.

### **Rationale:**

Over the past 20 years, evidence for beneficial effects of psychedelics for mental health (e.g., depression treatment), lifestyle behaviors (e.g., increased physical activity, smoking cessation treatment), and public health indicators (e.g., reduced odds of cardiometabolic diseases) has grown in quality and quantity. Unsurprisingly, the concept of ‘behavioral psychedelics,’ or “the study of the potential of psychedelics to foster intentional changes in behavior to improve health and resilience,” is receiving more attention. Research is also needed to understand psychological mechanisms that underlie positive transformative effects (e.g., psychological flexibility, a sense of connectedness).

This roundtable will open by polling attendees about perceptions of acceptability surrounding psychedelic treatments for behavioral and mental health. P. Rodrigues, MD, PhD, will then provide a historical overview of psychedelic treatments. He will discuss changing perceptions around acceptability over time, evidence for safety and efficacy, and hold a brief Q&A. Next, J. Encantado, PhD, and L. Carvalho, MS, will present results of a series of observational studies exploring self-reported behavior change after psychedelic use. Attendees will again be polled on psychedelic treatment acceptability, but with additional nuance on context of use (e.g., mental health interventions, behavioral interventions, psychedelics for the well). Attendees will generate word clouds for pros and cons of these treatments and discuss these perceptions. P. Teixeira, PhD, will present results on potential psychological mechanisms of change involved in psychedelic-facilitated behavior change processes and discuss whether existing psychological health theories are applicable in psychedelic studies. T. Cornelius, PhD, MSW, MS, will discuss what psychedelic research might teach us about socially embedded health psychology. She will present preliminary data on social mechanisms of change and engage attendees in an exercise surrounding the validity of different sources of knowledge.

## **Older adults' experiences with self-regulation strategies used in mHealth intervention to improve physical activity**

Fien De Block<sup>1</sup>, Delfien Van Dyck<sup>1</sup>, Benedicte Deforche<sup>1,2</sup>, Geert Crombez<sup>1</sup>, Louise Poppe<sup>1</sup>

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**Background:** Many older adults do not meet the physical activity guidelines. MyDay-Plan, an mHealth intervention guided by the Health Action Process Approach, was found effective in increasing daily step counts in inactive adults aged 18-64. MyDay-Plan consists of a smartphone app and Fitbit and supports self-regulation by providing behavior change techniques (BCTs) (i.e., goal setting, action planning, coping planning, and monitoring). Since older adults' daily routines and smartphone usage differ from younger adults, this study aims to assess how older adults experience MyDayPlan and its BCTs and how they utilize the app.

**Methods:** For this qualitative study, 20 participants aged 65+ will use the intervention daily for 14 days. Thereafter, their experiences with MyDayPlan and the BCTs will be evaluated through semi-structured interviews, which will be analyzed using deductive thematic analysis (NVivo). Furthermore, the participants' app interactions will be objectively assessed using their user data.

**Expected results:** The in-depth interviews will provide insights into the older adults' experiences with the intervention's BCTs. The rich user data will demonstrate, for example, whether goals were achieved, whether plans and goals changed over days, and whether action and coping plans aligned.

**Current stage of work:** Recruitment and data collection.

**Discussion:** The increasing proficiency of older adults in smartphone and wearable usage creates opportunities for mHealth interventions. However, this population may experience BCTs differently compared to younger adults. Therefore, this study will clarify how these BCTs are experienced by older adults and how they can be used to induce behavior change in this population.

# Unveiling the digital pathways to active aging: an exploratory mixed methods study in older adults

Iris Maes<sup>1</sup>, Stéphanie Carlier<sup>1</sup>, Julie Latomme<sup>1</sup>, Femke De Backere<sup>1</sup>, Greet Cardon<sup>1</sup>, Delfien Van Dyck<sup>1</sup>

<sup>1</sup>Ghent University, Belgium

## Background.

Mobile health (mHealth) interventions may offer a promising solution to help older adults to meet the physical activity (PA) guidelines. Yet, little is known about how older adults perceive mHealth interventions. This study explored older adults' experiences with the 'My Health Plan' mHealth intervention, and examined which person-level factors were associated with adherence to the intervention.

## Methods.

Forty older adults (52.5% female, mean age 72.6 years) were instructed to use the My Health plan application, which provided maximum six stretch- and strengthening exercises per day, and to wear a Fitbit Charge activity monitor for seven consecutive days. Person-level factors were assessed using a questionnaire. After the measurement period, semi-structured interviews were conducted to learn about participants' experiences with the application and Fitbit. Deductive thematic analysis (qualitative data) and regression analyses (quantitative data) were conducted.

## Results.

Key themes emerging from the interviews were 1) smartphone notifications (including timing and number) and carrying the smartphone throughout the day, 2) suggested stretch- and strengthening exercises, 3) providing feedback, 4) experiences with Fitbit, and 5) overall suggestions for improvement of the application and mHealth interventions. Overall, participants reported positive experiences with the application and Fitbit. Being male, having a higher baseline PA, lower anxiety, and greater ability to participate in social roles and activities were related to increased engagement with the proposed exercises.

## Conclusions.

This study provides valuable insights to optimize future mHealth interventions tailored to older adults' specific needs, aligning with their perceptions of the digital transformation in health promotion.

## **Feasibility and acceptability of a smartphone-based, activity-triggered Ecological Momentary Assessment study among low-income older adults**

Olivia Malkowski<sup>1</sup>, Nick Townsend<sup>2</sup>, Mark Kelson<sup>3</sup>, Max Western<sup>1</sup>

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**Background:** Smartphone-based Ecological Momentary Assessment (EMA) methods capitalise on recent advancements in mobile and sensor technologies to yield novel insights into health-related behaviours. However, there has yet been little research that uses EMA to capture and understand physical activity in older adults of low socio-economic status. We aim to report on the feasibility and acceptability of EMA among older adults living in low-income households.

**Methods:** Researchers partnered with trusted individuals and community organisations in South West England, and provided ongoing technical support, to facilitate the recruitment and retention of low-income older adults. For 7 days, 37 older adults ( $76.8 \pm 8.5$  years; 70% earning < £25,000/year) received EMA surveys (assessing their affect, context, and motivation to be physically active) when they surpassed predefined activity thresholds, as determined via an activity sensor. A post-study questionnaire assessed perceptions of study acceptability.

**Findings:** Participants were compliant with the EMA protocol on 81% of occasions. Responses to open-ended questions revealed that the most enjoyable aspects of taking part were the opportunity to learn more about themselves, contribute to science, and engage in a new activity. The least enjoyable aspects included the interruption of activities to complete a survey, the frequency of EMA prompts, and difficulty using the features and functions of the smartphone.

**Discussion:** Smartphone-based, activity-triggered EMA is a feasible and acceptable tool among low-income older adults. Comprehensive strategies, such as community partnerships, managing participant resource constraints, and available technical support, are crucial to engage and retain this population in digital health research.



## **Cortisol and subjective stress response to the (f-)TSST between sitting and standing body position**

Miriam Kurz<sup>1</sup>, Luca Abel<sup>2</sup>, Felicitas Hauck<sup>1</sup>, Robert Richer<sup>2</sup>, Veronika Ringgold<sup>1</sup>, Lena Schindler-Gmelch<sup>3</sup>,  
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The study aimed to investigate the impact of participants' body position (sitting vs. standing) on stress responses during the Trier Social Stress Test (TSST) and its friendly version (f-TSST). Forty-four participants (22.59 ± 2.86 years old, 54 % female) were exposed to TSST and f-TSST on two consecutive days. Half (n = 22) of the participants performed the (f-)TSST in a sitting position, while the other half were in a standing position. Salivary cortisol and subjective stress (Short Stress State Questionnaire, SSSQ-G) were assessed before and after the (f-)TSST. In addition, the Primary Appraisal Secondary Appraisal questionnaire (PASA) was completed during the anticipation phase of the (f-)TSST.

Maximum cortisol increase exhibited no significant differences between the sitting and standing conditions ( $F=0.63$ ,  $p=0.43$ ), while distinguishing between the stressful and non-stressful conditions ( $F=11.54$ ,  $p=0.002$ ). SSSQ-G change scores differed significantly between TSST and f-TSST ( $F= 58.18$ ,  $p<0.001$ ), but did not reveal any differences between sitting and standing ( $F=0.01$ ,  $p=0.92$ ). PASA scores differed significantly between TSST and f-TSST (Threat:  $F=32.78$ ,  $p<0.001$ ; Challenge:  $F=28.29$ ,  $p<0.001$ ). In addition, threat perception during the anticipation period of the (f-)TSST was significantly higher for the standing subjects compared to the sitting subjects ( $F=4.60$ ,  $p=0.04$ ), while the challenge subscale did not show any significant differences ( $F=2.46$ ,  $p=0.13$ ). Results suggest that salivary cortisol and subjective rating collected after the stressor do not differ between a sitting and standing body position. However, self-reported measures collected during the anticipation phase might be affected by a sitting position.

## **Longitudinal association between healthcare mistreatment, perceived discrimination, and metabolic syndrome among Chilean adults**

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**Background:** Metabolic syndrome (MetS) encompasses a set of cardiovascular risk factors amplifying susceptibility to Type 2 diabetes and coronary atherosclerosis. The association between healthcare mistreatment (HM), perceived discrimination in medical settings (PD), and the heightened risk of MetS is recognized. This study aimed to investigate the longitudinal relationship between MetS and PD, along with exploring potential mediating roles of psychological distress, emotional eating, and physical activity.

**Methods:** A cohort of 278 Chilean adults (mean age = 58.8, SD = 5.16; 64.1% female; 71.28% married), free of cardiovascular disease, underwent a 2-year follow-up. Participants self-reported psychological measures across waves 1 to 3, and at wave 3, blood samples and anthropometric measures were collected following the ATP-3 definition of MetS.

**Findings:** A direct effect of a latent healthcare relationship factor (HRF) measured at baseline on MetS at wave 3 was observed ( $b = 0.25$ ;  $p = 0.03$ ). HRF at baseline exhibited a direct association with psychological distress at wave 2 ( $b = 0.42$ ;  $p = 0.00$ ), subsequently linking to increased emotional eating ( $b = 0.67$ ;  $p = 0.00$ ) and decreased physical activity ( $b = -0.23$ ;  $p = 0.00$ ). While mediation analyses did not reach statistical significance, the results underscore the impact of perceived discrimination and mistreatment on the risk of developing MetS.

**Discussion:** Further analyses are warranted to delve into the potential mediating roles of health behaviors and psychological distress in this association. Healthcare mistreatment and perceived discrimination, prevalent experiences among Chileans, may contribute to an increased risk of developing MetS.

## **Mental and somatic health as predictors of emotional, physical and cognitive exhaustion**

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**Background:** There are strong relations between stress, sleep, and burnout, but also between burnout and mental ill-health as well as somatic symptoms. The aim of this study was to examine whether mental and somatic ill-health can predict burnout.

**Methods:** Longitudinal questionnaire data from a normal population sample consisting of 2336 individuals living in northern Sweden, stratified by age and sex, were used to examine the relationships between stress, sleep, depression, anxiety,

and somatic symptoms at baseline and three aspects of burnout (emotional exhaustion, physical exhaustion and cognitive weariness) at a three-year follow-up using

structural equation modeling.

**Findings:** The tested model showed an acceptable fit (CFI >.90, RMSEA < .05, SRMR < .05). We found large overlaps and comorbidity within several of the measured constructs. Also, all measured constructs to some extent significantly predicted one or more of the measured facets of burnout.

**Discussion:** There are clearly relations over time between our three burnout factors and all measured constructs. The large overlaps are not surprising since there is also an overlap in diagnostic criteria. They also make it difficult to determine what causes what but it gives important knowledge about risk factors for burnout. The results imply that if we can treat some of the conditions we may help with the others, and that early interventions targeting transdiagnostic processes could be helpful in combatting burnout.

## **Are continuous and intermittent low-energy diets for weight loss/ remission in type 2 diabetes acceptable?**

Jo Brooks<sup>1</sup>, Helen Ruane<sup>2</sup>, Sarah McDiarmid<sup>2</sup>, Avni Vyas<sup>2</sup>, Basil Issa<sup>2</sup>, Michelle Harvie<sup>1, 2</sup>

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**Background:** The Manchester Intermittent versus Daily Diet App Study (MIDDAS) tested the feasibility and potential efficacy of two remotely delivered low-energy diet (LED) programmes (800 kcal / day) to support weight loss and remission of type 2 diabetes: continuous [CLED] (8 weeks of daily LED) and intermittent [ILED] (2 days of LED/week for 28 weeks). Understanding participant experiences can help to understand the acceptability of LED programmes to people with type 2 diabetes, informing future programme development and implementation.

**Methods:** Twenty participants (ten CLED; ten ILED) took part in interviews conducted at the end of the active weight loss phase (CLED week 12, ILED week 28). Interviews were transcribed and analysed thematically using the template analysis approach, with an a priori focus on acceptability.

**Findings:** Four themes are presented: Prospective acceptability; Intervention coherence and perceived effectiveness; Opportunity costs; and Self-efficacy.

Both remotely supported CLED and ILED interventions appeared acceptable to participants. CLED participants found the rapid initial weight loss phase comparatively easy and highly motivating but expressed more concerns around weight maintenance. ILED participants found the more gradual weight loss initially frustrating but expressed greater confidence in their longer-term adherence. The importance of continued individualised support from healthcare professionals was emphasised, and evidence of weight loss and improvement in other medical markers through monitoring via the app was useful.

**Discussion:** Different approaches to remotely delivered LEDs appear acceptable, therefore asking patients which approach may be more acceptable to them may be a useful way to offer individualised and tailored support.

## **Harnessing the flow: Movement and biofeedback as catalysts for self-efficacy**

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### **Background:**

This experimental study explores the psychophysiological link between physical activity, biofeedback, and self-efficacy, focusing on inducing a flow state through movement and biofeedback. It fills a research gap in the area of physical exercise and self-regulation techniques.

### **Methodology:**

Participants in a month-long training program, divided into control and experimental groups, engage in physical activity (walking) and resonance breathing, supplemented by auditory and visual biofeedback to foster flow states and boost self-efficacy. Flow experiences are measured using the "FollowFlow-app" and the Flow Short Scale, self-efficacy with the SWE ("Allgemeine Selbstwirksamkeitserwartung") and biomarkers with the "Kubios HRV-software".

### **Analysis (Work in Progress):**

The relationships between physiological markers (heart rate, heart rate variability), the measurements of the biofeedback tool and self-reported flow state and self-efficacy (focusing on longitudinal changes in self-efficacy and the induction of flow states) are examined. Statistical techniques include ANOVA, Chi2-tests, and t-tests.

### **Expected Results:**

We expect the experimental group to report improved flow state experiences, unique biomarker patterns, and stronger training effects of self-efficacy than the control group.

Current stage of work: First results imply a relationship between higher flow values in the "FollowFlow-app" and a lower LF/HV-ratio of HRV. This ratio of different frequency bands often gets interpreted as the ratio of sympathetic to parasympathetic activity.

### **Discussion:**

This study aims to provide new insights into how biofeedback and physical activity can enhance self-efficacy, contribute to health psychology's understanding of sustainable personal health practices and lay the groundwork for further research on flow state induction through exercise.

## **Does Heart Rate Variability Moderate the Relationship Between Social Anxiety and Emotion Recognition?**

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**Background:** This study explores the intricate relationship between social anxiety (SA) and the accuracy of emotion recognition using visual stimuli, drawing upon established research in the field. Additionally, it investigates the potential moderating role of heart rate variability, a significant physiological parameter, in this association.

**Methods:** A total of 82 participants aged between 18 and 50 were enrolled in the study. Social anxiety levels were assessed using the Liebowitz Social Anxiety Scale (LSAS). Heart rate variability was monitored using a Polar H10 heart rate belt for a duration of 5 minutes, and emotion recognition abilities were evaluated through the Emotion Recognition Task (ERT).

**Results:** The findings revealed a statistically significant negative correlation between social anxiety and the accuracy of recognizing five out of the six emotions under analysis (anger, disgust, fear, happiness, and sadness). These results align with prior literature. However, no significant correlation was observed between SA and the recognition of wonder/surprise. Importantly, the study did not find evidence supporting a moderating effect of heart rate variability on the relationship between social anxiety and emotion recognition accuracy.

**Discussion:** This study provides empirical evidence of a significant negative correlation between social anxiety and the accuracy of recognizing emotions for five of the six emotions examined. Nevertheless, it did not confirm the presence of a moderating effect of heart rate variability on this relationship. Future research should consider exploring this moderating effect with larger participant groups to further elucidate these complex dynamics.

## **Implementing a Spiritual Care Intervention in a Public Hospital in Chile: Barriers and Facilitators**

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Many patients who survive a critical illness suffer physical, psychological, and cognitive problems, which have been termed Post-ICU Syndrome (PICS). Some studies have reported a residual effect several months after discharge from the Intensive Care Unit (ICU), affecting people's quality of life and functionality. Although some interventions have been implemented, very few have been assessed and the majority have been pharmacologic. Spiritual support has been proposed as a potential strategy aimed at preventing PICS among these patients; however, spiritual care is not frequently offered to ICU patients and is considered difficult to implement during the hospital stay. For vulnerable patients, from low-income communities, spirituality is particularly important in their lives. The primary aim of this work is to assess the feasibility and acceptability of the spiritual care strategy in critically ill patients while they are still hospitalized, delivered by trained volunteers using Zoom. The secondary aims include evaluating the differences in anxiety and depression symptoms and post-traumatic stress disorder between the spiritual care group and the usual care control group. The implementation strategies, barriers, and facilitators are discussed as well as the take-home lessons from this process, which we expect can provide insights into how systematic spiritual care can be offered for patients who are still in the process of recovering from critical illness.

## **Biopsychosocial Effects of Technology-enhanced Multidisciplinary Neurorehabilitation: Preliminary Longitudinal Multi-Sample Evidence**

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**Background:** Technology-enhanced neurorehabilitation programs have so far shown promising evidence in targeting motor disability. However, still less is known on the widespread benefits of technology, specifically regarding the functional status, cognition, psychological well-being, and broader health-related quality of life (HRQoL).

**Methods:** A pilot longitudinal investigation on the biopsychosocial impact of technology-enhanced neurorehabilitation programs compared to conventional treatment was conducted in a convenience sample of patients with stroke, Parkinson's Disease (PD) or osteoarthritis (n=68). A two-arm non-randomized study design was adopted to estimate pre- post-intervention changes and long-term effects (6-month follow-up) on multiple outcomes, including the functional status (ADLs autonomy, risk of falls), cognitive functioning (attention, executive functions), anxiety and depression symptoms, and HRQoL. Within- and between-group statistical analyses and general linear models were performed within each clinical population involved.

**Findings:** At post-intervention, widespread improvements were observed, with significant multi-domain changes estimated within each sub-sample. Significant between-group comparisons were found in psychological well-being, depression symptoms and HRQoL variables among patients with stroke, PD, and osteoarthritis respectively, evidencing a wider short-term impact of technology-enhanced programs. At 6-month follow-up, significant main effects of time were estimated on HRQoL scores within all sub-samples and, additionally, on anxiety and depression symptoms levels within patients with stroke and osteoarthritis. No longitudinal interaction effects were estimated, although significant between-group differences in anxiety and depression symptoms were found in patients with PD at final follow-up.

**Discussion:** Further research is needed to deepen the longitudinal trajectories of the biopsychosocial benefits of technology-enhanced neurorehabilitation programs, ultimately supporting technology multi-domain effectiveness.



## **Cardiac rehabilitation and psychological treatments: differences in anxiety, depression, and illness perception levels**

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**Background.** The relationship between psychological factors and cardiovascular diseases (CVDs) has long been a focal point of previous research, but not very well is known about the role of cardiac rehabilitation and the types of psychological treatments on patients' psychological status. Our study aims to compare the levels of anxiety, depression, and illness perception of patients with different CVDs at the beginning (t0), at the end (t1), and three months after a cardiac rehabilitation program (t2) with three different types of psychological treatments: psychoeducational group intervention, progressive muscle relaxation training, individual psychological counseling.

**Methods.** Patients with recent episodes of Acute Coronary Syndrome (ACS), heart failure (HF), or cardiac surgery undergoing cardiac rehabilitation at ASST Bergamo Est were involved. We used self-report questionnaires to assess anxiety, depression, and illness perception levels of participants.

**Findings.** One hundred and eighty-one participants (females 28.7%; mean age=65.96 ( $\pm$ 11.90) years old) were involved, namely n=36 ACS (19.9%), n=25 CHF (13.8%), and n =120 cardiac surgery (66.3%). Statistically significant differences in anxiety ( $F(2)=3,51, p=.034$ ), depression ( $F(2)=4,11, p=.019$ ), and illness perception levels ( $F(2)=2,59, p=.052$ ) were observed at the program's initiation (t0) and upon completion (t1 and t2): individual psychological counseling had a better impact on levels of anxiety and depression and on the development of a more adequate perception of illness.

**Discussion.** Findings of our study showed that the type of psychological treatment during cardiac rehabilitation gives different results in terms of psychological status, underlining the better outcomes for individual psychological counseling.

## **Engaging in nonpharmaceutical interventions during an outbreak. What drives behaviour? A comprehensive systematic review**

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**Background.** Nonpharmaceutical interventions (NPIs) are actions, apart from getting vaccinated or taking medicine, that people can take to slow the spread of diseases. Examples include contact tracing or social distancing. Engagement in NPIs is heterogenous in time, space and context. Understanding what drives these behaviours helps create new ways to support engagement in NPIs and reduce transmission of disease. To grasp the complexity of various factors at play, this review integrates perspectives from different disciplines (e.g. psychology, sociology, economics) through the lens of the Behavioural Drivers Model (BDM), which consolidates 25 theories (e.g. Theory of Planned Behaviour).

**Methods.** A mixed method systematic review, submitted to Prospero, will be performed. Two independent reviewers will conduct data extraction based on a systematic search in MEDLINE, Web of Science, Scopus and PsycARTICLES. Data analysis and synthesis will depend on the included studies. Statistical measures will quantify the results where possible (random-effects model for meta-analysis, risk ratio or OR, absolute risk difference, or mean difference or standardised mean difference and their 95% CIs). Expected is that due to heterogeneity between studies statistical pooling will often not be possible, a thematical analyses based on the BDM will be conducted.

**Expected Results.** Establishing facilitators and barriers of behaviour associated with engagement in NPIs in the context of infectious disease control.

**Stage.** Submitted protocol to Prospero.

**Discussion.** Citizen engagement is key in the successful execution of disease control programs. Understanding the mechanisms behind behavioral shifts during outbreaks is crucial for developing effective interventions for future emergencies.

## **Coping with COVID-19 health messages on social media: Interviews with students with varying depressive symptoms**

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### **Background**

The COVID-19 pandemic intensified reliance on social media (SM) for health information and emotional coping. Increased SM exposure to COVID-19 information correlated with lower mental well-being (MWB), potentially due to exposure to specific official health message characteristics (e.g., fear appeals). Individuals with elevated depressive symptoms may be disproportionately affected. In contrast to passive consumption, active engagement (e.g., reacting to posts) may yield positive MWB outcomes. This study explores how individuals with varying depressive symptoms used SM to cope with COVID-19 health messages, shedding light on the uncharted nuances of SM as a coping mechanism during health crises in the SM era.

### **Methods**

In December 2023, semi-structured interviews were conducted with 30 students (aged 18-25), divided evenly by depressive symptomatology (normal vs. higher). Thematic analysis was used.

### **Preliminary results**

During the COVID-19 pandemic, participants spent more time on SM to improve their MWB, but this effect was often contradictory, especially with passive use. They actively controlled exposure to official health messages, avoiding and privately discussing distressing messages for social support. Conversely, they engaged with positive health messages publicly to shape content algorithms and cultivate their social media persona.

### **Current stage of work**

We collected data in December 2023. Transcription is underway and coding is scheduled in February. Full results, including comparison in responses among those with varying levels of depressive symptoms, will be ready for the EHPS conference.

### **Discussion**

Insights highlight SM's potential in health psychology for enhancing digital resilience during public health crises, especially for those with depressive symptoms.

## **Social media use at work: Diary analysis of the impact on employees' work and health**

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**Background:** As the boundaries between personal and work life continue to blur in the digital age, personal social media use at work has seen a significant rise. Whilst this behavior is mostly perceived to be counterproductive, research is rare regarding the positive influence on employees' work and health. Therefore, this study aims to investigate the relationship between personal social media use during working hours with health and work-related outcomes (i.e., work engagement, work creativity and work-related well-being). Moreover, based on the effort-recovery model it is hypothesized that resource recovery mediates the assumed relationships.

**Method:** 82 employees with a mean age of  $M = 35.9$  years ( $SD = 11.8$ ) took part in a daily-diary study across two consecutive working weeks, resulting in 523 daily measures. Social media use, health- and work-related outcomes were assessed self-reported every evening.

**Findings:** Multilevel analyses showed that employees who spend more time for personal social media use at work reported lower levels of work engagement, but there was no effect on work creativity and work-related well-being. Furthermore, we did not find evidence for the proposed mediating effect of resource recovery.

**Discussion:** The findings suggest that personal social media use at work is not necessarily related to employees' work and health-related outcomes. Future research should investigate further influential mediators (e.g., detachment) in the context of social media use and employees' work and health. Furthermore, the quality and different purposes as well as types of personal social media use at work (e.g., messaging or status updates) need to be explored.

## **TikToxic or TikDoc? A Qualitative Study about Adolescents' Social Media Use for Mental Health Complaints**

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Currently, 43.7% of Dutch adolescent girls and 13.3% of adolescent boys report anxiety- and depression complaints. Despite these alarming numbers, adolescents face barriers when seeking professional help. Social media platforms and especially online short videos (OSVs, e.g. TikTok) are rich in anxiety- and depression-related content and may overcome barriers.

They may therefore serve as an important source for adolescents who seek information and support for their complaints. Therefore, this study aims to understand (1) what information and support needs adolescents address on social media, and OSVs (2) motivations for use, (3) what barriers they encounter, (4) need fulfillment.

We will conduct semi-structured interviews with 25 adolescents who have recently sought professional help for anxiety- or depression complaints and who have used social media and OSVs for their complaints. Thematic analysis will be used to analyze the data.

We expect that adolescents use social media and OSVs to find information about illness- and treatment-related issues and support through sharing experiences. Moreover, we expect they are motivated to use social media and OSVs as they are accessible, anonymous and engaging, yet they might be offset by mistrust or superficial information. Therefore, adolescents may only partially fulfill their needs.

We are piloting the study and aim to start data collection in March. Our study will expand theories on online help-seeking and information and support needs to a developmental psychopathology and OSV context. Moreover, it may inform interventions and healthcare practices how to use social media and OSVs to improve adolescents' mental health.

# **Can social media reduce stigma towards people with visible differences ? A randomised controlled experiment**

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## **Background**

Those with visible differences (conditions or injuries that affect appearance) face societal stigma, which contributes to poor quality of life and other negative psychosocial outcomes. Although valuable, previous research focusses on supporting affected individuals to cope, rather than challenging stigma itself. Social media allows large audiences to form bonds with and gain understanding and exposure of influencers who are visibly different, which may consequently reduce stigma. Additionally, viewing diverse content may contribute to increased acceptance of appearance diversity and more positive attitudes to individuals' own bodies.

## **Method**

~90 adults (university staff and students) took part in a randomised controlled trial viewing content of an individual with a visible difference or a matched control. Participants attended three weekly sessions where they viewed content and answered questionnaires. Data were collected at baseline, three weekly sessions and at one-week follow-up.

## **Results**

ANCOVA analyses will indicate whether viewing content from an influencer with a visible difference was effective at a) developing a perceived bond with the influencer, b) reducing intentions to behave in a stigmatising way towards those with visible differences, c) broadening conceptualisation of beauty, and d) improving participants' attitudes towards their own bodies.

## **Current stage of work**

Data collection is underway and due to be completed mid-March.

## **Discussion**

Findings will contribute to a small but growing body of work aiming to reduce the negative impact of stigma on the visible difference population.

## **The Roles of Social Media Information Exposure and Seeking in COVID-19 Vaccination: a longitudinal study**

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**Background:** This study drew upon the stimulus-organism-response (S-O-R) framework to examine the influence of stimulus factors (i.e., passive exposure to and active seeking for COVID-19 vaccination-related information on social media) on users' internal psychological mechanisms (i.e., perceived information overload and psychological reactance) and COVID-19 vaccination behaviors.

**Methods:** A two-wave cohort study with a 1-year follow-up was conducted among the general population in Hong Kong (W\_1 N = 411, W\_2 N = 264). The hypothesized mediation model was tested using structural equation modeling.

**Findings:** Passive information exposure and active information seeking on social media were positively associated with both vaccination initiation (i.e., receiving the first dose) and full vaccination (i.e., completing the recommended 3-dose schedule at W2). We identified different mediation pathways from passive information exposure and active information seeking to vaccine skepticism through perceived information overload and psychological reactance. Specifically, a double-edged sword effect was found for active information seeking. Active information seeking was associated with decreased vaccine skepticism both directly and indirectly through decreased psychological reactance. On the other hand, active information seeking was associated with increased perceived information overload, which in turn was associated with increased psychological reactance and subsequently increased vaccine skepticism. Passive information exposure indirectly affected psychological state and vaccine skepticism through increased active information seeking.

**Discussion:** These findings contribute to the literature on the impact of social media use on vaccination behavior in the context of public health emergencies and offer practical implications for governments and social media platforms in risk communication and vaccination promotion.

# Social Media Dynamics In Pre-Hikikomori: Exploring Patterns And Potential Interventions

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## Background:

Hikikomori, marked by prolonged social withdrawal, poses risks of isolation and distress. Pre-hikikomori, a precursor stage, offers intervention opportunities, where increased social media use may mitigate full hikikomori development. This study aims to investigate patterns of social media use among young individuals in the pre-hikikomori stage compared to non-hikikomori individuals. The primary objective is to understand whether social media engagement differs between these groups, shedding light on potential strategies for intervention.

## Methods:

A total of 1249 participants aged 18-25 were recruited from the USA via an online database. Among them, 196 were identified as pre-hikikomori, while 1053 were non-hikikomori. Participants reported their average daily activity on five social media platforms and the nature of their communications. Data analysis involved comparing platform usage, communication frequency, and nature between the two groups.

## Findings:

Pre-hikikomori individuals engaged with an average of five social media platforms compared to four among non-hikikomori. They also spent more time on social media daily (30 minutes to an hour) compared to non-hikikomori (10 minutes to 30 minutes). Notably, pre-hikikomori preferred socially-oriented platforms (Facebook, X) over self-documentation (Instagram) or entertainment (YouTube, TikTok). They also sent and received more communications through social media platforms compared to non-hikikomori, except for TikTok.

## Discussion:

These findings suggest that individuals in the pre-hikikomori stage may utilize social media as a means to counteract physical isolation. Understanding these patterns could inform interventions aimed at preventing hikikomori development and promoting mental well-being among young adults.



## Mapping digital food environment on social media

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**Objective:** Growing evidence indicates that exposure to the food environment on social media may be relevant to individuals' food choices. Yet less is known about what contributes to food content exposure on social media. In the present study, we aim to map the digital food environment on social media by exploring food content.

**Methods:** We implemented a survey study combined with a data donation approach. Participants donated their YouTube use data and a company list that targeted them as potential customers. They filled out questionnaires regarding media algorithm awareness, perception of food norms, experience with personalized ads, and demographic measures.

**Analysis plan:** We have coded the videos as healthy and unhealthy food-relevant, followed by correlation analyses to link the scores from the survey with the social media data (e.g., food-relevant video viewing). We will do a mediation analysis to test the mediating effect of food companies in the association between social media interactions (i.e., food video likes, searches relevant to food, and food channels followed) and the frequency of food video viewings. Finally, we will perform subgroup analyses to identify characteristics of individuals who are more susceptible to unhealthy food content.

**Implications:** The implications of the present study are twofold. First, it may suggest the necessity for regulations, from public health perspectives, on how food companies and social media platforms utilize user data. Second, it may shed light on how researchers can utilize social media data based on the data donation approach to investigate food-relevant topics.

## **Co-designing a framework for communicating health messages to young people via social media**

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**Background:** Social media became a crucial communication channel for health authorities during the COVID-19 pandemic, particularly for younger populations who rarely engage with traditional channels. Improving the way authorities use this channel is vital in ensuring health promotion reaches this priority population effectively, especially during emergencies.

**Methods:** We conducted a co-design process with young people (18-24 years) and health communicators at Australian health authorities to develop a framework for communicating health messages to young people via social media. This included interviews and iterative co-design workshops with young people and health communicators. Transcripts and workshop affinity diagrams were analysed thematically using a Framework Analysis approach.

**Findings:** We co-designed 10 recommendations from 17 interviews and 3 co-design workshops for youth-centred social media health communication, related to content, process and guiding principles. Content recommendations included: prioritise visuals, make appropriate content for platform, use strong attention hook and use humour, trends and memes. Process recommendations included: involve young people in message creation, collaborate with influencers and real people and engage with public. Guiding principles included: balance professional and engaging content, consider social and cultural context and include specific call to action.

**Discussion:** These findings provide a framework for health authorities to guide future social media communication to youth. By incorporating a variety of messaging approaches and actively involving young people in content development, health authorities can better reach and impact the health behaviours of young people. Future research will implement and evaluate the framework in practice, and explore adaption for different health emergency responses.

## **Addressing humanity's existential crisis: How health psychology can accelerate climate change mitigation and adaptation**

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**Purpose:** This roundtable will address the role academic health psychologists can play in addressing the multifaceted challenges posed by climate change. We want this roundtable to be a space to (1) present concrete professional transitions and (2) offer support to develop new courses, research questions, or other professional initiatives towards climate change and health (i.e., presenters' time) and (3) collectively explore and debate the role our role in the current planetary health emergency (i.e., discussion time).

**Objectives:** Through this roundtable, we specifically aim to: (1) motivate health psychology academics to think about how to redirect some of their research, teaching and other professional activities towards addressing climate change; (2) identify key research questions and educational initiatives relevant to the current context; (3) provide a space and time for networking and identifying potential collaborators; and (4) reflect on the role EHPS can have in addressing current challenges imposed by climate change.

**Rationale:** Climate change is an ongoing and escalating health emergency. Limiting the worst consequences of climate change requires urgent, simultaneous and far-reaching behavioral, economic, and societal transformation. We believe that health psychologists can contribute to this challenge in several ways: by (partially or totally) shifting research programs to address climate change and health; by bringing climate change and health into all their teaching; and by using their societal roles as organisational participants, policy advocates, and active members of civil society to shape and catalyse the needed transformations. The COVID-19 pandemic has shown that our scientific community can quickly generate new practical knowledge in record time on topics that are only partially familiar to us. Imagine what could be achieved if, similar to COVID-19, our scientific community shifted to focus on climate action and planetary health. This roundtable seeks to accelerate this movement.

## **Identifying behaviour change characteristics within UK COVID television briefings using the Behaviour Change Techniques Ontology**

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**Background:** Regular national television briefings were delivered in the UK during COVID to communicate policy changes. However it is unclear the extent to which behaviour change strategies were used within these briefings. This study aims to identify behaviour change strategies used in the UK's COVID television briefings using the Behaviour Change Techniques Ontology.

**Methods:** Twenty transcripts of UK COVID national television briefings were purposively sampled out of 82 available on the Rev transcript portal. Descriptive information extracted about transcripts included duration, speakers, key policy proposals and target populations. Behaviour change characteristics extracted included Intervention Functions from the Behaviour Change Wheel and Behaviour Change Techniques from the Behaviour Change Technique Ontology. All data was extracted by two coders.

**Findings:** Most commonly identified Intervention Functions across the transcripts were Enablement, Education, Environmental Restructuring and Persuasion. 74 distinct BCTs from the Behaviour Change Technique Ontology were identified across the transcripts, with most commonly identified BCTs being Advise specific behaviour, Arrange instrumental support, Instruct how to perform behaviour and Prompt social comparison.

**Discussion:** This study is the first to analyse behaviour change strategies within national televised public health briefings. This talk will also discuss experiences using the Behaviour Change Technique Ontology.

## **Interventions aiming to change multiple healthcare professional behaviors: A systematic review**

Carolina C. Silva<sup>1</sup>, Marta M. Marques<sup>2</sup>, Zack van Allen<sup>3</sup>, Márcia Carvalho<sup>4</sup>, John Dinsmore<sup>1</sup>, Justin Presseau<sup>3</sup>

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**Background:** Healthcare professionals (HCPs) are required to engage in multiple clinical behaviours when providing care, and behaviour change advice although relevant is often neglected. This systematic review aimed to identify and synthesise the characteristics of multiple behaviour change interventions in HCPs.

**Methods:** Five electronic databases were searched up to November 2023. Randomised trials of interventions aiming to change more than one clinical behaviour and comprising 'provision of behaviour change advice' were included. Intervention components were extracted and specified using a data extraction form informed by existing ontologies within the Behaviour Change Intervention Ontology. Quality was assessed using the Risk of Bias tool. Behavioural outcomes identified from included studies were categorised into upper-level categories, and evidence was narratively synthesised.

**Findings:** Overall, seventeen studies were included, all of which aimed to change multiple HCPs' behaviours simultaneously, and most targeted physicians. Regarding intervention characteristics, they were typically brief in duration (median=5 days) and delivered in group formats (47.1%), through a combination of face-to-face and at-a-distance modes of delivery (41.2%). Only 3 studies reported using theory to inform intervention development (17.6%). Each intervention used at least one behaviour change technique (BCT; 21 BCTs across all studies). The most frequent BCTs were 'set behaviour goal' (84.2%) and 'add objects to the environment' (68.4%). Behavioural outcomes identified had varying levels of specificity preventing any significant comparisons.

**Discussion:** Inconsistent reporting in trials posed challenges when extracting information and comparing interventions. Using existing classification systems allowed for a detailed examination of intervention components, and to identify specific reporting limitations.

## **Identifying BCTs of a multi-component intervention including pictorial communication about subclinical atherosclerosis using the BCIO**

Elin Andersson<sup>1</sup>

<sup>1</sup>Umeå University, Sweden

**Background:** Imaging techniques have enabled the study of risk of cardiovascular disease in a more direct way by examination of atherosclerosis, the underlying disease causing the majority of all cardiovascular events. Atherosclerosis screening has the potential to improve risk prediction, and also opens up new ways of communicating risk -and possibilities to influence risk- in a more personalized manner. The RCT VIPVIZA, conducted in northern Sweden, has shown reduction of CVD risk factors with a sustained effect over three years, and regardless of participants' education level. For replication of effective interventions, structured descriptions of intervention content are important.

**Methods:** Using the Behaviour Change Techniques Ontology, BCTs were identified based on the research protocol, published articles, written and graphical communication material, informal talks with research nurses conducting motivational interviewing, interviews with study participants, the co-PI, and the coordinator for the population-based CVD/diabetes prevention program from which participants were recruited. Findings were reviewed with four researchers well acquainted with the trial.

**Findings:** Eleven BCTs were identified, e.g. Provide biofeedback, Provide feedback on outcome of behavior, Instruct how to perform behavior, Inform about health consequences, Increase salience of consequences, Persuade about personal capability.

**Discussion:** This talk will describe identification of BCTs from different sources and experiences using the Behaviour Change Technique Ontology in a multidisciplinary setting.

## **MOST Lab: Discussing Health Psychology Innovation Through the Use of the Multiphase Optimization Strategy**

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**Purpose:** The Multiphase Optimization Strategy (MOST) Lab session will instigate conversations regarding novel ideas on the use of MOST and provide a venue for brainstorming, networking, and collaborative action planning.

**Objectives:** 1) To provide a space for introducing, discussing, and resolving problems about the research methods that are part of MOST

2) To facilitate the identification of core problems within the field of intervention development and brainstorming ways MOST can be leveraged to solve them

3) To support structured networking to identify areas of interest within intervention optimization and potential collaboration

**Rationale:** MOST is a translational research framework that supports the development and testing of interventions that balance effectiveness with affordability, scalability, and efficiency. In essence, the framework supports the development of interventions in such a way as to consider real-world resource constraints from the beginning of the intervention design. By considering the implementation of the intervention from the early phases of research, the resulting intervention has more potential to be disseminated and used as intended, ultimately improving outcomes as desired. The companion experimental designs in the optimization phase of the framework provide highly efficient designs to answer difficult intervention questions. As opposed to a traditional 2 arm randomized controlled trial, randomized optimization trials can identify main and interaction effects on treatment outcomes, test decision rules in adaptive interventions, and evaluate other intervention or context constraints to empirically inform intervention development decision-making. To date, much of the research activity using MOST has been centered in the United States, owing to its birthplace. However, there have been efforts more recently to increase the use of MOST more broadly. The convenors of this lab, both experts in MOST, support the dissemination of the methods to a broader audience given its potential usefulness to the field of health psychology. By disseminating training and exposure to this new framework and catalyzing conversations about its use, the convenors aim to identify interested parties and compelling research topics and provide a venue for sparking new collaborations. Attendees will have an opportunity to report back on key takeaways or follow-up plans, and convenors will provide resources and materials to continue to learn and discuss MOST.

## **Stress and health behavior: Avenues for future research and collaboration**

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### **Purpose:**

This lab series aims to form a network of EHPS members researching stress and health behavior, a hot topic in health psychology. Potential outcomes of this meeting are the formation of a special interest group for planning joint publications and grant proposals to coordinate and strengthen EHPS research on stress and health behavior. This meeting is open to all delegates.

**Objectives:** (1) Obtain an overview of who is doing what in terms of health psychology on stress and health behavior in the EHPS; (2) Map the field of health behaviors in which stress is crucially implicated as well as the range, type and effectiveness of stress management interventions in the context of health behaviors; (3) Identify priority topics for joint research in this field; (4) Form a network of EHPS members on stress and health behavior, which might result in a special interest group, joint papers and grant applications.

### **Rationale:**

Even though health behavior is one pathway by which stress affects health, research on stress and health behavior has been tackled somewhat separately in health psychology. Lately, research adopting a joint perspective on stress and health behavior has been gaining traction, also owing to the increased availability of ecological momentary assessment expertise that facilitates the investigation of these processes and the proliferation of dynamic digital assessment tools and apps on smartphones, watches and related technologies. We believe it is time to form a network of EHPS members researching stress and health behavior to further promote this line of research, coordinate research efforts in different behavioral domains, and strategically position the EHPS at the forefront of its future development.



## **Tackling societal harms: Network analyses of Psychological Flexibility “foci” processes for stigma in chronic illness**

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The lack of clear medical explanations for many chronic illnesses often leads to stigmatizing and invalidating behaviors towards affected individuals, impacting both individuals' mental and physical health. While Psychological Flexibility (PF) processes have shown promise in mitigating stigma, identifying specific predictors and mediators has been challenging, limiting their practical application in interventions. Traditional methods fail to capture the dynamic interaction of stigma-related thoughts, emotions, and behaviours, hindering intervention development. Given that stigma is a multi-dimensional construct, network analysis offers a novel approach, conceptualizing stigma as a network of interacting patterns. In this study, we present findings from building network analyses in two cohorts of chronic illnesses conditions: Chronic Pain individuals (n=215; female= 81%, married=54%, university degree=45.1%) and individuals with various skin conditions (n=105; 57% female, with a mean age of 54), using the Glasso and Lasso R package, including the parametrisation bootent. We explored the potential role of the PF processes in buffering the effects of stigma; and identified the potential bidirectional relations among the PF processes, stigma, and stigma-related outcomes. Our analyses revealed the central role of acceptance and defusion processes in buffering the effects of stigma across both cohorts. Furthermore, values and committed actions emerged as significant factors in both models, suggesting foci for intervention development. These findings underscore the importance of tailoring interventions to tackle stigma in chronic illness. The findings indicate the centrality of some PF processes pointing to their potential utility of tailoring idiographic interventions for tackling the effects of stigma in chronic illness.

## **Affect shift dynamics in the prediction of psychological flexibility and well-being**

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How affective experiences, such as feelings, emotions, and moods, fluctuate over time is relevant for understanding and predicting psychological flexibility and well-being. In this talk I will present a novel approach to investigate affect dynamics grounded on the concept of multistability, a common behaviour of complex systems, characterised by abrupt shifts between two or more stable states. I will present data from self-report measures in two Ecological Momentary Assessment studies from Spain (N=65) and Germany (N=56) where participants were asked to rate how they feel on a single bipolar visual analogue scale ranging from very bad to very good, six times a day over the course of 29 days in the Spanish study and five times a day during 21 days in the German study. Results revealed a bistable behaviour in 65% of the Spanish and 46% of the German sample, suggesting that affective bistability is a prevalent feature of affect dynamics. Further, I will introduce a range of novel metrics that can be used to quantify the frequency and magnitude of shifts between positive and negative affect, and present evidence that particularly the ratio of positive to negative affect shifts (P2N-ASR) is a robust predictor of psychological well-being. I will argue that this novel approach of assessing affect dynamics has the potential to improve our tools for predicting psychological flexibility and well-being both in research and clinical settings.

## **A qualitative exploration of lifestyle behaviour changes following breast cancer diagnosis and treatment**

Lucy McGeagh<sup>1</sup>, Lauren Matheson<sup>1</sup>, Emma Davies<sup>1</sup>, Julie Bennett<sup>1</sup>, Jo Brett<sup>1</sup>, Sara Matthews<sup>1</sup>, Eila Watson<sup>1</sup>

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**Background:** Lifestyle behaviour modification can significantly reduce risk of breast cancer recurrence, yet few studies have explored experiences of making changes to alcohol consumption, diet or exercise following diagnosis and treatment. This study explored lifestyle behaviour change following breast cancer, including experiences of support and information.

**Methods:** Qualitative interviews were conducted as part of a larger mixed-methods study. Participants (n=140) were recruited through an online survey exploring lifestyle behaviours following diagnosis. A purposive sample of 21 were then interviewed (including those with higher alcohol consumption). Interviews were analysed using Thematic Analysis.

**Findings:** A diagnosis was often the impetus for changing exercise or dietary behaviours, yet less emphasis was placed on reducing alcohol consumption as a long-term change. Participants reported that lifestyle advice was either not provided, not individually tailored, or that, in some cases, they felt they were discouraged from making changes during treatment. Lifestyle advice by health professionals would have been welcomed early on and where it was offered, this was found to be empowering, valuing “a strong call to arms” to make changes. Key facilitators to behavioural change included peer support, weight and stress management.

**Discussion:** Individuals with breast cancer would value personalised, appropriately timed and empowering lifestyle related support and information to promote behavioural change. Future interventions are needed for both patients and health professionals to help increase awareness of the benefits of lifestyle changes post breast cancer, particularly regarding alcohol consumption, to enable informed decision-making and empowerment regarding making lasting lifestyle changes.

## **Views of cancer survivors living with obesity, on weight management and health behaviours: qualitative study**

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**Background:** Obesity and weight gain after a cancer diagnosis are associated with poorer outcomes. Weight management could help to reduce the risk of mortality and morbidity. We aimed to understand how a cancer diagnosis impacts weight, health-related behaviours, and views on weight management support among cancer survivors living with obesity.

**Methods:** We conducted semi-structured, one-to-one interviews with 19 people with a BMI  $\geq 30$ , who had previously been diagnosed with breast, colorectal or prostate cancer. Participants were recruited from two trials that aimed to improve health behaviours among cancer survivors ('ASCOT' and 'APPROACH'). The interviews explored how participants' cancer diagnosis had impacted their behaviours (e.g., diet, exercise), and their views on the importance of weight management support in cancer care. We are analysing the data using reflexive thematic analysis.

**Expected results:** At the time of the interview, the time since participants' cancer diagnosis varied from nine to 133 months. Early interview findings suggest the importance of tailored weight management support to participants, and the preference for this support to be introduced once active cancer treatment has ceased. Several informational needs were discussed, including the need to understand further the relationship between weight and cancer risk.

**Current stage of work:** All interview data has been collected and we have begun analysing the data. We anticipate having the full results available to share by EHPS 2024.

**Discussion:** The findings from this study could help to support future health psychology studies which aim to develop and adapt weight management interventions for cancer survivors.

## The role of coping in quality of life in multiple sclerosis: A 9-year follow-up study

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### Background

Coping with chronic disease such as multiple sclerosis (MS) is challenging as the course of the disease is unpredictable with emotional and physical difficulties affecting daily functioning. Various coping strategies can provide a promising way to improve quality of life in MS. The aim of this study was to examine association between coping strategies and Physical and Mental Quality of Life (PCS, MCS) in 9-year follow-up period.

### Methods

Data were collected in two waves (T1 in 2012-2014, T2 in 2021-2023). The sample consisted of 59 people with MS (84.7% female, mean age T1: 38.8±10.5 years; T2: 47.1±10.7 years). We used the 36-Item Short-Form Health Survey and Coping Self-Efficacy Scale. Data were analyzed by paired sample t-tests and linear regression analyses.

### Findings

Final models consisted of age, sex, education, functional disability, disease duration, and coping strategies as independent variables, and PCS and MCS as dependent variables. Coping strategies were not significant contributor to the overall explained variance in PCS, while in MCS, coping was a sole significant contributor. Explained variance in MCS ranged from 32.7% to 36.9% in T1 and 26.3% to 33.1% in T2. There were no major differences in the significance of the baseline and T2 models.

### Discussion

Both active and passive coping strategies seem to be adaptive at preventing of deteriorating of MCS. Moreover, this relationship is stable over time. Thus, education about adaptive coping strategies and intervention units may have long-term beneficial effect for people with MS, especially in mental domain.

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## **Self-compassion, health-related quality of life and psychological wellbeing in individuals with endometriosis: A prospective study**

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**Background:** The negative impact of endometriosis on psychological wellbeing and health-related quality of life (HRQoL) has been well-documented. Previous research has shown that self-compassion may be an important resource in coping with chronic illness. However, the role of self-compassion in endometriosis functioning is understudied. In addition, the mechanisms through which self-compassion may influence functioning are not well understood. The present study sought to examine the relationship between self-compassion and changes in HRQoL and psychological wellbeing in individuals with endometriosis over a period of six months. Pain acceptance, pain catastrophising and resilience were examined as potential mediators.

**Methods:** 276 individuals with endometriosis living in Aotearoa New Zealand completed online questionnaires measuring self-compassion, pain acceptance (activity engagement and pain willingness), pain catastrophising, resilience, and endometriosis symptoms at baseline. HRQoL and psychological wellbeing (depression and anxiety) were assessed at baseline and again 6 months later.

**Findings:** Higher self-compassion was associated with improvements in HRQoL and psychological wellbeing over the study period. Bootstrapped mediation analyses (controlling for number of endometriosis symptoms reported) showed that higher pain willingness and lower pain catastrophising mediated the relationship between self-compassion and changes in HRQoL. Higher pain willingness, higher resilience and lower pain catastrophising mediated the relationship between self-compassion and changes in psychological wellbeing.

**Conclusion:** These findings show that self-compassion may be an important resource in coping with endometriosis. Being self-compassionate encourages positive coping styles (less catastrophising, more pain acceptance and resilience). Interventions targeting self-compassion may be a promising tool to improve wellbeing in individuals with endometriosis.

## **Cardiac Distress: A case study in conceptualisation, measurement and translation into clinical practice**

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### **Objective:**

To detail the processes undertaken in the Cardiac Emotions Study, a multi-component project exploring the construct of cardiac distress (CD). A three-stage process of 1) conceptualising cardiac distress within health psychology theory, 2) developing a novel measure of cardiac distress, 3) translating the construct for use in research and clinical practice is described.

### **Methods:**

CD was conceptualised by a multi-disciplinary team of clinician-researchers, to address a conceptual gap, in which cardiac distress had often been defined simply by the way it was measured. E.g., defining distress as depression + anxiety, ignoring its multi-dimensional emotional content. Generation of a CD item pool will be described.

This item pool was tested in an international population of cardiac patients (N=405). To design a CD measure, a two-stage psychometric evaluation of the 74 items used exploratory factor analysis followed by Rasch analysis to confirm dimensionality within factors. A 12-item short form of the measure was also tested. Within the larger sample, a hospital case series (N=194) allowed for the first ever analysis of prevalence and severity of CD.

### **Results:**

Testing the item pool resulted in the Cardiac Distress Inventory (CDI); a 55-item assessment measure, comprising eight subscales: fear and uncertainty, disconnection and hopelessness, changes to roles and relationships, overwhelm and depletion, cognitive challenges, physical challenges, health system challenges, and death concerns. While the CDI is ideal for clinical assessment, the CDI Short Form (CDI-SF) was designed as a screening tool.

In the prevalence study, most commonly endorsed were dealing with symptoms, fear of the future, negative affect, and social isolation. A mental health history and financial strain were key risk factors for elevated distress. Translation of this work, in using the CDI in a psycho-cardiology clinic is illustrated. Translation and validation studies currently underway attest to the international significance of the CDI.

## **Investigating the Role of Gastrointestinal-specific anxiety and Disability in the Adjustment to Inflammatory Bowel Disease**

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**Background:** In this study an exploratory model was tested to investigate the mediating role of Gastrointestinal-specific anxiety and Perceived Disability in the relation between Disease Activity and the outcomes of Quality of Life and Depression in patients with Inflammatory Bowel Disease (IBD).

**Methods:** In a cross-sectional design, data from an online survey of patients with IBD (over the age of 16) recruited through a UK based IBD charity was used to test a model of serial mediation. Measures targeted Disease Activity (self-reported), Gastrointestinal-specific anxiety (Visceral Sensitivity Index), Perceived Disability (Perceived Disability Scale), IBD specific Quality of Life (UK Inflammatory Bowel Disease Questionnaire) and Depression (Depression subscale of the Depression, Anxiety and Stress Scale). The theoretical model was investigated using model 6 of the PROCESS macro for SPSS. Bootstrapped 95% confidence intervals were constructed for each estimate

**Findings:** 320 participants provided valid responses to the survey. Gastrointestinal-specific anxiety and Perceived Disability were found to serially mediate the relationship between Disease Activity and Quality of Life (95%CI = -.80 to -.19), And Disease Activity and Depression (95%CI = .13 to .59).

**Discussion:** Findings suggested that the effect of multiple psychosocial variables in the experience of people living with IBD and its respective outcomes should be taken into account when planning treatment. The theoretical and clinical implications of these findings are discussed.



## **Innovating smoking prevention through co-creation with adolescents and youth workers in social work organisations**

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**Background:** Adolescents experiencing societal vulnerability confront a higher risk of smoking initiation, thereby perpetuating health disparities. To develop a smoking prevention intervention tailored to these adolescents, employing a participatory approach like co-creation can ensure alignment with their needs. Navigating a co-creation process, especially concerning a sensitive topic like smoking, remains uncharted territory in existing literature, particularly when engaging with hard-to-reach youth.

**Objective:** This paper describes the co-creative process underpinning the KickAsh!-intervention, a smoking prevention program involving youth workers and 10-16-year-olds experiencing societal vulnerability.

**Methods:** Four youth workers (mean age = 23.75 ± 0.96) and nine adolescents (mean age = 13.56 ± 0.73) from two social work organisations in Belgium participated in a co-creation trajectory of eight months, together with two academic researchers and one design thinking specialist. The Double Diamond Model and the Intervention Mapping Protocol facilitated this trajectory. The objectives and working methods from each co-creation session are described.

**Results:** The outcomes of the co-creative process and how these findings have shaped the development of the KickAsh!-intervention – a website consisting of materials developed in collaboration with youth workers and adolescents – are described.

**Conclusion:** This paper emphasises the value of prioritising participatory designs structured by an evidence-based framework. This approach enables us to devise intervention strategies rooted in the lived experiences of adolescents and youth workers, ensuring practicality within the given context. The developed KickAsh!-intervention prioritises creative elements informed by evidence-based theories with the expectation of achieving effective outcomes. However, further research is needed to evaluate its effectiveness.

## **Barriers to, and enablers of, physical education engagement among school students aged 6-16 years**

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**Objective:** To identify the barriers to, and enablers of, physical education engagement among school students aged 6-16 years.

**Introduction:** The current body of literature and evidence syntheses on student engagement in physical education exhibit three significant shortcomings: a lack of stakeholder consultation, absence of recommendations for school-based physical education interventions utilizing the Behaviour Change Wheel, and nonutilization of the Mechanisms of Action Ontology.

**Inclusion criteria:** This review incorporates research that explores barriers to and/or enablers of engagement in physical education among 6-16-year-old students from high-income countries. Excluded are studies referring solely to special needs schools and those that primarily address engagement in physical activities beyond formal physical education classes.

**Methods:** The literature search is conducted on PsycINFO, MEDLINE, Scopus, Web of Science, ERIC, SPORTDiscus, CINAHL, and ProQuest Dissertations & Theses, with screening facilitated by ASReview and Covidence. Coding of data from eligible studies is performed in NVivo, employing the Capability, Opportunity, Motivation, and Behavior model along with the Mechanisms of Action Ontology. Empirical findings are later discussed in a stakeholder consultation, and, ultimately, the Behaviour Change Wheel and the Theory and Techniques Tool are employed to pinpoint pertinent intervention functions and behavior change techniques.

**Expected results:** The current literature associates student engagement in physical education with self-determination theory, but additional research is needed to identify the barriers and enablers related to capabilities and opportunities for enhancing engagement. The study also provides a list of intervention functions and behavior change techniques, offering insights for future interventions in physical education engagement.

## Cross-lagged analyses of the effects of interpersonal communication, news consumption and trust on health behaviours

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Adherence to behavioural regulations (ABR) during health crises is influenced by, among others, news consumption, interpersonal communication and trust in government. This study explores the longitudinal relationships between these factors during the first COVID-19 year in the Netherlands.

We used longitudinal data collected by the Dutch National Institute of Public Health and Environment. Data from four waves (May 2020-January 2021), on 6341 respondents, were analysed. A cross-lagged model was employed, in AMOS-29, including four variables: news consumption frequency, interpersonal communication valence, trust in government, and ABR, all measured in each of the four waves. Given the large sample size, only effects above  $\beta > .10$  were considered worth interpretation ( $p$ -value  $< .05$ ).

Preliminary results, focusing on handwashing, revealed reciprocal effects between interpersonal communication valence and trust in government ( $\beta$  between  $.17$ - $.31$ ). This means that more positive interpersonal communication about the government's COVID-19 regulations led to a higher trust in government, and vice versa. No substantial effects were found between news consumption frequency and the other variables ( $\beta < .07$ ), nor between ABR and the other variables ( $\beta < .03$ ). For EHPS2024, we also plan to analyse and present the effects on adherence to other COVID-19 behaviours.

Interpersonal communication valence and trust in government appear to influence each other during pandemics. Therefore, public campaigns aiming to increase trust in government could focus on/promote positively valenced interpersonal communication. The two-step flow communication theory, suggesting that interpersonal communication mediates news consumption effects on (health) behaviour does not seem to apply to handwashing behaviour, however, future research should explore this in the context of other behaviours.

## **The influence of emotions and health information on healthier food shopping behaviour in a supermarket**

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**Background:** Previous studies have found an effect of positive emotion induction (EI) on healthier food choices. These findings have not yet been applied in a food shopping context. Building on the emotion-imbued choice model by Lerner et al. (2015), this study investigates if positive EI (in combination with health information) can increase healthier food shopping behaviours.

**Methods:** An intervention study in two supermarkets in Germany will be carried out in April 2024. Participants (n(minimum)=252), who are doing their household shop, will be recruited based on opportunity sampling. Participants will be randomly allocated to one of three video nudging conditions: 1. Positive EI, 2. Positive EI + health information in form of a nutrition pyramid, 3. Neutral EI (control group). They will be nudged at the start of the experiment, followed by their food shop and a short questionnaire. A score for healthy products purchased (fruit and vegetables) will be calculated. The data will be analysed using descriptive statistics and mean comparisons (One-way ANOVA).

**Expected results:** Participants in the positive EI + health information condition will show the highest scores of healthy food products purchased, followed by the positive EI condition and finally the control condition.

**Current stage of work:** We are currently awaiting ethics approval of our study.

**Discussion:** Findings can inform future health interventions, as well as practitioners. Positive EI, in addition to easy-to-understand health information may be useful tools to increase healthy food purchasing behaviour in supermarkets. Additionally, positive EI could improve the overall shopping experience.

## **Sustainability in food-based dietary guidelines: a review of recommendations around meat and dairy consumption**

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Citizens in high-income nations need to urgently change their dietary patterns. They need to move away from animal-based foods, particularly meat and dairy, and shift toward more plant-based diets, to reduce greenhouse gas emissions and land use from the food system. This could also have substantial health co-benefits (e.g., reduced risk of heart disease, stroke, and some cancers). Food-based dietary guidelines are country-specific and communicate nutrition recommendations to the public. However, it is not known how different countries' FB DG communicate reducing meat and dairy intake to citizens in the context of sustainability.

We reviewed global consumer-facing dietary guidelines (n=58) to explore information and recommendations for reducing meat and dairy consumption in the context of sustainability, and the pictorial representation of these foods compared to other foods.

A minority of countries used a sustainability argument to recommend reducing meat (6/58) or dairy (2/58) intake. The proportion of meat images within visual food guides was consistently lower than dairy images. Furthermore, guidelines lacked specific actionable advice around sustainability and diet.

Only a very small number of countries recommend reducing meat and/or dairy consumption. Clearer guidelines backed by current evidence around both health and sustainability are needed. These guidelines should provide justification behind recommendations, actionable advice for meeting the recommendations, and appropriate quantified targets or limits of certain foods. This well-rounded advice is imperative to empower citizens to change their dietary habits, to reduce global meat and dairy consumption and shift towards more sustainable diets for human and planetary health.

## **Focus groups on stakeholders' needs and preferences regarding a genomic newborn screening program in Germany**

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**Background:** With the identification of genetic causes for numerous diseases increasing, there is an ongoing debate on incorporating genome sequencing into newborn screening programs. This would enable parents to discover hereditary predictors and genetic susceptibility for known disorders in their child. However, interpreting genetic testing probability scores may be complex, leading to consequential family decisions. This could increase parental stress. Thus, prior to potential implementation in Germany, we seek to understand stakeholder perspectives.

**Methods:** We conducted four online focus groups with parents, patient representatives, and healthcare professionals to explore perceived opportunities, challenges, and needs regarding a potential gNBS program in Germany. The focus group discussions were semi-structured and involved 24 participants. Sessions were audio-visually recorded and transcripts were analyzed using a qualitative content analysis approach.

**Findings:** Participants shared positive views on gNBS, but also voiced reservations, with a salient theme being the conflict between expected certainty and numerous uncertainties related with gNBS. Parents especially expressed concerns about psychological challenges. Ambivalence, both inter- and intraindividual, surfaced, particularly regarding disclosure of (non) actionable findings. Despite this, unanimous support for standardized prenatal education, potentially with video support. Key concerns included data protection and long-term support with a multidisciplinary team, including psychological support in case of abnormal findings.

**Discussion:** We gathered key insights on stakeholders' concerns, risk perception, needs for informed consent and communication, and supportive care needs in case of abnormal findings. Family interactions play a role too. Further analysis of preferences related to disease actionability and penetrance is warranted.

## **Voices in Co-Creation: Understanding Participant Experiences in Developing a Smoking Prevention Intervention**

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**Background:** Smoking initiation disproportionately affects certain population groups, including socially vulnerable adolescents. This emphasises the need for an innovative and effective approach, such as co-creation, to develop tailored interventions that address smoking initiation disparities. For this research an intervention was co-created with adolescents and youth workers from two youth social work organisations. The aim of this study was to analyse the experiences of participants engaged in this co-creation process.

**Methods:** Participants included youth workers (n=5) and socially vulnerable adolescents (n=9). To develop the intervention, co-creation sessions with youth workers, a 3-day co-creation camp and follow-up sessions with adolescents were conducted. Data were collected through individual interviews with youth workers and two focus group discussions with adolescents. A thematic analysis was performed.

**Findings:** Analyses revealed important preconditions for co-creation, including obtaining and maintaining accessibility to participate, building a bond of trust, considering context, acknowledging motivation and ensuring shared decision-making. In general, participants experienced the co-creation process in a positive way. Good group atmosphere facilitated collaboration and increased engagement throughout the project. Participants, especially youth workers, experienced capacity building. Feelings of ownership and empowerment varied between participants. Used co-creation methods (e.g., using games, drawing your opinion, group discussions) were perceived as adequate, yet adaptation to the target population should be kept in mind.

**Conclusion:** This study gives insights into the collaborative dynamics and processes that emerged throughout our co-creation process, enabling the refinement of co-creation methodologies. Additionally, these findings underscore the importance of using an inclusive approach when addressing health disparities.

## **Work-in-progress: Measuring public acceptability of using Artificial Intelligence in a national Breast Screening Programme**

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### **Background**

The integration of AI tools in breast screening has the potential to improve outcomes by reducing radiologist burden and improving accuracy in the detection of cancers.

We aimed to measure the acceptability of AI use in breast screening within the mammogram reading pathway, to highlight potential sociodemographic inequities and elucidate communication needs.

### **Methods**

We conducted an online population-based survey with breast screening candidates (ages 45-70 years) living in England. Questions were derived from twelve focus groups (n=64) and refined through cognitive interview testing (n=12). Respondents were randomly assigned to receive information about one of two AI use-case scenarios: (1) AI as second mammogram reader, or (2) AI as a triage tool.

### **Planned findings**

The planned sample size is ~3600, with 596 responses so far. Data collection will be completed by the end of March, with findings ready to report at the conference. An analysis plan has been pre-registered on Open Science Framework ([osf.com](https://osf.com)). Frequencies of AI use-case acceptability (anticipated acceptance, experience, and attendance), concerns, expectations, and information provision preferences will be reported. Chi-square tests will be used to compare acceptability of AI as second reader and as a triage tool. Logistic regression will be used to explore differences in acceptability by age, ethnicity, or education level and whether any differences are explained by psychological factors.

### **Discussion**

An early understanding of public acceptability of AI tools being used in breast screening is essential for responsible and ethical deployment, to maintain confidence in healthcare services and ensure widespread, equitable engagement.



## **Examining cultural responsiveness of COVID-19 vaccination messages for Latino persons in the California Central Valley**

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**Background:** Persuasive messaging promoting COVID-19 vaccination uptake has been a central strategy of health agencies to ensure control of COVID-19 infection rates and to curtail outbreaks. Despite these efforts, Latino persons living in California's Central Valley have lower primary series and booster vaccination rates compared to state and national averages and report higher levels of vaccine hesitancy. These disparities in vaccination rates are concerning given that individuals in underserved groups are shown to be disproportionately affected by the negative health consequences of COVID-19 infection. A potential factor contributing to lower COVID-19 vaccination rates in this population is the lack of culturally tailored vaccination promotion messages. Thus, the development and dissemination of culturally and contextually tailored messaging to increase COVID-19 vaccination has been declared a public health priority. **Aim:** We examined, via participatory action research methods, the cultural appropriateness of messages used to promote COVID-19 vaccination and the adoption of culturally relevant salient beliefs embedded within. **Methods:** Four focus groups guided by a semi-structured interview protocol among the target population were conducted. Alongside this were a scoping review of the scientific literature and searches of government and community websites in this context. **Results:** Findings showed the majority of messages delivered were developed in English with limited consideration to cultural sensitivities, and targeted people's attitudes only. Suggestions were provided on improving message content to be relevant to the target group. **Discussion:** Results provide valuable insights that can inform subsequent development of culturally-tailored COVID-19 vaccination messages for Latino persons in the Central Valley.

## **Exploring intersectional inequalities in wellbeing during the COVID-19 pandemic: a longitudinal intersectional MAIHDA approach**

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**Background:** While the COVID-19 pandemic highlighted resilience in the general population, it also exacerbated pre-existing inequalities. Traditional single-axis analyses of vulnerability may obscure the nuanced impact of concurrent social (dis)advantages; however, intersectionality provides a framework for understanding complex identities. This study employs the MAIHDA approach to explore the role of intersectionality in explaining variation in average levels and trajectories of wellbeing during the pandemic.

**Methods:** 26,145 participants were included from a Dutch cohort study spanning 2.5 years (20 waves) of the pandemic. Intersectional strata were defined as the intersection of social categories—living situation, sex, education, and migration—resulting in 48 distinct strata from which individuals and their observations were nested. Controlling for age, step-wise models evaluated the discriminatory accuracy of the intersectional strata for average levels and trajectories of loneliness.

**Findings:** Intersectional strata demonstrated a modest amount of explanatory power for average loneliness throughout the COVID-19 pandemic. However, the variance in trajectories of loneliness could only be minimally attributed to the intersectional strata.

**Conclusions:** Findings highlight the dynamic nature of pandemic wellbeing and the utility of an intersectional framework, while also reiterating the complexity within this phenomenon. The intersectional strata's small explanatory power does not negate the presence of disparities; rather, they suggest that wellbeing is influenced by a myriad of factors at various levels, with individual variation being a primary and often expected source of differences. Upcoming analyses will seek to disentangle the mechanisms of intersectional effects and highlight sources of inequalities for both loneliness and mental health.

## **Psychosocial and contextual determinants of protective behaviour during the COVID-19 pandemic: insights for future strategies**

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**Background:** Understanding drivers of prevention behaviours during pandemics is key to effective policies and communication. Currently, longitudinal studies of prevention behaviours are rare.

**Methods:** We used individual-level data (186,490 participants in 21 surveys conducted throughout the entire pandemic) from the Corona Behavioural Unit Covid-19 Cohort, a dynamic cohort study conducted during 26 months of the Covid-19 pandemic in the Netherlands. Longitudinal between- and within-person models on distancing, handwashing and isolation/quarantine were estimated.

**Findings:** Adherence to distancing guidelines was higher in periods with a more severe Covid-situation, while adherence to handwashing and quarantine/isolation guidelines remained stable throughout the pandemic. Both distancing and isolation behaviour varied across situations. Distancing was lower in social situations and when the environment provided fewer opportunities to distance (e.g., in a crowded supermarket or at work). People were more likely to isolate when testing positive compared to other quarantine/isolation situations (e.g. when experiencing symptoms). Also, if people with a positive test were not adherent, they tended to engage in lower-risk (i.e. outdoor) activities only. We found a few consistent sociodemographic differences (lower adherence among younger age groups and in more rural areas) and of the psychosocial determinants, response efficacy was the main driver of behaviour.

**Discussion:** Government and public health professionals should clearly communicate the severity of the pandemic and the effectiveness of prevention measures, particularly for behaviours where motivation may be lower (isolation when experiencing symptoms and distancing in social situations). Moreover, modifying the environment could improve people's capabilities and opportunities to adhere to guidelines.

# The Role of Self-Compassion in Loneliness during the COVID-19 Pandemic

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**Background:** The COVID-19 pandemic has produced unprecedented changes in the lives of many people. Although research has documented associations between concerns related to COVID-19 and poor mental health indicators, fewer studies have focused on positive factors that could help people better cope with this stressful social context. We present findings from two longitudinal studies. The first study explored the psychological implications of sanitary behaviors, including social distancing restrictions, on well-being during the pandemic. The second study examined the role of self-compassion, an emotion regulation strategy, as a buffer against diminished well-being arising from the challenges posed by COVID-19.

**Methods:** Employing a group-based trajectory modelling approach, our studies explored the associations between sanitary behavior adherence, self-compassion, and well-being from 6026 Belgian residents across six waves from April 2021 to December 2021.

**Findings:** First, we demonstrated that increased adherence to social distancing rules is associated with diminished well-being, including heightened loneliness, over time. Second, we found that individuals characterized by high levels of self-compassion facets—specifically self-kindness and common humanity—show lower levels of loneliness, over time.

**Discussion:** To address mental health challenges, health authorities and policies should promote sanitary behaviors while always taking into account their potential psychological impact. Additionally, we highlight the potential of cultivating self-compassion, an individual strategy, as a complementary approach to promoting better mental health in similarly challenging situations.

## **Redefining the Intention-Behavior Gap: A Multidimensional Difference Framework of the Intention-Behavior Gap**

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The intention-behavior gap (IBG) poses a significant challenge within health psychology, highlighting the discrepancy between individuals' preconceived intentions and their actual behaviors. Predominantly, research within the domain of physical activity employs two approaches to IBG: the Amount of Unexplained Variance and the Action Control Framework. The former assesses IBG by calculating the amount of behavioral variance unexplained by intentions, using linear regression to identify explained variance and applying interaction effects to identify IBG moderators (see Rhodes et al., 2022 for a review). Conversely, the action control framework views IBG as the "ratio of unsuccessful to successful intenders" (see for a meta-analysis Rhodes & DeBrujin, 2013; Feil et al., 2023) and uses discriminant analysis to explore differences between successful and unsuccessful intenders. Although extensive research exists, traditional methods, often based on cross-sectional designs, fail to capture the dynamic nature of the IBG and the variations that occur within individuals. This presentation introduces a novel Multidimensional IBG Difference Framework, which redefines the IBG as a multidimensional difference between intended and actual behaviors, proposing variability across four dimensions: individual differences, temporal dynamics, contextual factors, and behavioral manifestations. It advances a novel perspective for measuring intentions and behaviors and recommends specific research designs for exploring IBG. Essential to this framework is the use of intensive longitudinal research designs incorporating multiple intention measurements within a single behavioral episode, utilizing ecological momentary assessment alongside a mixed methods approach to scrutinize the complex interaction between intentions and behaviors. Through the application of a specific mathematical model, this innovative framework seeks to enhance our comprehension of the IBG, thereby facilitating the development of more efficacious strategies for behavior modification and health behavior promotion.

## Trait self-control and social cognition predictors of health behaviour: A meta-analysis

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**Background:** Research demonstrates that people with high self-control are better able to regulate their thoughts, emotions, and impulses compared to those with low self-control. Given the evidence of the role of self-control in behaviour and hypothesised long-term outcomes such as health and wellbeing, we sought to determine the relationship between self-control and people's health behaviour through a synthesis of the existing literature. **Aim:** We aimed to meta-analyse correlations among self-control and constructs (e.g., attitude, risk perception, self-efficacy) from key social cognition theories (e.g., theory of planned behaviour) and use them to test theory predictions and effects of salient moderators on intentions and health behaviour. **Methods:** A systematic search identified 25000 potential studies of which 493 provided correlations between self-control and at least one social cognition construct, intention, or behaviour. Theory predictions are tested using meta-analytic structural equation modelling. Studies are also coded for candidate moderators of model effects (e.g., age, gender, length of follow-up, behaviour type, and type of assessment), with the proposed models estimated at each level of the moderators. **Findings:** Results supported theory predictions with direct and indirect effects of self-control on intentions and behaviour, mediated by social cognition constructs. Model effects hold when controlling for past behaviour, supporting the sufficiency of the theory. Few moderator effects were observed on relations between theory constructs. **Discussion:** Findings support the role of self-control in predicting behaviour, and identifies important social cognition determinants of health behaviours. The tested model signposts potentially modifiable targets for behavioural interventions for individuals low on self-control

## **Migrant women's information seeking behavior and needs, concerning cervical cancer prevention: a scoping review**

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Migrant women are often disproportionately affected by cervical cancer (CC), but participate less in CC prevention programs. To support informed decision-making, this study investigates literature on migrant women's information needs regarding CC screening participation and HPV vaccination uptake.

A scoping literature review was conducted to provide an overview on whether, which and how information is obtained by migrant women. Embase.com (including PubMed) and PsycINFO were searched in February 2023 to gather data, followed by a full-text analysis conducted by two researchers.

In total 348 articles were derived from the databases, of which 64 articles were included. The review showed that migrant women indicate a need for more personalized information regarding CC screening and HPV vaccination. In particular, identified barriers for obtaining, processing, and understanding the information, which included overall practical, emotional, cultural and religious aspects, such as shame, taboo, lack of trust, fatalism, and cultural norms and values regarding sexual activity. Also, some facilitators were identified, such as translation services, receiving information from someone with a similar cultural and/or religious background, encouragement by other women or family, and using home visits as an outreach strategy.

Our review provides a comprehensive overview of the needs mentioned in literature, which could be used to tailor interventions to the needs and preferences of this vulnerable groups, considering the contextual nuances in which they are situated. Considering their needs in newly to be developed information materials may support migrant women in making informed decisions regarding participation in CC prevention programs.

## **Colorectal cancer screening in people with intellectual disabilities: Exploring needs, facilitators, and barriers**

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### **Background:**

People with intellectual disabilities (ID) face significant barriers to healthcare and preventive care, resulting in delayed cancer diagnosis and poor prognosis. This study aims to identify the barriers, facilitators, and needs of people with ID for an inclusive colorectal cancer (CRC) screening programme in Austria.

### **Methods:**

Semi-structured qualitative interviews were conducted with 31 adults with ID in the form of focus groups and individual interviews. Thematic analysis was used to analyse the qualitative data with four researchers involved. The identified themes were analysed using the Theoretical Domains Framework (TDF) and the Capability, Opportunity, Motivation, and Behaviour Model (COM-B).

### **Results:**

The study findings provide insights into the experiences of individuals with ID regarding mental processes, emotional aspects, beliefs, and cognitive factors that influence their participation in CRC screening. Barriers to accessing healthcare at organisational, societal, and systemic levels are revealed. The findings highlight the important role of personal support and trusting relationships. Specific needs and targeted interventions are identified.

### **Conclusions:**

The study establishes the groundwork for inclusive screening programmes and contributes to evidence-based improvements in participation rates for people with ID in cancer screening programs, helping to reduce mortality rates in this underserved population. The implications extend beyond research and inform practice by providing valuable insights into the design of screening programmes for people with ID while promoting inclusion and equity in healthcare.

**Keywords:** Cancer screening, Colorectal cancer, Healthcare, Equity, People with ID



## **Digitizing communication of population cancer screening programs: An inclusive redesign**

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**Background:** Government's desire is to digitize the communication regarding the population screening for breast, cervical and colorectal cancer. The aim of this study is to redesign this digital communication with (potential) clients with low literacy, a migration background, and elderly.

**Methods:** Four co-creation sessions were performed with 11 to 16 participants (50-79 years old) to develop prototypes of the letter, website and client portal, in line with identified needs and preferences, via: 1) user journey, 2) cut-and-paste on paper creating a new design, 3) using the website via phone/tablet, 4) a prototype including all insights from previous sessions. We analyzed this data, collected from interview questions, observations, thinking aloud method, and output materials.

**Findings:** The following recommendations emerged from the co-creation sessions: 1) providing information concisely and in a central place, 2) person-centered communication, 3) visible possibility of language choice, and 4) the possibility of allowing a trusted support figure (for example, family) to access the client portal.

**Discussion:** It is important to involve stakeholders in the interpretation of the results and recommendations during the co-cocreation sessions. This allows stakeholders to constantly evaluate and assess what is and what is not possible, what they want to focus on, and provide feedback so that this is also considered in the co-creation sessions to optimize the information needs of the target group. The co-creation sessions were valuable for both the stakeholders (knowledge to adapt current information and communication) and the target group itself (information, appreciation, and empowerment).

## **Needs of pregnant women with limited literacy skills for digital decision support about prenatal screening**

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**Background** – Informed decision making about prenatal screening is challenging for pregnant women with limited health literacy skills. This study aims to identify their needs for the layout, functionalities and content of a digital decision aid about prenatal screening.

**Methods** – Needs of pregnant women (N=16) regarding the decision aid were identified by means of individual and group interviews. The decision aid was iteratively developed; each iteration (N=3) was evaluated via individual interviews (N=12 in total) using various methods (e.g., think-aloud, teach-back). The semi-structured interviews were thematically analyzed and summarized by two researchers.

**Findings** – Pregnant women indicated a need for a digital decision aid used on their mobile phone, in spoken form in multiple languages. They preferred an explanation of prenatal screening and that they can make their own choice. Points for improvement of the decision aid were to choose a clear role and appearance of the avatar, and the use of a brief title, a subtitle and explanation of the goal of the decision aid. The final version of the decision aid is mobile first, multilingual, and an avatar provides information about experiences of others, information about prenatal screening tests, help with the decision, and an opportunity to gather remaining questions for the obstetric care provider.

**Discussion** – This study contributes to equity, inclusive and evidence-based decision support by providing recommendations regarding the layout, functionalities and content of a digital decision aid regarding prenatal screening for pregnant women with limited health literacy skills.

## **Adolescents scoring on alexithymia exhibit altered interoceptive brain activity: a heartbeat-evoked potential (hep) study**

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**Background:** Alexithymia (AT), characterized by impaired emotional identification and expression, might overlap with atypical interoception - the perception and processing of bodily signals. Prior research suggests that brain regions involved in interoception may be implicated in AT. Furthermore, a distorted perception of bodily sensations might hinder appropriate identifying and regulating of emotions. The present study investigates this link between AT and interoception in adolescents using the heartbeat-evoked potential (HEP), an EEG-potential reflecting cardiac interoceptive processing.

**Methods:** Forty-seven healthy adolescents (mean age 14.29, 53.20% female) underwent EEG recordings during an interoceptive heartbeat tracking task and resting condition. AT was assessed using the Toronto Alexithymia Scale (TAS-20).

**Findings:** During the interoceptive task, frontocentral HEP activity in the right hemisphere correlated negatively with the total AT score (Spearman's  $r_s = -.37$ ,  $p = .010$ ), particularly with the "difficulties describing feelings" ( $r_s = -.32$ ,  $p = .030$ ) and "difficulties identifying feelings" ( $r_s = -.31$ ,  $p = .037$ ) subscales. No significant correlation was observed between resting-state HEP and AT scores.

**Discussion:** These findings propose altered neuronal processing of cardiac signals in adolescents that scored higher on AT. This is consistent with previous studies that have linked AT to altered interoceptive processes. The result can be interpreted in terms of the predictive coding framework, whereby adolescents with elevated AT have difficulty to correctly predict upcoming internal signals due to a misguided precision weighting of their priors and prediction errors. This study connects AT to interoception, suggesting potential avenues for understanding AT pathways.

## **Emotional and stress-eating in 800 healthy individuals using ecological momentary assessment: a secondary analysis**

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Stress and negative Emotions on the one hand and eating on the other have strong reciprocal relationships. Emotional and Stress Eating refer to the tendency to eat in response to emotional experience and stress, respectively. However, the evidence is mixed for emotional antecedents and consequences of eating and their relationships with eating style questionnaires. To study the temporal relations between a range of emotions, stress, food craving, and snacking behavior, we analyzed over 40.000 data points obtained through ecological momentary assessment from 801 participants across nine different studies. Eating style questionnaire scores functioned as moderators for the emotion-snacking/craving relationship in generalized linear mixed models. We found that feeling bored, irritated but also cheerful or enthusiastic was concurrently associated with more craving while relaxation was associated with less craving. These effects were moderated by a range of eating style questionnaires. Snacking was significantly positively predicted by boredom only. Snacking (compared to not snacking) in turn predicted more boredom and less irritation later. Snacking was also associated with a stronger reduction in feeling irritated from the previous timepoint. Eating style questionnaires played no significant moderating role, except that self-identified stress and anger eaters reported more stress after snacks than after not snacking. These results from a large dataset collected through EMA support the interpretation of eating style questionnaires as a general tendency to experience food craving but not to engage in snacking when emotional. Future research should identify situational factors that moderate the complex relations between emotions, eating styles, and actual behavior.

## **Dynamics of interoception when facing speech-induced stress: A work in progress**

Lorena Desdentado<sup>1</sup>, Jéssica Navarro-Siurana<sup>2</sup>, Marta Miragall<sup>2</sup>, Desirée Colombo<sup>3</sup>, Rosa M. Baños<sup>2</sup>, Olga Pollatos<sup>1</sup>

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**Background:** Previous research suggests that impaired interoception plays a critical role in a wide range of psychopathological disturbances, most of which consider interoception as a trait-like construct. However, it is known that interoceptive processes are subject to fluctuations. Sensitivity to non-resting states seems to be particularly relevant in relation to emotion processing. This work aims to investigate how cardiac interoceptive processes fluctuate in response to a stressful event.

**Methods:** A total of 128 adult participants will be recruited and randomly assigned to either the stressful or the control condition. The stressful condition consists of a 3-minute impromptu speech, whereas the control condition consists of reading written passages aloud. The Heart Rate Discrimination task and the Hedonic and Arousal Affective Scale will be administered before and after the experimental conditions. Emotion reactivity and anxiety will be assessed with baseline questionnaires.

**Expected results:** First, it is expected that interoceptive processes (i.e., threshold, precision, and metacognitive efficiency) will improve in response to a stressful event (vs. a control task). Second, it is expected that the change in interoceptive processes (i.e., differential scores) in response to a stressful task will be related to baseline anxiety and induced stress. These hypotheses will be tested with mixed-effects models in R.

**Current stage of work:** The study protocol has been submitted to the Ethics Committee at Ulm University.

**Discussion:** This study will deepen the understanding of interoceptive mechanisms involved in the human emotional experience, potentially paving the way for novel therapeutic approaches.

## **Patient and public involvement to reduce inequalities in breast cancer screening and early detection**

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**Background.** Breast cancer survival in parts of East London is lower than the national average, indicating a need for improving early detection. This region is characterised by its diverse population, often facing inequalities. An aim was to establish a community advisory group to guide research on reducing inequalities in screening participation and help-seeking for symptoms.

**Methods.** We formed a multi-ethnic community advisory group (12 women, 7 Asian, 3 (other) White, 1 Black, 1 mixed Arab) by collaborating with local community organisations and patient and public involvement groups. Group members have been joining regular group meetings and workshops to discuss experiences with screening and symptom awareness. They have been advising on two workstreams: 1) quantitative analysis of screening, referral, and diagnosis data by general practice and 2) evidence synthesis of existing reviews.

**Findings.** The community advisory group discussed barriers to early detection, including challenges in navigating current pathways, insufficient knowledge of screening risks and mistrust in Somali communities, resistance to BRCA testing in Jewish communities, language barriers, and mental health issues. They summarised previous initiatives, explained quantitative results from a local perspective, discussed the potential of interventions identified in the evidence synthesis, and advised on research questions and approach.

**Discussion.** Involving a community advisory group in the research is instrumental in conducting locally relevant research, understand findings, and identify potential interventions, which may have been missed from the analyses. Findings will be integrated to develop intervention studies to improve breast cancer outcomes whilst reducing inequalities in East London using participatory methods.

## Using participatory methods to achieve impact: A breastfeeding research case study

Amy Burton<sup>1</sup>

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Participatory Action Research (PAR) engages individuals with lived experience in the co-creation of knowledge and facilitation of action. This talk will draw on learning from two recent PAR projects which aimed to understand and improve breastfeeding rates in Stoke-on-Trent in the West Midlands of England. Stoke-on-Trent has one of the lowest breastfeeding rates in the country with initiation at around 53%, well below the England average of 67%<sup>1</sup> falling to around 35% of children receiving any breastmilk at 6-8 weeks compared to 49% in England.<sup>2</sup> Stoke-on-Trent is an area of high deprivation with lower than national average life expectancy, around 24% of children living in low-income families, and a high infant mortality rate at 7.5 per 1000 births <sup>1</sup>. Breastfeeding has been linked to reduced infant mortality risk in urban areas<sup>3</sup> therefore increasing breastfeeding uptake and maintenance has the potential to improve public health in Stoke on Trent.

The strengths of using PAR approaches to achieve impact will be reflected on through drawing on learning from two recent projects:

(1)A Photo Voice project with breastfeeding peer supporters who collected photographs of local environments to better understand the environmental features which either promote and support breastfeeding or represent barriers to breastfeeding.

(2)A project engaging members of the Pakistani community as co-researchers to better understand the facilitators and barriers to breastfeeding through collaboration on the delivery of a community event incorporating family friendly activities and data capture using creative tools.

## Research engagement with underserved women

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**Background:** To address healthcare inequities, research must include underserved populations in order to improve access to and uptake of healthcare services within these groups. However, individuals who are underserved by healthcare services are also often underrepresented in healthcare research; while they may be 'hard to reach', they should not be 'hardly reached'.

**Method:** This work includes two projects developing interventions for breast screening, and one project for cervical cancer, each comprising 1-4 workshops. These workshops led to the development of an animated video on breast cancer screening, SMS messaging for interventions targeted at specific underserved subgroups, and co-production of a leaflet-based breast cancer screening intervention. Workshop participants included women from ethnic minority groups, high deprivation households, with multimorbidity, and women at the intersections of these groups.

**Findings:** Findings include recommendations for successful recruitment both online and in person including how to achieve representativeness of the target demographic; differences in conducting workshops online versus in-person in terms of facilitation and participation; adjusting for additional language and access needs in heterogeneous groups; and considerations around appropriate remuneration for women who may have low digital literacy and/or not have a private bank account. This paper also advises on sensitivity towards cultural needs within specific subgroups, and the importance of working with advocates, as 'gatekeepers' to communities to facilitate recruitment and participation.

**Discussion:** Involving underserved groups in research, especially research focused on addressing health inequities is critical. This paper presents recommendations for conducting successful co-design with women from underserved groups to inform future research.



## **Digital Stories as Participatory and Relational Inquiry in Cervical Cancer Prevention**

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**Background:** Inequities in reproductive health are generally avoidable, since they are tied to socioeconomic inequities, systemic barriers and the social constructions of gender. Bulgaria continues to have staggering levels of mortality from cervical cancer. Bulgaria is participating in the CBIG-SCREEN project, a Horizon 2020 Program including 10 collaborating countries in Europe. Its primary aim is to address health inequities, using participatory methods which foster engagement and dialogue.

**Methods:** We are conducting participatory inquiry through Digital Storytelling, a narrative relational methodology. It places the voices and dialogues of women at the center of research in local contexts. Through the process of participatory research and action, meanings and ideas for change are co-constructed and structural barriers, inequities are critically discussed. Underserved women (12) and (3) researchers participated in four Community Workshops, held in Sofia.

**Findings:** The process led to understanding the relational engagement during the workshops, and co-creation of contextually relevant Digital Stories (DS), exemplifying health promotion messages. Women consulted and trusted each other as sources of knowledge during the workshops and were presented as such in the DS plots. Health promotion DS were created and addressed to other women with the aim of individual and community empowerment for sustaining health. The stories exemplified intergenerational values, traditions, and memories as a source of knowledge, trust and appreciation of health.

**Discussion:** The co-created Digital Stories express culturally relevant values of relationality and caring for others as integral to health, reduction of health inequities and improving cervical cancer screening.

## Social support in the daily lives of individuals with chronic low back pain

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**Background:** Social support can modulate pain and thus constitutes a promising resource in low back pain. Previous research has provided insights into the role of instrumental support in pain (e.g., taking over someone's chores), but less is known about emotional support (e.g., comforting behaviors). Additionally, while experience sampling methodology (EMA) has increasingly been applied in pain assessment, social support related to pain has rarely been examined in daily life. Therefore, our aim was to examine low back pain and relevant social support by applying EMA.

**Methods:** We included 82 individuals with chronic low back pain (defined as low back pain lasting 12 weeks or longer; 56% women and 44% men, aged between 20 and 65 years,  $M = 40.4$  years,  $SD = 12.4$ ). Data on pain and perceived social support were collected at baseline, and experience sampling data on pain and received social support (instrumental and emotional) on five fixed measurement occasions per day over 14 days.

**Findings:** Participants reported the occurrence of pain for 2,305 out of 4,806 measurement occasions. Received social support co-occurred on 49 occasions. Across all occasions, levels of received instrumental support ( $M = 4.10$ , ranging 1-6) were higher than of emotional support ( $M = 3.26$ , ranging 1-6).

**Discussion:** The remarkably low number of occasions when support was received contrasts with baseline data that indicate higher levels of perceived social support. We discuss these discrepancies and the role of invisible support in chronic pain. Finally, we highlight promising routes for future ambulatory assessments of social support in low back pain.

## **Daily associations between support, emotion regulation, and eating among insecurely attached people**

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**Background:** Insecurely attached people (both anxious and avoidant) have difficulties regulating their emotions and are less likely to use adaptive emotion regulation strategies, such as cognitive reappraisal. Instead, they often rely on eating to regulate their emotions. However, romantic partners can play a pivotal role in helping insecurely attached people reappraise situations. Furthermore, anxiously and avoidantly attached people need different types of support to help them regulate their negative emotions, specifically interdependence and independence support, respectively. Prior research has looked at types of support that are more effective for anxiously and avoidantly attached people, but less work has related attachment orientations and emotion regulation patterns to eating behavior.

**Methods:** To address this gap in the literature, we will recruit 200 individuals through a 2-week daily diary study examining support received, perceived stress, emotion regulation, and eating behavior.

**Expected results:** We will examine the degree to which anxiously and avoidantly attached people perceive specific types of support from their romantic partner as more effective in regulating their daily negative emotions and how this is associated with their daily eating behavior. We predict that on days when people report higher stress, the type of support (interdependence vs. independence support) will moderate the association between targets' attachment insecurity (attachment anxiety or attachment avoidance) and targets' reappraisal.

**Current stage of work:** We are currently collecting data.

**Discussion:** By investigating the complete picture of these different processes, we can also determine which processes are more versus less conducive for couples.

## **Social environment determinants of physical activity in the family: group model building and system mapping**

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**Background:** This study adopted a participatory approach to map the complex system of determinants operating in the social environment and predicting physical activity in the nuclear family system. The goal was to explore the connections between the determinants included in the map and gain a better understanding of how the system operates.

**Methods:** Sixteen researchers involved in the group model building created a map of critical determinants and pathways using a systems mapping workshop. Follow-up consultations were held to refine the map. Network analysis methods were employed to analyze the final map and identify determinants with the highest values of the centrality indicators.

**Findings:** The systems map shows 85 connections between the included determinants. The network analysis indicated that family values, co-activity, cohesion, and external support were major leverage points. Over 70% of the determinants represented a broader category of social support networks, while under 24% represented income inequalities or neighbourhood factors.

**Discussion:** This study identified key determinants that are central to the family system and, therefore, likely to be critical targets for intervention to produce behavioral changes. The findings align with existing evidence on the role of movement behaviors in family dynamics and socioecological theories.

## **Investigating Self-Efficacy and Intention as Mediators in the Relationship Between Social Support and Health Behaviors**

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**Background:** Social support plays an important role during health behavior change. However, the mechanisms through which social support works remain unclear. According to the Enabling Hypothesis, social support may affect health behaviors through self-efficacy. Furthermore, the extended Theory of Planned Behavior suggests an indirect effect of social support on behavior through intention. This preregistered study aims to investigate these mechanisms on a daily level.

**Methods:** Using data from four different samples, we investigated the within-person mediation of self-efficacy and intention of the association between emotional and instrumental support and health behaviors. The samples included inactive romantic partners aiming to increase their moderate-to-vigorous physical activity (Study 1), patients right after discharge from cardiac rehabilitation (Study 2), adolescent best friends (Study 3), and smokers attempting to quit smoking (Study 4). Social support, self-efficacy and intention were assessed through daily diaries. Physical activity and smoking abstinence were assessed device-based through accelerometers and smokerlyzers.

**Findings:** Results indicated an indirect effect of emotional support on physical activity through self-efficacy and intention in Study 1. We did not find any mediation effects of the proposed mechanisms in the other studies. Furthermore, there were no direct effects of emotional or instrumental support on the subsequent health behavior.

**Discussion:** There was only weak evidence that social support unfolds its effects on health behavior via self-efficacy and intention. Future research may investigate the proposed mechanisms across different time spans (e.g., on the within-day level) and examine different mechanisms.

## **Does ‘preference for self-reliance’ moderate the effects of health-related social control?**

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Health-related social control describes attempts to influence an individual's health behavior. Positive control (e.g., persuasion) is associated with favorable behavioral and affective outcomes, whereas negative control (e.g., pressure) can lead to reactance (anger and negative cognitions) and is associated with unfavorable outcomes.

This preregistered study examines whether mean and daily ‘preference for self-reliance’, i.e., the desire for others to stay out of one's health behaviors, moderates the effects of positive and negative social control on reactance-related behavior (resisting), affect, and health behavior .

We analyzed intensive longitudinal data on physical activity from 139 patients after cardiac rehabilitation (Study 1) and smoking cessation in 71 adults from the general population (Study 2), using multilevel modeling.

Daily negative control was associated with increased reactance-related behavior in both studies and with decreased physical activity but was unrelated to smoking. Furthermore, it was linked to unfavorable affect in Study 1, but not Study 2. Positive control was only associated with higher positive affect in Study 2 and unrelated to other outcomes. In Study 1, daily preference for self-reliance moderated the relationship between positive control and reactance-related behavior: the association became positive and significant when preference for self-reliance was high. All other moderation hypotheses lacked support.

Results from exploratory analyses indicated that higher daily and mean preference for self-reliance was directly related to unfavorable outcomes, suggesting potential implications for health behavior change interventions.

Our findings call for future research on preference for self-reliance and other inter- and intraindividual factors affecting responses to health-related social control.

## **Trust and technology terrorism in Medicine: Health Psychology's role in the digital transformation of healthcare**

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We are living in the age of a Digital Revolution, where technology is pervasive in our lives and continues to advance at breakneck speed. Four billion people globally use the internet, and this number is rising. Although the pandemic accelerated widespread adoption of digital technologies in healthcare settings, this sector continues to lag behind. In recent years, key trends in healthcare technologies include the use of big data; virtual/augmented reality; wearable devices; artificial intelligence and robotics. These novel technologies have the capacity to completely transform the way healthcare is delivered. However, this can only be achieved through meaningful engagement with key stakeholders and if underpinned by behavioural science.

The WHO Digital Health Strategy (2021-25) aims to 'accelerate the development and adoption of accessible, person-centric digital health to promote health and wellbeing', thus signalling the importance of patient and public involvement (PPI). Despite this, there has been a growing sense of public distrust around the use of AI, issues around data privacy and lack of regulation. Patients are more likely to engage with technologies recommended by a trusted source that enhance doctor-patient communication and are personalised to their individual needs. It is evident that key stakeholders need to be active agents in the design, development, and implementation of innovations.

It is evident that health psychology has a key role to play in guiding the digital transformation of healthcare. A huge gap exists between the ambitions of new technologies and their acceptability and effective use. Many have been developed without an understanding of how to achieve health behaviour change, thus failing to achieve significant long-term improvements in health. This talk will outline the key role that health psychology has in this complex task, by providing expertise on user-centred design, to guidance on motivators and barriers to behavioural change.

## Promoting medication adherence in hypertension: The role of Personas in tailoring eHealth technologies

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**Background:** Inadequate medication adherence (MA) is widespread in pharmacologically treated hypertension representing an important risk factor associated with poorer health outcomes. With their potential in remote monitoring and interaction, eHealth technologies can be useful to provide personalized interventions to improve patients' habits. The aim of this study is to define Personas of individuals affected by hypertension that can be used to tailor eHealth technologies to promote antihypertensive MA.

**Methods:** 200 individuals with hypertension underwent self-administered validated questionnaires investigating socio-demographic characteristics, clinical status, pharmacological treatment, beliefs about medicines, adherence, self-efficacy, literacy, medical interview satisfaction, illness perception, anxiety, depression and eHealth literacy. Collected variables were reduced using Principal Component Analysis mix and clustered by means of k-medoids clustering. Statistical analysis was applied to define which variables were able to differentiate among the k clusters, leading to the generation of a Persona card (i.e., a template with textual and graphical information) for each of the obtained clusters.

**Findings:** Three personas were created that pertained to each cluster. Personas varied mainly on age ( $p=.002$ ), beliefs about harmful effects of medicine ( $p<.001$ ), self-reported adherence ( $p<.001$ ), self-efficacy ( $p<.001$ ), illness perception ( $p<.001$ ), anxiety ( $p=.018$ ), depression ( $p<.001$ ) and perception of knowledge and skills at using eHealth information ( $p=.006$ ).

**Discussion:** Personas based design allows to create concrete representations of fictitious persons, characterized by different multicomponent traits, representing specific target groups. This will be used to personalized eHealth technologies messages based on individual patient needs, to enhance the patients' decision-making process and therapy adherence.



## **Lifestyle behaviour change and maintenance of patients following cardiac rehabilitation: the BENEFIT intervention study**

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**Background:** The majority of people with cardiovascular disease do not maintain a healthy lifestyle. To promote initiating and maintaining a healthy lifestyle, the BENEFIT intervention was developed as an addition to standard cardiac rehabilitation care. Core of the intervention is access to an advanced eHealth platform consisting of functionality for daily goal monitoring, access to lifestyle interventions, personal coaching and a reward program. Goal of the current study is to examine the added value of the intervention on health behaviour change at 1-year follow-up.

**Methods:** 7 Dutch cardiac rehabilitation centres participated between 2020-2023. Control group patients (n=361) received standard rehabilitation care, the intervention group (n=656) additionally received the intervention program. Online questionnaires were used to measure six lifestyle behaviours: physical activity, smoking, alcohol use, diet, stress, and sleep, at the start of rehabilitation and at one-year follow-up.

**Findings:** The program significantly impacted the maintenance of physical activity: while we found no difference in exercising in the control group, the intervention group had increased their exercising behaviour with approximately 45 minutes ( $p = .03$ ) after one year. We found no effects on other lifestyle behaviours.

**Discussion:** Following cardiac rehabilitation along with partaking in an online lifestyle program at home may significantly increase healthy behaviours. Our healthy living program makes it possible to tailor lifestyle interventions to the needs and preferences of users, encouraging engagement and active self-management of a healthy lifestyle.

## **Critical fluctuations as Early Warning Signals for Sudden Losses in Physical Activity: A replication Study**

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**Background:** Understanding behavior dynamics over time is crucial for promoting physical activity. Prior research suggests that critical transitions might be preceded by early warning signals (EWSs). A previous study from our team found increased fluctuations in walking behavior linked to a 43% higher probability of subsequent sudden losses. This study aims to replicate these findings with a larger dataset of real-world data.

**Methods:** We analyzed daily step counts of 21,425 French adults (Mage=42.7 years; 60% women) registered for a Kiplin digital program aimed to promote physical activity between 2019 and 2023. Steps were measured via accelerometers of activity monitors or smartphones used by the participants. Sudden behavioral losses, defined as a 30% reduction in steps lasting at least 7 days relative to each participant's median step count, were identified using recursive partitioning. Fluctuation intensity in steps from each participant's individual time series was computed with a dynamic complexity algorithm to identify potential EWSs.

**Findings:** Local dynamic complexity was positively associated with subsequent sudden losses with an odds ratio (OR) of 1.93, indicating that an increase of 1 SD relates to 93% increased odds of a 30% loss in the next 3 days. Furthermore, being engaged in the Kiplin intervention was negatively related to losses (OR=0.88), suggesting a protective effect of the intervention on sudden losses.

**Discussion:** Our results replicate our previous findings, indicating the presence of EWSs for sudden losses in physical activity behavior. These results provide support for the development of digital "just-in-time adaptive" interventions based on EWS detection.

## Personalizing digital “just-in-time” nudges for healthier food choice: a randomized controlled trial

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**Background:** “Just-in-time”(JIT) nudges represent an emerging strategy to promote healthier food choices within digital food environments. We investigated whether personalization increases the effectiveness of JIT nudges in stimulating healthier food choices. Two forms of personalization were examined: Nudge content was (mis)matched to users’ (health versus price) food choice motivations, while nudge type was (mis)matched to users’ (visual versus verbal) cognitive style.

**Methods:** In a 2 (Nudge Content: Personalized versus Non-Personalized) by 2 (Nudge Type: Personalized versus Non-Personalized) randomized controlled trial, 200 participants completed a shopping task on a mock supermarket app in one of four nudging conditions or a control (no-nudge) arm. In nudging conditions, JIT nudges were administered when an unhealthy product was selected, which recommended an alternative (healthier) product which could be accepted/declined. Before checkout, participants could replace products in their basket.

**Findings:** Nudges personalized on Type resulted in healthier alternatives being more frequently accepted than non-personalized nudges (mean difference=7.0% [0.3%,13.7%],  $\eta^2=.027$ ). Personalized nudge content exerted positive “spillover” effects (more healthier product replacements) relative to non-personalized content (mean difference=3.1% [0.3,5.9],  $\eta^2=.030$ ). Regardless of personalization, all nudges increased healthier foods purchased at checkout (65%-69%) compared to the control group (28%), and resulted in higher choice satisfaction (78-80 versus 71 out of 100).

**Discussion:** Personalizing nudge content and type has small positive effects on healthier food choices, which seemingly operate at different decision making phases. Yet, the psychological mechanisms underpinning these effects merit further assessment – preferably in samples allowing for stronger personalization manipulations (e.g., low SES or clinical populations).

## **Text support for pregnancy smoking cessation (MiQuit): multi-trial analysis of potential effect moderators and mechanisms**

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**Background.** Digital self-help is attractive to people who smoke in pregnancy (SIP). In two RCTs, MiQuit, a tailored, theory-guided, SMS texting intervention for quitting SIP, demonstrated borderline effectiveness. **Aims.** Determine, using pooled MiQuit RCT data: 1) MiQuit effectiveness for a range of abstinence outcomes; 2) whether effectiveness is moderated by baseline quitting motivation or nicotine dependence; 3) whether hypothesized mechanisms of action (determination, self-efficacy, harm to baby beliefs, lapse-prevention strategy use) mediate the intervention effect. **Methods.** Pooled analysis of data from two procedurally identical, parallel-group RCTs comparing MiQuit (N=704) to usual care (N=705). Participants were smokers, <25 weeks pregnant, recruited from 40 English antenatal clinics. Outcomes included seven-day point prevalence abstinence at four weeks post-baseline and late pregnancy, and prolonged abstinence between these points. Late pregnancy outcomes were validated biochemically. We used hierarchical regression analyses and Structural Equation Modelling. **Findings.** MiQuit improved short-term, self-reported abstinence (four weeks post-baseline OR=1.73 [95% CI 1.10-2.74]) but not prolonged or validated abstinence. Effectiveness was not moderated by baseline dependence (Heaviness of Smoking Index “low” versus “moderate-high”), but there was some evidence of higher effectiveness in those with higher baseline quitting motivation (e.g. abstinence at four weeks in those planning to quit within one month OR=2.09 [1.21-3.61]; beyond one month OR=1.02 [0.42-2.50]). Mean number of lapse prevention strategies differed between arms (MiQuit 8.6 [SD 0.17], usual care 8.1 [SD 0.17]; p=0.030); other hypothesized mechanisms did not. **Discussion.** MiQuit increased short-term but not long-term/validated abstinence; additional components are likely required to maintain smoking abstinence in pregnancy.

## Targeting symptom mindsets: An intervention to improve adherence and persistence of methotrexate for autoimmune-inflammatory arthritis

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**Background:** Patients' negative expectations about medication can exacerbate side-effect burden, fostering poor persistence and adherence. However, in certain cases the presence of side-effects can be an early indication of treatment efficacy. A novel intervention involves targeting patients' mindsets about non-severe side-effects by re-framing them as encouraging signs from the body that medication is working. This study explores whether a brief 'side-effects as positive signals' mindset intervention can improve adherence and side-effect burden after 4-weeks and help patients persist with medication after 12-weeks.

**Methods:** A randomised clinical trial was conducted with patients starting methotrexate to treat autoimmune-inflammatory arthritis (n=47). Participants were randomised to a mindset intervention (n=24) or a standard-information control condition (n=23). Measures included self-reported adherence and side-effect burden, and objective assessment of persistence taking methotrexate. Pearson's chi-square and independent-sample t-tests were conducted.

**Findings:** There was no significant difference between groups in the number of participants reporting side-effects. However, intervention participants had greater belief that side-effects were positive signals (p=.002) and found them less burdensome than control participants (p=.005). At the 4-week follow-up, the intervention group reported greater adherence behaviour to methotrexate than the control group (p=.003). At 12-weeks, intervention participants were more likely to be taking methotrexate (92%) compared to control participants (65%) (p=.027).

**Discussion:** This is the first study to test a 'symptoms as positive signals' mindset intervention in adult patients taking a medication with burdensome side-effects. The findings illustrate that re-framing the role of non-severe side-effects is a promising approach for improving early-stage medication persistence and adherence.

## **The CareNet Project – a roadmap to psychosocial childhood cancer intervention**

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The CareNet Project was designed to map the psychosocial practices developed for children with cancer. The project departed from the Childhood Cancer International network, which integrates 183 childhood cancer-related organisations. Psychosocial interventions comprehend a range of interpersonal or informational activities, techniques, and strategies, aiming to improve health functioning and psychological wellbeing. They target aspects as behavioural, cognitive, emotional, interpersonal, social, or environmental factors. However, many times they are not consciously tailored to answer to specific needs. In this work we aimed at clarifying the association between need and interventions in this context. 98 organisations (54% of CCI) responded to an online survey based on the SureCan questionnaire (SURVIVORS' REHABILITATION EVALUATION AFTER CANCER; Duncan et al., 2017). 9 questions evaluated the provided psychosocial interventions, while 14 items evaluated the main psychosocial needs. The result of a multiple dimension analyses, followed by a cluster analyses, identified a 3-dimension solution. Emotional needs (e.g. fear of death, depression) were associated to interventions as art or expressive programs; psychoeducation interventions were associated to vocational or health promotion problems; finally, social skills needs are related to social support groups or cognitive-behavioural interventions. In conclusion, our study not only sheds light on the diverse psychosocial needs of children with cancer but also provides insights into the targeted interventions associated with addressing these needs. This understanding is pivotal for optimizing psychosocial support strategies for this vulnerable population, ultimately contributing to enhanced overall wellbeing during and after cancer treatment.

## **Psychosocial interventions in the childhood cancer context: identification of guidelines and good practices**

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Childhood cancer poses unique challenges for all the involved, that can be addressed through psychosocial interventions. Psychosocial interventions in the childhood cancer context address emotional, social, and psychological needs of children, adolescents, and their families affected by cancer. This study maps the psychosocial practices developed for children and adolescents with cancer, parents, caregivers, families, and survivors, carried out by Childhood Cancer International (CCI)' organizations. Seven focus groups were conducted with the representatives from 32 organizations. A content analysis mapped different types of interventions and its characteristics. The gathered data was organized according to the TIDieR checklist framework' dimensions, and the following good practices were identified: a) designing tailored interventions considering the needs of each population; b) using adequate materials; c) recurring to specialized providers, according to the goals; d) adapting the modes of delivery and location; e) adequate structure - duration of sessions, number and periodicity; f) considering the specific goal; g) planning, monitoring and assessing; h) and adapting to the cultural context. Our findings identified a vast variability of interventions and modes of application. However, the most adequate interventions are generally tailored to the audience, use reading and informational materials, are provided by psychologists or social workers, are preferably implemented in-person, in groups and in a clinical setting. Caring for the entire family and considering cultural aspects was also identified as vital to the success of the psychosocial interventions. The overall identified goal was to improve wellbeing and quality of life, which was mainly achieved by CCI' organizations.

## Psychosocial Predictors of Doping Intentions and Use in Fitness and Sport: Systematic Review and Meta-Analysis

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The use of image- and/or performance-enhancing drugs by exercisers and athletes poses significant risks for their physical and psychological health. Diverse theoretical models and constructs from health psychology have been employed in the psychosocial literature on doping. We synthesised this research via a meta-analytic review (pre-registered on OSF; <https://bit.ly/doping-meta-registration>). We included studies that measured the outcome variables of doping behaviour, inadvertent doping, and/or doping intention, and at least one psychosocial determinant of those. Given the high prevalence rates of doping in fitness and sport settings, our review is timely.

We included 25 experiments (N = 13,586) and 186 observational samples (N = 309,130). We used three-level random effects models with restricted ML via the R metafor package. Experimental groups reported lower doping behaviours (g = -.08, 95% CI [-.14, -.03]), doping intentions (g = -.21, 95% CI [-.31, -.12]), and inadvertent doping (g = -.70, 95% CI [-1.95, .55]). For observational studies, protective factors (e.g., self-efficacy) were inversely associated with doping use (z = -.09, 95% CI = -.13, -.05), inadvertent behaviours (z = -.19, 95% CI = -.32, -.06), and intentions (z = -.28, 95% CI = -.31, -.24). Risk factors (e.g., social norms, pro-doping attitudes) were positively associated with doping use (z = .17, 95% CI = .15, .19) and intentions (z = .29, 95% CI = .26, .32), but not inadvertent behaviours (z = .08, 95% CI = -.06, .22). We will discuss the implications of our findings for theory-informed interventions to target doping-related intentions and behaviours.



## Psychological factors and eating behaviors using Ecological Momentary Assessment: An updated systematic review and meta-analysis

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**Background:** Dietary behavior and its correlates can vary over time and contexts, meaning that within- and between-person variance is important to capture. Ecological momentary assessment (EMA) is well-suited to studying such variability. This systematic review aimed to summarize methodological features and synthesize within-person associations of psychological factors with dietary intake in EMA studies.

**Methods:** A systematic literature review and meta-analysis were conducted (-Dec 2019, updated in March 2023) as part of a larger, multi-behavioral review on EMA in healthy adults. OVID Medline, Embase, PsycINFO, and Web of Science databases were searched. This review adhered to the PRISMA checklist and used CREMAS to assess study quality.

**Findings:** EMA studies that examined healthy/unhealthy diet were selected for the narrative review (n = 44) and meta-analysis (n = 17). Meta-analysis showed that the combination of negative affect, daily stress, and ruminations is associated with lower healthy eating ( $\beta = -.01$ ,  $p < .001$ ) and higher unhealthy eating behaviors ( $\beta = .05$ ,  $p = .022$ ), even though the latter was not replicated when focusing on OR (logOR = .469,  $p = .095$ ). The narrative review of the remaining studies confirmed these analyses and explored methodological limitations (e.g., heterogeneity of measuring diet, lack of reliability analyses, questionable validity of measures used).

**Discussion:** Results showed that stress-related factors (negative affect, stress, rumination) are associated with increased unhealthy and decreased healthy eating. However, several psychological factors remain little investigated (e.g., positive affect, self-regulation, habits), and eating outcomes are heterogeneous while facing methodological limitations requiring improvement.

## **What drives success in long-lasting collaborations between health researchers and diverse ethnic communities?**

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**Background:** Health psychologists, and health researchers more broadly, needs to do more to involve communities that have typically been underserved by us. The objective of this rapid review is to summarise current evidence on barriers and facilitators to successful collaborations between researchers and people from diverse ethnic communities or organisations that work with those communities.

**Methods:** We used rapid review methods to identify, select, extract, and code information from reporting on long-term partnerships (i.e., partnerships that worked together more than once) between researchers and diverse ethnic communities that were published since 2013 (to reflect contemporary practices) and were done in high-income countries. We used an existing framework of success in Long-Standing Community-Based Participatory Research (CBPR) Partnerships to code barriers and facilitators to success reported within the included studies.

**Findings:** Our review included 18 studies providing information on 17 collaboratives. Our findings highlight the importance of building partnerships based on shared power, trust, clear communication, flexibility, respect and reflexivity. We also found that long-term collaborations are supported and sustained through sharing resources throughout the partnership in a fair and honest manner as well as engaging in activities to build research capacity across the collaboration and the communities they represent.

**Discussion:** 'Success' of long-lasting collaborations is a multifaceted concept which includes a combination of ingredients, which likely work in a synergistic way. Underlying all of these elements and processes is the understanding that successful collaborations require time to build, operate and thrive as well as resources to support people's time and activities.

## Patients' perceptions of SIGMA-informs in supporting parenting in mothers with cancer

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**Background:** Maternal cancer diagnosis can significantly affect the emotional well-being of family members and their relationships. Despite recognizing the challenges of cancer on parenting, validated interventions supporting families dealing with parental cancer are lacking in Portugal. This study aims to analyze the effectiveness of an online psychological intervention for mothers with cancer, named SIGMA-informs.

**Methods:** The sample included 23 mothers with cancer, aged 38 to 51 years ( $M = 43.52$  years,  $SD = 4.35$ ), all with at least one dependent child. Qualitative methods were used to assess intervention effectiveness, with participants sharing perceptions and experiences regarding SIGMA-informs. Thematic analysis was conducted. SIGMA-informs is an online intervention providing psychoeducational materials weekly on six themes related to parenting challenges during cancer (e.g., communicating with children about cancer, children's reactions, activating social support). The intervention comprises eight weekly sessions. Participants were recruited from hospitals with oncology services and associations supporting oncology patients.

**Findings:** Participants noted several benefits of the intervention, including improved management of children's reactions to family dynamic changes, open communication about maternal cancer, and normalization of experiences and emotions. Suggestions for enhancing support were provided (e.g., intervention delivery timing, addressing additional topics like depression, incorporating more audiovisual materials).

**Discussion:** SIGMA-informs emerged as a significant and useful tool for supporting parenting in families facing maternal cancer. Minor adjustments are needed to improve the support offered. Early availability of this psychological support tool can maximize its benefits. Thus, this study underscores addressing parenting challenges in psychological support for cancer patients with dependent children.

## **Mental Health and Quality of Life When Coping with Stigma of Visible Chronic Skin Disease**

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**Background:** People with visible chronic skin disease (VCSD) contend with stigmatizing beliefs that they are unhygienic, flawed, or contagious. Stigma can become internalized, with severe consequences for well-being. Coping strategies may be employed to minimize stigma-related stress. We explored how social and internalized stigma relate to indicators of adjustment to chronic illness (depression, anxiety, and disease-specific quality of life (QoL)) and whether coping strategies (approach, avoidance, stigma resistance) buffer these relationships.

**Methods:** Young adults seeking care at an outpatient dermatology clinic for a VCSD (N= 195, M age= 28.06, SD= 4.42, 49% female) completed questionnaires assessing social and internalized stigma, coping strategies, anxiety, depression, and QoL. Skin diseases included psoriasis (55%), atopic dermatitis (23%), and hidradenitis suppurativa (22%). Correlational and moderation analyses were conducted.

**Findings:** Both internalized and social stigma were significantly associated with greater anxiety, depressive symptoms, and lower QoL. Interaction effects of internalized stigma and approach coping were significant for depression ( $F(3, 186)= 30.52, p<.001$ ) and anxiety ( $F(3, 183)= 23.29, p<.001$ ) and for social stigma and approach coping on QoL ( $F(3, 180)= 25.19, p<.001$ ). Approach coping buffered effects of internalized stress on depression and anxiety, but exacerbated how social stigma impacted QoL. Stigma resistance coping was directly related to better outcomes, whereas avoidance was associated with poorer outcomes.

**Discussion:** Stigma hinders adjustment to chronic skin disease for young adults. Findings highlight the importance of distinguishing stigma types and approach vs. avoidance coping. This suggests that psychological interventions should focus on internalized stigma and boosting coping repertoire.

## **Relationship experiences of couples following acquired brain injury during inpatient rehabilitation: a qualitative study**

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**Background:** Qualitative research into partner relationships following acquired brain injury (ABI) has mostly investigated the period post-discharge. This study aimed to explore survivor and partner experiences of the relationship during inpatient rehabilitation.

**Methods:** Semi-structured interviews were completed using a purposive sample of ABI survivors attending level 1 neurorehabilitation services, and their partners. Five survivors and five partners were separately interviewed, either in-person or remotely. An interview schedule was developed (consulting with service users) to explore couples' experiences of their relationship during inpatient rehabilitation. Interviews were analysed iteratively using interpretative phenomenological analysis. Member checking was used to validate findings. **Findings:** Five themes were identified: Emotional journey through recovery; Reaching across the divide of injury; Navigating our disrupted dynamics; Negotiating a new future; Endurance in the face of change. Themes illustrated challenging dialectics of relationships; couples melded together yet distanced, changed yet enduring, and the injury pausing life but life needing to go on. The inpatient context provided challenges of distance and the uncertainties of discharge, but also the hopes of recovery and reconnection.

**Discussion:** Findings highlighted the early impact of ABI on relationships as well as couples' efforts to maintain their relationship. Interviewees identified ways to overcome challenge and the role that healthcare professionals can play in supporting this. Services should offer explicit support for relationships, including physical intimacy; and space for privacy should be promoted. Partners should feel included in the rehabilitation process where appropriate, whether through regular updates or involvement in rehab sessions (where survivors consent).

## **Alcohol consumption and its determinants among post-menopausal breast cancer survivors: a longitudinal observational study**

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### **Background**

A recommendation on alcohol consumption (i.e. not drinking alcohol) has been issued to improve health outcomes in postmenopausal breast cancer (PMBC) survivors, however little is known about (non)adherence and determinants of (non)adherence to this recommendation over time. Therefore, this study aimed to longitudinally assess proportions and determinants of (non)adherence in order to guide intervention development.

### **Methods**

The OPTIMUM study is a longitudinal observational study in 694 PMBC survivors with measurements at 5 months post-diagnosis (T0: retrospectively before diagnosis), 1 year post-diagnosis (T1: after completion of initial treatment), and 1.5 years post-diagnosis (T2: during follow-up). Measures included the Dutch Healthy Diet Index 2015 (alcohol consumption) and the hospital anxiety and depression scale (anxiety, depression). Sociodemographic characteristics were assessed using standardized questions. Descriptives, logistic regression analyses and generalized estimating equations were used for data analyses.

### **Findings**

463 participants had complete data on alcohol consumption (66.7%). Non-adherence rates were relatively stable over time: 70.4% did not adhere at T0, 65.2% at T1, and 67.2% at T2. 59.6% (n=276) did not adhere at any time point, whereas 24.6% (n=114) adhered at all time points. Women with a low educational level adhered more frequently than women with a high educational level at all time points (e.g., T1: 41.4% vs. 22.3%; OR 2.4 (95% CI 1.3-4.3)).

### **Discussion**

Findings suggest that adherence to the alcohol consumption recommendation should be structurally promoted in the general population, as well as in clinical care for PMBC survivors from diagnosis onwards, particularly among those with a high educational level.

## **Mediators and moderators of symptom burden and distress in breast cancer survivors on hormone therapy**

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### **Background:**

Breast cancer survivors prescribed adjuvant hormone therapy for up to 10 years may experience difficult side effects from the medication. These side effects are reported to be distressing; however, this relationship is not well understood. This study aimed to test the relationship between physical symptoms and distress by conducting mediation and moderation analysis over 12 months to identify potentially modifiable variables.

### **Methods:**

The longitudinal observational study recruited 269 breast cancer survivors in the first 2 years of taking hormone therapy with a 90% retention rate at 6 months and 83% at 12 months. Participants completed online questionnaires at 3 time points. Measures included distress, symptom burden, acceptance and commitment therapy processes, illness perceptions and cognitive-behavioural responses to symptoms. Mediation and moderator analyses were conducted using MPlus.

### **Findings:**

Psychological processes from several theoretical models including cognitive fusion, values obstruction, symptom focusing, breast cancer consequences and embarrassment avoidance mediated the impact of symptoms on distress. Significant indirect effects ranged from  $\beta = 0.06$  to  $0.08$ . There were significant interaction effects for treatment coherence ( $\beta = -0.33$ ) and damage beliefs ( $\beta = 0.26$ ).

### **Discussion:**

This study contributes to understanding “how” and “for whom” physical symptoms might lead to distress. Considering the lack of self-management options for side effects of hormone therapy, understanding the potential modifiable mechanisms and individual differences for this relationship can inform effective interventions to help mitigate the distressing impact of physical symptoms in breast cancer survivors taking adjuvant hormone therapy.

## Determinants of trajectories in WCRF/AICR recommendations adherence in breast cancer survivors with and without multimorbidity

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Breast cancer (BC) survivors with multimorbidity may face more challenges adhering to lifestyle recommendations than those without, heightening their vulnerability to lifestyle-related illnesses and mortality. It is unknown whether changes in lifestyle post-diagnosis differ between BC survivors with and without multimorbidity. This study aimed to describe adherence trajectories to WCRF/AICR lifestyle recommendations in postmenopausal survivors with and without multimorbidity. Additionally, determinants were investigated to better understand what factors were related to adherence trajectories.

Longitudinal data from the OPTIMUM study were used, comprising a retrospective assessment at 4-6 months and prospective at 12- and 18-months post-diagnosis. WCRF/AICR recommendations adherence was estimated using self-report measures on physical activity, diet, alcohol, and weight. Latent class growth curve models were used to describe adherence trajectories over time. Univariate and multivariate multinomial logistic regressions examined predictors of trajectories.

Among 664 BC survivors, four stable adherence trajectories were identified: "very low" (10%), "low" (34%), "moderate" (40%), and "high" adherence (16%). Multivariate models indicated that survivors were more likely to be in the (very) low adherence trajectory if they had lower self-compassion (OR=0.95; 95%CI: 0.90-1.00), were younger (OR=0.93; 95%CI: 0.88-0.98), were lower educated (OR=17.10; 95%CI: 4.49-65.04), experienced anxiety (OR=3.25; 95%CI: 1.00-10.57) or multimorbidity (OR=2.19; 95%CI: 1.04-4.60). No interactions were found with multimorbidity status and determinants.

Adhering to lifestyle recommendations appears to be more challenging for survivors with psychological distress, lower education levels, reduced self-compassion, and multimorbidity. These findings underscore the importance of supporting survivors to develop healthy lifestyle habits and address these identified determinants when designing interventions.



## Characterization of daily pain and symptom experiences in childhood cancer survivors with chronic pain

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**Background:** Approximately 40% of adult survivors of childhood cancer experience chronic pain, yet little is known about the daily pain experiences of survivors. The current study aimed to characterize daily pain experiences in adult survivors of childhood cancer with chronic pain and to examine associations between daily pain and related symptoms.

**Methods:** Using a mHealth-based ecological momentary assessment (EMA) design, 80 adult survivors of childhood cancer (58.3% female) with chronic pain (pain lasting  $\geq 3$  months) were asked to complete 2-weeks of daily measures (8-items total) assessing pain intensity and pain interference (adapted Brief Pain Inventory), mood (adapted Patient Health Questionnaire), anxiety (adapted Generalized Anxiety Disorder Scale), and sleep quality (adapted Pittsburgh Sleep Quality Index). Multi-level linear mixed models examined the association of prior day symptoms with outcomes of daily pain and pain interference reporting adjusted mean change due to a unit change of the risk factor as beta (B) and 95% confidence intervals (CI).

**Findings:** Elevated levels of pain intensity and pain interference were endorsed on 28.2% and 24.6% of completed diaries, respectively. For male, but not female, survivors, low sleep quality (B[CI] Male; 0.4[0.1, 0.6] and 0.3 [0.0,0.7]), elevated anxiety (0.3[0.1,0.5] and 0.2[0.0,0.5]), and elevated depressive symptoms (0.3, [0.1,0.4] and 0.4 [0.2,0.6]) were associated with higher pain intensity and higher pain interference the next day.

**Discussion:** A substantial proportion of survivors with chronic pain experience significant pain daily and associated interference, with associations between daily pain and prior day symptoms observed for males.

## **Beyond sensors and alerts: smart wearables for diabetic foot ulcer prevention**

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### **Background:**

Diabetic foot ulcers are common and costly. Most cases are preventable, though limited resources are allocated to prevention. Emerging health technologies aimed at prevention are rarely co-designed.

This study explores patient and provider feedback on a smart-sensing sock (in development) to detect shear pressure and alert the wearer to change their behaviour (i.e. pause activity and check their feet); and considers how patient experience and attitudes to self-care may impact uptake and long-term effective engagement with this application of health psychology.

### **Methods:**

20 people with diabetic neuropathy and two carers were recruited from podiatry clinics, and pre-consented participant recruitment networks, for interviews either in-person, or by phone or teleconferencing. Six podiatrists were recruited via professional networks for one virtual focus group. Findings were analysed thematically.

### **Findings:**

Three themes were generated, each split into contextual challenge and related participant preferences. 1. Patient buy-in: challenged by limited awareness of risk; potentially addressed by using the device to collect and record evidence. 2. Effective engagement: challenged by difficulties accepting and actioning information; requiring simple, specific and supportive instructions. 3. Sustained use: challenged by emotional burden and overwhelm; facilitated by increased self-efficacy and control gained from an early warning system.

### **Discussion:**

There is appetite for smart-sensing socks among patients and providers, but it would need to be packaged as part of a wider health intervention to support necessary behaviour changes required for ulcer prevention. A list of Guiding Principles is provided to assist development of interventions using similar devices in this population.

## **The mechanisms through which social media exposure affects youth's mental health: a systematic review**

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Social media (SM) exposure is related to poor mental health in youth, but the mechanisms remain poorly understood. We conducted a systematic literature review to examine the long-term role of SM exposure in youth's mental health outcomes and to assess the underlying explanatory mechanisms. Medline, Scopus, PsychInfo, and CINAHL were searched for cohort studies and randomized-controlled trials (2008–November 2022) examining the association of SM exposure with depression, anxiety, affective well-being, and life satisfaction in healthy young populations (age range: 2–24 y). The protocol was registered in PROSPERO (CRD42023387004). Among the 29 included articles, the majority showed that SM exposure was associated with higher risk for depression, especially in girls, through sleep disruptions, mother-adolescent conflict, digital stress, and feelings of rejection on SM. Passive vs. active SM use and SM use for entertainment vs. education purposes showed highest impact on depression. SM exposure was associated with anxiety through cyberbullying, sleep, physical activity, and co-rumination with friends. SM exposure was also associated with lower affective well-being. Excessive duration, but not frequency of SM use, predicted decreased life satisfaction in adolescents with lowest levels of emotional self-efficacy and perceived friend support. The reverse association between poor mental health and SM exposure was not observed. This review suggests that SM exposure leads to deteriorated mental health in youth in the long-term. The identified mechanisms may inform the development of future (digital) health interventions. Our findings call for actions by health authorities and SM industry to limit youth's exposure to the SM environment.

## **Social connections with family and friends in adolescence: Shaping BMI trajectories into young adulthood**

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Social connections are an understudied contributor to obesity, which has tripled among US adolescents. Psychosocial stress is a potential mechanism of this relationship via stress buffering or social aggravation hypotheses. This study aimed to investigate associations between adolescent social connections and body mass index (BMI) trajectories into young adulthood and investigate whether demographic factors moderate associations.

This longitudinal cohort design used data from 17,514 participants within Add Health, a representative school-based study of US adolescents. Growth curve models were used to estimate BMI trajectories from waves II-IV for different levels of social connection constructs at baseline, including social contact, relationship status, loneliness, social support, and positive and negative aspects. Interactions were tested to explore age, gender, and ethnic differences.

Stronger peer-related social connections were associated with slower BMI increases over time, e.g., BMI of those with high peer contact was 0.62 [95% CI -0.90, -0.33] points lower 12 years after baseline, compared to those with low contact. Stronger family-related connections were associated with higher BMI increases, e.g., BMI of those with high family contact was 0.43 [95% CI 0.08, 0.79] points higher 12 years after baseline, compared to those with low contact. Stronger associations were observed for females, older adolescents and Black or African American participants.

This study expands the scope of health psychology research beyond individual behaviours to include modifiable social determinants of health. This study provides insight into the types of connections associated with adiposity and the key moderating factors which allows the development of targeted interventions.

## The relation between physical activity and executive function in preschoolers

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**Background:** Physical activity is important for multiple physiological and mental health outcomes across the lifespan, and experimental research suggests a positive association between physical activity and executive function. Evidence from preschool samples is scarce, and observational research does not consistently support a positive association of physical activity in everyday life with executive function in this age group. Hyperactive-impulsive behavior is linked to higher physical activity and could act as a possible moderator.

**Methods:** In this observational study, we examined executive function, everyday physical activity, and hyperactive-impulsive behavior in a sample of 68 German preschoolers (3-5 yrs). Physical activity was measured with an accelerometer for seven days. As a measure of executive function, we implemented an extensive and novel test battery, previously validated for preschool samples. Hyperactive-impulsive behavior was assessed with a parental questionnaire.

**Findings:** Contradicting our expectations as well as findings from older age groups, we found a negative association between time spent in moderate-to-vigorous physical activity and preschoolers' executive function. Hyperactive-impulsive behavior did not moderate this association. Interestingly, sedentary behavior was positively related to executive function.

**Discussion:** Our findings suggest that findings from experimental studies are not transferrable to physical activity in everyday life. Future research should combine objective and subjective measures to better understand how different types and contexts of everyday physical activity and sedentary behavior influence the relation with executive function. Preschool age is an important developmental phase for executive function, and understanding how physical activity could potentially aid this development is essential for later health outcomes.

## Can Self-Control Mediate the Relationships Between Internet/Smartphone Addiction and Insomnia?

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**Background:** Adolescence is associated with multiple factors that can dysregulate teenagers' circadian rhythms. Concomitantly, the increasing number of smartphone users is turning access to the internet progressively simpler in a way that internet addiction (IA) and smartphone addiction (SA) are becoming a major health concern since they can harm teenagers' sleep quality. Evidence regarding its impact on Portuguese adolescents' sleep, as well as how can self-control influence these relationships is still limited. Therefore, this study aims to explore if IA and SA predict insomnia in adolescents and whether self-control (dysfunctional and functional) mediates these relationships. **Method:** This cross-sectional online study included 1,566 adolescents from Madeira, Portugal (12-19 years old; M=14.79, SD=1.89). Data were collected using the Internet Addiction Test, Smartphone Addiction Scale (Short Version), Brief Self-Control Scale, and the Athens Insomnia Scale. A mediation analysis was conducted using SPSS PROCESS macro v4.2. **Findings:** Two parallel mediation models were performed with age and biological sex as covariates, one for each addiction. A significant direct effect of IA and SA on insomnia was found (B=.07 and B=.04, respectively;  $p < .001$ ), along with significant indirect effects of IA and SA on insomnia, when mediated by dysfunctional self-control (B=.23, 95% CI =.22, .25 and B=.32, 95% CI =.28, .35). **Discussion:** Functional self-control did not work as a protective variable. This study highlights the pertinence of developing future interventions focusing on youth impulsivity, specifically promoting impulse control, the adoption of sleep hygiene behaviours and providing strategies on how to better regulate a healthy use of smartphones/internet.

## **Predictors and motives of physical activity for parent-child dyads: Baseline results of ProAct intervention**

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**Background:** Physical activity levels decline significantly among children aged 8-12 and parents have lower physical activity levels than non-parents. Therefore, we developed ProAct, a theory-based online physical activity promotion intervention for inactive parent-child dyads, which targets family structures instead of children or parents alone. This study uses baseline data from a randomized controlled trial of the ProAct intervention to examine relationships among theoretical predictors of physical activity, and to examine current physical activity motives of children and adults.

**Methods:** Baseline data have so far been collected from 78 inactive parent-child dyads. This includes physical activity intentions, attitudes, perceived behavioural control (PBC), descriptive norms (DN) and social norms (SN). Linear regression analyses examined the associations between these predictors and physical activity intentions.

**Results:** Attitudes and PBC were significantly associated with physical activity intentions among both parents and children (all  $P < 0.003$ ). Descriptive norms were associated with intentions among parents ( $P = 0.041$ ), but not children ( $P = 0.083$ ). The results also showed that the most common motivator for parents to exercise was the benefits of exercising and for children it was that exercising was perceived as fun.

**Discussion:** These results revealed that the influence parents have on their children's physical activity might be less than expected. This information has scientific value particularly since it has been measured from parent-child dyads representing the same families. Further research from this randomized trial will investigate intervention effects on these factors and directionality of changes within parent-child dyads.

## Development of the Social Dimensions of Health Behavior Framework

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Background: Despite rapid theoretical expansion in conceptualizing individual and environmental processes, examination of social processes associated with health behaviors has a less cohesive theoretical landscape. The purpose of this mapping review and content analysis was to develop a taxonomy of social dimensions applicable to health behaviors. Methods: Michie et al.'s (2014) "ABC of Theories of Behaviour Change" text, which includes 83 behavior change theories, was used as the initial data-set (augmented with the foundational texts for each of the corresponding theories), whereby an iterative concurrent content analysis was undertaken with respect to all relational/interpersonal psychological dimensions (and their respective constructs). Findings: The analysis resulted in a social dimensions of health behavior (SDHB) framework of 10 relational dimensions, including seven specific sub-types of social appraisal dimensions and three-sub-types of social identification dimensions. Critical review of the SDHB revealed that specific dimensions, such as descriptive norm, are prevalent in behavioral theories, while other dimensions have seen far less theoretical attention. Further, while most social constructs in behavioral theories include only one social dimension in the SDHB, other constructs have complex dimensional representation. Discussion: This version 1.0 of the SDHB framework should assist in specifying the core elements of social dimensions in health behavior, provide a common lexicon to discuss relational constructs in psychological theories, amalgamate the disparate social constructs literature in the overall health behavior landscape, and identify where there may be opportunities for further research in specific social dimensions in order to advance theory development and interventions.



## **Internalized weight-bias, loneliness, and early-adolescents' mental health. Two-wave longitudinal investigation of emotional dysregulation as mediator**

Alexandra S. Zancu<sup>1</sup>, Loredana R. Diaconu-Gherasim<sup>1</sup>

<sup>1</sup>Alexandru Ioan Cuza University of Iasi, Romania

Background: Internalized weight bias and social dysfunction may have negative consequences on mental health during critical developmental stages like early adolescence. The present study aimed to: (1) examine the impact of internalized weight bias and loneliness on early adolescents' internalizing problems and disordered eating behavior; (2) explore the mediating role of emotional dysregulation on these effects. Method: The study relied on a two-wave longitudinal design at six months apart. 400 children between 11-13 years old (Mage=12.18, 60% girls), with BMI across the weight spectrum (MBMI=19.63), completed self-report measures of internalized weight bias and loneliness at Time 1, and 237 of them also completed self-report measures of internalizing symptoms, disordered eating, and emotional dysregulation six months later. Findings: Results of the path analysis revealed very good fit indices for the proposed mediational model,  $\chi^2(3)=1.98$ ,  $p=.57$ ;  $\chi^2/df= 0.66$ , NFI=.99; CFI=1, RMSEA<.01. As hypothesized, internalized weight bias and loneliness were positively related with early adolescents' emotional dysregulation six months later, which was further positively related with their internalizing symptoms and disordered eating behavior. Emotional dysregulation mediated the longitudinal relations of both internalized weight bias and loneliness with early adolescents' internalizing symptoms and disordered eating behavior. Discussion: The findings underscore the negative mental health consequences of internalized weight bias and loneliness during early adolescence, highlighting emotional dysregulation as a psychological mechanism explaining these negative effects over time. The study supports the need for early interventions to address weight bias and social isolation during developmental transitions, to prevent later mental health problems.

## **The protective roles of the vagal nerve in health and illness: Making diseases less "vague"**

Yori Gidron<sup>1</sup>

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Among the leading causes of mortality worldwide are heart disease, cancer, stroke, and diabetes. When adding to these chronic pain, anxiety and depression, we include major causes of global burden of diseases (GBD) and disability. Health psychology can play a crucial role in the prevention and treatment of these GBDs by activating one resilience factor, which predicts a lower risk of GBD, which is related to better health behaviors, and which inhibits biological causes of GBD. The resilience factor is the vagal nerve, the major nerve of the parasympathetic nerve system. Vagal activity is indexed by heart-rate variability (HRV). High HRV predicts a lower risk of myocardial infarction, stroke and cancer and better prognosis in these conditions as well as in diabetes. For example, high HRV predicts between 2-5 times a higher chance of survival in several cancers. The vagal nerve is bi-directionally related to more physical activity, lack of smoking and healthy diet patterns. Finally, the vagus inhibits oxidative stress, inflammation and sympathetic over-activity, all which could prevent GBD or their progression. My talk will present evidence for all these and how high HRV also moderate the prognostic roles of other risk factors like age and disease relapse on mortality. In addition, I will show how the psycho-physiological treatment of HRV-biofeedback has emerging evidence in helping to treat several of the GBD. Vagal nerve activity is relevant to many domains in health psychology and can also serve the communication with physicians and patients on how psychological factors (e.g., depression) affect onset and prognosis in diseases. This talk will merge health psychology with neuro-immunology in the service of global public health, to advance the understanding, prediction and treatment of GBD.

## **Threats to social safety and neuro-inflammatory mechanisms underlying sexual orientation disparities in depression symptom severity**

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**Background:** Sexual minority individuals have a markedly elevated risk of depression compared to heterosexuals. We examined early threats to social safety and chronically elevated inflammation as mechanisms contributing to sexual orientation-related disparity in depression symptoms, and the relative strength of the co-occurrence between chronic inflammation and depression for sexual minorities versus heterosexuals.

**Methods:** We analyzed data from a prospective cohort of sexual minority and heterosexual young adults (n=595), recruited from a nationally representative sample, that included valid assessments of depression symptoms over four years, three well-established biomarkers of inflammation (i.e., CRP, IL-6, TNF- $\alpha$ ) measured at two time points, and early threats to social safety in the form of adverse childhood interpersonal events.

**Findings:** Sexual minorities experienced more adverse childhood interpersonal events, were more likely to display chronically elevated inflammation, and reported more depression symptoms than heterosexuals. Adverse childhood interpersonal events and chronically elevated inflammation explained approximately 23% of the total effect of the longitudinal association between sexual orientation and depression symptom severity. Further, there was an increased coupling of chronically elevated inflammation and depression symptoms among sexual minorities compared to heterosexuals.

**Discussion:** This is one of the first longitudinal, population-based studies to demonstrate the role of chronically elevated inflammation in linking threats to social safety during childhood with depression symptom severity in young adulthood. Our research highlighting potential biopsychosocial intervention targets to reduce sexual minority disparities in depression.

## Changes in HRV in the Peripartum Predict Mothers' Depressive Symptoms 18 Months after Childbirth

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**Background:** In the peripartum period, low vagally-mediated Heart Rate Variability (HRV) has been linked to higher depressive symptoms. This study examines changes of HRV from pregnancy to postpartum interact with prenatal depression to predict postpartum depressive symptoms at 18 months.

**Methods:** This longitudinal study included 74 pregnant women. During the second or third pregnancy trimester they completed the Edinburgh Postnatal Depression Scale (EDPS) and provided a HRV measurement using a smartphone application. One month after giving birth, another rMSSD measurement was taken, and at 18 months postpartum, the EDPS was re-administrated. Higher difference between postpartum and prepartum rMSSD values indicated an improvement of vagally-mediated HRV. A moderation analysis was conducted to examine the interaction between prepartum depressive symptoms and the changes in HRV on postpartum depressive symptoms at 18 months, adjusting for age, education, and BMI.

**Results:** Prepartum EPDS was associated with 18-month postpartum EPDS ( $b = 0.68, p < 0.001$ ). Moreover, the change in peripartum rMSSD moderated this association ( $\Delta R^2 = .020, F(1,412) = 9.27, p = .004, b = -0.37, p = 0.04$ ): depressive symptoms at prepartum were associated with higher 18-month postpartum depressive symptoms in women with a more detrimental change of peripartum rMSSD.

**Conclusion:** Findings suggest an association between decreased HRV change and depressive symptoms, highlighting how non-adaptive changes in HRV from pre- to postpartum can prospectively affect postpartum depressive symptoms at 18 months. Supporting parasympathetic activity regulation during the peripartum could positively impact the emotional and psychological well-being of new mothers in the long term.

## **Non-invasive vagus stimulation attenuates the work-related stress impacts**

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Clinical studies have shown the effectiveness of current stimulation for mental and stress related disorders. Our study analyzed the effects of the non-invasive vagus nerve stimulation for boosting mental and physical health and performance at work conditions. 62 healthy volunteers (telecom operators of the contact center of telecommunication company JSC Kazakhtelecom, 24 students and employees of KazNU) 18-49 years old were recruited for study. Vagus nerve stimulation (BrainPatch platform for non-invasive stimulation) was arranged as a 4-day course of 6-minutes stimulation sessions with monitoring of HRV. Psychological testing (State Anxiety, STAI; psychological stress level, PSM-25; emotional burnout level MBI; identification of depression, IDS) was carried out on the first and last day of the study. We detected beneficial changes in the psychoemotional state of the respondents: improvement of mood, reduction of work stress (PSM-25), emotional exhaustion and professional reduction (MBI), depression symptoms (IDS). HRV effects of VNS turned out to be short-term and reflected the activation of parasympathetic nervous system &#40;the increase of vagally mediated parameter RMSSD and decrease of LF/HF ratio&#41;. An increase in the spectrum of high-frequency waves indicates a high degree of recovery and readiness for stress. Our data suggests that VHS attenuated the work-related stress impacts. A normalizing effect on the psychoemotional state manifested in the form of shifting "sympatho-vagal balance" to the functional optimum.

## Introducing Comprehensive Construct Definitions: The Case of Self-Efficacy

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**Background:** In earlier work, we demonstrated that experts have difficulty in predicting how people 'score' on determinants (i.e.; for a given behavior, whether the general population holds positive or negative attitudes, strong or weak perceived norms, and high or low perceived behavioral control; doi.org/js9b). This stresses the importance of conducting determinant studies to gain more insight into how people 'score' on determinants, how these scores develop over time, and to what extent determinants are related to a specific behavior of interest. Such studies, and health psychology in general, require comprehensive construct definitions (doi.org/jnjp).

**Methods:** After introducing the rationale for comprehensive construct definitions, this contribution uses self-efficacy as an exemplary case to illustrate procedures for developing definitions and associated measurement instructions.

**Findings:** Self-efficacy is a commonly used psychological construct in many studies in health psychology. However, when developing definitions and associated measurement instructions for this construct, many basic questions come to light on what it is exactly and how to measure it.

**Discussion:** Basic questions on what a construct exactly is and how to measure it are relevant for all psychological constructs, especially when having to rely on indirect measurement. This contribution focuses on how we could answer such questions and at the same time respect epistemic diversity.

[Repository at Open Science Framework: <https://doi.org/mh9p>]

## How we Measure Matters: Challenges in Evidence Synthesis across Theoretical Constructs

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**Background:** Careful attention to mismatch and similarity of construct labels and definitions in behavioral science is critical for evidence synthesis, theory advancement, and intervention optimization, but this is complicated at the measurement level. Science Of Behavior Change (SOBC) researchers are conducting a series of collaborative studies that (a) correspond SOBC-curated measures to theory-derived mechanisms of action (MoA) hypothesized to underlie behavior change identified by the Human Behaviour Change Project (HBCP), (b) empirically identify shared construct-variance across measures, and (c) illustrate lack of clarity in construct definitions and measure items.

**Methods:** Five studies are completed/planned: (1) An expert consensus exercise (N=30) assessing agreement links between 44 measures and 26 MoAs; (2) Coding measures/subscales to the HBCP MoA Ontology; (3) An item-level discriminant content validity study (N=90); (4) Confirmatory factor analyses (CFA; N=806) informed by Studies 1-3; and (5) A qualitative study soliciting item-based comprehensive construct definitions and measurement instructions (N=20).

**Findings:** Experts agreed on 167 measure-MoA links (Study 1). Study 2 confirmed 397 links and identified 289 new links. Co-occurring patterns of entities were identified. Study 4 confirmed original scale structure and demonstrated excellent fit of an entity-based CFA. Studies 3 and 5 are underway.

**Discussion:** Frameworks for organizing theoretical constructs are necessary to advance behavioral science, but measurement considerations highlight challenges of applying these frameworks. Measure-MoA links can be identified, but evidence suggests scale-specific variance not captured by overlapping entities. Embracing and elaborating heterogeneity in constructs in tandem with organizational frameworks will improve rigor and transparency and advance theory.

<https://doi.org/mh9q>

## **Below the surface: 'hidden' heterogeneity when operationalizing cognitive and social activities in research and interventions**

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**Background:** Engagement in cognitive and social activities alleviates the risk of social isolation and loneliness while enhancing cognitive reserve. This makes the promotion of these activities a promising avenue for preventing dementia. However, a precursory requirement is insight into how to measure engagement in cognitive and social activities.

**Methods:** A scoping review was conducted to explore how engagement in cognitive and social activities is measured in dementia prevention research and how it is promoted through interventions in this area.

**Findings:** Across 52 studies, a broad spectrum of themes was observed to measure cognitive and social activities (e.g., reading, writing, gaming, puzzles, social outings, socializing, multimedia use, making music, education, working/volunteering, attending clubs/groups, and household chores). The operationalization of themes varied considerably across studies in terms of what themes were addressed, item phrasing, response scales, recall periods, and how scores were composed. Furthermore, preventative interventions primarily relied on psychoeducation and cognitive training tasks, which offer a limited reflection of the everyday activities measured in research exploring protective effects against dementia.

**Discussion:** Many researchers investigate the effects of cognitive or social activities against dementia but measure these concepts completely differently. A way to address this hidden heterogeneity is to comprehensively clarify what the concept entails and what aspects to measure. This supports the development of better questionnaires and measurement instructions, which enhance our understanding about how specific activities protect cognitive functioning. These insights might lead to more advanced interventions to promote everyday activities, ultimately reducing the risk of dementia. Materials: <https://doi.org/mh9k>.



## **Mind measurement: systematically analyzing and advancing measurement using comprehensive construct definitions and narrative response models**

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**Background:** Conventional development and application of measurement instruments in psychology typically hinges on psychometric analyses of correlation matrices. However, these analyses have little diagnostic value, and moreover, preclude inference as to whether an instrument measures what it was designed to measure. This in turn obstructs epistemic iteration, instead encouraging epistemic stagnation. We show how this construct validity approach can be abandoned in favor of test validity: an approach based on understanding of the measurement instrument.

**Methods:** We start with developing Decentralized Construct Taxonomies to specify a comprehensive construct definition. Based on this, we develop Narrative Response Models to represent how participants' response processes should unfold for each item to allow inferences about the target construct.

**Findings:** Using the results of the audience engagement activity that opened this symposium, we show how narrative response models can help to explicitly link items to the corresponding target constructs. In addition, we discuss the development of verbal probes at the hand of a narrative response model, and illustrate how cognitive interview notes or transcripts can be coded when studying test validity.

**Discussion:** Although the argument to abandon construct validity and psychometric analyses as primary evidence of validity is persuasive, this does not come with an alternative approach to validity. We propose narrative response models as a tool that allows thorough consideration of item-level validity using qualitative and quantitative as well as rationalist approaches. Linking narrative response models to decentralized construct taxonomies enables distributed, cumulative validity research and so facilitates epistemic iteration. Materials at [doi.org/mh3r](https://doi.org/mh3r).

## Challenges and Obstacles When Working With a Decentralized Construct Taxonomy

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**Background:** For behavior change to occur it is essential an intervention targets the beliefs, expectations and needs that determine the target behavior. The mapping of behavioral determinants is however hindered by an absence of unequivocal construct definitions and operationalizations. A Decentralized Construct Taxonomy (DCT) may be a solution to this problem. When working with a DCT one may, however, encounter new challenges and obstacles, as we show in this contribution (<https://doi.org/mjcv>).

**Methods:** To facilitate the development of an intervention to promote hearing protective behavior in young adults, a systematic literature review, and a qualitative and quantitative study were conducted to help identify the determinants of the target behavior. Comprehensive construct definitions and accompanying instructions were developed prior to the start of the studies for unequivocal reference to definitions and operationalization of constructs.

**Findings:** Drawing up a definition and operationalization of a construct requires a considerable investment of time and effort. Reviewing the literature on a construct takes time; and may not suffice -- in addition clarifying a definition and corresponding operationalization is not a trivial task.

**Discussion:** The development of comprehensive constructs most often is not the goal of any given study, but a means to conduct research. This may mean the space or willingness to invest time in this process may be absent. To prevent a large time investment, constructs with a broad applicability may be drawn up. However, these broad constructs are unable to specify what is being measured when reference is made to that construct.

## **Psychometric validation of the English and French version of the Eating Disorder-specific Interoceptive Perception Questionnaire**

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**Background:** The Eating Disorder-specific Interoceptive Perception Questionnaire (EDIP-Q) is a German self-report measure to assess the ability to perceive and discriminate between emotions, hunger and satiety. To increase the employability of the EDIP-Q, it was translated into English and French. The aim of the current study was to validate the two new language versions and to replicate previous findings on poorer EDIP in individuals with self-reported eating disorders (EDs), including anorexia nervosa (AN), bulimia nervosa (BN) and binge-eating disorder (BED).

**Methods:** In an online survey, 1147 participants (25.9% with self-reported EDs) completed eating and body-related questionnaires, including the EDIP-Q language versions. The postulated factorial structure and measurement invariance between the language groups were examined using confirmatory factor analyses. Construct validity was assessed by examining relationships with other measures. Group differences were investigated using multivariate analysis of variance.

**Findings:** The EDIP-Q language versions have sound psychometric properties. Overall, lower EDIP-Q scores were found in individuals with self-reported EDs compared to healthy controls. While the ED groups reported similar difficulties with emotion perception, individuals with BN and BED reported higher sensibility to hunger, lower sensibility to satiety, and greater difficulty distinguishing between emotional states and hunger compared to individuals with AN. The opposite picture was found for individuals with AN.

**Discussion:** Our results support the validity of the EDIP-Q language versions. Previous research findings were replicated and important interoceptive deficits were identified to varying degrees in AN, BN, and BED, highlighting the need to develop more targeted interventions for EDs.

## Unravelling the role of satiation perception in stress-induced eating

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**Background:** The relevance of eating behavior for physical and mental health highlights the need for a better understanding of eating regulation. Despite the physiological expectation that acute stress should reduce food intake, some individuals eat more when stressed. Eating traits, along with difficulties in regulating emotions, have been recognized as contributing to stress-induced eating. This study investigates how acute stress affects satiation perception to shed light on a possible mechanism behind stress-induced eating.

**Methods:** 59 sober participants completed both a stress-inducing and a control task in random order across different laboratory sessions. Subsequently, they were asked to eat yogurt from a self-refilling bowl until they felt initially and completely satiated. The effect of stress on satiation perception, considering self-reported eating traits and emotion regulation skills, is analyzed through multilevel modeling.

**Findings:** Preliminary results indicate that individuals with higher levels of uncontrolled eating experienced a diminished sensitivity to satiation signals when stressed, whereas those with lower levels showed the reverse ( $b = 57.59$ ,  $p = .014$ ). Similar trends emerged for restrained eating ( $b = 40.91$ ,  $p = .081$ ) and difficulties in emotion regulation ( $b = 40.69$ ,  $p = .086$ ).

**Discussion:** The findings indicate that stress may alter satiation perception in interaction with eating traits, possibly explaining differences in eating behavior under stress. Specifically, uncontrolled and restrained eating traits and emotion regulation difficulties are associated with a physiologically unexpected deterioration in satiation perception under stress. Future studies should explore the relationship between stress-induced eating, satiation perception under stress, and related physiological markers.

## **Effects of a novel virtual reality gastric biofeedback intervention on disordered eating behaviour and interoception**

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In eating disorders, interoception and especially the perception of gastric activity seems to be altered. The perception of gastric activity is important for hunger, satiety and fullness perception. Thus, training the perception of gastric activity with gastric biofeedback (with electrogastrography; EGG) is a promising new approach in eating disorder treatment. Therefore, we developed a novel gastric biofeedback paradigm in virtual reality, which we evaluated by conducting a randomised controlled trial (expected N = 80) with three groups (1) a VR based gastric biofeedback paradigm, (2) the same paradigm in 2D and (3) a control group. The study comprised four training sessions of 10 mins each over two weeks. By calculating repeated measures ANOVAs, we will present results regarding the extent to which healthy subjects can increase their normal gastric activity and changes of eating disorder symptoms and interoception. Normal gastric activity will be measured with EGG, disordered eating behaviour with questionnaires (e.g., Dutch Eating Behaviour Questionnaire) and interoception with questionnaires such as the Multidimensional Assessment of Interoceptive Awareness. Preliminary results from the pilot study were promising regarding the feasibility of training gastric activity as well as favourable effects on disordered eating behaviour and interoception. Data collection is planned to finish in June 2024. This study contributes important new findings in the domain of gastric biofeedback as a possible tool in the prevention and treatment of disordered eating behaviour, by enhancing the perception of gastric signals. However, more research is needed to clarify the underlying mechanisms.

## **What Mediates The Relationship Between Emotion Regulation Difficulties, Disturbed Eating, And Body Dissatisfaction In Youth?**

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In recent years, an increasing number of youths have reported disturbed eating and compensatory behavior. Previous studies have shown that this is particularly the case among young individuals who struggle with regulating their own emotions. Moreover, adolescence may be characterized as a period of particular vulnerability in the development of body dissatisfaction, with major physical, social, cognitive and emotional changes, and identity formation occurring. Nevertheless, the mediatory mechanisms underlying the relationship between emotion regulation difficulties [DERS-SF], disturbed eating [DECB], and body dissatisfaction [BSQ-8C, MDDI] remain insufficiently explored, prompting the current study to delve into the nature of these mediating factors. By calculating a two-stage mediation model, we aim to present the mediating roles of cognitive style [SATAQ-G], cognitive distortion [TSF-B], body mass index [BMI], negative mood [BDI-FS], and social anxiety [SIAS-6]. The present study is part of a large-scale, Swiss research project conducted at the University of Fribourg (Switzerland). It was started in April 2021 with the overarching aim to assess determinants of mental health – especially disordered eating behaviors – in a general youth population (14-24 years). In the online-questionnaire sub-study presented here, we assessed mental health correlates of a German-speaking general youth population. Data collection is scheduled for completion by April 2024. Preliminary analyses suggest significant mediating roles of cognitive style, cognitive distortion, body mass index, and negative mood, whereas social anxiety does not appear to exert a similar influence. These findings emphasize the critical importance of these mediators in shaping body dissatisfaction and disturbed eating.

## **Cardiac modulation of visual body processing and body image distortion in anorexia nervosa**

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Body image distortion (BID), key symptom in anorexia nervosa (AN), refers to the misestimation of the own body size. BID results from inadequate integration of sensory information, as proposed by the allocentric lock hypothesis. The role of cardiac information in generating body representations remains largely unexplored. This study aims to investigate whether cardio-synchronous information affects visual processing of bodies and its relation to BID in AN.

Twenty AN in-patients and 30 healthy controls performed a cardio-visual photo presentation task while a 32-channel EEG was recorded. Photographs of intact or scrambled bodies were presented either synchronously with the heartbeat (230ms post R-peak) or delayed (530ms post R-peak). A body size estimation task was conducted and visual event-related potentials (N170) were computed.

Preliminary results reveal no significant difference in body size estimations between AN patients and controls. A mixed ANOVA will analyze group differences, orientation (intact vs scrambled), and cardio-synchronicity (synchronous vs delayed). Considering the multisensory integration deficit in AN, we anticipate a significant group x cardio-synchronicity interaction. Specifically, AN patients are expected to show no significant differences in N170 mean amplitude between synchronous and delayed stimuli, unlike controls who should exhibit stronger responses to delayed stimuli. Understanding the psychophysiological mechanisms is crucial for better understanding BID and developing targeted interventions to enhance AN prognosis.

## **Investigating the effects of a cardio-visual full-body illusion on embodiment and body image**

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Current eating disorder theories suggest patients are stuck in a distorted view of their body, not influenced by current sensory input. This project aims to create a virtual reality (VR) platform that can be used to improve body image by targeting this issue.

For this purpose, a cardio-visual full-body illusion in VR is used, which is created by the outline of an avatar flashing in synchronisation with the participant's heartbeat. This leads to significant alterations in somatosensory and interoceptive processing, positively affecting body image. The current study aims to test the effects of a cardio-visual full-body illusion in VR on body image in comparison to various control conditions. In particular, we want to identify which components of the illusion lead to higher embodiment and improvements in body image. In the synchronous condition, the flash will peak 250 ms after the R-peak. Control conditions include flashing with a longer delay (550 ms), synchronized with pre-recorded ECGs, or no flashes.

Self-report data on embodiment and body satisfaction will be assessed alongside physiological data (EDA, EMG, skin temperature). Twenty healthy participants (M = 10, F = 10) will be recruited.

Data will be analysed with repeated-measures ANOVA. We anticipate stronger embodiment of the avatar and higher body satisfaction in the synchronous condition than in the control conditions. Data collection is ongoing.

Our platform employs a multisensory approach and holds the potential to expand current etiological models of eating disorders, laying the foundation for innovative treatment methods.



## School students' civic engagement for climate protection: Scale development and psychometric evaluation

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**Background:** Civic engagement is a form of pro-environmental behavior that initiates collective processes and pursues systemic change towards climate change mitigation, aiming to increase one's ecological handprint. School students have been at the forefront of the climate protection movement. To date, no validated scale exists to measure civic engagement for climate protection in the school student context. This study aims to examine item properties and the factor structure of a newly developed 8-item scale.

**Methods:** As secondary baseline analyses of the Public Climate School study project, N = 360 school students (M<sub>age</sub> = 14, SD = 1.19, 49% female) from seven schools in Germany completed the scale measurement. To determine discriminant and nomological validity, correlational and regression analyses were conducted.

**Findings:** Mean item ratings were low across all items. All items were represented in one factor, which indicates one-dimensionality of the construct. The scale had good reliability (McDonald's  $\omega = .86$ ). The scale mean was positively correlated with consumption behaviors contributing to ecological handprint ( $r = .44$ ) and enactment of social influence for climate protection ( $r = .64$ ). Individual predictors (risk perception and self-efficacy) explained 25% of the scale's variance and collective predictors (ingroup identification and ingroup norms) explained 41% of its variance. Civic engagement was negatively associated with psychological wellbeing ( $r = -.15$ ).

**Discussion:** Results indicate that the scale civic engagement for climate protection can be used as a one-dimensional measure in future studies. Further validation and the adjustment of the scale to the adult context are needed.

## Effects and mechanisms of the Public Climate School: A climate education program for school students

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**Background:** Climate change will increasingly affect the lives of young people. In the spirit of education for sustainable development, it is important to educate students about climate change and provide opportunities for action, such as civic engagement for climate protection to increase people's 'ecological handprint'. This study examines pre-post effects and potential mechanisms of the Public Climate School, an online school-based project week on environmental and health topics.

**Methods:** We enrolled 360 students from 7 schools in Germany (Age:  $M = 14$ ,  $SD = 1.19$ ; 49% female), who responded to online questionnaires before and after the Public Climate School, which took place between 20–24 November 2023. We repeatedly assessed theory-based behavioural and psychological variables, including civic engagement for climate protection (e.g., signing a petition for climate protection).

**Findings:** Preliminary pre-post analyses showed increases of students' civic engagement for climate protection, reflected by a small effect size. Analyses predicting pre-post changes in civic engagement for climate protection yielded two significant predictors: students' intention strength as well as their perceived identification with the climate movement.

**Discussion:** This study showed that a school-based project week can foster students' civic engagement for climate protection and identified potential mechanisms. Future research could use experimental designs examining causal relationships. School actors from different levels (e.g., teachers, head of the school) could consider implementing a long-term adaptation of such a program in order to strengthen education for sustainable development.

## **Reducing carbon footprints by fostering environmental health behavior: Randomized controlled trial of the GROW app**

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**Background:** Active transportation and a low-meat diet are some of the key behaviors to cut individual carbon emissions. These behaviors also have health co-benefits. To promote adoption, we developed a volitional intervention based on the health action process approach: the GROW smartphone application. We hypothesize that GROW will lead to greater environmental health behavior and reduction in carbon footprint than a motivational app.

**Methods:** In this double-blind randomized parallel trial, N = 136 adults will be allocated to the volitional GROW app, or a motivational app. Participants then engage with the app content and respond to daily e-diaries of their eating and optionally also their transportation behavior over 37 days. The primary outcome is carbon footprint. Secondary outcomes are red-meat consumption and active transportation. Data will be analyzed using multilevel modelling.

**Expected results:** The results will provide insights into the efficacy of GROW to reduce carbon footprint and promote environmental health behavior compared to a motivational app. We will also show results on the temporal dynamics of these effects and app engagement.

**Current stage of work:** The app is finalized, and ethical approval has been obtained. Data collection will be completed in June 2024.

**Discussion:** Beyond providing insights on the efficacy of an app-based intervention to promote environmental health behavior and reducing carbon emissions, this study will provide evidence on the added value of volitional interventions to change behavior compared to motivation. Finally, recommendations for improvement of future app-based interventions to promote environmental health behavior will be derived.

## **The impact of public participation on psychological ownership and acceptance of river restorations**

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By improving biodiversity and providing multiple ecosystem services, restored river landscapes help in protecting environmental health (i.e. that part of human health that is determined by the natural and built environment). Yet restoration projects often meet resistance by the local public, possibly because people become aware of personal costs they might face (e.g. restricted use of the river area). Psychological ownership of the river (i.e. feeling as one of the owners of the river) could shift the focus from perceived personal costs to perceived benefits for the owned object, the river, and might thus increase support of its restoration. Moreover, research suggests that ownership may be increased by participation in the planning around the owned object. Our quasi-experimental longitudinal study in two regions in Switzerland (N=326) revealed that participation in the planning of the restoration project increased two out of the three assumed roots of psychological ownership. Specifically, at wave 2, people in the intervention group (but not those in the control group) felt to have invested more time and effort into the development of the local river and to have more control over decisions around their river than at wave 1. Moreover, increased feelings of self-investment and control were associated with increased feelings of ownership, which, in turn, were associated with increased acceptance of the restoration project. Our findings suggest that public participation could be an important measure to increase support of local river restorations in particular and acceptance of environmental policies in general by increasing psychological ownership.

## The role of psychological distance in the perception of microplastics pollution

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Microplastics and nanoplastics (hereinafter referred to as "microplastics") contaminate many areas of the environment, e.g. water, soil and air. Microplastics have also been found in the human body. Nevertheless, the current state of research sees no danger to humans and only potential danger to aquatic ecosystems at high concentrations. However, there is increasing public concern about microplastics pollution. This could be explained by a high psychological proximity to the pollution, possibly triggered by alarming media reports. To our knowledge, the psychological distance of microplastics pollution has not been investigated so far. The study therefore investigated whether low psychological distance explains concern about microplastics pollution. The conventional dimensions of psychological distance (spatial, social, temporal, hypothetical) and an additional dimension (biological distance) were taken into account. Additionally, we investigated whether low psychological distance also explains intentions to reduce microplastics pollution and the willingness to pay for mitigation measures and whether this relationship is mediated by concern. This was analysed using structural equation modelling in a Swiss sample (N = 828). The results showed that the microplastics pollution tends to be perceived as psychologically close. The structural equation model indicated that lower psychological distance is associated with greater concern and, mediated by this, with higher behavioural intention to reduce the pollution and the willingness to pay for mitigation measures. This suggests that low psychological distance could facilitate behaviour change and measures to reduce microplastic pollution. Yet, communication about the microplastics pollution should not create unnecessary high concern among the population regarding health risks.

## **The potential of a mutually beneficial intervention: delivery of opportunistic behaviour change interventions by volunteers**

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**Background:** Volunteering exerts a range of psychological, physical, and social health and wellbeing benefits to volunteers. Making Every Contact Count (MECC) is an opportunistic approach to health behaviour change that can be delivered by anyone through health and wellbeing conversations. This qualitative study aimed to explore the potential of a two-fold positive impact of MECC delivered by volunteers.

**Methods:** Semi-structured, one-to-one interviews were conducted with seven volunteers who had not yet received MECC training across a variety of settings including charities, youth groups, and religious settings. Reflexive thematic analysis was applied using Nvivo.

**Findings:** Volunteers were generally accepting of, motivated, and willing to deliver MECC, and often already engaged in similar conversations. Facilitators included the time to build trusting relationships with service users, that some volunteers perceived themselves as peers, possession of valuable local knowledge, and altruistic motivations to make an impact. Volunteers reported a sense of giving back to the communities they occupied, contributing to reducing disparities through their individual agency of aiding those more disadvantaged than themselves. Through this purpose, volunteers developed skills, felt a strong sense of reward through observing the progression and change in service users, and gained meaning, particularly if retired.

**Discussion:** Provided with MECC training, delivery of MECC by volunteers has the potential to exert mutually beneficial effects on volunteers and service users as volunteers feel like they matter. Future research should monitor volunteers before and after MECC training, and include benefits to the deliverer as an outcome when assessing the cost-effectiveness of MECC.

## **Volunteering affects loneliness, social and mental health in older adults: Evidence from the HEAL-HOA dual-RCT**

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**Background:** To determine the beneficial effects of volunteering on own loneliness, social network engagement, perceived social support, stress, anxiety and depressive symptoms, among Chinese older adults in Hong Kong, during the COVID-19 pandemic.

**Methods:** The dual RCT “Helping Alleviate Loneliness in Hong Kong Older Adults (HEAL-HOA)” tested the effects of telephone-based psychosocial interventions, delivered by older-adult volunteers, in a population of low-income older adults experiencing loneliness. 375 individuals aged 50-70 were randomised into a volunteering condition or an active control condition (psycho-education sessions with social gatherings). Following a 6-week training period, participants randomised to the volunteering condition delivered tele-interventions to intervention recipients. The primary outcome was loneliness (UCLA Scale). Secondary outcomes were loneliness (De Jong Gierveld Scale), social network engagement, perceived social support, perceived stress, anxiety, and depressive symptoms. Assessments were completed before training (baseline) and immediately after the 6-month volunteering period, and at 12-month follow-up.

**Findings:** Results from linear mixed models show significant positive effects of volunteering (significant interactions of condition × time) on both measures of loneliness (dppc2=-0.41 UCLA Loneliness score, dppc2=-0.70 total De Jong Gierveld score), social network engagement, stress, and depressive symptoms, as compared to control participants. At 12-months, effects on stress, anxiety and well-being were found.

**Discussion:** The HEAL-HOA trial demonstrates beneficial effects of volunteer-delivered tele-interventions on decreasing loneliness within the volunteer population itself. Communicating these benefits to volunteers may attract more older adults into volunteering. This effective tele-based volunteer program is scalable for wider implementation.

## **Momentary effects of support provision on affective well-being: A role of basic needs fulfilment**

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**Background:** Social support has well-documented benefits for recipients, but providers are often studied in terms of resource depletion. Examining support provision from an intra-individual perspective in natural settings allows for more ecologically valid conclusions. Drawing on self-determination theory, we hypothesize that support provision has a positive effect on the well-being of providers, particularly under conditions of autonomy, competence building, and fostering relatedness.

**Methods:** The EMA study involved 220 adults (75% women) who submitted data via mobile phone three times a day for seven days. They reported their emotional state and whether they had given support in the previous 60 minutes (yes/no). If support was provided, additional questions assessed details of the support, perceptions of autonomy, competence and relationship with the support recipient.

**Findings:** Of 4620 measurement points, 4226 provided valid data (9.5% attrition). Support was provided on 26% of occasions, less on weekends (23% vs. 31% on weekdays). The ICC for affective well-being informed about up to 43% of the total variance between individuals. For support provision, the ICC was lower (.11), suggesting a contextual dependence. From a within-person perspective, providing support was associated with higher positive and lower negative emotions. Autonomy, competence, and relatedness in support provision were related to higher positive emotions, whereas lower negative emotions were related to higher autonomy only.

**Discussion:** As hypothesized, the momentary affective state in everyday life can be modified by acts of support provision. This modification is related to the perception of basic needs fulfillment, with autonomy as a key component.



## **The association between social support and well-being in partners of persons with a chronic illness**

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Background: A large number of studies have examined the relationship between patients' well-being and received social support. Also, a great number of studies have examined the impact of caregiving on caregivers' health. However, the relation of social support to the well-being of persons providing support to patients who do not need systematic caregiving has not been systematically studied. The two studies presented here aim to examine this relationship. Methods: In the first study, the cross-sectional correlation between self-rated health and the support provided by 74 partners to patients with cardiovascular disease was examined. The second prospective study focused on the relationship between self-rated and mental health of 92 male partners and the support they provided to newly diagnosed breast cancer patients. Findings: In both studies, the support provided by patients' partners was moderately correlated to own well-being ( $r=.30-.35$ ,  $p<.01$ ), even after controlling for sociodemographic factors. Interestingly, according to the findings of the second study, received support (as reported by patients) was also associated with partners' well-being ( $p<.05$ ). However, the relation of the baseline support provided by partners to their well-being three months later was not statistically significant in most cases. Discussion: The social support provided by partners to patients, who do not need systematic caregiving, seems to be associated with partners' well-being. Providing social support may be an indicator of social connection or altruistic behaviour both of which are associated with better health (Holt-Lunstad, 2018; Post, 2005). Still, the strength and the direction of this relationship should be further examined.

## **Does willingness to care and inclusion of other in self influence caregiver gains and wellbeing?**

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### Introduction

In an ageing society assumptions exist over the provision of care by family in the event of a member becoming ill, frail or disabled. Motivations for caring and, more specifically, willingness to provide specific types of care are not inevitably positive. Whilst altruism and volunteering has reportedly benefitted wellbeing in general populations, does this hold amongst caregivers?

### Design

We present data from a large scale online survey of informal caregivers conducted in 8 European countries and Israel (ENTWINE, N=1872). Caregivers completed a battery of measures, here specifically Inclusion of Other (the care recipient) in Self (IoS), motivations to care (MECS, INternal, EXternal MTC), willingness to care (WtC), perceived gains in caregiving (GAINS) and wellbeing (WHO5, WB).

### Findings

IoS, WtC (global,nursing,emotional,instrumental, INMtC and EXMtC were moderately high, however reported Wellbeing was moderate and Gains were low. Including 'other' in one's sense of self was associated with higher motivation and willingness to care but with fewer gains (NS with wellbeing). INMEC was associated with fewer gains but greater WB, EXMEC associated with lower WB (ns with Gains). All subscales of WTC associated with lower Gains but only emotional WTC and global associated with greater WB.

### Conclusion

Considering another person in a caregiving-care recipient dyad and being intrinsically motivated (care out of love, affection, reciprocity) and willing to provide care was associated with fewer care-related gains. Although emotional willingness to care and intrinsic motivations associated with greater wellbeing, overall our findings suggest we might want to consider the issue of 'over caring'.

## **A feasibility study on the effects of an online dental anxiety peer support group**

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**Background:** Dental Anxiety (DA) is both highly prevalent and leads to avoidance of treatment. This study aims to evaluate the feasibility of a Randomised Control Trial (RCT) on the effects of engagement with a DA Online Support Group (OSG), to assess the acceptability of an OSG for adults with DA and the appropriateness of the outcome measures.

**Methods:** The mixed-methods protocol was developed with patient involvement. The study aimed to recruit 38 adults with moderate to high DA within 3 months. The sample size allowed for attrition up to 33% and is based on a review of relevant literature. Recruitment took place through social media. Participants completed pre- and post-measures of DA and intention to attend routine dental care. They were randomly allocated to a wait-list control or to the OSG and asked to access it for a period of six weeks. Semi-structured interviews were conducted with participants allocated to the OSG.

**Findings:** 40 participants were recruited within 3 months and attrition was lower than anticipated (7.5%). Participants found the measures easy to complete. There was variation in the level of engagement with the OSG. Most participants were positive about the experience, with a small number reporting that it was “not for me”. Barriers to engagement included other health issues and limited time. Facilitators included a forthcoming dental appointment or a current dental concern.

**Discussion:** The results of the feasibility study indicate that a full RCT is both feasible and necessary to further understand the efficacy of OSGs on DA.

## **Exploring experiences of social media in adults with visible differences: a photo-elicitation interview study**

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**Background:** Visible differences (health conditions that affect appearance) are associated with experiences of stigma, discrimination, and lead to social anxiety, depression, low self-esteem, and appearance dissatisfaction. Social media provides a space to connect with others with the same condition, gain information and support, raise awareness, and challenge misconceptions. However, little is known about how individuals with visible differences use social media. This study aimed to explore adults with visible differences' experiences of social media.

**Methods:** An inductive qualitative design was employed, using online participant-driven, semi-structured photo-elicitation interviews with eighteen adults (15 female, 2 male, 1 non-binary) with a range of visible differences. Participants selected screenshots of social media posts which were used to guide the interviews. Reflexive thematic analysis was used to analyse the data and identify common themes, using NVivo 14 software.

**Findings:** Three over-arching themes were generated: (1) Filtered realities: navigating a self-conscious landscape of appearance ideals; (2) Developing my online self: a pathway to accepting my offline self; and (3) A place to belong: building visible difference communities online.

**Discussion:** Adults with visible differences face similar appearance pressures on social media to the general population; however, the visible nature of their condition makes it more difficult for them to adhere to these norms. Although sometimes a self-conscious space, participants used social media to develop confidence showing their difference and it provided a space to connect and gain advice from experts by experience. Practical recommendations for adults with visible differences, charities, and social media companies will be discussed.

## **A smartphone-based social media use intervention: Insights from a randomized controlled trial**

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**Background:** 60% of the world's population engage in social media for an average of 2.27 hours daily. Empirical evidence indicates that high social media use is associated with lower well-being, stress, and depressive symptoms to the point where it can interfere with a person's daily life. There are interventions promoting healthy social media use by monitoring or restricting app usage, but their effectiveness remains unclear.

**Method:** In a randomized controlled trial, a total of N = 70 participants (67% women, Mage = 26) were allocated to an intervention or a control group. Participants from the intervention group installed a custom intervention app on their smartphone, in which they chose their most problematic social media app(s) and received personalized full-screen reminders with the option to quit or continue their social media app use, whenever they exceeded their app use limits. All participants completed weekly online surveys at baseline, postintervention, and follow-up assessing app usage and well-being outcomes.

**Findings:** The intervention (vs. control) group showed a significant decrease in time spent on the most problematic social media app ( $b = -26.57$  minutes/day,  $SE = 6.41$ ,  $p < .001$ ). No significant between-group differences were found regarding positive and negative affect, well-being, and stress.

**Discussion:** Our findings suggest that the intervention app promotes self-regulated social media use but not the improvement of well-being outcomes. Future studies should investigate prolonged intervention effects, as changes in well-being and lasting impacts on mental health may take more time to unfold.

## Examining the use of an online discussion forum for people living with dementia

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**Background:** This multi-part study explored how people affected by dementia use an online discussion forum and the support marshalling strategies they employ to elicit support.

**Methods:** This internet-mediated research utilised publicly available messages posted to the Alzheimer's Society Dementia Support Forum, specifically the 'I have dementia' sub-forum. 100 conversation threads were randomly selected, comprising 863 individual messages. Reflexive thematic analysis was first applied to explore the content of messages exchanged between users. Content analysis was subsequently used to discern direct/indirect support requests, categorise type of support requested, and assess the success of support requests.

**Findings:** The online forum was a valuable space where users could share their journey with dementia, particularly their experiences of adjusting to diagnosis and adapting to everyday life. This self-disclosure facilitated exchanges of reciprocal peer support through which users developed a sense of community and companionship. 29% of initial posts used a direct support marshalling strategy, whereas 54% used an indirect strategy. Informational support was the most requested, predominantly focusing on symptom management, adjustment to diagnosis, medication, and engagement with health and social care services. For both direct/indirect marshalling strategies, nearly all 1st posts received a reply, of which most were on the same day as the initial post.

**Discussion:** Online support forums appear to be filling an important gap in offline post-diagnostic support provision for people with dementia. Clinicians, support workers and organisations could consider recommending online support forums to people affected by dementia, particularly in the aftermath of diagnosis.

## **Co-production of a decision aid to facilitate shared decision-making about technology-assisted mental health support**

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**Background:** Technology-assisted mental health support (TAMHS) can widen access to mental health interventions. TAMHS varies in terms of therapeutic approaches and design features. We aimed to co-produce a decision aid (DA) to help people seeking mental health support engage in shared decision-making about whether TAMHS might be right for them, and if yes, to elicit their preferences for TAMHS .

**Methods:** A phased study was used to develop a prototype DA, informed by (1) a cross-sectional survey to identify barriers and enablers of access and usability of TAMHS; (2) semi-structured interviews with users of TAMHS to understand their preferences for mode, form and content of a DA (3); a narrative review of features of TAMHS identified in the literature and in phases 1 and 2; and (4) feedback on a draft DA in a public engagement workshop.

**Results:** Phases 1 (46 participants) and 2 (13 participants) highlighted support needs related to TAMHS (digital literacy; access to the internet and equipment). Issues considered important for inclusion in the DA were safety and confidentiality of TAMHS, level of tailoring to users' needs and flexibility of use, and perceived effectiveness of TAMHS. Phase 3 resulted in an evidence- and user-informed taxonomy of features of TAMHS, which was embedded in the draft DA. Phase 4 (11 participants) identified the need for a "digital explainer" to accompany the DA.

**Conclusions:** A digital explainer is currently being co-produced with mental health service users. The prototype DA will be subjected to usability testing using mock consultations.

## **KindMap – an e-mental health tool for people facing infertility**

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**Background:** The KindMap is an e-mental health intervention designed for people with infertility. This web-app is a stand-alone and cost-free tool based on the Mindfulness Based Program for Infertility (MBPI). It comprises eight modules integrating mindfulness, self-compassion and Acceptance and Commitment Therapy components. This study aims to test the KindMap's feasibility.

**Methods:** A two-arm 2:1 non-blinded feasibility Randomized Controlled Trial. One hundred eighty fertility patients randomized into experimental group-KindMap (EG-KindMap) and waiting-list control group (WL-CG). Three time-point assessments (baseline, post-intervention, ten weeks follow-up) comprising self-report measures assessing well-being, depression, anxiety, infertility-related stress, mindfulness, self-compassion, psychological flexibility and infertility-related self-efficacy. At post-intervention, EG-KindMap will complete a feasibility questionnaire. Modified intention-to-treat and Per-Protocol analyses will be performed to explore limited efficacy.

**Expected results:** It is expected that the KindMap reveals to be a feasible low-intensive psychological intervention with limited-efficacy results pointing to improvements in well-being and mental health indicators. Results from this study will inform future improvements to KindMap and changes to study protocol for a future large-scale efficacy RCT.

**Current stage of work:** A KindMap prototype version is being developed. The next phase will encompass participants' recruitment, assessment and randomization to EG-KindMap or WL-CG. EG-KindMap will have immediately accessed to KindMap.

**Discussion:** The KindMap can reach a wider number of fertility patients and provide additional support with a patient-centred care framework. The KindMap may power clinical practice and services as it may be used as a stand-alone tool and as a supplement to psychological interventions delivered by mental health professionals.



## **Diet and fitness app use and eating disorder symptomology: A systematic review**

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**Background:** Diet and fitness applications (apps) are widely marketed and used to improve physical health. These apps allow users to monitor their dietary intake or physical activity data using mobile phones and other corresponding technologies. Emerging research suggests that these apps may also play a role in eating disorder symptomology. The present systematic review aimed to synthesise quantitative and qualitative research examining the relationships between diet and fitness app use and disordered eating, body image concerns and compulsive exercise. Additionally, it sought to identify how the frequency of use, type of app used, and other influencing factors contributed the relationships investigated. **Methods:** The search was undertaken across five databases and articles were peer-reviewed and published from 2012 onwards. Thirty-four articles met inclusion criteria and were included after screening. **Findings:** Disordered eating symptomology was higher in young adults who use diet and fitness apps and among those who use them more frequently, than those who do not use them. Qualitative research provided further insight into the unintended harm of diet and fitness app use such as problematic use, promotion of thin ideals, pressure to meet goals, and associated feelings of guilt. However, the research is limited in providing any causal conclusions. **Discussion:** The review findings provide preliminary evidence of a link between diet and fitness apps and increased disordered eating, body image concerns and compulsive exercise. Future research should attempt to examine differences between app types and features, examine risk and protective factors, and expand study designs to include underrepresented populations.

## **Mental health service use and cumulative risk in the offspring of parents with affective disorders**

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**Background:** The offspring of parents with affective disorders (OAD) are known to be especially sensitive to environmental risk factors, including ineffective parenting styles, familial dysfunction, and stress in the home. The objective of this study was to better understand the relationship between early cumulative environmental risk, subsequent mental health need, and mental health help-seeking in adulthood between the OAD and controls.

**Methods:** As part of the TRacking Adolescents' Lives Survey, 2230 participants (51% female, Mage= 11.1 years, SD = 0.6) and their parents were assessed across 6 timepoints, spanning 15 years. Children of parents reporting lifetime occurrence of depressive or manic episodes were categorized as OAD (n = 761). Cumulative risk scores were compiled using known environmental risk factors, including SES, parenting styles, familial dysfunction, and parenting stress. The Achenbach Adult self-report provided a measure of mental health in adulthood. In-house questionnaires assessed mental health care usage in adulthood.

**Findings:** A principal component analysis was used to calculate risk scores. Using a moderated mediation model, we examined whether environmental risk in childhood predicted greater need and more intensive care in adulthood. Results from the analyses revealed that the OAD were more likely to seek out more intensive mental health services as adults than controls ( $B = 0.40$ ,  $SE = 0.18$ ,  $p = .025$ ), as a function of cumulative risk and subsequent mental health need.

**Discussion:** Given their sensitivity to early environmental risk, the OAD could benefit from early interventions to prevent future need of intensive and costly mental health care.

# Parental Chronic Illness and College Students' Adjustment: A Role-Balance Perspective

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Background: Adverse effects of parental chronic illness on children have been documented in the literature. However, little is known regarding its impact on college students. As emerging adults, college students of parents with chronic illness may have to take on more family responsibilities while completing their education and imagining their future, potentially affecting their adjustment and learning. Applying occupational balance and quality of life models, this study

investigates how parental illness may result in increased family demands, family-to-school conflict, and life-balance difficulty, affecting adjustment and academic performance. Methods: 324 college students in the United States completed an online survey that assessed perceived family demands (Perceived Work and Family Demand; Boyar et al., 2007), family-school conflict (Olson, 2011), role balance (Occupational Balance-Questionnaire; Dur et al., 2014), psychological adjustment (Brief Adjustment Scale-6; Cruz et al., 2020), and academic performance. Findings: Independent sample t-tests revealed that students of parents with chronic illness, when compared to those of healthy parents, reported higher levels of family demands ( $p = .05$ ), family-to-school conflict ( $p = .001$ ), and adjustment difficulty ( $p = .015$ ), as well as lower levels of role balance ( $p = .001$ ). A path analysis suggests that severity of parental illness may lead to higher levels of family demands, family-to-school conflict, and role balance, affecting perceived life satisfaction and academic performance; RMSEA = 0.07, CFI = 0.97, TLI = 0.96. Discussion: College students of parents with chronic illness experience challenges in navigating role balance and may require support to cope with family and school demands.

## Effects of parental stigmatization and attributions of the child's illness on the parents' mental health

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This study examined the effects of parental stigma and attributions of the cause of the child's language disorder on the parents' mental health. Consistent with the attribution model of self-stigma (e.g., Mak & Kwok, 2010), we hypothesized that attributions of the cause of the child's disorder would partially mediate the relationship between perceived and internalized stigma, and that only internalized stigma would have a direct effect on parents' mental health. We conducted a three-wave longitudinal study with a three-month time interval. A total of 380 parents (94% mothers) whose children had been diagnosed with the developmental language disorder participated in the study. At each wave, participants completed an online questionnaire consisting of the Revised Causal Dimension Scale, the Depression Anxiety and Stress Scale (DASS-21), and the revised versions of the Devaluation of Consumer Families Scale and the Affiliate Stigma Scale. The data were analyzed using a cross-lagged structural equation model. The results showed a stable positive longitudinal effect of perceived stigma on internalized stigma ( $\beta = .18$ ,  $p = .025$ ). The perception of stability of the cause of the child's disorder at T1 was directly associated with an increase in negative emotional states at T2 ( $\beta = .24$ ,  $p = .008$ ), and negative emotional states at T2 predicted internalized stigma at T3 ( $\beta = .22$ ,  $p = .009$ ). The results suggest that attributing child's disorder to stable causes is related to poorer parental adjustment and that parents with poorer mental health may be more prone to internalizing stigma over time.

## Protective Factors for At-Risk Youth Exposed to Adversity

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Research indicates that adversity can have a detrimental impact on adolescent wellbeing, but knowledge about the protective factors that mitigate this relationship is limited. This study aims to a) identify dominant patterns of adversity experienced by adolescents across home, peer, and school, b) explore the relationship between adversity profiles and mental health and wellbeing; c) determine whether health behaviours and social supports buffer these relationships.

Secondary data analyses were performed on data from 15,129 adolescents, in their 4th year of secondary school education in the west of Ireland. Data is available from 3 cross-sectional Planet Youth surveys: 2018 (n=4848), 2020 (n=5004) and the 2022 (n=5277). Latent class analyses (LCA) were conducted using the Bolck, Croon, and Hagenaars (BCH) method to identify the dominant patterns of adversity experienced by adolescents across peer, home and school settings.

LCA indicated that there are four dominant profiles of adversity experienced by adolescents across all cohorts: peer-adversity; parental-adversity; multiple-adversity and low-adversity. Results showed that there were significant differences in adolescents' mental health and wellbeing outcomes across the adversity classes. While findings indicated that parental support, school safety and sleep were significantly associated with adolescents' wellbeing outcomes, the relationship between these protective factors and youth mental health wellbeing varied across the adversity groups.

Youth who experience adversity across multiple social contexts experience poorer mental health and wellbeing, and higher levels of depression. While individual and social protective factors are positively associated with wellbeing, the magnitude of these associations fluctuate across time and adversity groups.

## **The role of psychosomatic symptoms on mental health and life satisfaction in Romanian adolescents**

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**Introduction:** Psychosomatic symptoms, reflecting the interplay between mind and body, serve as crucial indicators of adolescent mental health. This study delves into the complex influence of psychosomatic symptoms on adolescent well-being and life satisfaction, employing data from the Health Behaviour in School-Aged Children (HBSC) survey across 232 Romanian schools, targeting adolescents aged 11, 13, and 15 (N = 8472).

**Methods:** We employed a cross-sectional design, examining the frequency of reported psychosomatic symptoms—headaches, stomachaches, and sleep difficulties—and their association with self-reported well-being and life satisfaction. Statistical analyses, including hierarchical linear modeling (HLM) and structural equation modeling (SEM), were employed to explore the nuanced relationships between psychosomatic symptoms and adolescent well-being, accounting for potential confounders such as socio-economic status and gender.

**Findings:** There was a consistent negative impact of psychosomatic symptoms on both well-being and life satisfaction across all age groups, with specific symptoms exerting distinct effects. For instance, headaches were particularly detrimental to well-being among 11-year-olds, while backaches and sleep problems were significant predictors for 13-year-olds, and stomachaches and sleep disturbances were most impactful for 15-year-olds. A surprising outcome was the correlation of higher socio-economic status with an increased prevalence of psychosomatic complaints.

The study underscores the critical role of psychosomatic symptoms as indicators of reduced adolescent well-being and life satisfaction. It calls for targeted interventions that recognize and address these symptoms to improve mental health outcomes. The association between socio-economic status and psychosomatic symptoms warrants further investigation to unravel the underlying mechanisms.

## **Childhood emotional abuse and binge watching: The role of vulnerable narcissism and emotion dysregulation**

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**Background:** Childhood emotional abuse (CEA) significantly impacts psychological well-being and has been linked to vulnerable narcissism and emotion dysregulation. Binge-watching has emerged as a noteworthy coping mechanism, particularly among those with psychological vulnerabilities. The present study explored a serial mediation model with CEA as the predictor, vulnerable narcissism as the first mediator, emotion dysregulation as the second mediator, and binge-watching as the outcome.

**Methods:** This cross-sectional study involved 1082 Italian young adults (50% women) aged 18 to 25 years ( $M=21.39$ ,  $SD=2.31$ ), recruited through both offline and online means. Validated self-reports assessed each variable. Structural equation modeling (SEM) with latent variables was employed to test the mediation model, and multigroup path analysis (MGPA) was carried out to test gender invariance.

**Findings:** The results revealed good fit indices:  $\chi^2(56)=121.11$ ,  $p<.001$ ,  $CFI=.99$ ,  $RMSEA=.03$  (90% CI=.03-.04), and  $SRMR=.02$ . All direct and indirect paths were significant. Vulnerable narcissism mediated CEA's relationship with emotion dysregulation ( $\beta=.24$ ,  $p<.001$ ) and binge-watching ( $\beta=.05$ ,  $p=.02$ ). Emotion dysregulation mediated binge-watching's relationship with CEA ( $\beta=.02$ ,  $p<.02$ ) and vulnerable narcissism ( $\beta=.12$ ,  $p<.001$ ). Gender invariance was confirmed.

**Discussion:** CEA's influence on vulnerable narcissism and emotion dysregulation highlights the importance of trauma-informed interventions. By addressing impaired emotional processing and maladaptive coping mechanisms, clinicians might disrupt the cycle leading to binge-watching tendencies. Furthermore, this study illuminates binge-watching as a coping mechanism for those grappling with emotional issues. Effective interventions could prioritize healthier coping mechanisms, foster emotional resilience, and provide viable alternatives to binge-watching behaviors.

## Early Childhood Predictors of Psychological Resilience: A Mediation Model

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Psychological resilience, regarded as a character strength, is the process of adapting to trauma, stress, tragedy, threats, or adversity well and includes not only “bouncing back” from these stressful situations but also experiencing personal growth. Childhood sexual and physical abuse are early childhood traumatic experiences that disrupts a child's both physical integrity and psychological well-being with profound long-lasting effects on developing psychological resilience. Besides childhood traumatic experiences, how the child responds to these experiences within his/her relationship with the caregiver may have more critical role in psychological resilience. The aim of the current study was to investigate the mediator role of early role confusion with the caregiver in the association between childhood abuse (i.e., physical and sexual) and psychological resilience. The research data were collected online (September-June 2021) from 327 adult participants. Demographic Information Form, The Brief Resilience Scale (BRS), Childhood Trauma Questionnaire (CTQ-33), and the Relationship with Parents Scale (RPS) were used. A mediation model suggested by Hayes (2013) was conducted. According to the findings, although childhood sexual abuse and physical abuse had no direct effect on psychological resilience, these abuse types predicted decreased psychological resilience via role confusion with the caregiver. These findings highlighted that in the face of traumatic experiences the child seems to be preoccupied with the emotional status of the caregiver rather than focusing on his/her emotions. Psychological interventions that may help child prioritize and touch his/her emotions may be important for the child to gain psychological resilience later in life.



## **Mosaic: A website delivering peer support to cancer caregivers in a tailored, accessible written format**

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**Background:** The Mosaic website delivers peer support in a scalable written format to stem cell transplant (SCT) recipients. Its database of peer support narratives (written by SCT survivors to share their experiences, advice, and encouragement with patients preparing for SCT) is paired with psychoeducation and features that recommend narratives based on users' coping preferences and needs. We are adapting Mosaic to support patients' informal caregivers (Mosaic-CG), who are critical to patient recovery. This presentation describes evidence supporting the need for Mosaic-CG and methods for building a database of caregiver peer support narratives.

**Methods:** 120 caregivers of patients treated with SCT or CAR T therapy (emerging alternative treatment) within 100 days to 5 years completed an online assessment of pre-treatment caregiving preparedness, current caregiving life disruption, attitudes towards Mosaic-CG, and willingness to write a peer support narrative for Mosaic-CG's database.

**Findings:** Only 29% of caregivers (24-86 years old, 60% college educated, 84% non-Latinx white) reported having been pretty well or very well prepared for caregiving and 55% reported  $\geq$  moderate current caregiving disruption, indicating need for intervention. Most (93%) believed that people preparing for caregiving would benefit  $\geq$  moderately from using Mosaic-CG; 75% were  $\geq$  moderately likely to join a study to use Mosaic beginning pre-treatment; and 65% were  $\geq$  moderately likely to join a post-treatment study to use Mosaic-CG's writing module to write their own peer support narrative. Sociodemographic and medical factors were mostly unrelated to these responses.

**Discussion:** Findings support the need for Mosaic-CG and its acceptability among caregivers.

## **Narrative Care Journey: Structuring the Experiential Paths of Acquired Brain Injury Patient - Caregiver Dyads**

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**Background:** Acquired Brain Injury (ABI) is among the key contributors leading to adult dependency, disability, and death in the UK. Informal caregivers play a significant role in providing care to ABI survivors. This study explores care experiences in familial dyads affected by ABI.

**Methods:** Semi-structured interviews were conducted with ABI survivors and their informal caregivers, in total 15 participants, comprising six caregiver-care recipient dyads and one triad (two caregivers, one care recipient). Qualitative dyadic analysis and structural analysis within the narrative approach were applied to verbatim transcripts.

**Findings:** Three themes were generated: (1) Harmony and Discord, where dyads either had congruent perceptions of care and more positive experiences or incongruent perceptions and tensed relationship; (2) Crossroads, referring to the dyad's points of convergence or divergence in understanding ABI; (3) Quest and Chaos, which describes narratives of quest (personal growth, enhanced empathy, strengthened relationships) and narratives of chaos (despair and hopelessness) resulting from caregiving and sustaining ABI.

**Discussion:** This study highlights factors contributing to positive dyadic wellbeing and ABI survivor rehabilitation, such as effective role adaptation, balancing caregiving with personal needs, reciprocity, reduced dependency, perceived gains, and improved recovery prospects. Conversely, negative dyadic care narratives may result from unmet psychological and social needs, disrupted family dynamics, increased dependency, conflicting care perceptions, and misunderstandings of ABI. The presence of various ABI dyadic narratives requires diverse approaches for supporting the dyadic relationship. Healthcare providers should consider both perspectives for dyadic wellbeing. Individualised, compassionate, person-centred, outcome-focused support, adaptable to changing dyad needs, is essential.

## **Extrinsic emotion regulation and positive emotions in people with dementia and their family carers**

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**Background:** While some people with dementia and their family carers live well, others experience poor emotional wellbeing after a dementia diagnosis. This variation may partly be attributed to how the dyad emotionally supports each other. This study investigates who may benefit from trying to improve the other's emotions (extrinsic emotion regulation); the provider or the receiver. Additionally, we explore how people with dementia's sense of competence and autonomy may shape how carers' extrinsic emotion regulation is received.

**Method:** Using actor-partner modelling (path analysis) we analysed self-reported cross-sectional data from people with dementia and their family carers (419 dyads). We calculated actor-effects (self-influence) and partner-effects (influence on the other) between each person's extrinsic emotion regulation and positive emotions. We also explored if people with dementia's sense of competence or autonomy moderated associations between carer's extrinsic emotion regulation and people with dementia's positive emotions.

**Findings:** Higher extrinsic emotion regulation was associated with more positive emotions in carers ( $b=0.15$ ,  $p<.05$ ) and people with dementia ( $b=0.33$ ,  $p<.001$ ; significantly stronger effect than carers  $p<.05$ ) (actor-effects). No partner effects were found in the main analysis. However, when people with dementia reported lower competence, carers' higher extrinsic emotion regulation was associated with less positive emotions for people with dementia ( $b=-0.12$ ,  $p<.05$ ; partner-effect).

**Discussion:** Our findings suggest people with dementia may benefit from positively influencing the emotions of others. Additionally, carers' support may not always be positively received. Dyadic interventions should emphasise a collaborative approach, empowering people with dementia to contribute to emotion regulation within the dyad.

## **Couple communication in cancer: concurrent and predictive validity of a state measure of protective buffering**

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Avoidant communication among couples coping with cancer has been associated with poorer well-being. Protective buffering (PB) is characterized by withholding/denial of negative emotions. Studies have relied on global measures of PB that assess it with reference to the past month. Accordingly, we know little about PB in the moment. We assessed validity of a state PB measure. Patients with cancer and their caregiving partners (N = 344 individuals, M age 57, 77% female patients and 24% female caregivers) completed surveys at baseline and 3, 6, 9 and 12 months later, assessing communication with their partner, distress, relationship adjustment, and physical well-being. At baseline, couples also conversed about cancer and then rated the extent to which they had used PB during the conversation (7-item state PB), plus an item assessing motivation: To what extent did you do these things to protect your partner? Transcripts of the conversations were submitted to linguistic analysis using LIWC-22. For both patients and caregivers, state PB was positively correlated with global PB, holding back, social constraints, and distress; and inversely correlated with relationship adjustment and physical well-being ( $p$ 's < .01 for all concurrent and prospective associations). For caregivers only, greater state PB was associated with a more positive linguistic tone during the conversation ( $r=0.28$ ,  $p<.01$ ); a more prosocial motivation to buffer was associated with fewer words indicative of authenticity ( $r=-0.22$ ,  $p<.01$ ). Results support validity of the state measure. Caregivers' PB may manifest as positive but also less authentic expression in the context of greater protective motivation.

## **Motivations to start and continue with jogging groups: role of inclusivity, support, autonomy, and confidence**

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**Background:** Initiating and maintaining a physical activity habit is challenging. Jogging groups at one's local setting can positively influence the motivation to start and maintain a jogging habit. The main aims of the study were to understand the factors that impact on starting and continuing with jogging group participation.

**Methods:** We conducted an interview study with participants of jog groups based in Scotland. All (N = 20) were members of jog groups organised by jogscotland, Scotland's recreational running network aimed to encourage running. Interviews were analysed by reflexive thematic analysis using a deductive-inductive approach. Self-Determination Theory has been applied deductively.

**Findings:** Among themes generated were: inclusivity of the jogging groups (both for all levels of physical ability but also from all walks of life); social support (from joggers and jog leaders facilitating participation) autonomy over the sessions (how much effort one wants to put in); building confidence and competence (sense of achievement leading to confidence; unexpected benefits (having a community).

**Discussion:** Community-based groups provide benefits to new as well as experienced joggers to start and improve their physical activity levels. Regular training sessions with others foster a habitual element to jogging which is supported by all participants in training. Creating an atmosphere that encourages autonomy over jogging training and welcomes diverse groups of joggers is critical in physical activity habit formation. Theories of motivation and behaviour change are useful lenses to understand behaviour change initiation and maintenance in a community-based physical activity setting.

## **Spousal Poor Sleep Quality Is Associated with Diet Quality Via Impaired Diet-Related Action Control**

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**Background:** Cohabiting spouses co-create a home environment that promotes certain eating habits. Poor sleep increases the risk for unhealthy food choices. However, it is not clear how poor sleep may contribute to lower diet quality among couples. The goal of this study was to examine the actor and partner effects of poor sleep on diet quality and diet-related self-regulation processes.

**Methods:** In this longitudinal study, 196 couples completed the Pittsburgh Sleep Quality Index to assess sleep quality and the Starting the Conversion Questionnaire to evaluate diet quality at 3 time points over a three-month period. At study entry, participants also completed a 14-day daily diary assessment of diet-related action control including self-regulation strategies of awareness of standards, self-monitoring, and self-regulatory efforts. To be included in the study, couples had to have been cohabiting for at least one year and at least one partner had a body mass index above 25 and trying to change their lifestyle habits. Analyses were conducted using actor-partner interdependence modelling.

**Findings:** There were both actor and partner effects of poor sleep on diet quality. Similarly, there were actor and partner effects of poor sleep on diet-related action control. The indirect effect linking partner's sleep quality to actor's dietary behaviours via actor's action control was significant. No significant gender differences were observed.

**Discussion:** These results highlight spousal interdependence in dietary behaviours and diet-related self-regulation processes and point to the role of poor sleep quality and diet-related action control in contributing to both spouses' lower healthy dietary behaviours.

## **How formal care complements informal caregiving: knowledge mapping through a scoping review**

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**Background:** The role of informal caregivers (IC) might be complemented by social and/or health services, provided by formal caregivers, which might buffer the detrimental effects of providing informal care on the informal caregivers' health. Therefore, this scoping review aims to map the existing literature on (1) different types of complementarities between formal and informal care and on (2) the impact of this complementarity on IC' health.

**Methods:** Scoping Review is being conducted according to JBI and PRISMA-ScR guidelines, considering qualitative, quantitative, and mixed-method studies that involved adult informal caregivers who care for their relatives suffering from chronic diseases, and that report the use of social/community/health services. The search was conducted in databases for published and unpublished studies in the several databases (CINAHL, EBSCO, MEDLINE, SciELO, WoS, Scopus, PsycINFO, APA PsychArticles, Open Dissertations, OpenGrey, RCAAP, and CAPES). Articles written in English, Portuguese, Spanish, French, and Polish were considered for inclusion.

**Expected results:** It will provide with an overview of types of services/interventions that complement the role of IC and its associated outcomes with IC' health.

**Current stage of work:** Presently the team is conducting data extraction of the screened articles.

**Discussion:** This study will provide insight on which community/health services are important resources for informal caregivers. Furthermore, this study will convey practical contributions to community and social interventions/services to protect informal caregivers' health and may inform public policy initiatives.

## Behavior change techniques in face-to-face interventions promoting condom use among youth

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**Background:** Declines in condom use among youth highlight the need for effective interventions to prevent sexually transmitted infections and unwanted pregnancies.

**Objectives:** To examine the relationship between Behavior Change Techniques (BCTs), the active components of interventions, and the effects of condom interventions among youth. We quantify the number of BCTs used, assess their alignment with underlying theory, and evaluate coverage of specified Mechanisms of Action (MoA) within the theory.

**Methods:** Face-to-face theory-based interventions aiming to promote condom use among youth were identified in a previous systematic review. Interventions were analyzed using the BCT Taxonomy v.1.0., alignment with theory was determined using the Theories and Techniques tool. Wilcoxon rank-sum tests assessed BCT effectiveness, Spearman's rank correlation coefficient determined associations between intervention effects and the total number of BCTs, the proportion of BCTs aligned with MoAs, and the proportion of MoA covered by BCTs.

**Findings:** In 21 interventions we identified a median of 3 BCTs (IQR:1-5) per intervention. BCTs were poorly reported. No grouping of BCTs was found to be more effective. Neither the proportion of BCTs aligned with MoAs (median=85.7%,IQR=50.0-100%, Spearman's  $\rho = -0.09$ ) nor the proportion of MoA covered by a BCT (median=44.4%,IQR=25.0-50.0%, Spearman's  $\rho = 0.27$ ) were correlated with intervention effects.

**Discussion:** No associations between the use of BCTs and the intervention effects on condom use were found. Robust conclusions regarding the utilization of BCTs, their alignment with theory, and their effects can only be reached when future research consistently and comprehensively reports the use of BCTs.



## **A scoping review of fidelity frameworks and models for complex health behaviour change interventions**

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### **Background:**

Addressing intervention fidelity is vital to ensure that health behaviour change interventions are delivered and evaluated appropriately. Research has highlighted a need to improve the use of existing fidelity frameworks/models. This scoping review aimed to provide a systematic overview of conceptual fidelity frameworks/models.

### **Methods:**

We searched seven electronic databases for conceptual fidelity frameworks or models from inception to December 2023. Two reviewers independently screened citations and extracted data. We used descriptive statistics to summarise included study characteristics. In consultation with the review team, two reviewers used qualitative content analysis to describe and compare frameworks/models, and to narratively synthesise the fidelity constructs included in the frameworks/models.

### **Findings:**

After screening 5606 records, we included 19 frameworks and/or models. Ten different terms for fidelity were used, with the majority of frameworks/models using 'implementation fidelity' (53%), followed by 'intervention fidelity' (32%). The methodology of development was unclear for 9 frameworks/models (47%), 4 (21%) were developed from an unsystematic literature review, and 4 (21%) used a systematic search. All frameworks/models consider fidelity as a multifaceted concept comprised of multiple constructs including intervention design, provider training, intervention delivery, participant responsiveness and contextual factors. Eleven (58%) frameworks/models explicitly address the concept of adaptation alongside fidelity.

### **Discussion:**

This review provides clarity regarding previously underexplored areas of intervention fidelity, and areas of similarities and discrepancies amongst existing frameworks/models. This review will aid researchers in applying fidelity frameworks and models within health behaviour change intervention research and facilitate a systematic and comprehensive approach to future research in this area.

# Effects of self-affirmation intervention on health behavior change: a systematic review and meta-analysis

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**Background:** Self-affirmation interventions have been effective in facilitating behavior change as demonstrated in two meta-analyses published in 2015. The present study aims to provide comprehensive and up-to-date synthesized evidence on the impact of self-affirmation interventions on outcomes including message acceptance, cognitive processing, and actual health behavior change.

**Methods:** Studies using self-affirmation manipulation before health information and targeting health behaviors were included. Six databases were searched for the literature up to October 2022. Effect sizes were aggregated using a random-effects model and reported as Hedge's *g*.

**Findings:** A total of 125 randomized clinical trials were included, encompassing a sample size of 40,100 participants. The findings indicate that self-affirmation interventions yielded significant improvements in actual behavior ( $g = 0.24$ , 95% CI 0.13 to 0.36), behavioral intentions ( $g = 0.18$ , 95% CI 0.10 to 0.26), fear ( $g = 0.12$ , 95% CI 0.01 to 0.24), and message acceptance ( $g = 0.16$ , 95% CI 0.08 to 0.24), but with non-significant changes in response efficacy, risk perception, and self-efficacy. Moderator analysis revealed that type of control group (absent vs. standard active control vs. unrelated issue), type of self-affirmation (kindness vs. positive attributes vs. values), message type (multiple vs. one), age, and sample size significantly moderated the effectiveness of self-affirmation interventions on actual behavior.

**Discussion:** This study corroborates that self-affirmation interventions can be effective in changing health behaviors, intentions, message acceptance, and fear. Future analysis is needed to explain the potential mechanisms between self-affirmation and health behavior change.

## **A mixed-method study on clothes shopping, body image, and eating disorder behaviours among Argentinian adolescents**

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**Background:** This study aims to explore the relationship between the experience of finding one's clothing size with body image and eating disorder behaviours among Argentinian adolescents, aligning with the first critical research phase towards health promotion and disease prevention within the behavioural epidemiology framework.

**Methods:** A convergent-parallel mixed method design was employed. An online questionnaire using validated measures of body esteem, internalisation of appearance ideals, and eating disorder behaviours, and purpose-built items exploring the difficulty finding one's size was administered to 187 high school students aged 13-19 years (56% girls; Mage=15.4, SD=1.49). Three hierarchical linear regressions, controlling for body mass index, explored if difficulty finding one's size was associated with body esteem, internalisation, and eating disorder behaviours. Online semi-structured interviews with the same age group (n=15; 67% girls; Mage=15.6, SD=1.80) were analysed using thematic analysis.

**Findings:** Difficulty finding one's size was negatively associated with body esteem ( $\beta=-.449$ ;  $p<.001$ ), accounting for 18% variance ( $R^2=.181$ ;  $p<.0001$ ); positively associated with internalisation ( $\beta=.324$ ;  $p<.001$ ), accounting for 9.5% variance ( $R^2=.095$ ;  $p<.0001$ ); and positively associated with eating disorder behaviours ( $\beta=.393$ ;  $p<.001$ ), accounting for almost 14% variance ( $R^2=.139$ ;  $p<.0001$ ). Three themes were generated from interview data: Fashion is a double-edged sword; Body dissatisfaction and clothing are inextricably linked; and Not finding one's size: Consequences and coping strategies.

**Discussion:** This study supports the need for legislative advances and public health policies in Argentina regarding the regulation of clothing size availability. Longitudinal and experimental research is an important next step to investigate the causal relationships at play.

# Overriding Poverty? Religiosity tilting towards enhanced health through health behaviors

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## Background

While socioeconomic status (SES) is consistently associated with health outcomes, exceptions can shed light on how other social determinants of health operate. One such exception is the Ultra-Orthodox (UO) Jewish religious minority in Israel, which exhibits higher longevity despite being low on most SES indicators. This work examined whether health behaviors in their psychosocial and physical dimensions account for enhanced health.

## Methods

Data was derived from the Israeli Social Surveys conducted in 2010 and 2017, years containing a health module. Participants were 5126 non-UO and 543 UO Jewish men, the latter group rarely studied. A taxonomy of health behaviors was used in grouping behaviors. The primary independent variable was self-identified religiosity and the explained variable was self-rated health (SRH). Multivariate regression analyses tested whether the addition of demographic characteristics and health behaviors, categorized into physical and psychosocial, would decrease the magnitude of the religiosity-SRH association.

## Results

Elevated SRH among the UO men was replicated. Though demographic attributes were significantly associated with SRH, their addition did not annul the significant religiosity - SRH association. Adding psychosocial health behaviors to the equation reduced the religiosity - SRH association but it remained significant. However, adding physical health behaviors decreased this association into nonsignificant. The model in its final step explained 42% and 49% of the variance, in linear and logistic regressions, respectively.

## Discussion

Results indicate that community membership and social/cultural context can shape and promote health through behaviors, even overriding structural socioeconomic conditions such as material poverty.

## The Social Extension of Health Mindset: Behavioral and Policy Associations

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Inspired by Haitian epistemologies, this research introduces and theorizes about the concept of the Social Extension of Health mindset (SEH), defined as the degree to which people assume their health impacts others beyond the self. Across five Studies (N = 22,581 Americans), SEH was associated with protective health behaviors, vaccination willingness and uptake, and prosocial policy support. Study 1 introduced a reliable ( $\alpha = .8$ ) and validated SEH scale, showing that SEH differs from general interdependence and social responsibility. Studies 2 & 3 supported the predictive validity of SEH. In the longitudinal Study 2 (conducted March-September 2020), priority given to protective health behaviors and prosocial policy support increased, while COVID-19 vaccination willingness decreased over time. Critically, SEH emerged as a significant, positive, and meaningful predictor of priority given to protective health behaviors, COVID-19 vaccination willingness, and prosocial policy support (e.g., universal healthcare). Study 3 showed that SEH affected actual COVID-19 vaccination rates by impacting COVID-19 anxiety and vaccine hesitancy, with variations by political affiliations. Study 4 used topic modeling on participants' open-ended responses about their understanding of SEH to reveal that SEH is associated with ideas about social connectedness, responsibility, welfare, and structure and systems. Study 5, a longitudinal experiment, applied these ideas to successfully manipulate SEH and demonstrate that the relationship between SEH and prosocial policy is mediated by self-focused motivation. These findings support SEH as a reliable, valid, and distinct construct associated with protective health behaviors and prosocial policy support, with implications for individual and population health.

## **The MyBack programme: design of a health intervention to prevent recurrences of low back pain**

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**Background:** Low back pain(LBP) recurrences are common and current literature recommends exercise for their prevention. However, its regular adoption remains a challenge. This study aimed to explore the determinants of regular exercise practice and describe the development process of the MyBack programme, an exercise and behaviour change intervention, designed to prevent LBP recurrences.

**Methods:** A multi-stage approach following the Behaviour Change Wheel was undertaken to design the MyBack programme. A literature review and 2 focus groups with patients were conducted to identify barriers and facilitators to adopting exercise practice. A semi-structured interview schedule guided the focus groups, which were videoconference-held, audio/video recorded and transcribed verbatim. A deductive content analysis was performed independently by 2 researchers, based on the Capability, Opportunity and Motivation–Behaviour(COM-B) model and the Theoretical Domains Frameworks(TDF). Intervention functions, behaviour change techniques(BCTs) and modes of delivery of the MyBack programme were selected according to the identified determinants.

**Findings:** Eleven patients were included in the focus groups. Eighteen barriers and 19 facilitators were identified, classified in 9 and 13 TDF domains, respectively. All COM-B components were represented. Following this, 7 intervention functions and 29 BCTs were identified. The MyBack programme consisted of a 12-week intervention, including 6 weeks of face-to-face appointments, followed by 6 weeks of autonomous sessions with regular supervision.

**Discussion:** A comprehensive understanding of the determinants for the adoption of regular exercise practice was crucial to inform the programme and its implementation plan. Following a systematic and theory-driven approach, it was possible to design the intervention components.

## **SMS-coaching in a lifestyle change program within digital primary healthcare**

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### **Background:**

SMS-coaching has been successful for lifestyle changes in several different areas. We have created a personalized SMS-coaching program according to the COM-B model, i.e., Capability (the psychological and physical abilities to perform the desired behavior), Opportunity (living conditions and resources), and Motivation (cognitive and emotional processes that control behavior); that shows positive changes in a non-profit health organization in Sweden. The objectives of the current study are to assess the feasibility and effects of SMS-coaching as a supplementary method in an existing program for multiple health change behaviors within digital primary healthcare.

### **Methods:**

Participants are adults seeking support for lifestyle changes at a digital primary healthcare center in Sweden. The quasi-experimental intervention will use a mixed-method design, collecting both qualitative (interviews with participants and health-coaches) and quantitative data (self-assessments before and after). The interviews will be analyzed with thematic analysis. The analysis of the quantitative data will depend on the pending sample size.

### **Expected results:**

Results from the previous study showed increased capabilities, opportunities, and motivation and reduced waistlines among the participants. According to the fitness coaches, the SMS-coaching was also considered a good complement to face-to-face coaching.

### **Current stage of work:**

The research group is writing the ethical application and wishes for input on design- and analysis methods for small sample sizes.

### **Discussion:**

Finding scalable methods, such as personalized SMS-coaching, that can support lifestyle changes may have a wide impact, as digital health interventions are considered tools for preventive and global health.

## **Eczema Care Online: implementation of an effective behavioural intervention**

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**Background:** Eczema Care Online is a web-based behavioural intervention developed using theory-, evidence- and person-based approaches to support people with eczema and parents of children with eczema. The website ([www.EczemaCareOnline.org.uk](http://www.EczemaCareOnline.org.uk)) has been shown in two large RCTs to improve eczema symptoms. Compared with usual care over 24 weeks, eczema severity significantly improved in the intervention groups and this effect was sustained up to 52 weeks.

We sought to understand the implementation pathway for Eczema Care Online and evaluate its impact on costs and outcomes for healthcare providers.

**Methods:** We mapped the key features of Eczema Care Online to the NICE Evidence Standards Framework using mixed methods to define key features of the website and evaluate the views of key stakeholders. Health economic data was collected through an in-trial evaluation using medical notes review to collect health resource use data.

**Results:** Key features of the website that were valued by stakeholders were that it is: evidence informed, created in partnership, comprehensive, independent, accessible and proven to improve eczema. The website meets the NICE Evidence Standards for adoption of digital interventions into the UK National Health Service. The intervention was shown to be low cost and highly cost-effective compared to usual care (being lower cost and more effective in most scenarios).

**Conclusion:** Eczema Care Online is clinically and cost-effective and is being adopted in a variety of healthcare settings across the UK and internationally. We reflect on the different routes to implementation and integrating the behavioural intervention into clinical care pathways.



## **Supporting GPs and people with hypertension to maximise medication use: Pilot RCT of MIAMI intervention**

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**Background.** The MIAMI intervention supports GPs and people living with hypertension to maximise medication use to control blood pressure (BP). It contains GP targeted components (30 minute online training, booklet and consultation guide) and patient targeted components (24 hour BP monitor, urine chemical adherence test, pre-consultation plan, informational videos). The aim of this pilot RCT was to gather and analyse acceptability and feasibility data to allow (1) further refinement of the MIAMI intervention, (2) determination of the feasibility of a future definitive RCT.

**Methods.** Patient participants were eligible if they were over 65, taking 2 or more anti-hypertensive medications and had a BP >130/80 mmHg. Quantitative data collection took place at baseline and 3 months. Semi-structured interviews took place at 6 weeks and 3 months. Fidelity and health economic costings were assessed.

**Findings.** Six general practices and 52 people living with hypertension were recruited. All 6 practices were retained. Four patient participants were lost to follow up (8%). Fidelity was good but there were three processes that were not delivered as intended. Two of these were minor processes, but the third was the delivery of the urine test results, which often did not occur due to delays and confusion around accuracy. The qualitative data demonstrated that the urine test component is not feasible in its current form but the other intervention components worked relatively well.

**Discussion.** Some modifications are required to the MIAMI intervention components and research processes but with these in place progression to a definitive RCT is feasible.

## **Illness perception, expectations fulfilment and functional outcomes after knee and hip replacement due to osteoarthritis**

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**Background:** End stage of osteoarthritis (OA) is frequently treated with total joint replacement (TJR). Post-operative results show that up to 30% of patients report continuation of poor functional outcomes (FO). The aim of this study was to examine illness perception, fulfilment of surgery expectations, and pain catastrophizing as possible determinants of FO in people after total knee and hip replacement (TKR/THR).

**Methods:** The sample consisted of 217 TKR patients (mean age 65±8.4, 39.6% males) and 149 THR patients (mean age=63.9±10.0, 56.8% males). FO were assessed by the Knee/Hip Injury and Osteoarthritis Outcome Score one year after surgery, and controlled at baseline. Other variables were measured by Pain Catastrophizing Scale, the Brief Illness Perception Questionnaire, and the Patient Reported Fulfilment of Expectation year after surgery. Data were analysed using regression analyses (Method Enter).

**Findings:** Total explained variance of FO one year after TJR was 34% (knee) and 28% (hip). Illness perception significantly contributed to the explained variance of FO in both types of surgery ( $\beta=-.45$ ,  $p\leq.000$  knee and  $\beta=-.40$ ,  $p\leq.00$  hip). Expectation fulfilment contributed significantly to the explained variance of FO in patients after TKR ( $\beta=.20$ ,  $p\leq.05$ ).

**Discussion:** This study indicates that the less patients perceived OA as threatening, the better was their FO. FOs were also better in people after TKR, whose expectations about surgery outcomes were fulfilled more. Results can be used in educational and intervention programs for patients with end stage OA [Grant support: APVV-22-0587].

## **Development of a complex online intervention to support high calorie diets for people with ALS**

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### **Background:**

Weight loss is associated with reduced survival in people with Amyotrophic Lateral Sclerosis (pwALS). Three phases of formative research, guided by the COM-B model, informed the development of an intervention to support increased calorie intake to gain weight in pwALS.

### **Methods:**

Phase 1. Focus groups (n=47) and a national survey (n=281) of healthcare professionals (HCPs) plus Freedom of Information requests from NHS Hospital Trusts and Clinical Commissioning Groups (n=251) charted current nutritional support for pwALS. Systematic reviews of correlates (65 studies) and interventions (14 studies), and interviews and focus groups with pwALS (n=18), carers (n=18) and HCPs (n=51) explored facilitators/barriers to high calorie diets in pwALS. Phase 2. Think aloud interviews for intervention materials (6 cycles) with pwALS (n=12), carers (n=10) and HCPs (n=10). Phase 3. Intervention piloting (3 cycles) and feedback interviews with pwALS (n=9), carers (n=6) and HCPs (n=5).

### **Findings:**

Phase 1 identified a lack of evidence-based nutritional guidelines, late referral to dietitians, little HCP training, and few effective interventions. Key facilitators/barriers included capabilities (physical ability), opportunities (social support) and motivations (dietary beliefs). Phase 2 feedback improved the content, presentation and functionality of intervention materials. Issues raised and addressed in Phase 3 included the rationale for high calorie diets, concerns/difficulties around increasing calorie intake, and participant burden.

### **Discussion:**

OptiCALS targets key facilitators/barriers to increasing calorie intake in pwALS through tailored behaviour change techniques (information, goal setting, action planning, monitoring, feedback). User feedback indicates it is usable, acceptable and feasible. OptiCALS is being evaluated in a multicentre RCT.

## **Motivational Interviewing in increasing physical activity in chronic pain: a feasibility and acceptability study**

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Pain affects approximately 8.6 million adults in France and is often associated to anxiety-depressive symptoms and sedentary behaviours. Research show that physical activity reduces chronic pain by building muscle strength and flexibility, reducing fatigue, reducing pain sensitivity, and reducing inflammation. In addition, physical activity is effective for reducing mild-to-moderate symptoms of depression, anxiety, and psychological distress. To our knowledge, little research has been carried out in interventions that favour physical activity in chronic pain. Studies have shown the efficacy of motivational interviewing (MI) on the adoption of health behaviours. This study aims to assess the feasibility of a MI program on increasing physical activity in people with chronic pain.

This interventional study will start in March. Forty participants will be recruited from the chronic pain department of the Haguenu hospital. The intervention group will take part in two individual MI sessions, and complete self-assessment questionnaires (well-being, physical activity, motivation, physical literacy, self-efficacy, anxiety-depressive symptoms, mindfulness). The second group (treatment as usual) will complete the questionnaire only.

We hypothesize that participants in the MI sessions will tend to be more engaged in physical activity, compared with the second group. We also hypothesize that the intervention will influence participants' psychological variables and their protective resources.

This study could help understand factors involved in the well-being of people with chronic pain, their motivation to adopt health behaviours and the feasibility of a short MI program in chronic pain.

## **Cognitive behavioral stress management intervention on sleep quality and anxiety in patients with bruxism**

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**Background:** Psychological and emotional states, such as stress, and anxiety, tend to play a significant role in developing bruxism and worsening its symptoms. This research aims to compare the differences in the effects of cognitive behavioral stress management intervention on sleep quality, and anxiety in patients with bruxism, before and after the intervention. **Methods:** The sample consisted of 17 patients diagnosed with bruxism, 15 females and two males, aged between 19 and 57 ( $M = 34.59$ ,  $SD = 13.82$ ). The study design was quasi-experimental. Participants underwent a stress management intervention program with five weekly sessions. They completed an online protocol consisting of a sociodemographic questionnaire, Pittsburgh Sleep Quality Index (PSQI-PT), STAI Form Y-1, and Y-2 before (T1) and after intervention (T2). **Findings:** There was a statistically significant improvement in the quality of sleep between T1 and T2 ( $Z = -2.714$ ,  $p = 0.007$ ). The study findings indicate a statistically significant decrease in state anxiety ( $Z = -2.085$ ,  $p = 0.037$ ) and trait anxiety ( $Z = -1.969$ ,  $p = 0.049$ ) between T1 and T2. **Discussion:** The study concluded that the intervention was effective in reducing anxiety and improving sleep quality in patients with bruxism. Psychological therapy intervention can be considered as part of the multidisciplinary treatment for patients with bruxism for improvement of their physical and psychological well-being.

**Key-words:** Bruxism, anxiety, sleep quality, well-being

# Reducing patient delay in Acute Coronary Syndrome- qualitative evaluation of a digital behaviour-change intervention

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## Background

The 'RAPiD' intervention combines digital delivery and animation with behavioural science to address preventable delay in patients with acute coronary syndrome (ACS).

## Aims

To obtain in-depth qualitative feedback from individuals and their significant others on the intervention in order to develop the intervention in line with lived experience and adapt for significant others.

## Methods

Semi-structured interviews thematically analysed using Framework method.

## Results

Twenty individuals with lived experience of ACS participated in interviews. Twelve nominated significant others were also interviewed. Firstly, positive and negative feedback on aspects of the Content generated four themes conveying the perceived importance of (1.1) an unambiguous central message, (1.2) detailed and realistic condition-specific information, (1.3) diverse illustrative examples, (1.4) clearly relevant personal applicability. Some participants felt the original intervention demonstrated these features well, whereas others indicated areas for improvement. Secondly, participant views on the overall Format or delivery of the intervention were synthesised in two further themes, indicating broader engagement and impact are enhanced through (2.1) presenting choice with variety of audio-visual, written and interactive elements, (2.2) adopting a broadly accessible communication style without 'patronising'.

## Conclusions

The qualitative findings evidence the overall acceptability and relevance of the RAPiD intervention for people with ACS and their significant others, providing insight into potential barriers and relevant modifications. Synthesis of participant feedback offers guiding principles for applying lived experience to both the Content and Format, to better meet the diverse needs of the wider population, with broad implications for person-based approach to digital health behaviour change intervention development.

## **Association between diabetes distress and continuous glucose monitoring metrics of glycemic control: Preliminary study**

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**Background:** Emotional problems are common in adults with diabetes, and there is a need to clarify how their various indicators are related to glycemic control. Diabetes-specific distress can complicate the necessary self-management of the disease (Aikens, 2012) and limit the self-care activities (Peyrot et al., 1999). The aim of this study is to investigate the associations between diabetes-specific distress, hypoglycemic fear, depression, and anxiety with continuous glucose monitoring metrics of glycemic control in adults with type 1 diabetes.

**Methods:** A total of 46 patients (47.8 % men; mean age: 44.02±11.66) took part in this study. Participants completed self-report questionnaires assessing diabetes distress, hypoglycemia fear (behaviours that people with diabetes engage in to avoid hypoglycemia and the worries they may have), anxiety, and depression.

**Results:** 10.3% and 10.9% of patients reported symptoms of moderate depression and anxiety, respectively. The patients as a group exhibited moderate levels of diabetes-related distress ( $M=2.01$ ;  $SD=0.61$ ), lower levels of worry ( $M=0.62$ ;  $SD=0.61$ ), and avoidance behaviour related to possible hypoglycemia ( $M=0.78$ ;  $SD=0.46$ ). There were significant positive correlations between diabetes-specific distress and hypoglycemia fear ( $r_{worry}=.73$ ;  $r_{bih}=.47$ ), depression ( $r=.34$ ), and anxiety ( $r=.40$ ), but no correlation was found between psychological variables and disease severity.

**Discussion:** The absence of a correlation between objective disease indicators and the psychological characteristics, assessed in patients, suggests that this association may be influenced by unexplored factors such as personality traits or coping strategies. It appears that experiencing a chronic disease is linked to distress, fear of hypoglycemia, anxiety, and depressive symptoms irrespective of glycemic control.

## Technical feasibility of a psychoeducational intervention for chronic non-specific low back pain in mixed reality

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**Background:** Psychoeducation has a positive effect on psychological components of pain chronification, such as fear of physical activity (FoPA) in chronic non-specific low back pain (CNLBP). In the context of digitalization, virtual reality (VR) interventions are discussed, which show superior but short-term effects than conventional pain treatment due to complete immersion. Mixed reality (MR) as a virtual supplement to reality could combine both approaches. **Objectives:** Technical feasibility of a psychoeducational intervention using the Microsoft HoloLens 2 for CNLBP in MR and to investigate the effects on pain psychology variables. **Methods:** A scoping review was conducted in July 2023 according to PRISMA guidelines to conceptualize psychoeducation in MR. We conducted a single-arm pilot study with healthy participants in a quantitative pre-post design. We primarily investigated the feasibility and secondarily, using questionnaires presented in MR, the user experience as well as changes in pain intensity, fear of physical activity and mood. **Results:** Of 20 test subjects in the pre-phase, 18 participants (90%) successfully completed the intervention. Two ended the intervention prematurely due to rheumatic complaints in their hands or migraine symptoms. The data on user experience values can be rated as acceptable. There was no increase in pain (M:PRE=1.05, M:POST=0.56,  $p=.109$ ,  $d=.28$ ). The FoPA decreased significantly on the overall scale (M:PRE=0.62, M:POST=0.46,  $p\leq.01$ ,  $d=.40$ ) as well as on the subscale level (everyday life, sport and leisure). Negative mood was also reduced (M:PRE= -1.40, M:POST=-1.52,  $p\leq.05$ ,  $d=.09$ ). **Conclusion:** Our study provides preliminary evidence for the feasibility of MR psychoeducation to optimize rehabilitation.



## **Services for depression in patients with chronic kidney disease: The MOODMAPS study patient perspective**

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### **Background**

Depression is highly prevalent across the spectrum of Chronic Kidney Disease (CKD) and is related to poor clinical outcomes. This study aimed to explore the identification and management of depression from the perspective of patients with CKD.

### **Methods**

Patients from six hospitals across the UK were screened for depressive symptoms as part of the MOODMAPS survey using the Physical Health Questionnaire-8 (PHQ-8). Patients with a score of 10+ were approached to take part in a semi-structured interview about their CKD and mental wellbeing journey.

### **Interim Results**

Nineteen interviews have been conducted to date. Participants' mean age was 61 years old (SD=14), 53% were male; predominantly White British (79%), had a mean PHQ score of 14 (SD=4) and were recruited from all six selected hospitals.

Initial themes generated from the thematic analysis include 1. limited awareness of psychosocial services for CKD, such as financial support for those who use their own transport, 2. fear of what's to come, not knowing how their life will be impacted, 3. feeling overwhelmed and wanting support sooner, 4. the importance of peer support.

### **Interim Discussion**

Access to psychosocial care for CKD varies across the UK. Even in centres that have some psychosocial support for people with CKD, patients are often unaware of the services, they would like access early in their treatment journey to help to manage fear of their future treatment options. The MOODMAPS survey and follow-up safeguarding acted as an intervention for the majority of the patients to access some psychosocial care.

## **The level of subjective health and coping with stage fright- psychological predictors**

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**Background:** A study on the relationship between level of stage fright, coping styles, personal resources and the subjective health of students from music schools is presented. The theoretical base of the researches is Functional Model of Health (FMH, Wrona-Polańska 2003), in which health is a function of creative coping with stress and personal resources.

**Examined persons:** 210 students of music schools, - 36% men and 64% women.

**Methods:** Examined methods were the questionnaires: Spielberger`s STAI, Endler`s, Parker`s CISS, Antonovsky`s SOC-29, Rosenberg`s self-esteem scales and 10-point rating scale of subjective health.

**Findings:** From a psychological point of view, stage fright is very specific type of stress, it is an anxiety for the social exposition. The level of subjective health depends on: effective coping with stage fright - coping styles and personal resources: sense of coherence (-.49), positive self-esteem (-.47) and good instrumental preparation for the performance.

**Conclusions:** The subjective health is a function of creative coping with stage fright and personal resources. To promote health should: increase positive self-esteem and social support.

**Keywords:** subjective health, stage fright, coping, personal resources

## **PTSD and Moral Injury in Policing (Poster: Work-in-progress)**

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What is the relationship between PTSD and moral injury in policing? Moral injury has symptoms consistent with PTSD but the trauma producing moral injury involves serious moral wrongdoing. The sufferer is either responsible for the wrongdoing in question or is the one seriously morally wronged. Thus, a police officer who as a result of his gross negligence shoots dead an innocent person and, thereby, experiences ongoing intense guilt and moral condemnation from others, may suffer moral injury. The analysis of empirical findings will likely reveal the need for a more nuanced theoretical perspective than the current very underdeveloped one which inter alia insists on a sharp distinction between moral injury and other forms of psychological injury, including in relation to PTSD

## Does affective touch by romantic partner help deal with stress?

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**Background:** The term affective touch (AT) refers to a special form of touch, the gentle slow stroking of the hairy surface of the skin. It plays a role in social aspects of homeostatic regulation, and thus in reducing the stress response in mammals. The aim of our experiment was to assess the stress regulating effect of AT, depending on the intimacy of the relationship.

**Methods:** 67 young individuals participated in an experiment with three conditions (attention focused on the skin, AT by the foreign experimenter, AT by the romantic partner). Each condition was preceded by a stress effect (presentation of affective pictures). Pleasantness of the skin sensation, subjective arousal and mood, and physiological changes (HR, RMSSD, RR) were assessed during the stimulation.

**Findings:** Following stress effect, AT by the partner improved the mood (Friedman's  $\chi^2=44.385$ ,  $df=2$ ,  $p<.001$ ) and the pleasantness of the skin sensation ( $\chi^2=57.471$ ,  $df=3$ ,  $p<.001$ ), compared to the effects of AT by the experimenter ( $p<.001$ ) and of control attention condition ( $p<.001$ ). Subjective arousal ( $\chi^2=1.616$ ,  $df=2$ ,  $p=.446$ ), and autonomic arousal reflected by RMSSD ( $\chi^2=2.062$ ,  $df=2$ ,  $p=.357$ ) were not influenced, while HR was reduced ( $\chi^2=18.212$ ,  $df=2$ ,  $p<.001$ ) and RR was increased ( $\chi^2=21.522$ ,  $df=2$ ,  $p<.001$ ) by AT of the experimenter ( $p<.001$ ) and partner ( $p<.001$ ) as well.

**Discussion:** Neither the change in subjective, nor in autonomic arousal reflect a clear parasympathetic activation. Thus our results do not support the general stress-reducing effect of affective touch. Some subjective changes were, while the physiological reactions were not influenced by the intimacy of the relationship.

## **Autobiographical Memories in women undergoing assisted reproductive treatment: analysis through the Referential Activity linguistic program**

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The diagnosis and the related treatments of infertility can represent a difficult emotional challenge for people involved. The present work aims to explore the linguistic characteristics of autobiographical memories, indicators of the ability to cope with present and past painful experiences, of infertile women undergoing Assisted Reproductive Treatment.

44 women, enrolled in a fertility medical centre in Rome, completed a brief socio-demographic questionnaire and a semi-structured interview aimed to collect their memories on a neutral, a positive and two negative events (one related to infertility diagnosis and one related to a negative discussion about these difficulties with their partner.). The interviews were audio recorded and transcribed and the text analysed through the Referential Process (RP) linguistic measures via IDAAP software.

In the narratives related to infertility diagnosis, women reported higher scores in the Weighted Referential Activity Dictionary (WRAD) ( $p=.001$ ), Weighted Reflection and Reorganization List (WRRL) ( $p=.001$ ), than in narratives of neutral event; higher WRAD ( $p=.04$ ), than in narratives of positive episode; lower WRRL ( $p=.02$ ), than in narratives regarding the discussion about the fertility problems with the partner. In the narrative exploring the discussion with the partner women reported higher scores in WRRL and lower in the WRAD (both  $p=.001$ ), than in neutral event, higher in the WRRL ( $p=.05$ ), than in the positive event.

Present preliminary findings highlight different capabilities in symbolizing and reflection/reorganization process according to the specific nature of the episode. Women appeared to be engaged in an elaboration process of their infertility experience.

## Health locus of control, resilience and mental health in pregnancy and post-partum during the pandemic

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**Background:** The study aims to assess mental distress and verify the relationship between some potential aggravating and protective factors in pregnant and postpartum women during the second wave of the pandemic.

**Methods:** 452 women (264 pregnant and 188 postpartum) completed: Multidimensional Health Locus of Control (MHLC), Resilience Scale RS-25, Pandemic-Related Pregnancy Stress Scale (PREPS), State-Trait Anxiety Inventory (STAI) and Edinburg Perinatal Depression Scale (EPDS).

**Findings:** Multiple regression analysis indicate that income loss, disrupted perinatal care, Preparedness Stress, and strong belief that health outcomes are determined by chance were significantly positively associated with state anxiety (STAI-S) in pregnant women. Lower levels of STAI-S were reported by women with Internal HLC and those who had higher score in Acceptance of Self and Life. Among the postpartum women, higher levels in STAI-S were reported by women with high Preparedness Stress, whereas higher depression levels were reported by those who had obstetric risk during their pregnancy and who experienced high infection stress. In addition, Personal Competence and IHLC had negative but weak associations with STAI-S. Finally, IHLC and Acceptance of Self and Life were negatively associated with depression.

**Discussion:** Although resilience factors appeared to be negatively associated with anxiety and depression, these factors may not have been sufficient or activated in the given period to counteract the COVID-19 effects. Programs for prevention and monitoring of perinatal mental health are deemed necessary to safeguard the mothers' and newborn's mental health and may promote resilience during future crises and other more common stressful life events.

## **Associations between Psychological Distress and COVID-19 Vaccination Side Effects: A Retrospective Cohort Study**

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Empirical evidence shows that psychosocial factors are related to the number and severity of postvaccination side effects people experience. To date limited research has examined this association in the context of COVID-19 vaccines.

This study presents a refined analysis of this association, measuring a broad spectrum of psychological distress in a large sample (n= 4154) of the vaccinated Flemish population in early 2022. Mental health disorders, intra- and interpersonal psychological distress, fear of COVID-19, attitude towards COVID-19 vaccines and affect shortly after the COVID-19 vaccine administration are registered using a set of validated scales and self-constructed items. The severity of the side effects is registered in two ways: number of unexpected side effects and the duration of the side effects following the first and second dose of the primary vaccination for COVID-19. A composite variable is generated as a measure of overall side effect severity. Various control variables are included in the analysis. Generalized linear models are used to evaluate the associations.

Our analysis found that all forms of psychological distress correlated significant with the occurrence of unexpected side effects following COVID-19 vaccination and with the severity and duration of these side effects. Psychological distress plays a role in COVID-19 vaccination outcomes. In view of future pandemics, addressing stress reduction in the general population should be a focus of policy. Additionally, in future pandemics policy must take psychosocial factors into account when enacting measures.

## **Tell me where and when you work, and I'll tell you how you recover**

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**Background:** Recovery from work stress has been the subject of increasing research in recent years, as it is fundamental to well-being and health. However, research into recovery in the context of regular work has been the primary focus. The aim of this systematic review to address several emerging questions about the effects of telework and nonstandard work schedules (NSWS) on recovery. To this end, we develop the following research questions: (1) What are the differential effects of telework on recovery? (2) What are the differential effects of NSWS on recovery?

**Methods:** We conducted our search in the digital databases Scopus and Web of Science using several combinations of search words. We aimed to select every published article that included recovery, NSWS and telework variables.

**Results:** Our expected outcomes are the effects of NSWS or telework on recovery. We also investigate whether there are differences in these effects between rotating shifts, shift work, night shift, quick returns and on-call work. We also expect to look for the moderating effect of telework due to COVID-19 compulsory confinement and the moderating effect of the country's work culture.

**Current stage of work:** The databases have been searched, duplicates have been removed, the first screening has been carried out and we are currently carrying out the second screening.

**Discussion:** By understanding the impact of NSWS or teleworking on recovery, we will understand how to mitigate the negative effects and maximise the benefits of these working arrangements on recovery, health and well-being of these employees.



## **Family dynamics, socioeconomic hardships and health risk behaviours of Bulgarian adolescents during the COVID-19 pandemic**

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**Background:** The COVID-19 pandemic impacted everyday life, health and well-being of adolescents and their families. Affected areas included parents' economic activity, material status of families, family dynamics, and relationships with extended family. The aim of the study is to explore family dynamics and socioeconomic hardships during the COVID-19 pandemic and their associations with adolescents' health risk behaviours (HRBs).

**Methods:** Based on a representative study of adolescents aged 11-17 conducted in Bulgaria during the COVID-19 pandemic (N=3326, girls 49.2%), logistic regression models were applied, assessing cigarette smoking, vaping, alcohol consumption, drunkenness, and cannabis use. The predictors included demographics, Family Affluence Scale (FAS III), family structure and ease of communication with parents (HBSC study), and authors' developed questions on parents' pandemic-related job loss, family conflicts and missing contact with extended family during the pandemic.

**Findings:** Material status of the family showed increasing differentials in adolescents' HRBs. Parental job loss was associated with higher risk of substance misuse, except for cannabis use. Family conflicts, missing contact with extended family and difficulties in communication with mother were associated with higher risk of substance misuse. Difficulties in communication with father had no significant effect. Girls had higher risk of vaping and lower risk of alcohol use, drunkenness, and cannabis use. Higher age and minority status were associated with an increase in adolescents' HRBs.

**Discussion:** Socioeconomic hardships during the pandemic, along with worsened family dynamics, negatively impacted adolescents' behavioural health, highlighting the need for special family focused interventions in times of large-scale societal and health crises.

## **A qualitative interview study exploring women's experiences of eating behaviours and midwife interactions during pregnancy**

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**Background:** Unhealthy eating behaviours can lead to excessive gestational weight gain, which is associated with poorer birth outcomes. However, healthy eating guidance is not consistently provided to all pregnant women during their antenatal care. The primary objectives of the study were to investigate women's eating behaviours during pregnancy and early motherhood, as well as the interactions with their midwife.

**Methods:** Twenty-four semi-structured interviews were conducted with women who had given birth within the previous twelve months. A thematic analysis was performed.

**Findings:** Most women, regardless of BMI, discussed experiencing issues with their weight, eating behaviours or body image disturbances prior to pregnancy. Midwife discussions about healthy lifestyles were similar for all participants, and were described as short and information-based. For some women, healthy eating began as soon as pregnancy was confirmed, but for others physical and/or emotional factors impacted on healthy eating. Many women found healthy eating hard to sustain and this became more difficult during early motherhood. A concern for the fetus was a primary influence on eating behaviours but over a third of women also described engaging in unhealthy eating as a means of being kind to themselves.

**Discussion:** There may be a missed opportunity for sufficiently discussing healthy eating behaviours during midwife care, especially if BMI is the main criteria used to determine further discussion or the trigger for signposting to additional services. Targeted interventions and support for eating behaviours during pregnancy may provide valuable support for women with positive effects for future health and subsequent pregnancies.

## **A systematic review and meta-analysis of psychological interventions for parental burnout**

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This systematic review and meta-analysis aimed to evaluate the effectiveness of existing psychological interventions aimed at preventing and reducing parental burnout, both among parents from the general population and parents of children suffering from chronic diseases. Parental burnout develops as a consequence of a chronic imbalance between parenting stress and resources and carries a risk of deleterious consequences for the parent, couple, and children, including suicidal ideation, sleeping disorders, substance abuse, marital conflicts, neglectful, and violent behaviors towards children (Mikolajczak et al., 2018). The prevalence of parental burnout reaches 10% in Europe and even 30% among parents of chronically ill children (Linsdröm et al., 2016; Roskam et al., 2021).

The present study was conducted following the PRISMA 2020 guidelines (Page et al., 2021) and was preregistered on the International prospective register of systematic reviews PROSPERO (CRD42021231247). Across 26 psychological interventions included in this review, there were a total of 1409 participants. The results of the meta-analysis supported the effectiveness of psychological interventions for parental burnout reduction compared to a control group. A random-effect model showed a statistically significant moderate effect size favoring a reduction of parental burnout symptoms ( $Z = -4.57$ ,  $SMD = -0.632$ , 95% CI  $[-0.903, -0.368]$ ,  $p < 0.001$ ). This meta-analysis suggests that psychological interventions can be helpful in reducing parental burnout among the parents of chronically ill children as well as those from the general population.

## **Coping with Pregnancy Loss: Lived Experiences of Fathers and First-Time Expectant Fathers**

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**Background:** Viewing pregnancy loss as a women's issue has been found to complicate the ability of bereaved men to grieve. Two studies were conducted to explore the experiences of pregnancy loss among first-time expectant fathers and fathers. Although research suggests that transitioning into fatherhood can affect men's mental health and well-being, its contribution toward the intricacies of pregnancy loss remains mostly unknown. Past studies have also shown that having other children prior to pregnancy loss can impact parents' coping. However, little is known regarding the influence of having been a father to other children on the experience of pregnancy loss. The objectives of these studies were to expand on existing knowledge regarding the experiences of pregnancy loss in first-time expectant fathers and fathers.

**Methods:** Studies consisted of semi-structured interviews with 14 Israeli first-time expectant fathers and 12 Israeli fathers to other children, who all experienced pregnancy loss, respectively.

**Findings:** Thematic analysis was used in both studies. Five themes were identified in Study 1: "consolidating the father identity," "experiencing the loss," "reconstructing meaning," "experiencing disenfranchisement," and "preparing for future fatherhood." Five themes were identified in Study 2: "before pregnancy loss," "during the procedure," "life after pregnancy loss," "coping styles," and "influence of existing children."

**Discussion:** Study 1 findings suggest that pregnancy loss leads to deconstruction of the fatherhood identity, thereby necessitating meaning reconstruction processes. Study 2 findings suggest that fathers' grief is often disenfranchised, and parental obligations may complicate their grief. Findings may inform interventions in support of men's grieving processes.

## **Co-sleeping assemblages: What shapes the co-sleeping practices in mother-baby dyads in Aotearoa New Zealand?**

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**Background:** Co-sleeping, involving parent-infant dyads sharing a sleeping surface, is a customary practice in many global cultures. Despite its potential health benefits, co-sleeping challenges Western norms and raises concerns about Sudden Infant Death Syndrome (SIDS). Limited research and the absence of clear guidelines contribute to a dilemma for mothers who wish to co-sleep. This study aims to address this gap by exploring co-sleeping practices in mother-baby dyads in Aotearoa New Zealand.

**Methods:** Grounded in Feminist New Materialism, the study will purposefully recruit 5 to 8 New Zealand mothers practicing co-sleeping with their infants. Utilising two-week digital diaries, including one-on-one conversations and regular prompts, this data collection process aligns with the dynamic nature of co-sleeping and the study's theoretical underpinnings. A New Materialist informed analysis will facilitate a comprehensive examination of co-sleeping assemblages.

**Expected results:** The study aspires to unravel the intricate interactions between human and non-human elements in co-sleeping practices, offering insights into how co-sleeping happens.

**Current stage of work:** This research, part of a Master of Health Psychology thesis program, is currently in the ethics review stage, initial findings will be presented at the conference.

**Discussion:** By delving into under-researched co-sleeping practices, incorporating both human and non-human elements, and considering current New Zealand health guidelines, this study aims to provide a nuanced understanding that can help inform safe sleep guidelines and maternity care, challenge existing norms, contribute to the literature, and reduce associated stigma.

## **The Relationship and Family Problems During COVID-19 Pandemic: A Qualitative Study**

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The COVID-19 pandemic and the social distancing and quarantine measures taken during the pandemic have significantly impacted individuals and their relationships. Harmony between spouses in their marriages is crucial for the well-being of both individual and relational dynamics, and conducting qualitative studies became important to understand the individual and relational problems encountered by individuals during this period and the methods they use to cope with problems. It is believed that having qualitative information on this topic would be instructive for future measures and intervention methods that could be implemented during possible similar pandemics and quarantine periods. A qualitative study was conducted with 109 married participants (91 women and 19 men) between the ages of 27 and 73 ( $M=44,58$ ,  $SD=11,33$ ). The participants were asked to respond to open-ended questions about the topics they experienced during the quarantine process like the factors that increased or decreased their marriage cohesion, the main argument topics with their partner and children, the ways they used to cope with problems, the behaviors that make them irritated or happy, and the basic activities that they did together. The responses were analyzed through MAXQDA and the main themes were identified regarding the answers. The results were discussed regarding the COVID-19 measures and the possible steps to take in future pandemics.

## **More-than-human parenting villages: Distributed maternal subjectivities for improved perinatal health and wellbeing**

Eva Neely<sup>1</sup>

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Individualism and neoliberalism are epistemologically anchored in widely accepted notions of motherhood, imposing unjust responsibility on mothers to be sole bearers of their children's outcomes; much to the detriment of maternal physical, mental and social wellbeing. The imperative to 'be it all' perpetuates feelings of failure, guilt and shame in the wake of increased isolation and eroded support structures. My programme of research aims to collectivise this agency and foreground fluidity and emergence in the becoming-mother; with the endeavour to replace human agency with the capacity to affect and be affected through human and non-human forces. I draw on posthuman feminism to theorise maternal subjectivities as relational, embodied, affective and materially embedded. From this theoretical anchor I engage with human and non-human actants in mother-baby-assemblages to build distributed modes of agency that contribute to mothers' well/ill-becoming and belonging, situating responsibility as radically de-centred and multiple. I draw analytical insights from my ongoing longitudinal inquiry with 14 first-time mothers that has me following their journeys through digital diaries and interviews from pregnancy to their baby's first birthday (started January 2023; concluding January 2025). I work through the notion of the human and non-human village to theorise trans-subjective and more-than-human emergent mother-baby-assemblages that invite relationality and difference. The findings will advance theoretical, methodological and practical approaches to studying motherhood and perinatal health. With this work, I seek to de-emphasize psychologised individualized understandings of motherhood and promote contextually-rich and situationally-variable accounts of diverse maternities.

## **Family factors and their associations with anxiety and depressive symptoms in psychiatric inpatients**

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**Background.** Depression and anxiety are among the risk factors for symptoms such as self-harm or suicidal tendencies. Among the factors influencing the development of anxiety and depressive disorders, there are family factors. The aim of the study was to assess the relationship between family factors and anxiety and depressive symptoms in psychiatric inpatients

**Methods.** The study was conducted simultaneously in two groups - parents (N=30) and their children (N=30; age range: 9-17) staying in the Child and Adolescent Psychiatry Unit at the Dr. Antoni Jurasz University Hospital No. 1.

**Questionnaires for parents:** Mental Health Assessment, Temperament Questionnaire, Parental Attitudes Scale. **Questionnaires for children and adolescents:** The Revised Children's Anxiety and Depression Scale, State and Trait Anxiety Inventory, Questionnaire Set for the Diagnosis of Depression in Children and Adolescents

**Findings.** Children and adolescents hospitalized in the psychiatry unit presented a high level of anxiety and depression symptoms - the most common symptoms in children and adolescents include suicidal thoughts, self-harm, depressed mood, and lowered self-esteem. Data analyzes showed that increased neuroticism in one of the parents in the study group correlated positively with severe symptoms of anxiety in children and adolescents.

**Discussion.** The analysis of the results of the research can help create a plan for the prevention of mental health among today's population of children and adolescents. The results of the study may enable a better understanding of the environment of children and adolescents hospitalized in a psychiatric ward and their psychological functioning.



## **Exploring the influence of parental plant-based diets on their children – The COPLANT kids/family module**

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**Background:** Vegetarian and vegan diets are increasingly popular among German adults and across Europe. Still, rather little is known about the impact of parents' plant-based diets on their children's diet and, in turn, health and anthropometric parameters. Drawing on social-cognitive theory, this planned study aims to explore the influence of parental diet (vegan, vegetarian, pescatarian, or omnivore) on their children's nutrition and eating behavior, and social and psychological factors that might moderate these relationships.

**Methods:** At two study centers (Karlsruhe, Berlin), a sample of about 400 parent-child-dyads (age 0-17 years) will be recruited over the next three years as part of the multicentric COhort on PLANT-based Diet study. Anthropometric parameters, dietary intake, nutrient supplementation (children), and parenting style, familial feeding, eating practices, dietary intake, and sociodemographic parameters (parents) will be measured. Data will be analyzed using regression models.

**Expected Results:** We expect to gain insights into the family environment as a crucial factor influencing children's nutrition in the context of plant-based diets. Moreover, the study is expected to serve as a methodological feasibility project potentially expanding to longitudinal assessments of dietary pattern development, influencing factors, and health in German children and adolescents.

**Current Stage of Work:** Assessment tools and ethic proposal are currently being finalized.

**Discussion:** Results can bridge research gaps in new forms of plant-based diets and associated behaviors and serve to generate hypotheses for future investigations into the long-term risks and benefits, guiding age-specific nutritional recommendations, and evidence-based family interventions to improve children's nutrition and nutritional health.

## **Predictors of parents' awareness and knowledge of food-based dietary guidelines for children and adolescents**

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**Background:** German children and adolescents show strong deviations from the current food-based dietary guidelines (FBDG) for children and adolescents in Germany, the Optimized Mixed Diet (OMD). Parents act as important nutritional gatekeepers for their children. Thus, we aim to examine 1) if parents a) are aware of the German FBDG for children and adolescents, b) know the recommendations within the FBDG, and 2) which socio-demographic and familial factors predict both.

**Methods:** A cross-sectional survey among N = 400 German parents will be conducted. Items include questions regarding FBDG awareness, FBDG knowledge (questions based on the OMD) and potential socio-demographic and familial predictors (e.g., income, education, number of children). Data will be analyzed using descriptive statistics and logistic and linear regressions (prediction of FBDG awareness and knowledge) by using RStudio.

**Expected results:** We expect to gain insights regarding the estimated prevalence of FBDG awareness and the level of FBDG knowledge (recommendation-wise) among parents and important predictors thereof. The results can inform future intervention development (e.g., by identifying potential risk groups for designing effective communication campaigns).

**Current stage of work:** The questionnaire is finalized, and the study already received ethical approval. Data collection is expected to be finished at the end of May 2024.

**Discussion:** Parents' FBDG awareness and knowledge is an important first step for implementing and promoting a healthy diet among their children and adolescents. Our study will provide first insights into important socio-demographic and familial predictors of both awareness and knowledge of the German FBDG for children and adolescents.

## The pandemic and digital impact on neurodevelopment of children up to 3 years old

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Background: Language acquisition is influenced by the quality and quantity of communicational and linguistic input that baby's receives and depends on: the human voice acoustic characteristics, speech rate and cognitive content, speech related visual information, variability of interlocutors who provide input and bonding relationship with caregivers.

The lockdowns due to Pandemic 19 forced isolation and led to an increase in the use of digital as entertainment. The baby's early increased access to digital exposure has led to a drastic decrease in adult-child communication, which has been replaced by digital-child communication.

What is the Pandemics impact on children's neurodevelopment and specifically on linguistic and communicational acquisition?

Methods: Clinical sample of 50 patients assess and diagnosed between 2021-2023 at the Child and Adolescent Center CUF Tejo Hospital.

Findings: Mean age of 30 months at the 1st appointment; male prevalence (70%). Psychomotor development profile with a mean GQ of 79 and negative language dissociation. 68% with language below the 5th percentile and 32% are nonverbal at 30 months. 76% had autistic symptoms: avoids eye contact, doesn't have joint attention, doesn't interact with peers, excessive tantrums, stereotypies. Discussion: The increase of digital access, unaccompanied by an adult, at an early age can lead to a delay in the child's development and an increase in pseudo-autistic cases. The restriction of digital up to 2 years of age is essential and should be advised in follow-up consultations. In case of suspicion of delay or difficulty in parental awareness, refer to parental early intervention program.

## Selecting and constructing outcomes for a RCT: construct and item mapping

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**Background:** Evaluating the effectiveness of an intervention requires appropriate and concise measures that assess (primary and secondary) outcomes, and underlying mechanisms of change. We describe this process using construct and item mapping for evaluating an eHealth intervention to promote self-management and physical activity in cancer survivors with persistent pain (PECAN).

**Methods:** We developed a program theory outlining immediate, short- and long-term outcomes, and documenting the causal chains of processes involved in the intervention. After mapping selected questionnaire items in MIRO to the Theoretical Domains Framework (TDF), we found that TDF lacked coverage in pain-related concepts, leading us to also use the Common-Sense Model of illness representations (CSM). We involved health psychology and physiotherapy experts in mapping, refining existing items, and developing new ones to ensure comprehensive assessment of our program theory components and outcomes.

**Findings:** We identified items that measured 8 out of the 14 TDF domains (knowledge, beliefs about capabilities, beliefs about consequences, intentions, goals, social influences, emotion, behavioural regulation) and 6 out of the 7 CSM domains (causes, consequences, timeline, controllability, illness coherence, emotional representations). Certain items did not align with our program theory and lacked coverage.

**Discussion:** The TDF and CSM have proven to be useful frameworks for systematically mapping items onto constructs, thereby enabling the identification of potentially relevant missing constructs and uncovering any item overlap between measures. This analysis resulted in the development of a comprehensive set of questionnaires tailored for investigating the efficacy of PECAN.

# **Predictive factors for smoking and alcohol cessation following a diagnosis of head and neck cancer**

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## **Background:**

After a head and neck cancer (HNC) diagnosis, managing tobacco and alcohol consumption becomes crucial, impacting patients' quality of life and treatment effectiveness. Despite this, factors predicting the persistence of these harmful behaviors are unclear. This thesis explores determinants of ongoing tobacco and/or alcohol use post-HNC diagnosis, utilizing the HAPA model (Schwarzer, 1992).

## **Objectives:**

The primary goal is to assess how HAPA model components influence tobacco and/or alcohol consumption persistence in head and neck cancer patients.

## **Method:**

The study involves recently diagnosed head and neck cancer patients, categorized as consumers or non-consumers of tobacco and/or alcohol, with the latter as the control group. Surgeons recruit participants during the diagnostic announcement. Assessments occur at four key intervals: vulnerability consultation, one month post-diagnosis, end of treatments, and three months post-treatment. Currently, 20 patients have been included in two months at T0 and 10 patients at T1. Overall, we aim to include 150 patients.

## **Structural Equation Modeling Analysis:**

Structural Equation Modeling (SEM) is employed to scrutinize intricate relationships between HAPA model components and consumption behaviors. Confirmatory Factor Analysis (CFA) validates measurements, while the structural model explores direct and indirect relationships. Adapted longitudinal analysis and mediation exploration enhance understanding.

## **Conclusion:**

In summary, this thesis aims to deepen insights into predictive factors for sustained tobacco and alcohol consumption in head and neck cancer patients. By incorporating the HAPA, it seeks to contribute preventive and supportive insights, with a focus on identifying patient profiles succeeding or struggling to overcome these detrimental behaviors.

## Impact of appearance concerns on oral health behaviors in young adolescents

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**Background:** Young adolescents frequently face appearance concerns, significantly impacting their health behavior. This study aimed to examine how psychological factors, including appearance concerns, influence oral health behaviors among this demographic beyond the Health Belief Model.

**Methods:** This cross-sectional study utilized an online questionnaire. Three hundred and fifty high school students in Japan (Mean = 15.1; SD = 1.5) responded to the questionnaire comprising dental appearance concerns, self-efficacy, positive and negative outcome expectancies, risk perception, intention, and oral health behaviors. Structural equation modeling (SEM) analyses examined how oral health behaviors-related factors and dental appearance concerns influenced oral health behaviors.

**Results:** SEM analyses unveiled a model where intention mediated the impact of self-efficacy, outcome expectancies, and risk perception on oral health behaviors. Specifically, young adolescents with heightened dental appearance concerns exhibited diminished self-efficacy in controlling oral health behaviors ( $\beta = -.15$ ,  $p < .001$ ). This model demonstrated a good model fit ( $\chi^2 (14) = 59.22$ ,  $p < .001$ ; RMSEA = .10; CFI = .93; AIC = 119.22), explaining 22% ( $R^2 = .22$ ) of the variance in oral health behaviors.

**Discussion:** Japanese young adolescents with heightened concerns about dental appearance were less inclined to practice oral health behaviors. This study provides valuable insights for developing a health communication system addressing excessive dental appearance concerns.

## **Explaining physical activity behaviour using a network analytical approach to social cognitive theory**

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Although Bandura's social cognitive theory is well researched, the theoretical assumptions of the model are increasingly being questioned - while Bandura assumed unilateral relationships between self-efficacy, outcome expectations, socio-structural factors, and goals as well as corresponding behavioral measures, a reciprocal influence of these constructs is conceivable, which can be analyzed by network analyses. Network analyses can analyze the complex pattern of relationships between the constructs without the restriction of causal assumptions. Analyzing the network topology in terms of the community structure of a network also allows statements about which constructs of SCT theory are more or less interconnected. It is possible to investigate for example whether cognitive constructs interact more strongly with each other than with behavioral measures. 394 participants (225 female (55.1%)) completed an online questionnaire on their physical activity behavior and related self-efficacy, outcome expectations, social-cognitive factors, and goals. The networks were estimated using regularization procedures and resulted in accurate and stable estimates of the network parameters. The resulting network structure is divided into two communities, one of which consists solely of physical activity behavior, while the other community represents the cognitive constructs postulated by social-cognitive theory. The central node of the network is self-efficacy, which in turn confirms the current research in the field of SCT in which self-efficacy is primarily investigated and promoted while the other variables take a back seat. However, the two communities indicate the classic problem of theories for explaining and predicting behavior: the existence of an intention-behavior gap.

## Latent profile analysis of adolescents' physical activity motivation: A self-determination theory approach

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**Background:** Guided by Self-Determination Theory, this study explored (i) motivational profiles for physical activity (PA) among Irish adolescents, (ii) predictors of, and (iii) PA outcomes associated with motivational profiles at baseline and 12-month follow-up.

**Methods:** A longitudinal design comprising 790 students aged 12-18 years ( $M_{age}=13.71$ ,  $SD=1.29$ ) from 8 secondary schools in Dublin, Ireland. Students completed a questionnaire at two time-points 12-months apart comprising measures of motivation (BREQ-2), competence, relatedness, autonomy, and a PA Recall Diary. Latent Profile analysis was performed to identify adolescents' motivational profiles. Multinomial logistic regression examined whether basic psychological needs, age, and gender predicted differences in adolescents' motivational profiles. One-way ANOVAs compared moderate-to-vigorous physical activity (MVPA) outcomes across profiles at baseline and 12-month follow-up.

**Findings:** Latent profile analysis identified six distinct profiles. The Autonomous (high intrinsic and identified regulation) profile was most common (46.3%), followed by the Strongly Motivated (high introjected, intrinsic, and identified regulation, 16.5%); Low Overall Motivation (14.4%); Controlled (12.4%); High Amotivation and External Motivation (5.7%); and Moderate Amotivation (4.7%) profiles. Higher perceptions of competence and autonomy predicted higher likelihood of membership in the Autonomous and Strongly Motivated profiles. Girls were more likely than boys to be represented by the Controlled, and High Amotivation and External Motivation profiles. MVPA outcomes were associated with motivational profile. Autonomous and Strongly Motivated profiles reported significantly higher baseline MVPA levels and increased likelihood of meeting daily MVPA guidelines at 12-month follow-up.

**Discussion:** The findings offer support for SDT, underscoring the importance of autonomous motivation for adolescents continued PA participation.



## **The role of social norms and social identity on the adoption of health-protective behaviors**

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The adoption of health-protective behaviors is important for individual health and the containment of infectious diseases. Previous studies have shown that social norms and social identity influence the likelihood of adopting such behaviors. Extending the framework of Protection Motivation Theory, the proposed study will examine the impact of social norms, social identity, and (dis)agreement with political mandates about health-protective behaviors on response efficacy, perceived threat, and adoption of protective behaviors. Using a 2 [social norms: strong, weak] x 2 [social identity: family, friends] x 2 [political mandates: agreement, disagreement]) design, we aim to recruit N = 800 participants who will be randomly assigned to the different conditions in a computer game simulating an infectious disease outbreak. We will examine the effects of social norms, social identity, and agreement with political mandates on the adoption of health-protective behaviors, response efficacy, and perceived threat. We expect that stronger social norms, identification with friend groups (vs. family groups), and stronger agreement with political mandates predict the adoption of health-protective behaviors and increase response efficacy and perceived threat. We are currently finalizing the study design and recruiting Citizen Scientists to develop the computer game. Based on the extended Protection Motivation Theory, we aim to discuss the effects of social norms, social identity, and agreement with political mandates on health-protective behaviors, response efficacy, and perceived threat. In addition, we aim to discuss the use of computer games to collect health-related behavioral data.

## **Barriers and facilitators for uptake of care pathways for rare tumour risk syndromes– PREVENTABLE project**

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**Background:** Although strategies exist to prevent cancers in rare tumour risk syndromes (RTRS), most healthcare systems keep opting for the treatment of clinically expressed cancer. PREVENTABLE aims to assess the clinical, social and economic impact of applying preventive care pathways for families with RTRS. This study, within PREVENTABLE, will identify the barriers and facilitators to the referral and uptake of the best care pathways for RTRS.

**Methods:** This is a cross-cultural mixed-methods study, consisting of: 1) two international online surveys, following the COM-B model, examining the barriers and facilitators to i. the referral of the best care pathways with RTRS-clinical teams (n=100) and ii. the uptake of the recommended care pathway by RTRS patients (n=300); and 2) focus groups for an in-depth exploration of barriers and facilitators with patients, their social network and clinical teams (6 focus groups each). This study is conducted in six European countries– Portugal, Spain, France, Germany, Netherlands and Norway.

**Findings:** A preliminary pilot study with RTRS-clinical teams (n=11) allowed us to identify 6 barriers (e.g., lack of knowledge and guidelines) and 6 facilitators (e.g., reimbursement, clear communication) that will inform the main survey. Results from the surveys and focus groups will be triangulated to provide person-centred communication guidelines for improving referral and uptake of the care pathways for RTRS.

**Discussion:** By identifying these barriers and facilitators to the referral and uptake of RTRS care pathways, this study might enhance the referral and uptake of RTRS preventive strategies and inform the best care for RTRS globally.

## **What makes a patient engaged: a multilevel integrative review of factors contributing to patient engagement**

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**Background:** Scholars and practitioners from diverse disciplines are increasingly exploring Patient Engagement (PE), defined as individual consensus and participation in health treatment. However, this heightened attention has generated contention over PE's definition and promotion. This study addresses the challenge through a multilevel integrative review to deepen PE understanding.

**Methods:** Using the umbrella review approach, we synthesized literature from different disciplines (e.g., psychology, healthcare studies, medicine) by classifying antecedents of PE at different levels, namely from the individual level to the societal level.

**Findings:** Our multilevel review provides an integrated understanding of PE as a multidimensional concept with antecedents and implications across various levels. At the individual level, we identified intra- and inter-individual factors with elements (e.g., trust, expectations, autonomy, motivation) shaping the PE experience. The task level included factors related to treatment, illness type, and technological devices, with specific elements (e.g., demands, usability, duration). The relational level encompassed healthcare providers and patients' perspectives (e.g., interprofessional communication, collaboration, and goal setting). The organizational level included factors like work environment planning, organizational resources, and policies, with specific elements (e.g., care planning and accessibility). The societal level considered factors like access to health programs and societal/cultural accounts (e.g., public/private distinctions and patient-centered care/approach).

**Discussion:** This contribution introduces an integrated model, expanding perspectives beyond the traditional individual PE model to encompass multiple factors, including organizational and social spheres. The proposed multilevel perspective is applied for theoretical considerations (e.g., identifying antecedents and facilitating factors) and practical applications (e.g., enhancing healthcare service quality).

## **Exploring the antecedents of red meat consumption: An extension of the Theory of Planned Behavior**

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Research has shown that consuming red meat is associated with an increased risk of developing health issues. Therefore, it is important to investigate the factors influencing people's willingness to reduce their red meat intake. The present study explored the antecedents of individuals' red meat consumption by extending the Theory of Planned Behavior (TPB, Ajzen, 1991) with past behavior as a precursor of TPB constructs.

The study was conducted in two waves. An online survey was administered to a convenience sample of 709 Italian adults (56.7% male, Mage = 32 years). At T1, participants completed a questionnaire with measures of all independent variables and their intention to consume a maximum of 100g of red meat per week in the next month, the amount of red meat recommended by the Mediterranean Diet. At T2, participants reported their red meat intake in the previous month. The relation model tested via SEM explained 68% and 29% of the variance in intention and behavior, respectively. Past consumption of red meat predicted all TPB constructs, the intention to consume a maximum of 100g of red meat per week, and future behavior directly. Finally, the intention was associated with cognitive attitude, injunctive norm, perceived behavioral control, and reduced future red meat consumption.

Results indicate that habitual dietary behaviors have a significant impact on red meat consumption, beyond the TPB constructs. Therefore, when developing interventions aimed at promoting healthy and sustainable eating behaviors, it is crucial to consider people's habitual eating preferences, and how they have become established.

## **Evaluating Acceptability of an Online Behaviour Change Intervention for Tier 3 Adult Weight Management Patients**

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**Introduction:** Within the context of a Tier 3 Adult Weight Management (AWM) service, a novel online behaviour change intervention was developed and is currently being delivered. The intervention comprises monthly, pre-recorded health psychology sessions, delivered to patients over a nine month period, each focusing on a different aspect of weight management and behaviour change. As this is a new element of the AWM service, the acceptability of the intervention is currently unclear. The aim of this evaluation is to therefore assess the acceptability of the intervention within the target population.

**Methods:** A cross-sectional design will be used to gather data immediately post-intervention for 12 cohorts of patients entering the AWM service (n= ~20-40 patients per cohort). Patients will be asked to complete measures of intervention acceptability relating to format, content, and delivery. Engagement with the intervention over time will also be assessed and used as a proxy measure of acceptability. Data will be analysed descriptively.

**Expected results:** It is expected that the data collected will provide valuable insight into the acceptability of the intervention and will highlight areas for improvement.

**Current stage of work:** Data are currently being collected.

**Discussion:** Evaluating the acceptability of the intervention will provide insight into the patient experience and enable us to understand whether the needs of the population are being met. This will enable further development and refinement of the intervention, to better support patients and enhance weight loss attempts.

## **Examining longitudinal trajectories and predictors of weight loss and psychological distress in bariatric surgery patients**

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**Background:** Bariatric surgery is the most successful weight loss intervention for obese people with a BMI of  $\geq 40$ , or  $\geq 35$  with comorbidities. However, weight loss can be unsuccessful or suboptimal due to struggles making behavioural changes and/or mental health difficulties. Psychological literature is inconclusive with limited and mixed evidence on predictors of weight loss and consequences of surgery on mental health and adjustment. We have therefore implemented a research database examining longitudinal trajectories and predictors of weight loss and psychological outcomes across the bariatric surgery pathway.

**Methods:** Three London-based bariatric surgery NHS sites are collecting data at: initial assessment; 4-weeks pre-surgery; and 3-, 6-, 12-, 18-, and 24-months post-surgery. Patients complete a battery of measures in routine practice, such as BMI, eating behaviours, disordered eating, weight discrimination, distress, PTSD, alcohol misuse, and multimorbidity burden. Across sites, ~800 patients enter services and 450 operated on per year, with data collection for 5 years. Longitudinal modelling and latent profile analysis will identify predictors of weight loss and psychological distress post-surgery.

**Expected results:** To identify psychological profiles of patients at higher risk of suboptimal weight loss and poor mental health post-surgery. We hypothesise that those with difficulties rooted in emotion dysregulation and/or with a history of disordered eating and substance misuse will display the worst outcomes.

**Current stage:** Implementation with projects ongoing and/or planned.

**Discussion:** Results will advance the psychological literature and inform treatment pathways in bariatric psychology. They will help to refine eligibility for surgery and target interventions for weight loss optimisation.

## **Do intolerance of uncertainty and resource consumption actually influence the therapeutic strategies chosen by physiotherapists?**

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The medical environment is prone to diagnostic errors, which can have serious consequences for patients' health status. However, healthcare professionals (HCPs) are often overconfident in their choices. In this context, there is a growing interest in the influence of variables that may negatively influence the reasoning of HCPs, namely intolerance of uncertainty (IU) and resource consumption. We challenged 127 physiotherapists to play a simulation game and choose a therapeutic strategy for three cases of low back pain of increasing difficulty (easy, medium, difficult). We measured their IU level and their resource consumption (i.e., requests for test results for each case). Our results showed that 87.4% of participants chose the most appropriate strategy for the easy case, 46.5% for the medium and 29.1% for the difficult. For the easy case, IU and resource consumption had a negative influence on the chosen therapeutic strategy, which was less adapted. Moreover, resource consumption among highly intolerant individuals had a more adverse influence on the chosen strategy. However, we did not find the same results for the medium and difficult cases. We propose hypotheses to explain this difference (i.e., system 1/system 2, consideration of the physiotherapist's speciality, perception of uncertainty). We also outline potential improvements to our tool and suggest future research avenues.

## **Exploring relationships between chewing ability and well-being: Design of a remote chewing assessment system**

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**Background:** Chewing difficulties are associated with poor mental and physical well-being. Assessments of chewing are typically single lab-based measures requiring specialist equipment (e.g. wet sieving) and provide insight into one facet of chewing (e.g. breaking down or manipulating food). A more holistic approach, combining a range of objective and subjective chewing measures, and factors indirectly related to chewing ability (e.g., pain and fatigue), would allow earlier targeted interventions and better treatment outcomes. We introduce designs for a remote healthcare system to achieve this.

**Aims:** Aims are two-fold: i) Investigate relationships between various chewing measures, pain, fatigue, and well-being (including analysis of pain and fatigue as potential mediators), ii) Propose the design for a remote system to holistically assess chewing ability.

**Method:** 150 participants will complete a lab-based carrot chewing (particle size) and gum mixing (manipulation) tasks and self-report measures of subjective chewing ability, pain, fatigue, and well-being.

**Proposed analysis:** Multiple regressions will assess if chewing measures, pain and fatigue predict well-being. Mediation analysis will explore influence of pain and fatigue on relationships between chewing and well-being.

**Expected results:** It is anticipated that lower chewing ability, higher pain, and higher fatigue will be associated with poorer well-being (i.e., higher depression, anxiety, and stress). It is also expected that pain and fatigue will mediate relationships between chewing scores and well-being.

**Current work stage:** Collection of pilot data for chewing tasks.

**Discussion:** Findings will help inform the development of a remote system to assess chewing ability and identify targets for tailored intervention.



## **Identifying design features of diabetes audit and feedback interventions in primary care: a rapid review**

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**Background:** Audit and feedback (A&F) is an effective strategy to improve diabetes management. Systematic reviews of A&F in healthcare settings suggest certain modifiable elements of A&F are associated with improving the quality of management. In accordance with Cochrane rapid review interim guidelines, we conducted a rapid review of the literature to understand how diabetes A&F is designed and conducted in primary care.

**Methods:** Primary intervention studies reporting on diabetes A&F with quantitative and/or qualitative findings were eligible for inclusion. Database, grey literature and backward citation searches of A&F reviews were completed. One reviewer completed title/abstract and full-text screening. A second reviewer screened excluded papers from these searches. We extracted data on 19-modifiable A&F intervention elements previously collated from the literature. Data will be synthesised using narrative synthesis.

**Expected results:** 1,136 studies were identified and screened, and 26 were eligible for inclusion (North America=13; Europe/UK=8; Australia=3; Middle East=1; Africa=1). Preliminary results suggest co-interventions used to support the A&F process typically include case management by pharmacists, access to specialist advice, and peer support.

**Current stage of work:** A narrative synthesis is underway.

**Discussion:** The findings will inform an ongoing project to optimise the delivery and content of diabetes A&F in a cluster of general practices committed to improving the quality of diabetes care in Ireland. More broadly, the findings will offer considerations for the design of future diabetes A&F interventions.

## **Effect of Tapping Touch self-care online program 12: Contributors to improvement of insomnia symptoms**

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**Background:** Insomnia was significantly improved through a Tapping Touch self-care online program for stress care during the COVID-19 pandemic. This change was associated with improvements in psychological and interpersonal variables. However, our previous study used data from only the three sessions conducted during the program and did not include data from the follow-up conducted four weeks later. Furthermore, the analysis implemented only the total score on the Athens Insomnia Scale (AIS), comprising eight symptoms. Therefore, it was unclear which symptoms of insomnia had improved. This study explored factors contributing to improving insomnia from before the sessions to the follow-up. Moreover, it investigated which of these contributors are associated with which insomnia symptoms.

**Methods:** Data from 14 participants (partially overlapping with our previous studies) were analysed. Psychological and interpersonal variables were measured pre-program and at follow-up. The total AIS score and that for each symptom were also obtained.

**Findings:** Partial correlation analyses were conducted to examine the relationships between the extent of changes in psychological and interpersonal variables and that in insomnia, controlling for the pre-program score of each variable and the pre-program total AIS score. Results indicated improvements in negative emotion, depression/anxiety, apathy, sense of rejection, dependency, loneliness, self-trust, and imagination ameliorated insomnia. Furthermore, partial correlation analyses controlling for each contributor's pre-program score and each insomnia symptom revealed that psychological variables contributed more to improvement than interpersonal ones.

**Discussion:** Psychological and interpersonal variables contribute to improving insomnia. Moreover, the psychological effects are more effective in alleviating its symptoms.

## PHYSIOTHERAPISTS' ATTITUDES TOWARD OBESE PEOPLE

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**Background:** Negative attitudes towards obese and overweight people are prevalent, both among the general population and among health care professionals. Physiotherapists have a significant role in health promotion and work with people who are obese or overweight. The aim of the study was to examine the relationship between the attributions of obesity and attitudes towards obese people among working physiotherapists and to examine whether the frequency, and quality of contact with obese people are connected to the perception of the quality of that relationship.

**Methods:** 111 working physiotherapists, 86 female and 25 male, with an average age of 35,7 (SD=9,25), and average length of service of 11,7 (SD=10,30) entered online survey consisted of Causes of Obesity Scale, Fat Phobia Scale, Negative attitudes toward obese Scale, as well as questions about the frequency and quality of contact with obese people.

**Findings:** The results show that the attribution of the cause of obesity by internal factors is associated with more negative physiotherapists' attitudes towards obese people ( $r = 0,479$ ,  $p < 0.01$ ). More negative attitudes towards obese people contacts are associated with less quality of contact ( $r = -0.362$ ,  $p < 0.01$ ). More frequent contacts are associated with more positive attitudes towards obese people ( $r = 0,214$ ,  $p < 0.05$ ). Causes of obesity, frequency, and quality of contact explained 33,9.1% of the variance in attitudes toward obese people.

**Discussion:** A greater understanding of the factors connected to the negative attitudes of the physiotherapists toward obese and overweight people could help us improve the quality of the health care and physiotherapy provided.

## **Online grouptherapy for patients with heart failure and depression to promote self-care: a clinical trial**

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**Introduction:** There are recommendations from Cardiology Societies for the introduction of effective self-care for patients with Heart Failure (HF), aiming for a greater control of symptoms, high adherence to treatment and, consequently, a decrease in number of readmissions. One of the pillars of education for self-care for chronic patients recommended by the Health's Ministry is the management of the patient's emotional aspects. **Method:** Randomized clinical trial, with patients over 18 years old, diagnosed with HF and depression. Depression was assessed using the Beck Depression Inventory (BDI-II) and self-care using the Brazilian Version of the European Heart Failure Self-Care Behavior Scale (EHFScBS). Patients were randomized at the first outpatient appointment using envelopes. Statistical analysis was performed in SPSS®. Generalized estimating equations (GEE) were used. **Results:** From May to August 2022, 100 participants were interviewed, 52 (52%) with depression, 26 participants randomized in each group. The control group underwent consultation with a multidisciplinary team at the outpatient clinic. The intervention group had participated in 1 (one) weekly online WhatsApp group session lasting 1 hour each, totalizing 12 sessions. The intervention was carried out by a psychologist specialized in cardiology. The patients were evaluated at baseline and in 6-months follow-up. **Conclusion:** The intervention group had demonstrated improvement in self-care, as well as improvement in depression levels. **Discussion:** Psychological support groups for treating depression in patients with HF can improve self-care and depressive symptoms, becoming an option in health care services.

Clinical Trial Registry: NCT05948241

Founding: Coordination of Improvement of Higher Education Personnel (CAPES)

## **Cognitive behavioral techniques for stress management in patients with coronary artery disease - partial data**

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**Background:** Psychological stress is recognized as a potentially modifiable risk factor in cardiovascular disease (CD). In the long term it is related to the development of atherosclerosis and coronary disease. Thus, this study aimed at exploring the efficacy of a brief cognitive-behavioral group intervention (CBGI) for stress management.

**Methods:** Randomized, parallel, controlled, intention-to-treat clinical trial. Patients undergoing percutaneous coronary intervention (PCI) with scores  $\geq 16$  points in Perceived Stress Scale (PSS-10) were considered eligible. The 3-session CBGI for stress management was implemented by a psychologist about 4-months after PCI; participants were assessed at PCI day and at 4-month after intervention. Within and between group differences were explored through paired and independent samples t-test.

**Results:** Between December 2022 and March 2023, 11 patients were randomized to the Intervention Group (IG) and 12 to the Control Group (CG). sociodemographic characteristics and cardiovascular risk factors were not statistically different between groups. PSS-10 point decreased from  $23.38 \pm 3.35$  to  $16.18 \pm 8.93$  (range =  $-7.00$   $p = 0.023$ ) in the IG and from  $21.50 \pm 4.66$  to  $21.92 \pm 5.92$  (range =  $-0.42$   $p = 0.800$ ) in the CG.

**Conclusions:** In patients with a coronary artery disease and stress, stress management through brief CBGI improves the perceived stress. The intervention proved to be effective in reducing stress in this small group of patients, however, these are partial data. We will need a larger number of patients to better understand the impact of this intervention on cardiovascular outcomes.

Clinical Trial Registry: NCT04223882

Founding: CAPES

## Effect of treatment preference matching on outcomes and engagement in a post-cessation weight management trial

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**Background:** There is currently limited weight management research regarding treatment preference. These secondary analyses examined the effect of treatment preference matching on 12-month weight change, smoking cessation, retention, and attendance in a post-cessation weight management trial. To elucidate the stated preferences, we examined perceived intervention effectiveness and difficulty.

**Methods:** Participants (n=305; 68% female, 52% identifying as white, 87% with overweight/obesity, 10.8% attrition at 12-months) were randomized to one of three remotely-delivered weight interventions (Stability, Loss, Bibliotherapy); after the two-month weight intervention, all received the same behavioral+pharmacotherapy smoking cessation program. Participants indicated their preferred weight intervention (baseline) and perceived intervention effectiveness and difficulty (baseline, 2-months). Weight change and point-prevalence abstinence were assessed (12-months). Attendance was continuously monitored.

**Results:** Most participants (60.3%) preferred the Loss intervention. Those matched to their preference had greater 12-months weight loss (matched: M(SD)=-1.41(6.87) kg; mismatched: M(SD)=0.66(5.69) kg, p<0.05). Preference match did not impact smoking cessation, retention, or attendance rates. At baseline, most participants (53.4%) perceived the Loss intervention as most effective; however, at 2-months, more participants perceived the Stability intervention as most effective (baseline: 26.2% vs. 2-months: 43.1%, p<0.05). The Stability intervention was perceived as easiest at both baseline and 2-months.

**Conclusions:** Overall, the Loss intervention was most preferred, perhaps because participants perceived this intervention as most effective. However, given the perception that the Stability intervention is the easiest, there may be promise for both interventions for different populations. Future research should systematically test intervention preference effects with the aim of precision health.

## **e-ESPRIMO: Tailoring eHealth Intervention for Patients with Multiple Sclerosis and Moderate to Severe Disabilities**

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The e-ESPRIMO research project originated from the need to adapt a previously co-created in-person biopsychosocial intervention for young adults with Multiple Sclerosis and low disability (ESPRIMO). The goal of e-ESPRIMO is to develop a telematic version targeting patients with MS and medium to high disability levels, with the purpose of enhancing their Quality of Life. Various stakeholders and MS experts (e.g., individuals with MS, neurologists, physiatrists, psychologists, physiotherapists, PA experts) were involved in designing an integrated, customized intervention. The tailoring process of the intervention was conducted through: (i) co-creation activities: all stakeholders contributed to tailoring e-ESPRIMO to the specific needs of the target population, ensuring a customized fit; (ii) monitoring activities: after each session, there is continuous assessment of perceived physical effort and psychosocial aspects; (iii) Advisory Board activities: the Advisory Board was consulted at different stages to evaluate the feasibility of the intervention, allowing for ongoing adjustments. The results of the different actions implemented for the tailoring process have been analyzed and condensed to develop the pilot intervention. The adopted approach enables the adaptation of an intervention that integrates motor and psychological components to the specific needs related to the disabilities of the patients with MS. Each session involves the collaboration of experts from both domains, facilitating their coexistence and mutual influence. The data will be presented to demonstrate how patient and public involvement (PPI) may be functional in addressing the unique challenges faced by individuals with MS through an innovative intertwined biopsychosocial approach.

# Placebo and nocebo interventions impact perceived but not actual proprioceptive accuracy

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## Background

The placebo and nocebo responses were found to play an important role in many health and performance areas. This study aimed to test the impact on proprioceptive accuracy, an essential aspect of motor functions.

## Methods

Seventy-eight undergraduate university students were randomly assigned to three experimental groups. The placebo group (n=26) received positive, the nocebo group (n=26) negative, and the control group (n=26) neutral instruction about the effect of a local sham subliminal electric stimulation on proprioceptive accuracy of the elbow joint. Active and passive versions of the joint position reproduction task were used to measure proprioceptive accuracy before and after the intervention. Expected and perceived changes in performance were also assessed; changes in state anxiety, optimism, and motivation to cooperate were used as covariates in the models.

## Findings

Mixed analyses of variance indicated that the experimental manipulation did not affect actual proprioceptive accuracy ( $p>0.05$ ) but affected expected and perceived performance ( $p<0.05$ ). Adding the covariates to the models did not essentially change the results. We found no correlation between actual and perceived change in performance in the active test and only a weak correlation in the passive test. Overall, expected performance is not a relevant predictor of actual performance but is for perceived performance.

## Discussion

The results suggest that only perceived (subjective) aspects of proprioceptive accuracy are susceptible to placebo and nocebo interventions. From a practical point of view, the objective assessment of proprioceptive accuracy is necessary since the subjective reports might be affected by top-down factors.



## Exploring sensory processing sensitivity trait in tinnitus patients: preliminary study

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**Background:** Sensory Processing Sensitivity (SPS) is a genetically based personality trait, found in 30% of the population, characterized by deeper cognitive processing of stimuli, emotional reactivity, ease of overstimulation, and a greater awareness of subtleties in the environment. Tinnitus is a prevalent auditory disorder that severely affect to 1-2% of population producing severe emotional effects. Few investigations have addressed the study of tinnitus in the context of environmental sensitivity. The aim of this study was to investigate the relationship between SPS trait and tinnitus severity.

**Methods:** Correlations between SPS (total score and SPS subscales: SOS, LST, AES, FPD, HA) and tinnitus severity were analyzed in 58 participants of a cohort of tinnitus patients undergoing a Enriched Acoustic Environment therapy. SPS was measured with the Highly Sensitive Person (HSP) Scale and tinnitus severity was measured with Tinnitus Functional Index (TFI), Tinnitus Handicap Inventory (THI) and Visual Analogue Scale (VAS), collected prior to the start of therapy.

**Findings:** our main results showed significant positive correlations between HSPS and tinnitus severity (TFI:  $r=0.374$ ,  $p<0.05$ ), THI:  $r=0.426$ ,  $p<0.001$ ) and in general, positive correlations between TFI/THI and the SPS subscales were found. VAS did not correlated with SPS.

**Discussion:** this is the first study that analyzes the relationship between tinnitus severity and SPS personality trait. Our results revealed that tinnitus severity could increased at higher levels of SPS and are a starting point for future research. Going deeper into this relationship could provide relevant information within the therapeutic context of tinnitus.

## Interventions on the posttraumatic growth of adults with cancer: Best practice considerations

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**Background:** People diagnosed with cancer commonly present with post-traumatic growth (PTG) that allows them to beyond their pre-diagnosis state. Various types of interventions have been applied to increase PTG, yet not all are effective.

**Methods:** A systematic review and meta-analysis of clinical trials was conducted to identify interventions facilitating PTG among adults with cancer. The PRISMA guidelines and the Cochrane Handbook guided this process. A secondary evaluation of the most effective interventions was performed and resulted in some considerations and insights for best practice.

**Findings:** Of the 37 identified trials, 22 were effective ( $p < 0.001$ ). From those, many had group (45.5%), one-to-one (40.9%) or a mixture of both (13.6%) as a delivery format. Most were tailored for PTG (68.2%), with low (27.3%), moderate (36.4%), and high (4.5%) contact time. Moreover, they drew from cognitive behavioural therapy (22.7%), positive psychology (18.2%), expression-based theories (13.6%), education, peer support and health coaching (13.6%), case-management and palliative care (13.6%), mindfulness (9.1%) or a combination of those (4.5%). These interventions promoted education (e.g., health, psychoeducation, trauma), relaxation (e.g., mindfulness), and self-disclosure (e.g., life stories). They helped people to manage the impact (e.g., on emotions and thoughts), to adopt a more active coping style (e.g., behavioural activation, improved social support, reflective rumination), and facilitated the change of narrative into one of strength, meaning, appreciation and growth (e.g., cognitive restructuring).

**Discussion:** Overall, there is a great diversity of effective interventions that facilitate PTG. This is a promising field that should be pursued further.

## Online health-seeking behaviour, health anxiety and the Covid-19 vaccine in South Africa

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**Background:** Our aim was to explore differences in online health-seeking behaviour (OHSB) and health anxiety between adults in South Africa who were vaccinated against Covid-19 and those who were not.

**Methods:** A quantitative, cross-sectional study was conducted. The study was advertised on several social media platforms. Participants accessed the online survey using a link. Participants completed several measures including a demographic survey, the health anxiety index and a measure of OHSB containing three subscales, namely (1) information-seeking, (2) support-seeking and (3) using the internet as a supplement or alternative to offline medical care. The final sample therefore consisted of 146 adults. Data were analysed using one-way ANOVA's.

**Findings:** There were no differences in health anxiety ( $F(1, 133) = 4.58, p=.03$ ) and total OHSB ( $F(1, 133) = 1.98, p=.16$ ) between the two groups. However, participants who took the vaccine scored significantly higher on the information-seeking subscale than those who did not ( $F(1, 133) = 5.03, p=.03$ ). Participants who did not take the vaccine scored higher on using the internet as a supplement or alternative to offline medical care than those who took the vaccine ( $F(1, 133) = 1.89, p<.01$ ).

### Discussion:

We found that those who were not vaccinated against COVID-19 engaged in less online information-seeking relating to health but also tended to use the internet more as a supplement or alternative to offline medical care. The findings highlight the nuanced nature of OHSB and the role of the internet in decision-making around vaccination.

## **Technophobia links age and education to willingness to adopt new health technology among aging adults**

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The global population is undergoing significant aging, with the proportion of individuals aged 65 and above expected to rise from 9% in 2019 to 16% in 2050, necessitating substantial adjustments in various sectors, including health. A promising approach to this challenge involves relying more on digital solutions, which may support aging adults' autonomy and health. However, while aging adults find the area of health extremely important and recognize the need for additional support, they are generally not particularly willing to fill this gap with new technology. In the present study, we investigated the variables that could explain this discrepancy, focusing on the predictive role of demographic variables and the potential role of technophobia as a linking mechanism between demographic variables and willingness to adopt new health technology. Our sample consisted of 198 home-dwelling aging adults who responded to demographic questions regarding their gender, age, education, and socioeconomic status, as well as items regarding their technophobia (measured as a multidimensional construct consisting of personal failure, human-machine ambiguity, and inconvenience) and willingness to adopt new health technology. The analyses, performed using partial least squares structural equation modeling, revealed that age and education level significantly predicted technophobia and indirectly contributed to willingness to adopt new health technology via the human-machine ambiguity dimension of technophobia. Furthermore, human-machine ambiguity significantly negatively predicted willingness to adopt new health technology. Our findings carry significant implications for tackling low adoption of new technology among aging adults, offering insights into the potential target groups and key interventional elements.

## Perceptions And Satisfaction Of Telemedicine Services Among Patients And Healthcare Practitioners: A Mixed-Method Study

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**Background:** Telemedicine is an innovative way of delivering healthcare services through Information and Communication Technologies in which professionals and patients are in different locations. The healthcare professionals' and patients' acceptability and satisfaction with telemedicine services is still underexplored in Italy. This mixed-method study sought to (i) investigate the healthcare professionals' perspectives on telemedicine, and (ii) monitor the patients' acceptability and satisfaction with the telemedicine services.

**Methods:** We first conducted a focus group with healthcare practitioners (n=4) aimed at investigating their perceptions about telemedicine, and the perceived difficulties regarding its implementation within the medical department where they were working. Then, patients (n=36) filled out an ad-hoc online survey soon after their telemedicine visit, which investigated their perceived satisfaction about this service.

**Findings:** Qualitative analyses evidenced four main elementary contexts: healthcare practitioners' know-how about telemedicine (12.8%); telemedicine and its effects on job-related practices (21.1%); perceived difficulties in using telemedicine services (35.8%); the advantages of telemedicine and the development of new competencies (30.3%). Interestingly, patients were mostly satisfied with the telemedicine services, except for specific software or hardware-related difficulties (e.g., the microphone not working).

**Discussion:** Patients reports a good overall acceptance of telemedicine. However, healthcare practitioners consider telemedicine both as a challenge and as an innovative way of taking care of patients, despite their need to learn how to use a "new" instrument. As such, the use of these services among Italian healthcare practitioners may be increased with both ad-hoc interventions targeting the most commonly-reported difficulties and specific trainings.

## Is there a relationship between e-Health Literacy and Cyberchondria?

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**Introduction:** Cyberchondria is a multifactorial construct that combines a behavioral pattern with a subsequent emotional state through repetitive and excessive online searches for health information, resulting in an intensification of distress and anxiety. This study aims to understand the possible relationship between the degree of e-Health literacy and the severity of cyberchondria.

**Method:** A non-probabilistic snowball online sample, comprising 151 adults (Mage=33.08; SDage=10.78; Min=18; Max=65), 57% of whom were women, completed the eHealth Literacy Scale and the Cyberchondria Severity Scale Short-Form. A model was built using AMOS software (v.29).

**Results:** The model demonstrated an acceptable fit (GFI=0.809; TLI=0.834; CFI=0.855; RMSEA=0.080;  $\chi^2/df=1.960$ ), and the results showed a significant correlation between e-Health literacy and cyberchondria ( $\beta=0.251$ ;  $p=0.011$ ).

**Discussion:** The positive correlation between eHealth Literacy and cyberchondria revealed that, although a high level of health literacy is considered a protective factor for health, it may facilitate preoccupation with health-related distress and compulsive online search behavior, known as cyberchondria. This is still a relatively new phenomenon, and thus, with the widespread dissemination of (mis)information online and the increasing search for online health-related information, it is important to further explore the predictors of cyberchondria, namely which individual factors contribute to its manifestations, so that health professionals can better manage this clinical condition.

**Key-Words:** Health Literacy; e-Health Literacy; Cyberchondria; Internet; Health Anxiety

## **Developing and testing a comprehensive 'eSupport' package for smoking cessation in pregnancy**

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### **Background**

Smoking during pregnancy increases the risk of health problems for babies and drives health inequalities. In the UK, the NHS provides free interpersonal counselling and nicotine replacement therapy (NRT) to help pregnant people stop smoking. This is effective, but not widely used. Digital support - text messages, web, apps – could provide an alternative delivery model, and pregnant people and experts are enthusiastic about it. Few digital cessation tools are orientated towards pregnancy, which is the main reason most pregnant people try to quit, and none are available through the NHS. This study will design and test a comprehensive electronic support ('eSupport') package for smoking cessation in pregnancy. This would include help to use NRT, and possibly e-cigarettes.

### **Methods**

1. Identify key delivery modalities, content and behaviour change techniques to promote engagement and smoking cessation by undertaking systematic reviews.
2. Co-develop and optimise an eSupport package (with a commercial partner) using collaborative workshops and iterative testing.
3. Test the effectiveness and cost-effectiveness of the eSupport package in a randomised control trial, with embedded process evaluation.
4. Develop and evaluate implementation strategies for promoting eSupport in real-world settings.

### **Expected results**

The project will determine 'eSupport' (cost) effectiveness, and whether it can be made accessible in clinical and online settings such that pregnant people use and engage with it.

### **Current stage of work**

Starting May 2024.

### **Discussion**

We anticipate producing an effective eSupport package and implementation strategies to help more pregnant people stop smoking and, consequently, reduce infant morbidity and mortality.

## **Examining the preference for AI-based technologies in case of health-related complaints in a non-clinical sample**

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**Background:** Artificial intelligence (AI)-based systems are spreading rapidly in healthcare. AI-based applications have been created to help patients to find information about their symptoms, and to receive advice about treatments. The extent to which people prefer to use these technologies for health problems is unknown. Therefore, the aim of the study was to assess how people in a non-clinical sample prefer to use AI-based applications in health-related issues.

**Methods:** 12 situational vignettes were created in 3 categories: 4 non-health related situations, 4 health-related situations without pain and 4 health-related situation with pain. Participants (N=240) had to decide how likely they were to use AI in each situation. Participants also completed the General Attitudes toward Artificial Intelligence Scale, Pain Catastrophizing Scale, Fear of Pain Questionnaire, the Depression Anxiety Stress Scale, and the Multidimensional Scale of Perceived Social Support.

**Findings:** Our results show that individuals are more likely to use AI in everyday, non-health related situations, while they are less likely to use it in relation to their health-related complaints. There was no difference between painful and non-painful health situations in terms of the use of AI technologies. The results indicated that Positive and Negative AI attitudes predicted the using AI in each situation.

**Discussion:** The results suggest that although AI systems are becoming increasingly popular, their use in relation to health-related complaints does not seem to be as popular as in everyday situations. Psychological factors of pain perception do not seem to affect the preference for the use of AI technologies.



## How would eHealth literacy influence older people's health-related quality of life? A three-wave longitudinal study

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**Background and objectives:** The Internet provides extensive health information. Being able to utilize electronic health (eHealth) resources (reflected as “eHealth literacy”) potentially empowers older individuals to manage health and improve health-related quality of life (HRQoL). However, there is a lack of empirical evidence. This study aims to examine the longitudinal effect of eHealth literacy on older individuals' HRQoL, the temporal relationship between eHealth literacy and HRQoL, and potential underlying mechanisms.

**Methods:** A three-wave longitudinal study was conducted among older adults in Jiangxi Province, China, from February to November 2022. Data was collected at baseline (T1), 3-month (T2), and 6-month (T3) follow-ups, using online self-reported questionnaires.

**Results:** A total of 611 participants were included at T1, and 464 (75.9%) completed both 3-and- and 6-month follow-ups. Longitudinal Tobit models suggested that eHealth literacy could significantly improve older individuals' HRQoL (adjusted  $\beta$  and 95% CI: 0.023 (0.011, 0.035),  $p < .001$ ), after accounting for covariates. Cross-lagged panel models supported that older people with higher eHealth literacy could predict their improved HRQoL subsequently, but not the reverse. In addition, self-efficacy could fully mediate the relationship between eHealth literacy and improved HRQoL, with a mediated proportion of 28.3%. Multi-group analyses showed that the prospective association between eHealth literacy and HRQoL was stronger and only significant in older adults who perceived high instrumental support, compared to those with low instrumental support.

**Conclusions:** This study highlighted the importance of eHealth literacy, self-efficacy, and instrumental support in improving HRQoL among Chinese older adults, supporting the development of future interventions.

## **Exploring public values in the context of mental wellbeing apps: university students' perceptions**

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University students have been shown to have significantly higher levels of psychological distress compared to the general population. Mental health apps (MHAs) have shown to provide accessible and easily available tools for self-management and prevention. However, MHAs often provide health suggestions based on user-inputted or collected data, utilizing automated decision systems as recommenders, nudging users in specific directions and personalizing their in-app experience. This might aid or pose risks to public values such as privacy, autonomy, transparency, security, solidarity, etc., and subsequently users' wellbeing, but this remains understudied for the university student population. Thus, this research aims to dive into university students' perceptions of (1) which public values are most important to them when deciding to use and/or using an MHA with ADS, (2) how they perceive these values being impacted by the MHA, and (3) how their engagement with the MHA is influenced by the perceived impact MHA has on public values.

This study will include three groups of students at Erasmus University Rotterdam: (1) used an MHA provided by university as part of a research trial, (2) used the same app in natural settings once the app was rolled out, (3) have not used an MHA before. Semi-structured interviews will be conducted, starting in May 2024, including a hierarchical card sorting method and recruitment will continue until saturation of themes is achieved. The data will be analyzed using thematic analysis (two coders) including a mix of inductive and deductive approaches with the research questions guiding the higher-level themes.

## **A systematic review of the Uncanny Valley Effect in human-embodied conversational agent interaction**

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Embodied Conversational Agents (ECAs) are digital entities with anthropomorphic features that facilitate both verbal and non-verbal interactions with users. The Uncanny Valley Effect (UVE) is an intriguing facet of human psychology. UVE occurs when humans experience disgust, shock, or even anxiety towards the ECA that is perceived as being too anthropomorphic. Currently, there is no consensus on how to overcome the uncanniness problem. This systematic review aims to identify the human characteristics, agent features, and context factors that influence the UVE. We conducted a systematic review following the PRISMA 2020 guidelines. Initially, we identified 17,122 relevant records from ACM Digital Library, IEE Explore, Scopus, ProQuest, and Web of Science. The methodological quality of the included studies was evaluated using the Effective Public Health Practice Project (EPHPP). Based on the 19 included studies, it can be concluded that females and younger people perceive the ECA as more attractive. ECAs characterized by extraversion, emotional stability, and agreeableness are considered more attractive. Facial expressions also play a role in the UVE, with some studies indicating that ECAs with more facial expressions are considered more attractive. However, this effect is not consistent across all studies. Few studies have explored contextual factors, but they are nonetheless crucial. The interaction scenario and exposure time are important in human-ECA interaction. The current findings highlight a growing interest in ECAs, which have seen significant developments in recent years. Given this evolving landscape, investigating the risk of the UVE can be a promising line of research.

## **A behavior-change model informing the development of a remote patient-monitoring solution for cancer clinical trials**

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**Background:** Many patients receiving cancer treatment experience symptoms during or post-treatment. Remote digital symptom tracking in between clinic visits enables monitoring and can improve care but relies on patient's sustained engagement with digital solutions. Our aim was to develop a conceptual model to inform the development of a digital solution supporting participants in oncology clinical trials to remotely track and report symptoms for monitoring by clinical sites.

**Methods:** A literature review identified behavioral determinants of symptom reporting and engagement with digital solutions by patients receiving cancer treatment. The COM-B model and the Theoretical Domains Framework were used to classify these determinants and identify associated determinants. The Behavior Change Technique Taxonomy and Intervention Mapping were used to identify behavior change techniques to incorporate in the app's UI/UX and content.

**Findings:** Barriers identified: difficulty in recognizing and remembering symptoms, and digital literacy (Capability); patient perceptions and beliefs about the importance of symptom tracking (Motivation); and difficulties pertaining to digital solution access, either related to availability of such solutions or internet/technology (Opportunity). Behavior change techniques such as Instruction, Framing, Action planning, Feedback, and Prompts and cues were identified for inclusion through UI/UX and content.

**Discussion:** The conceptual model informed the solution's design, content and functionality. By supporting patients to recognize, track and report their symptoms, as well as to learn how to cope with them, the solution aims to enable early intervention to alleviate/palliate patient morbidity. Behavioral analytics on patients' use of the digital solution will inform conceptual model updates and solution iterations.

## Social use and mental health: the mediating role of social media addiction in two studies

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**Background.** Numerous studies have shown that people who use social more frequently have worse mental health (Boer et al., 2021). Studies that have analyzed the role of possible moderators, such as the type of Internet use, age, and gender, have shown that their effect is insignificant (Huang, 2017). With the present paper, we aimed to test the mediating role played by social media addiction in the relationship between frequency of social use and mental health, during lockdown and two years later.

**Methods.** Two studies were conducted: the first involving 1061 subjects (Mage: 37.30; SD=14.13); the second involving 562 subjects (Mage: 33.17; SD=15.00). A self-report questionnaire was administered comprising several measures, including General Health Questionnaire and Bergen Social Media Addiction Scale. A Mediaton model will be presented.

**Findings.** During lockdown, addiction partially explains the positive relationship between frequency in social use and mental illness (Direct effect: .07,  $p < .01$ ; Indirect effect: .07, 95% bootstrapped CI [.05, .10]), two years after it the relationship is totally explained by addiction (Direct effect: .03,  $p > .05$ ; Indirect effect: .14, 95% bootstrapped CI [.09, .19]).

**Discussion.** In light of this result, it is inferred that during the lockdown, social media use had an effect on people's distress even in the absence of an addiction condition, whereas two years later this was not the case. Therefore, intervening on the relationship between social use and mental health requires acting on social media addiction and taking into account additional intervening factors during lockdown periods.

## **Barriers and facilitators of a broader uptake of alternative protein foods: a system mapping approach**

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### **Background:**

This study adopted a participatory approach to map the complex system of determinants of an adoption of a diet including proteins from alternative sources (plants, insects, fungi, microbes). Capabilities, opportunities, and motivation-related facilitators and barriers of an adoption of alternative proteins were elicited using the system mapping approach. The goal was to explore the connections between the determinants included in the map and gain a better understanding of how the complex system operates.

### **Methods:**

Three system mapping workshops were conducted among clinical nutrition specialists (total N = 24; aged 18–55 years old; 16.6% men, 83.3% women). The workshops followed the group model building methods. The participants of each workshop developed a list of determinants and proposed connections between the determinants. Network analyses were performed.

### **Results:**

The following leverage points, characterized by the highest eigenvector values, were identified. In particular, the first system map included the popularity of products with alternative proteins (0.47), trends for the consumption of alternative proteins products (0.47), and knowledge about alternative proteins (0.30). The second map included culinary variety (0.37), disgust (0.33), and availability of alternative protein products (0.32). The leverage points in the third system map included willingness to consume alternative protein products (0.47), consumer beliefs about products (0.40), and dissemination of knowledge about alternative proteins (0.33).

### **Conclusions:**

The analyses of system maps developed by clinical nutrition specialists indicate leverage points representing motivation and opportunity-related determinants that may be considered the focal intervention points in programs promoting a broader uptake of alternative proteins.

## **Capabilities, opportunities and motivation of young people towards sustainable food-related lifestyles – A systematic review**

Soraya van Etten<sup>1</sup>, Marijn Stok<sup>1</sup>, Lonneke Jansen<sup>1</sup>, Brian Dermody<sup>1</sup>, John de Wit<sup>1</sup>, Eggo Müller<sup>1</sup>, Michèle Bal<sup>1</sup>

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**Background:** The present-day food system is a key driver of climate change, making it imperative for populations to shift towards more sustainable food-related lifestyles (SFRL). Involving youth in this transition is vital as dietary habits are shaped during this period in life and will have long-lasting impacts on the sustainable food transition. This review explores the associations of capabilities, opportunities and motivations – derived from the COM-B model - with SFRL among youth, identifying dominant facilitators and barriers and their interrelations.

**Methods:** Four databases were searched for studies exploring at least two COM-B elements associated with SFRL in individuals under 18. Sustainable behaviours included adopting a plant-forward diet, consuming local and seasonal foods, and minimizing food waste.

**Expected results:** Initial findings indicate diverse barriers to SFRL adoption, including food preferences, lack of knowledge, and social environment. The expected results will highlight dominant COM-B factors associated with SFRL and explore their interrelations.

**Current stage of work:** Data analysis is in progress and will be finished before September 2024.

**Discussion:** As youth are effective agents of change, investigating their barriers and facilitators for adopting SFRL is crucial. This study aims to explore these factors, providing valuable insights for future research and guidance on sustainable food transition among youth. The findings will be integrated into the Food-related Lifestyle in Youth (FLY) project, examining the development of underlying factors in youth from lower socio-economic positions and their spread within social networks. Ultimately, this contributes to developing an intervention toolkit facilitating youth's sustainable food transition.

## **Group-level interventions in schools promoting sustainable food-related lifestyles: A systematic review**

Lonneke Jansen<sup>1</sup>, Michèlle Bal<sup>1</sup>, Soraya van Etten<sup>1</sup>, Brian Dermody<sup>1</sup>, Eggo Müller<sup>1</sup>, John de Wit<sup>1</sup>, Marijn Stok<sup>1</sup>

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**Background:** The present-day food system significantly contributes to climate change and health-related sustainability issues, necessitating a shift towards Sustainable Food-related Lifestyles (SFrL). Given that dietary habits are shaped during adolescence, engaging youth in this transition is vital. Social network characteristics influence youth's dietary choices, highlighting the potential efficacy of group-level interventions in shaping SFrL among young people. This systematic literature review provides an overview of effective group-level intervention strategies within school settings targeting youth's transition to sustainable food-related lifestyles.

**Methods:** We conducted a search of the databases MEDLINE, EMBASE, and PsycINFO using a search strategy combining 'youth-', 'sustainable diet-', 'school-', and 'intervention'-related terms. 3319 unique studies were identified. ASReview, a machine learning tool to efficiently screen literature, is used to identify relevant publications. Extracted data are synthesized using thematic analysis.

**Expected results:** Preliminary findings suggest a scarcity of group-level interventions in school settings specifically targeting sustainable food behaviors. Additionally, most interventions promoting sustainable diets aim to enhance knowledge, motivation, and practical skills, with few addressing systemic issues such as food accessibility and equity or involving stakeholders beyond schools. Expected outcomes will provide an overview of effective interventions, ranging from school gardens to virtual reality experiences.

**Current stage of work:** Data analysis is in progress and will be completed before September 2024.

**Discussion:** The findings will guide the implementation of state-of-the-art intervention strategies in subsequent stages of the research project, contributing to the promotion of sustainable food behaviors among youth.



## Psychological predictors of attitudes and intention to eat insect-based food

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**Background:** According to the FAO, greenhouse gas emissions from agri-livestock activities represent 31% of human-related emissions, among the main culprits of the climate crisis. To overcome these problems, alternative foods, such as insect-based foods, are becoming widespread. However, the possibility of introducing them into eating habits often arouses adverse psychological reactions and mistrust. This study aimed to map attitudes towards insect-based foods and consumption intentions as a function of individual characteristics to capture the psychological predictors of a wary attitude towards them.

**Methods:** A sample of 122 students completed an online questionnaire in the pilot study. The questionnaire collected information about sociodemographics, decision-making style, trust in science, food neophobia, the intention to consume insect-based foods, and explicit and automatic attitudes (Implicit Association Test) toward them. Linear regression models were performed to explore which sociodemographic and psychological variables represented the most effective predictors of attitudes and intention to consume insect-based foods.

**Findings:** Preliminary findings suggested that food neophobia was the strongest predictor of explicit attitudes toward insect-based foods. The most significant predictors of intention to eat insect-based foods were food neophobia, trust in science, and gender (men showed a greater propensity to consume insect-based foods than women).

**Discussion:** Consumers are forming their beliefs regarding novel foods in this historical phase in which they must pay particular attention to choosing sustainable foods. This study contributes to understanding people's attitudes towards these products and any resistance to scientific-based communication actions that can reassure consumers and counteract negative beliefs.

# THE IMPACT OF IMPLIED MOTION ON PEOPLE'S PERCEPTIONS AND THEIR WILLINGNESS TO CONSUME IMPERFECT PRODUCE

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**Background:** Imperfect fresh produce is often rejected by consumers and retailers, contributing to about 30% of food waste. Shifting consumer focus from visual appearance to edible quality is crucial in combating food waste. We aim to investigate the influence of implied motion (i.e., a visual cue suggesting perceived movement in static images) on consumer perception of visually imperfect fresh produce and willingness to buy them.

**Methods:** Our research adopts a 2(Motion: Implied/Non-motion) x2 (Produce Type: Perfect/ Imperfect) experimental design by employing an online survey. We recruited 285 participants and exposed them to images of visually imperfect or perfect produce, with or without implied motion cues. Key measures included perceived freshness, quality, attractiveness, and willingness to purchase and consume such produce.

**Findings:** The findings suggest that implied motion positively influenced consumer perceptions of imperfect fresh produce. Our results indicate that attractiveness partially mediated the relationship between implied motion and purchase willingness. This suggests that the positive effect of implied motion on purchase willingness can be enhanced by increasing the attractiveness of the product.

**Discussion:** We expect our findings to contribute to the literature on consumer perception, and explore the applicability of implied motion in the online retail of fresh produce to promote healthy eating. By understanding how implied motion can alter consumer perceptions of food quality, our research has further implications for reducing food waste and sustainable consumption practices.

## **Interpersonal influences on adolescents' healthy and sustainable eating behaviour studied in the Dutch school context**

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**Background:** Introducing healthy and sustainable food into the unique life stage of adolescence is essential. Interpersonal factors are shown to influence adolescents' eating behaviour, however, more insight is needed into adolescents' views on these factors. Therefore, this research aims to gain insight into interpersonal influences related to Dutch adolescents' healthy and sustainable eating behaviour from the perspective of adolescents themselves.

**Methods:** This study had a mixed-methods design and included four participating secondary schools (n=314). Eight focus groups (n=48) were conducted and analysed using secondary deductive thematic analysis on interpersonal influences on eating behaviour. 152 students completed a survey including twenty-five items (five-point Likert scales) on healthy and sustainable eating behaviour and interpersonal factors. Differences were calculated using t-tests in R.

**Findings:** Students perceived eating healthy as being more important than eating sustainably (3.8±0.8 and 2.9±1.1; P<0.05). Family injunctive norm on healthy eating scored higher than peer injunctive norm (3.9±1.1 and 2.6±0.9; P<0.05). While peer support through talking about healthy eating was perceived low (1.9±0.9), peer acceptance was high (4.2±1.0). A similar picture was found for sustainable eating. Focus groups showed that most students acknowledged parents stimulating their healthy eating behaviour through the home environment. Contrarily, eating with peers during school hours was associated more with having fun, and less with the type of food consumed.

**Discussion:** While parents seemed to positively influence students' eating behaviour, peer influences were more mixed. High peer acceptance and low peer support show potential to improve adolescents' eating behaviour through enhancing peer support and norms.

## Consumer perceptions of health, sustainability, and similarity of meat and dairy alternatives

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Recently, many products have been launched on the market as alternatives to meat and dairy products. Health and sustainability are used as selling points for these products. But how do consumers perceive the sustainability and healthiness of such products? And how do they assess the similarity of these products to their animal-based reference products?

A total of 15 semi-structured individual interviews were conducted to explore these questions. Around half of the Swiss people interviewed were consumers who frequently consumed alternative products, while the other half were consumers who had previously consumed no or only a few alternative products. The interview transcripts were coded and analyzed using thematic analysis.

Two key themes have emerged. First, consumers have difficulty assessing the health and sustainability of alternative products. To reduce the complexity of many factors to consider, they rely on various heuristics. Second, the preference for the similarity of an alternative product to its animal-based reference product depends on the target group. Based on meat attachment and the view that a change in the food system is needed, four different target groups are distinguished.

This qualitative study provides initial insights into how consumers perceive meat and dairy alternatives and how they assess the health and sustainability of such products. These insights indicate that when promoting a healthy and sustainable diet with alternatives to animal-based products, attention must be paid to the heuristics in people's minds and a target group-oriented approach is required.

## **Barriers and attitudes mediating the associations between values and consumption of plant-based meat alternatives**

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**Background:** Removing barriers to the shift towards more plant-based diets is essential to promote sustainability and health. We examined what factors explain the negative associations between valuing power, achievement, hedonism, tradition, or security and the consumption of plant-based meat alternatives (PBMA).

**Methods:** Participants (n=1000) were 18–75-year-old Finns who completed an online survey in autumn 2020. Values were assessed with a Short Schwartz's Value Survey, barriers and attitudes with thirteen questions, and consumption of PBMA with a short Food Frequency Questionnaire. We examined the associations with mediation analyses (lavaan package, R), adjusting for gender, age, and education.

**Findings:** The associations between valuing power or tradition and not consuming PBMA were mediated mainly by the same factors: not considering PBMA healthy or sustainable, not liking their texture, and believing that the family members would not eat them (all  $p < 0.05$ ). In addition, among those valuing power, not liking the taste, and believing PBMA to cause indigestions acted as mediators (both  $p < 0.05$ ). Additional mediators among individuals valuing tradition were unfamiliarity of PBMA and believing them not to satiate (both  $p < 0.05$ ). The association between hedonism and non-consumption of PBMA was mediated by not liking the taste or texture of PBMA (both  $p < 0.05$ ). Among those valuing achievement, only disapproval of the family members and, among those valuing security, only perceived poor availability of PBMA acted as mediators ( $p < 0.05$ , respectively).

**Discussion:** Individuals valuing power, achievement, security, tradition, and hedonism might benefit from diverse emphasis in the communication and interventions promoting the consumption of PBMA.

# The Impact of Neighborhood Deprivation on Psychological Distress in Europe: A Multilevel Analysis

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The rising prevalence of mental disorders across European nations calls for an in-depth exploration of their underlying causes and contributing factors. While traditional research has largely focused on individual and sociocultural determinants, recent studies highlight the significant impact of the immediate environment on mental well-being.

This paper utilizes data from the European Social Survey (ESS) from 2014, which includes a comprehensive section on mental health, to investigate this phenomenon. Through a sample of 19,720 individuals from 11 European countries, we applied a multilevel model (MLM) to evaluate mental health as "Psychological Distress". This approach not only considers sociodemographic data but also incorporates environmental factors from the participants' surroundings, such as "Risk of Poverty and Social Exclusion" and "Severe Material and Social Deprivation".

Our analysis indicates a clear link between neighborhood deprivation and increased psychological distress (beta = .07; CI [.02-.11];  $p = .002$ ). Moreover, individuals unable to afford medical care exhibited significantly higher levels of psychological distress (beta = .60; CI [.49-.71];  $p < .001$ ), a trend also observed among those lacking access to medical advice in their immediate area (beta = .42; CI [.25-.59];  $p < .001$ ). The overall model accounted for 14.8% of the variance in psychological distress ( $R^2 = .148$ ), highlighting the substantial influence of both sociodemographic factors and the immediate living environment on mental well-being. These findings underscore the complex interplay between personal, socioeconomic, and environmental factors in shaping mental health outcomes, suggesting that interventions aimed at improving mental health in Europe must consider a broad range of influences beyond individual behaviors and circumstances.

## **Lessons Learned in Co-Production, Physical Activity and Mental Health: Do Social Barriers Need Social Models?**

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### **Background**

People with severe mental ill health (SMI) have a reduced lifespan due to behavioural factors including reduced physical activity (PA; Hayes et al., 2017). We aim to address this by using co-production methods to develop a feasible PA intervention for this population (Walker et al., 2023).

### **Methods**

Following preliminary workstreams, the 18-week intervention was trialled across 5 sites in the UK (Jones et al., 2024). Afterwards, participants (N=14) and physical activity coordinators (N=5) were interviewed to inform trial refinement. Results were analysed using framework analysis, with findings informing intervention refinement.

### **What Went Wrong?**

The intervention was acceptable and largely feasible, but health service employees delivering the intervention described struggling to engage community activity providers effectively. Similarly, some participants expressed concerns around maintaining PA following the intervention.

### **Solutions**

The team used these qualitative findings to apply for a programme development grant. This will facilitate research into community capacity for supporting individuals with SMI in accessing PA, and the co-production of resources to support community facilities to become more accessible.

### **Conclusions/Reflections**

Reflected from the perspective of a lived-experience co-applicant, these complications illustrate the implications of active commitment to co-production (Chauhan et al., 2023), and raise questions about the compatibility of bio-medical models of health with these methods (Toro et al., 2020). Whilst the intervention was designed to target individual-level PA behaviours, the need for wider work reflects the reality of societal barriers to equity that may be better understood through social models of disability (Owens & Cribb, 2012).

## **Social Support and Well-being in Transgender Individuals: Mattering and Internalized Transphobia as Mediators**

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**Background:** Transgender individuals may experience lower levels of well-being than the general population. As for the Italian context, little is still known about the factors that contribute to or threaten the well-being of transgender people. This study aimed to examine the association between perceived social support and well-being, through the mediation of interpersonal mattering and internalized transphobia.

**Methods:** This cross-sectional study involved 233 Italian transgender participants (Mage = 24.27 years ± 6.48; 59.1 % men, 8.2 % women, 30.6 % non-binary, and 2.2 % other). They responded to an online questionnaire, which assessed perceived social support, mattering to family and to friends, interiorized transphobia, and social and psychological well-being. We conducted two path analysis for testing two models, respectively with psychological and social well-being as the criterion variables. Perceived social support was included as the predictor while mattering to family and to friends and transphobia were considered as mediators.

**Findings:** Results supported the models for the two forms of well-being (psychological R2 = .45; social R2 = .22). In both of them the three indirect effects resulted to be significant and able of mediating completely the total effect of perceived social support on social and psychological well-being.

**Discussion:** This study offers practical implications in health psychology. It emphasizes the importance of fostering social support and interpersonal mattering while addressing internalized transphobia in order to increase transgender individuals' wellbeing. It highlights the need for inclusive interventions tailored to the unique challenges of this community.



## **Early childhood mental health: poverty, stress, and parenting in marginalized Roma communities**

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**Background:** Women from ethnic minorities experiencing financial hardship shape their motherhood in response to chronic stress resulting from poverty and discrimination. Related disturbed parenting practices affect children's mental health. The study aims to compare the mental health of children from marginalized Roma communities (MRCs) and the majority and explore the role of socioeconomic factors, stress and parenting practices.

**Methods:** We used cross-sectional data from the RomaREACH study conducted in Slovakia. The sample consisted of 94 mother-child dyads from MRCs and 79 from the majority (children aged 14–18 months). Data were analyzed using Chi-square and Mann-Whitney U tests. Mediations were tested in PROCESS Macro in SPSS.

**Findings:** A significant proportion of mothers from MRCs live in overcrowded households without running water and experience financial insecurity and stress. Children from MRCs show significantly more symptoms of impaired mental health compared to children from the majority. Serial mediation indicates an indirect effect of belonging to MRCs vs. the majority on children's mental health through mothers' perceived stress and the use of harsh discipline ( $b=0.07$ ,  $CI=0.01-0.16$ ). The association of belonging to MRCs vs. majority with harsh discipline is partially mediated through financial insecurity and perceived stress of mothers ( $b=0.46$ ,  $CI=0.11-0.91$ ).

**Discussion:** The worse mental health of children in MRCs can be partially explained by the accumulation of disadvantage, poverty and related stress. The public discourse attributing unequal chances of children from MRCs for healthy development to the individual shortcomings of parents ignores the structural factors and complex challenges arising from generational poverty.

## **Negative experiences of marginalized Roma females with attitudes and behaviours of healthcare providers**

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**Background:** Restricted access and quality of health care contributes to worse health outcomes in underserved groups, such as people living in marginalized Roma communities. Mutual relationships and communication between patients and health care providers are important aspects of quality of Health care. The aim of the study was to explore the experiences of marginalized Roma women and girls with attitudes and behaviours of primary health care providers as a potential barrier to health care.

**Methods:** We used data from the qualitative study conducted in Slovakia as a part of international project H2020: RIVER-EU. We conducted semi-structured interviews with 18 Roma mothers and 15 Roma girls from marginalized Roma communities. The data were analysed using the methods of consensual qualitative research. Thematic analysis of the transcribed audio recordings was performed in MAXQDA.

**Findings:** Following themes related to attitudes and behaviours of health care providers were identified: 1. Substandard quality of health care provided (refused and neglected health care, double standard practices); 2. Substandard relationship and communication (incomprehensible and insufficient communication, impersonal and inhuman approach, inappropriate or impudent behaviour); 3. prejudices and racism (prejudices about insolvency, implicit and explicit manifestations of racism).

**Discussion:** Relationship and communication between HC providers and marginalized Roma women and girls is burdened by prejudices, impersonal attitudes and double standard practices. Impaired relationships lead to avoidance of health care, creates a barrier for marginalized Roma in access to health care and has an impact on the perceived quality of health care.

## **The emotional impact of street harassment on women. A qualitative study**

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Violence against women is a public health problem that strongly impacts on women's well-being. However, information is limited on how Street Harassment (SH) impacts women's health. Hence, the aim of this research was to know how SH affects women on an emotional level. A qualitative phenomenological research was carried out with 115 Spanish women with an average age of 33 years (SD= 10,81) who fulfilled an online questionnaire with open questions. Participants were asked to explain their experiences of SH incidents, self-classified as severe or mild. Three independent researchers conducted a thematic analysis and developed a category system. In both mild and serious stories, the emotions were classified into 4 categories: towards herself, towards the aggressor, related to the harassment and towards the system. In mild incidents prevalent emotions in each category included self-directed guilt, anger towards the aggressor, disgust towards the aggression, and blame toward the system. For the serious incidents, the most described emotions were self-directed shame, disgust towards the aggressor, fear of harassment, and distrust towards the system. Street harassment significantly impacts women's experiences in public spaces, generating a range of negative emotional responses. The severity of the encounter influences the emotional impact. These findings emphasize the necessity of primary prevention, ongoing research and designing interventions to minimize the impact of this violence on women's health.

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## Explore health trajectory over 10 years of overweight, obese young adults: A qualitative study

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**Background:** Several studies have shown the existence of social inequalities in relation to overweight and obesity, and the high probability that behaviors acquired in adolescence will be maintained into adulthood. The PRALIMAP intervention aimed to investigate whether strengthened care management for adolescents with low socioeconomic status has an equivalent effect in reducing overweight as standard care management in adolescents with high status.

The PRALIMAP-CINéCO study evaluates the 10 years later future through the responses to follow-up questionnaires but also through the qualitative approach of the life and health trajectory of the Young Adult (YA).

**Methods:** The YA were contacted again and agreed to participate in socio-biographical interviews. Semi-structured interviews were carried out with 43 YA who had participated 10 years earlier in PRALIMAP. A reflexive thematic analysis was carried out to explore the influence of the social environment on their health behaviors. Nvivo software was used.

**Results:** The research highlighted the direct and indirect influences on health behaviors of the life context and interactions within different social circles: family, couple life, friends, school and work. Between the ages of 15 and 25, a period of social, physical, and emotional development, health practices are strongly associated with social representations about the “ideal” weight, different types of diet, nutritional behavior and physical activity practice. The economic, emotional and health irregularity or stability of the YA strongly impact their health behaviors.

**Discussion:** Favorable or unfavorable social interactions remain the principal factor into the YA will take care of himself.

## **Interventions aimed at enhancing the well-being of individuals with special educational needs at schools**

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Pupils with special educational needs (SEN) show difficulties not only in the school but also in the extracurricular environment, specifically in social interaction, autonomy, application of social rules, and behavioral and/or emotional self-regulation. Therefore, appropriate prevention and psychological as well as special educational intervention should support well-being, positive development, social and personal skills in students with special educational needs (Gaspar et al., 2016). Psychological and educational recommendations should be aimed primarily at the immediate environment of these children, especially their teachers, friends, families, and nearby communities. Our research objective is to identify interventions aimed at well-being, which are provided to students with SEN in schools and/or in school establishments, and find out how effective these interventions are. Our data are collected from published available literature focusing on schools and educational establishments based on a search from the end of June till the end of September 2023 in databases such as Web of Science, SCOPUS, ScienceDirect, and EBSCOhost, from which we identified a total of 11 studies published from 2013 till 2023 due to the timeliness and emphasis on the submitted topic in recent years, in which one intervention is always described. Subsequently, we identified three categories of interventions aimed to support well-being of children with SEN: relaxation, social and emotional skills, and positive mechanisms. We are currently discussing the limits of these school interventions designed to foster mental well-being or prevent mental health challenges in children with SEN.

## The Myth of Racial Progress in Healthcare

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Recent studies have illuminated a disparity in the accuracy of recognizing historical wealth distribution between racial groups, particularly an overestimation of Black individuals' earnings. This phenomenon, known as the "myth of racial progress," warps perceptions of persistent racial inequalities and diminishes the perceived urgency to address such disparities. In healthcare, the inequities faced by White versus Black individuals are established, with extant research predominantly exploring the influences of implicit/explicit racial and gender biases in clinical decision-making and the allocation of medical resources. Furthermore, investigations have linked meritocratic beliefs and racial biases to the differential medical treatment of White and Black patients. However, the influence of the myth of racial progress on medical care has yet to be explored. Addressing this gap, we conducted an experimental study with White medical trainees (N = 193) to determine: a) if there is a belief that Black individuals, as opposed to White, are currently receiving superior healthcare and access to medical resources than historically provided, and b) whether endorsement of this perceived progress is associated with the healthcare providers' implicit racial bias. Results indicated that irrespective of the experimental conditions' sequence (i.e., inquiries about current healthcare versus historical care), participants indicated that Black individuals have access to better healthcare and more scarce resources than in the past—a belief positively correlated with implicit racial bias. These findings offer preliminary evidence supporting the existence of the myth of racial progress within the healthcare sector, suggesting that it extends beyond wealth distribution to medical resource allocation.

## Longitudinal Effectiveness of Place-based Intervention to Promote Healthy Living and Healthy Weight for Vulnerable Children

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**Background:** Despite the urgent need for researchers to develop effective strategies combatting pandemic-induced weight disparities, there are limited evidence-based interventions addressing this critical issue. This study evaluated the longitudinal effectiveness of 'Let's Eat Healthy and Move Together' program, a childcare-based intervention for vulnerable children in South Korea from 2020-2022.

**Methods:** The programs consisted of comprehensive approaches including anthropometric evaluations, assessments of healthy lifestyle habits, scenario-based educational activities, interactive live and online cooking sessions, and continuous healthy lifestyle monitoring. A total of 524 children from 20 childcare centers for vulnerable children participated in the three-year program. A linear mixed model analysis was conducted to explore the program's impact on individual child weight status while accounting for organizational effects.

**Results:** Over time, underweight children's BMI percentiles exhibited a positive trend towards a healthier category (Time coefficient 2.15,  $p < .0001$ ). Healthy weight children maintained normal BMI percentiles, while overweight and obese children experienced significant weight reduction (Time coefficients -2.35,  $p = .0018$  for overweight; -2.53,  $p < .0001$  for obese) Further analysis revealed a dose-response effect, indicating greater program effects among children who consistently participated (coefficients = 2.27 for underweight; -2.41 for overweight; -2.53 for the obese group).

**Conclusion:** A place-based intervention (PBI) through a participatory action research (PAR) approach is suggested to be effective for both healthy and unhealthy weight children from disadvantaged backgrounds even during the COVID-19 pandemic. Sustainable and effective strategies such as PBI can be applied to support vulnerable families, providing enduring solutions.

## **Acceptance and Commitment Therapy for chemsex: a pilot study**

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**Background:** The demand for treatment for chemsex users with repercussions on physical and mental health has multiplied by 7 in Madrid between 2017 and 2021. Previous studies have shown the usefulness of interventions based on Acceptance and Commitment Therapy (ACT) for reducing hypersexuality. Effective interventions might contribute to improving psychological and sexual health and preventing sexually transmitted infections. This study is aimed at knowing the feasibility and effect of a psychological intervention for chemsex.

**Methods:** The study design consists of a pilot study. An intervention will be implemented and its effectiveness will be evaluated with a sample of six participants. An online group intervention protocol of eight sessions will be delivered. Its effectiveness will be evaluated through standardized questionnaires and self-monitoring at pre-intervention, post-intervention and three-month follow-up. Within-subject differences will be analyzed using Jacobson and Truax Reliable Change Index .

**Expected results:** It is expected that the intervention will be well accepted by users and will be accompanied by a reduction in the time dedicated to sexualized drug use, risky sexual behaviors, hypersexuality, substance dependence, and levels of anxiety and depression.

**Current stage of work:** The study is in the recruitment phase.

**Discussion:** This study will provide new data regarding the viability and usefulness of innovative therapeutic methods that contribute to improving the mental and physical health of chemsex users. Likewise, this study seeks to advance the line of research initiated and make the necessary adjustments to carry out a subsequent randomized clinical trial.



## **Patient and system-related factors contributing to missed healthcare appointments: a mixed methods study**

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Missed healthcare appointments present an issue in a situation of limited availability and extensive health-related waiting lists. This is nowadays a common context in many countries, who find themselves experiencing aftermath of the Covid-19 pandemic and related economic crisis. Surprisingly there is a very minimal literature on this topic.

The aim of this project was to examine patient and system-related factors that contribute to missed healthcare appointments in the UK. Through a semi-structured interview study and a cross-sectional online survey, we observed that people view missed healthcare appointments as an important issue to tackle. The findings demonstrated also that strategies such as improving ease of cancellation (with consideration of e.g., technology-related barriers) and providing appointment reminders could potentially reduce the level of missed healthcare appointments. We also found that working on establishing a more mutual, continuous, caring and respectful relationship between patients and healthcare providers could be the key (albeit challenging) to reducing the level of missed healthcare appointments as well as the satisfaction with healthcare provision. In addition, data from the survey participants showed that referring to one's prosociality and increasing the appreciation of the importance of on-time cancelling (if not attending pre-booked appointments) might be useful factors to focus on when designing strategies (e.g., public health communications) aimed at improving the situation with missed healthcare appointments. Designing such strategies and evaluating the effectiveness of the strategies that have a potential to reduce the level of missed healthcare appointments requires extensive future research though.

## Financial Impact of Peer Support Programs in German Hospitals

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**Background:** Healthcare professionals inevitably encounter highly stressful events throughout their careers, that may result in adverse outcomes. Participation in a support program based on psychosocial peer support proves instrumental in helping professionals navigate through further challenges. Moreover, such programs can result in substantial cost savings for hospitals, providing significant financial relief. This study aims to evaluate the impact of a peer support program (PSP) by conducting an economic evaluation of its cost benefits in acute inpatient care sector in Germany.

**Methods:** A Markov model was developed to analyze the costs of participating in a PSP, including sick leave and dropout costs within a 1-year time horizon to compare cost benefits with and without PSP from a hospital perspective. A hospital with 1,000 nursing employees was considered. The loss of a one-day leave is assumed to be €500 and the replacement of a nurse that drops out accounts to €75,000.

**Findings:** Within a year, 14.3% of the nursing staff resigns from their positions, whereas the implementation of a PSP decreased this rate to 5.8%. The projected results indicate an average cost reduction of €6,672 per healthcare worker enrolled in the PSP compared to non-participation. The annual budgetary impact of a support program is estimated at around €6,671,879 for the studied hospital.

**Discussion:** German hospitals can save considerable costs by implementing a PSP. Introducing a support program not only conserves the hospital's finance but also enhances job satisfaction, lowers absenteeism rates, and reduces turnover, thereby improving overall patient care.

## **Integrating implementation during the conceptualization and early development of health technology innovations: the RECENTRE program**

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### **Background**

For successful health technology innovation and implementation, it is key to understand the problem and whether a proposed innovation is the best way to solve the problem. However, making this workable for academic and early development settings can be challenging. A case study is presented on the organization of innovation and implementation activities throughout a 5-year interdisciplinary research program titled Risk-based lifEstyle Change: daily lifE moNiToring and Recommendations (RECENTRE).

### **Methods**

RECENTRE integrates state-of-the-art theories and models for sustainable implementation of innovations in healthcare practice. The process is facilitated by an implementation specialist. The program now runs for 1 year. Dedicated “implementation sessions” were organized with each of the 6 work packages and during consortium meetings.

### **Findings**

Together with work packages, implementation definitions, assumptions, knowledge gaps and support needs were explored. An initial stakeholder analysis was performed for the clinical use cases of daily life monitoring and recommendations for people with obesity and colon cancer. An implementation research strategy plan was drafted taking into account identified complexities for RECENTRE's proposed use cases, innovations, organizational structure, and individual work package plans. Integrated follow-up activities and tools include dedicated contextual inquiry, interdisciplinary collaboration, expert consultations, training, innovation management, and strategy evaluation.

### **Discussion**

So far, program members were positive about the involvement of an implementation specialist. The pro-active way of working supports early awareness, finding a common objective, and holistic innovation perspectives. This is considered essential for making conscious choices regarding next steps for development, evaluation, and implementation in clinical practice.

## **Determinants of attitudes towards migrant groups among healthcare professionals in Croatia**

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Challenges related to migration and integration are becoming more and more complex. In order to enact quality migration policies, preserve the health of migrants and to achieve successful integration of the immigrant population, it is important to regularly research the attitudes of health professionals as well as their knowledge about migrants. The aim of this research was to examine the attitudes of health workers towards migrants. The sample consisted of 171 respondents. The results of this research indicate that there are no significant connections between the attitude towards migrant groups and trust in people, as well as the degree of cynicism. There is a slight tendency for a negative relationship between age and the degree of cynicism, with older respondents showing a greater tendency towards cynicism. Participants who are politically right-oriented are significantly more religious. Also, the results indicate that respondents with a right-wing political orientation show more negative attitudes towards migrants than respondents who are politically neutral or lean more towards a left-wing political orientation. Regarding education, there is also no statistically significant difference in the attitude towards migrants. Participants with a graduate degree have the least positive attitude, while people with an undergraduate degree have the most positive attitude. However, the differences are too small and did not produce a significant difference. Although women express more positive attitudes towards migrants than men, the difference between them is also not statistically significant.

## Exploring Public Concerns and Acceptance of the use of Artificial Intelligence in Healthcare

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**Background:** Artificial Intelligence (AI) has the potential to revolutionize healthcare and enhance patient outcomes. Addressing the user's concerns towards AI is crucial for its appropriate development and implementation. Such as trustworthiness of AI, data privacy or accuracy of AI results. This study examines to what extent concerns and additional factors are associated with accepting AI in healthcare applications.

**Methods:** A cross-sectional online survey study involving 1,250 participants from the Netherlands will be conducted in April 2024 using Flycatcher survey sampling company. Participants will be randomly assigned to different real life AI applications within healthcare. Their general attitudes towards AI, their personality traits and AI literacy will be measured, followed by a description of the AI applications. Afterwards they will express their levels of concern towards one of the AI applications and their acceptance towards it. The Unified Theory of Acceptance of Technology will be used to measure the acceptance towards AI. The AI applications involve newborn screening, preventive interventions through wearables, chatbots supporting doctor-patient communication, and augmentation of data for AI training in imaging.

**Findings:** Regression analysis will be used to examine which concerns and additional factors are associated with acceptance within each AI application. In addition, we will perform moderator analysis to examine whether factors associated with acceptance differ between AI applications.

**Conclusion:** This research will contribute to human-centered AI development by identifying concerns and factors that influence acceptance to consider when implementing AI tools in healthcare. This can increase the likelihood of adoption of AI in healthcare.

## **Mapping intentional Non-adherence: Psychological factors and experiences with the healthcare system**

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Non-adherence to medical recommendations is a widespread public health challenge, attributed to socio-economic, healthcare system, condition, therapy, and patient-related barriers (WHO, 2003). The novel iNAR-12 instrument (Puric et al., 2023) assesses intentional non-adherence to medical recommendations which is a result of a deliberate process, including behaviors like treatment avoidance or modification and self-medication. This study investigated the prevalence of intentional non-adherence behaviors in Serbia and its psychological roots. This cross-sectional survey was conducted on a probability sample of 1003 participants, nationally representative of Serbia. The battery of instruments included iNAR-12 and scales assessing personality (HEXACO and Disintegration), health status, socio-demographics, healthcare-related beliefs, and experiences, along with thinking styles, and the "irrational mindset" set of questionnaires, which included magical health beliefs, health-related conspiracies and selected cognitive biases. As much as 91.3% of the Serbian adult population reported at least one instance of intentional non-adherence in their lifetime, with the most frequent behaviors being ignoring symptoms that required a visit to a doctor (78%) and taking antibiotics when not prescribed by a doctor (47%). While there were significant correlations ( $p < .01$ ) between iNAR and personality traits (H, X, A, D), and the irrational mindset (medical conspiracies, commitment bias, illusory correlations), the hierarchical linear regression demonstrated that negative experiences with the healthcare system were its strongest predictor. The results suggest that intentional non-adherence is a widespread phenomenon. Future health interventions should address modifiable factors such as enhancing healthcare experiences and tailoring communication to individuals at higher risk of intentional non-adherence.

## Organ Donation and COVID-19: the Healthcare Workers' point of view

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**Background.** The COVID-19 pandemic has impacted organ donation, requiring new strategies to address emerging challenges. This study aims to explore Critical Care practitioners' perspectives on organ donation during the pandemic.

**Methods.** A total of 100 interviews were conducted with physicians and nurses from 9 hospitals of three Italian regions (Lombardy, Lazio, Sicily). The final corpus (178,071 tokens; Hapax= 47%; TTR= 0.06) underwent analysis using Emotional Text Mining methodology.

**Findings.** 5 Factors were emerged: organ donation as a separate process from the general hospital organization (32.9% inertia); relationships within the staff as a protective factor against burnout (19.7% inertia); need to reach citizens through promotional activities about organ donation (17.3% inertia); use a paradigm centered on the concept of life, instead of death, to promote organ donation (15.5% inertia); pandemic as both a paralyzing and an activating experience (14.3% inertia). These factors combine into 6 Clusters, latent representations of meaning, named "Need for hope" (13.6% Context Units C.U.), "Team support" (21% C.U.), "Families role" (24.3% C.U.), "Reconnecting" (11.9% C.U.), "The death taboo" (15.5% C.U.), "Organizational response" (13.7% C.U.).

**Discussion.** If the pandemic has interrupted consolidated practices, it also represents an opportunity to rethink organ donation, both from an organizational and community point of view. Healthcare workers propose an epistemological shift about organ donation, based on the opportunity to sustain life, rather than intervene on the end of it. Relationships, within the medical staff and between the staff and the donors' families, seem to represent critical issues for future training programs.

## **Investigating the transfer process of MOOC content in healthcare through the Theory of Planned Behaviour**

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**Background:** Massive Open Online Courses (MOOC) are broadly adopted as educational tools for professional development within healthcare organisations. However, the effectiveness of these courses is often compromised by a low rate of knowledge and skill transfer to the workplace. Drawing from relevant organisational literature, we investigated psychosocial variables affecting physicians' intention to transfer learning in healthcare organisations. Specifically, we adopted an extended Theory of Planned Behaviour (TPB) model incorporating traditional TPB constructs (intention to transfer MOOC content to the workplace, attitude, subjective norms, and perceived behavioural control) alongside variables specific to MOOC format, professionalism, and the organisational learning culture.

**Methods:** A total of 217 Italian physicians (age: 26-70; M = 49.3; SD = 11.6) participated in the study by completing an online questionnaire designed to measure the psychosocial variables of interest.

**Findings:** Results from the Full Structural Equation Model (SEM) indicated that physicians' attitudes towards the transfer behaviour and perceived behavioural control positively influenced their intention to transfer. Additionally, findings showed that attitude was positively affected by perceived MOOC usefulness, professionalism, and organisational learning culture. Moreover, the relationship between MOOC reputation and attitude was fully mediated by MOOC usefulness.

**Discussion:** The proposed comprehensive model elucidating physicians' intention to transfer could guide future interventions aimed at enhancing MOOC effectiveness in modifying physicians' work behaviours and, consequently, improving the quality of care.



## **Digitalising A Specialist Treatment Programme For Smoking Cessation In Pregnancy**

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**Background:** Stopping smoking in pregnancy reduces the risk of many pregnancy complications and infant mortality/morbidity. The UK standard treatment programme for smoking cessation in pregnancy offers counselling and pharmacotherapy, but uptake is low. A digital support package could be offered as an alternative, but the evidence base is limited. This study aimed to investigate views on translating the UK standard treatment programme for cessation in pregnancy into a digital intervention.

**Methods:** Online group and individual interviews with 38 experts (11 focus groups, 3 interviews) and 25 pregnant smokers (all interviews) and analysed thematically.

**Findings:** Experts and pregnant people were supportive of a pregnancy-specific digital intervention. Most counselling content from the standard treatment programme was considered transferable. However, accountability to a human advisor, empathy and the ability to go 'off-script' were considered more difficult to replicate digitally. Suggestions to address this included personalisation, artificial intelligence tools, and the option to escalate support to a human advisor. While experts had mixed views on integrating remote carbon monoxide monitoring (for verifying smoking status) into a digital intervention, pregnant people were enthusiastic. Remote provision of free nicotine replacement therapy (NRT) without interpersonal support was considered feasible and pregnant people were receptive if the intervention felt trustworthy and provided tailored advice. However, experts had concerns about governance issues and exacerbating low NRT adherence.

**Discussion:** The standard treatment programme is largely transferable to a digital intervention and would potentially be helpful to pregnant smokers who are looking to quit, thus merits further development and evaluation.

## **Uncovering the ideal conditions to seek mental health help: A qualitative study with young adults**

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Help-seeking behavior among young adults for mental health issues remains low. Understanding the factors contributing to this phenomenon is crucial for developing interventions people will engage with and benefit from. This study identifies barriers and facilitators in the help-seeking process, while delineating the ideal behaviour change techniques to be employed within a digital intervention aimed at enhancing access to mental health support.

Fifteen university students, aged 18 to 30 years, participated in three focus groups and six psychology professionals were present in six semi-structured interviews, for a total of 23 participants, utilizing a non-probabilistic convenience sampling. Questions were guided by the Behaviour Change Wheel (BCW), a systematic framework facilitating the development and optimization of behaviour change interventions. Data was analyzed through a thematic analysis, firstly through an inductive approach and then coded into barriers and facilitators. Following the BCW's procedure, codes were mapped onto the COM-B model and theoretical domains framework (TDF), then intervention functions and behavior change techniques were identified, following APEASE guidelines. Lastly, core themes were delineated, based on relevant codes.

Themes were mainly concerned with three TDF factors, Environmental context and resources, Social influences and Knowledge. Stigma, information dissemination and informal help, were the most frequently referenced codes.

The resulting behaviour change techniques, coupled with the understanding of the help-seeking process, allows for the development of an evidence based intervention tailored to the specific needs of young people, increasing the likelihood of engagement.

## **Planning-to-reduce-sedentary behavior intervention and long-term changes in self-efficacy**

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**Background:** Self-efficacy may be one of the underlying mechanisms through which planning interventions operate in the process of triggering behavior change. This study aimed to investigate the long-term effects of an intervention that included planning to reduce sedentary behavior (SB) on self-efficacy beliefs, specifically for initiating, recovering, and maintaining regular physical activity and reducing SB time.

**Methods:** 790 participants (65.7% women; age range between 11 and 88 years old) were enrolled. Participants were randomized to a control (education) condition or a planning + education condition (delivered at Time 2). Self-reported data were collected at 6 timepoints, spanning 8 months: Time 1 (T1; baseline), Time 2 (T2; 1 week later), Time 3 (T3; 1 week after T2), Time 4 (T4; 6 weeks after T3), Time 5 (T5; 8 months from baseline) and Time 6 (T6; 1 week after T5). At T1, T2, T4 and T5 SB-related self-efficacy beliefs were measured, while PA self-efficacy data were collected at T3 and T6.

**Findings:** Analyses demonstrated non-linear time effects in both experimental and control groups. We found that SB-related self-efficacy beliefs significantly increased across the study conditions from T1 to T4, then decreased at T5. No changes in PA-related self-efficacy beliefs were observed. Interaction effects of time and experimental condition were non-significant.

**Discussion:** The findings suggest that both planning and education (control) conditions resulted in similar changes in SB-related self-efficacy. Adding a planning component did not strengthen the conscious self-regulatory processes, referring to SB and PA.

**Keywords:** sedentary behavior, physical activity, self-efficacy

## **Can colonoscopy screening serve as a teachable moment for smoking cessation? A work in progress**

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Background: Colorectal cancer screening, such as colonoscopy, can lead to lifestyle changes. The aim of the present study is to investigate whether colorectal cancer screening can serve as a potential teachable moment for smoking cessation. Methods: Using a quasi-experimental design, smokers (targeted total N = 200) are assessed who attend either a colonoscopy or GP appointment. At two measurement points (before and one month after the screening/appointment), smoking behavior, motivation to quit smoking, and compensatory health beliefs are measured. We will examine the impact of the colonoscopy on the motivation to quit smoking using repeated measurement ANOVAs and explore compensatory health beliefs as a potential moderator in multiple regression analyses. Expected results: Given the heterogeneous evidence on the influence of colorectal cancer screening on lifestyle, we explore whether a negative screening result adversely affects motivation to quit smoking, as in a health certificate effect. We expect that motivation to quit smoking will be lower when compensatory health beliefs are stronger. Current stage of work: The project has just received ethical approval. Data collection is scheduled to begin in spring 2024. Discussion: Previous studies focused on health behaviors after colonoscopy over long time periods, with limited insights in psychological processes that influence these outcomes. We examine a shorter period of one month to identify a potential time window for a teachable moment. Furthermore, we explore the relationship between compensatory health beliefs and motivation to quit smoking, as both aspects are key to the design of successful interventions for smoking cessation.

## **Effects of a smartphone reduction intervention on smartphone behaviour in teenagers: a randomised controlled trial**

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Sedentary behaviour and excessive smartphone use are risk factors for poor mental health. Adolescents are at particular risk for unhealthy smartphone behaviour. We aimed to test whether online, at-home interventions to either reduce smartphone time (ST) or increase physical activity (PA) would promote autonomous behaviour change in teenagers.

Adolescents of 14-19 years were recruited in Germany and Austria and after a 2-week baseline the interventions lasted 12-weeks. Smartphone use was objectively measured daily via an app and a standardised questionnaire measured smartphone addiction. Linear regression models analysed whether daily smartphone use and/or smartphone addiction scores changed over time between baseline and post-intervention and whether this was affected by group (ST, PA, control).

There was a significant interaction effect between group and time on objectively measured daily phone use: The control and PA groups showed no significant change (mean 27 and 8 min increase respectively) but the ST group significantly decreased their screentime between baseline and post-intervention (mean 149min decrease,  $p < 0.0001$ ). There was also a significant interaction between group and time on smartphone addiction: the ST group significantly reduced their smartphone addiction ( $p = 0.002$ ), but the PA and control groups showed no significant change.

A nudge-based smartphone intervention was effective in inducing smartphone behaviour change, with this group reducing their daily phone use by an average of 2.5 hours over the course of the 12-week intervention and decreasing their smartphone addiction scores. This suggests that interventions employing specific strategies for smartphone reduction can be effective for promoting healthy smartphone behaviour in adolescents.

## **Does neuroticism moderate the effect of a brief mindfulness induction on HRV in sad mood?**

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Mindfulness-based programs can enhance heart rate variability (HRV) reactivity (Christodoulou et al., 2020), which is an indicator of optimal self-regulation. Surprisingly, it appears that even single mindfulness meditation sessions can positively influence emotion regulation (Leyland et al., 2019). However mindfulness-based interventions have larger effects for participants who are more neurotic (Tang & Braver, 2020), there are mixed findings regarding mindfulness inductions (Norris et al., 2018; Winning & Boag, 2015; Zabelina et al., 2011).

In this study, we test the effect of a mindfulness induction on HRV, while exploring the potential moderating role of participants' levels of neuroticism.

University students (N=71) HRV was measured at baseline and following a sad mood induction. Before sad mood induction, they listened to either mindfulness meditation- instructions or a control recording. Neuroticism was measured at the beginning of the experiment by the Big Five Inventory. The effect of the induction on HRV will be tested using a mixed ANOVA, and moderation analyses will be conducted using the Process Macro.

We expect that participants will have increased HRV after a negative affect induction following a mindfulness induction compared to the control group and neuroticism may moderate this effect. Based on the few and mixed results, we cannot make a more specific hypothesis.

Data collection is now complete. We will present the results at the conference.

A brief mindfulness practice might be recommended in acute situations to enhance emotion regulation. Additionally, we might be able to make more specific suggestions based on one's level of neuroticism.

## **Prevention Should Start Early: Adapting the Communities that Care-Youth Survey for Elementary School Children**

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"Communities That Care" is a community-level prevention model to combat youth behavioral problems. It involves surveying adolescents on risk and protective factors in four domains as well as problem behavior to enable communities to implement prevention programs tailored to their specific needs. The goal of this study was to adapt an existing questionnaire for grades six to eleven for third and fourth graders. Original scales were omitted or revised and new questions were developed. The final questionnaire consists of 27 scales in the family, school, individual and neighborhood domain, respectively: nine measuring risk factors , twelve measuring protective factors and six measuring problem behavior (violence, delinquency, school absentism, depression and anxiety, mobbing or bullying, sleep). Following think-aloud interviews, the survey was administered to 288 students across seven schools in Lower Saxony from 11/2022 to 01/2023. Exploratory factor analyses point to reasonable factorial validity of most scales, with the exception of the newly developed ones measuring individual protective factors. Feedback from the survey team, students and school staff shows that the questionnaire is well suited for this age group. Risk and protective factors show moderate correlations with problem behavior.

## Health behavior change through psychedelics: an international population survey

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**Background:** There is ongoing interest in the role of psychedelic experiences to promote physical and behavioral health, including reductions in the (mis)use of tobacco and alcohol, and increases in physical activity. Our study aims to investigate whether psychedelic experiences are associated with changes in health behaviors, in psychedelic users.

**Methods:** This retrospective online survey examines participants' self-reported changes in health behaviors following classic (e.g., psilocybin) and atypical (e.g., MDMA) psychedelic use, in non-clinical settings. Measures include items assessing perceptions of health behavior change, namely frequency and direction of change. Furthermore, Pearson's correlation will be used to compare associations of health behavior change variables with characteristics of the psychedelic experience(s). Subgroup analyses will be performed based on characteristics of the psychedelic experience and demographic variables.

**Expected results:** Based on previous observational data, the main hypothesis was that participants (n=306) would report changes in all health-related behaviors in the healthiest direction. The most prevalent behavior changes were: 'Contemplative/mindfulness practices' (n=154; 50.3%), 'time spent in nature' (n=124;40.5%), 'personally meaningful social activities' (n=123;40.2%). The direction of change (rated on a scale from 1 - decreased a lot - to 5 - increased a lot) was positive in these categories: 'mindfulness' Mean=4.67 (SD=0.58); 'high quality time spent in nature' Mean=4.71 (SD=0.52); 'social gatherings' Mean=4.18; (SD=0.83).

**Current stage of work:** Data collection is ongoing.

**Discussion:** This analysis indicates that there are several health behaviors, namely contemplative and socially-relevant practices, for which psychedelics experience may trigger positive changes.



## **Complex Interactions Between Lifetime and Current Trauma, and Depression, Anxiety and Stress: A Multidimensional Study**

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One in three adults grapples with multiple chronic conditions, such as diabetes, heart disease, stroke, and cancer, which remain significant contributors to global morbidity and mortality. Furthermore, the coexistence of chronic ill conditions alongside somatic conditions, termed somatic–mental multimorbidity, is prevalent and correlates with heightened symptom burden, functional impairment, and excess mortality. We aimed to assess the impact of lifetime trauma on depression. We focused on current trauma as a predictor for the expression of anxiety, depression and stress symptoms in patients with chronic illnesses. Data were collected from in-patients (N = 205) who agreed to complete the questionnaire. The results addressed the relationship between lifetime and current trauma, and depression, anxiety and stress symptoms. We assessed socio-demographic indicators implicated in these interactions, such as age and gender. Linear regressions were performed to control a wide range of covariates. Baseline continuous LCTA score was a significant predictor of depression-anxiety-stress symptomatology within in-patients enrolled. Moreover, there were significant regressions of current trauma on anxiety ( $\beta = 3.16$ ,  $p < .05$ ) and stress ( $\beta = 3.52$ ,  $p < .01$ ). Age, as a covariate, showed a stronger prediction on depression ( $\beta = 1.61$ ,  $p = .354$ ), leading to a shaped regression result. In summary, our research highlighted the impact of lifetime trauma and current trauma while controlling for age on depression, suggesting a diminishing effect of lifetime trauma events with ageing. Additionally, current trauma plays a significant role in anxiety and stress, indicating that current traumatic events continue to affect in-patients regardless of age.

## **Future paths towards a psychology of “social health behavior change”**

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### **Purpose**

Human health is profoundly shaped by social interactions. Effectively modifying health behaviors often requires involvement from others. However, psychological conceptualizations of health behaviors as products of social interactions are in their infancy. Further developing these conceptualizations is highly promising for future research and interventions. This roundtable discussion will present ongoing as well as discuss and envision future developments for a comprehensive and systematic understanding of the relevance of social interactions for health behavior change.

### **Objectives**

Introduce and discuss current conceptual ideas and frameworks; take advantage of the contributors' and audience's different expertise to address:

1. What does a social perspective on health behavior change imply for theory building and research?
2. How do we define and operationalize social interaction in research?
3. What can we learn if we consider social influences in health psychology that we would otherwise not learn?
4. Where could we be in 10 years? Discuss strengths, weaknesses, opportunities, and threats of such a vision.

### **Rationale**

Two major goals of the EHPS conference are improving research in health psychology and carving out its importance in addressing major societal challenges (e.g., sustainable development goals). Thinking about health behaviors as primarily social activities is a comparably recent, but extremely promising avenue to further strengthen theoretical and empirical approaches in health psychology that address major societal challenges. By bringing together the proposed diverse group of experts and giving them and the audience space to discuss the future of “social health behavior change” paves potentially new ways to achieving these goals.

## Does Misestimation of Nutrient Contents Matter for (Un-)Healthy Diets?

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While most people know which types of food are more or less healthy (e.g., fruits vs. sweets), they struggle with the estimation of nutrient contents (e.g., calories, sugar). Yet, knowledge about nutrient contents is crucial to support healthy dietary choices – especially in contexts with unpacked foods (e.g., buffets). In this study, we aim at understanding the relationship between misestimation of nutrient content and people's diets. First, we expect that people overestimate sugar content, while we do not specify our expectations regarding calorie and carbohydrate estimations due to previous inconsistent findings. Second, we expect that higher misestimations negatively relate to the healthiness of people's diets.

We will collect data from 95 participants within an experimental laboratory setting. They will complete questionnaires to assess their habitual eating behavior and sociodemographic information. Afterwards, they will self-serve four meals (typical, healthy, low-calorie, low-sugar) from a buffet with realistic food replicas and estimate their calorie, carbohydrate, and sugar content. After conducting manipulation checks using within-subjects ANOVAs, we will examine the degree of misestimation by computing separate paired samples t-tests for each meal and estimation. Next, we will test the relationship between misestimation and people's habitual eating behavior using Pearson correlations.

Our results will provide an important baseline for interventions that support healthy eating behavior. If our expectations hold true, interventions should aim at improving people's estimation of nutrient content to support them in making healthy dietary choices.

## **Understanding engagement with dietary interventions in food-insecure communities: thematic analysis of barriers and facilitators**

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**Background:** Research suggests that individuals from deprived areas are more prone to attrition in intervention studies, demonstrating lower and less consistent levels of engagement. Community dietary interventions provide a potential foundation for improving healthy eating in food insecure populations if engagement can be improved. The present study aims to identify and understand the barriers and facilitators of engagement with dietary interventions amongst intended beneficiaries from low-income communities.

**Methods:** A semi-structured qualitative interview study was carried out with 15 intended beneficiaries of community dietary interventions from low-income communities. The interviews were recorded and transcribed verbatim. A reflexive thematic analysis was implemented following Braun and Clarke's six steps, adopting a realist, experiential approach to understand lived experiences and the reality of why engagement and healthy eating is suboptimal in the target population.

**Expected results:** As a result of the reflexive thematic analysis, the researchers expect to identify a number of emerging themes that could explain what prevents and/or facilitates people from low-income communities to engage with dietary interventions in their community.

**Current stage:** At this point, interviews are ongoing, and we anticipate that all interviews and analysis will be complete by April.

**Discussion:** The findings of the planned study will help to identify the barriers and facilitators to intervention engagement experienced by food-insecure intended beneficiaries. This valuable insight could inform the development of future interventions that can maximise low-income individual's engagement with community dietary interventions.

# License to eat meat? Exploring processes underlying the effect of animal labels on meat consumption

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## Background:

The adverse environmental, health, and animal welfare implications of meat consumption underline the urgent need for reduced meat intake, especially in high-income countries. Past research suggests various processes through which differently valenced animal pictures on meat products might influence consumption. The present study aims to systematically investigate three of these processes – disrupting the dissociation between meat and the animal killed to produce it, eliciting emotions (i.e., empathy, disgust, guilt), and a licensing effect.

## Method:

A power analysis yielded a need for N=1600 omnivores, who will be recruited for an online experiment. Participants will be randomized into four conditions (no label, neutral, positive, negative labels on meat products). Meat consumption will be assessed via shopping behavior in a simulated online supermarket. Momentary dissociation, emotions, and licensing cognitions will be assessed and tested in mediation analyses as process variables.

## Expected results:

Label effects on consumption may vary depending on the operating process: positive labels might increase meat purchases via a licensing effect compared to the no-label condition, whereas negative labels might reduce meat purchases due to emotional responses. If labels reduce the dissociation between meat and animal, all labels might decrease purchases in comparison to the no-label condition.

## Current stage of work:

We are preparing the online supermarket and plan to collect data in March/April 2024.

## Discussion:

Findings will advance understanding of how animal pictures on meat products influence meat consumption, and will provide valuable insights for designing interventions to reduce meat intake.

## **Barriers and facilitators in the implementation of dietary guidelines by paediatricians and kindergarten teachers**

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**Background:** Children's and adolescents' dietary patterns strongly deviate from the current national food-based dietary guidelines (FBDG) in Germany. Paediatricians and kindergarten teachers play an important role in the nutritional environment of children and can thus support the adherence to FBDG. We aim to explore paediatricians' and kindergarten teachers' perceived barriers and facilitators for implementing the FBDG in their daily practice.

**Methods:** A German-wide online survey addressing paediatricians (n = 200) and kindergarten teachers (n = 200) will be conducted. Facilities and participants will be randomly chosen on the basis of facility lists and pre-defined quotas. The survey items are based on the Theoretical Domains Framework and the COM-B model. The data will be analysed quantitatively by utilizing descriptive and inferential statistics.

**Expected results:** It is expected that e.g. lack of knowledge and environmental context will be identified as barriers in the implementation of FBDG. Social/Professional role and identity and beliefs about consequences of counselling parents and children are expected to be possible facilitators. As facilitators and barriers are expected to differ strongly between the professional groups, they will be compared between groups.

**Current stage of work:** We are currently finalising and pre-testing the questionnaire and are writing the ethics proposal.

**Discussion:** The study will provide important insights into barriers and facilitators in the implementation of FBDGs by professional groups relevant to children's extra-familial living environments. The results can help to develop strategies to broaden the use of FBDGs and thereby improve children's dietary quality and health.

## Exploratory Investigation of Sleep Hygiene Factors in a Non-Clinical Sample

Thomas McAlpine<sup>1</sup>, Barbara Mullan<sup>1</sup>, Patrick Clarke<sup>1</sup>

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**Background:** Sleep hygiene refers to a set of behaviours which may influence sleep. Many of these behaviours share variance with each other and have been demonstrated to cluster into four factors: routine-based behaviours, perseverative cognition, negative emotionality and physiologically-based behaviours. However, research has yet to establish a relationship between the behaviours that make up these factors and the underlying levels of the constructs in which they cluster.

**Methods:** Cross-sectional correlational methods were used to assess the association between sleep hygiene performance and scores on their respective constructs. Multiple linear regression was used to predict both subjective and objectively measured sleep using construct scores in a non-clinical sample of 262 participants.

**Findings:** Perseverative cognition and negative emotionality were significantly associated with each of their respective sleep hygiene behaviours ( $r = .15 - .50$ ). However, only two routine-based behaviours were significantly associated with preference for routine ( $r = .12 - .14$ ) and no physiologically-based behaviours were associated with their respective factor. The factors in combination were able to predict subjective sleep ( $R^2 = .14, p < .001$ ) but not objective sleep ( $R^2 = .01, p = .707$ ).

**Discussion:** Preliminary evidence for the role of both perseverative cognition and negative emotionality in sleep hygiene has been garnered, but more work is required to establish their importance for objective sleep outcomes. Less support is presented for the other factors and alternative explanations ought to be explored to determine their role in sleep hygiene.

## **Predicting health lifestyle behaviours in midlife women using machine learning with EMA and accelerometer data**

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**Background:** Machine learning (ML) has been increasingly embedded in developing digital health interventions (DHIs) to achieve better outcomes.

**Objective:** to explore the feasibility of using ML in identifying the best group-level predictors linked to BCTs and designed to improve healthy eating and regular physical activity behaviours in UK-residing midlife women.

**Methods:** A dataset of 171 records was collected in a single-arm feasibility study with midlife women (N=24) in a 21-day dietary and physical activity intervention using wearables, EMA app, and baseline survey data. Regression-based feature selection ML algorithms were explored to identify groups of predictors with the greatest impact on ten lifestyle behaviours.

**Results:** The model resulted in a high level of accuracy with an average NRMSE (0.14) across all ten outcomes. The model used on average 59 percent (13/22; range 6-21) of time-varying predictors and resulted in acceptable prediction power with an average R-squared (0.47). Goal setting (e.g., morning exercise plan, steps, veg portions), and counselling (e.g., problem solving, action planning) were most frequently selected predictors.

**Conclusion:** Using ML regression-based feature selection method to identify groups of predictors that are most relevant in predicting group-level intervention outcomes was feasible and resulted a high level of accuracy and in acceptable prediction power (goodness-of-fit), indicating that constructed 22 time-varying predictors linked to 32 BCTs explained on average over 56% of variability (range 43%-83%) in the intervention outcomes. Using ML to identify most relevant behavioural predictors has the potential to create more adaptive, dynamic, and personalised lifestyle health interventions in future studies.



## **Exploring ebike trips during a behaviour change intervention: a data-prompted interview study**

Allison Biamonte<sup>1</sup>, Chloe McGowan<sup>1</sup>, Louise Foley<sup>1</sup>, James Green<sup>1</sup>

<sup>1</sup>University of Limerick, Ireland

**Background:** Active travel is a co-beneficial health behaviour, offering benefits through both increases in physical activity and reductions in carbon emissions. Electric bicycles (ebikes, pedelecs) present an opportunity for more inclusive active travel by supporting users to travel further, overcome hilly terrains, and carry passengers and/or cargo. This study aimed to explore the meaning and function of ebike trips among participants in the ISCycle ebike loan behaviour change intervention.

**Methods:** Participants who completed the ISCycle intervention were invited to take part in an online data-prompted interview. During the semi-structured interview, participants were presented with a visual map of their ebike routes, a summary of their ebike use frequency, and changes in self-reported physical activity. Data were analysed qualitatively using thematic analysis.

**Results:** Nine interviews were conducted. Five themes were generated relating to i) changing perceptions of ebiking over the duration of the loan, ii) confidence using the ebike in various contexts, iii) physical infrastructure influencing route choices, iv) dynamic opportunities for physical activity, and v) health, social and financial impacts of ebiking in daily life.

**Conclusion:** Understanding how and why individuals use an ebike across a variety of contexts and purposes can inform initiatives to further promote active travel and sustainable mobility. At a local level, preferred and avoided routes are highlighted. At a broader level, knowledge of the potential uses and benefits of ebiking is expanded to inform future behaviour change interventions.

## **How childhood shapes us: Mediators between adverse childhood experiences and health behaviours. A systematic review**

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### Background :

Experiencing adversity in childhood is a risk factor for various health conditions and health risk behaviours in adulthood. Mechanisms that facilitate this connection are not completely understood, and behaviour change interventions often overlook this link. Our aim is to systematically compile known mediators between adverse childhood experiences (ACEs) and five key health behaviours (eating behaviour, physical activity, substance use including alcohol and drugs, sleep behaviour, and smoking) to better understand underlying mechanisms and to inform targeted interventions.

### Methods:

We conducted a predefined systematic search in several databases (MEDLINE, Embase, Psycinfo, Scopus, Google Scholar, Dissertation and Abstracts, OpenGrey) to answer the research question "Which factors (psychological and physiological) mediate the association between adult health behaviour and aversive childhood experiences?" We defined inclusion- and exclusion criteria, risk of bias assessment, and defined a search and screening protocol. Further details can be found at the Prospero Registration Identifier 2023 CRD42023402068.

Expected results: After finalized data extraction of the included studies, we expect to have a comprehensive list of so far studied mediators between adverse childhood experiences and health behaviour in adulthood.

### Current stage of work:

We successfully completed abstract and full text screening, as well as the risk of bias assessment. We are currently extracting information out of the 77 (70 of 77 completed) included studies, such as type of adversity, mediators, and health behaviours.

### Discussion:

The review supports better understanding of health behaviours of adults with a history of adverse childhood experiences and has potential to inform future targeted interventions.

## **Plant-based vs. animal proteins: Implicit and explicit measures, psychological predictors, and the role of sports**

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**Background:** Recent research in nutrition have highlighted how food choices, and the adoption of a healthy and sustainable diet, require an in-depth analysis of psychological factors, both cognitive and personality-wise. The objective of the study was to map automatic and explicit attitudes toward plant-based proteins in relation to personological features.

**Methods:** We developed a qualitative/quantitative methodology consisting of three successive steps. The first two steps involved the validation of the personalized Implicit Association Test (p-IAT): in the first one we created a database of protein food pictures, and in the second one we identified the attributes for categorization by conducting 4 focus groups. The third study will involve the administration of the final version of the study, with p-IAT and questionnaires (lifestyle, eating habits, sports activity, decision-making style, big-5, value orientation) in relation to consumption intention.

**Findings:** Linear regression models will be conducted considering the d index, explicit attitudes, and consumption intention as outcome variables, together with up to 10 predictors (e.g., gender, age, diet, physical activity, personality traits). Based on available evidence, we expect to find more positive attitudes toward animal than plant-based proteins, and that this effect is even more pronounced among sporty people.

**Discussion:** Protein intake may be influenced by certain preconceptions that lead people to choose more often the consumption of meat and other animal (so-called noble) proteins than plant-based options, which are healthier and more sustainable. This study will shed light on people's attitudes to promote targeted psychological actions to encourage healthier food choices.

## **What drives Italians to adhere to Mediterranean-Diet? The role of health, environment, and psychological distress**

Elena Castellari<sup>1</sup>, Francesco Bimbo<sup>2</sup>, Giulia Tiboldo<sup>1</sup>, Daniele Moro<sup>1</sup>, Veronica Vitali<sup>1</sup>, Valentina Carfora<sup>3</sup>

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The work investigates the level of adherence to a Mediterranean Diet (MD) in the Italian population along with its drivers, such as interest in health and the environment, and by accounting for individual-level of psychological distress. In this work, we used three years of data (2019-2021) from the Italian Multipurpose Household Survey (MHS). Data collects individual self-reported socio-economic features, eating habits, interest in health- and environmental-related aspects, as well as individual level of psychological distress experienced. Adherence to MD was approximated by three indexes constructed by using self-reported eating habits information and as proposed by Monteagudo et al. (2016), Trichopoulou et al. (2005) and Benedetti et al. (2018). These three MD indexes were employed as dependent variables in the empirical model that included socioeconomic aspects (e.g., age, gender, education, and income source), indexes capturing individual interest in health and the environment, and lastly, an index measuring the individual level of psychological distress, considering both the level of anxiety and depression. Preliminary results obtained via logistic estimator indicated there is strong heterogeneity of adherence to MD among different socio-demographic groups. Moreover, MD indexes are found to be positively correlated to healthy lifestyle, to subjects' environmental concern, and to mental distress: meaning healthier, more environmental concerned and "happier" people have higher probability to follow a MD.

## **Barriers and facilitators for adopting sustainable food behaviors: A qualitative study amongst Dutch university students**

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**Background:** Transitioning to more sustainable food-related lifestyles is urgently needed to decrease greenhouse gas emissions causing climate change. While the majority of research on this topic has focused on people's motivations for adopting sustainable eating behaviours, we argue that the Capabilities-Opportunities-Motivation-Behaviour (COM-B) model offers a more complete and situated understanding of people's decisions to engage in or refrain from sustainable eating behaviours by incorporating capabilities and opportunities.

**Methods:** Taking a COM-B approach, this qualitative study based on 15 semi-structured interviews examines factors that promote and hinder the transition to plant-based foods of students, who are in a crucial life stage developing purchasing and eating behaviour. Interviews were analyzed using a combination of inductive and deductive approaches.

**Findings:** Results showed that respondents were generally motivated to eat less animal-based products, although motivation was higher for reducing meat intake than for decreasing dairy consumption. Nevertheless, respondents struggled to incorporate more sustainable food consumption into their daily behavioural repertoires. Important hindering factors were the complexity of finding clear and unambiguous information (i.e., psychological capabilities), pricing and availability of meat and dairy alternatives (i.e., physical opportunities), and their social environment (i.e., social opportunities). Importantly, facilitating and hindering factors were oftentimes interrelated.

**Discussion:** Social environments shape motivation and capabilities and, as such, have the power to create vicious or virtuous transition cycles. High motivation can increase capabilities and decrease the hindering influence of environmental obstacles. Using a COM-B approach to food behaviour transitions can shed light on complex interplay between factors at different socio-ecological levels.

## **ISCycle: Examining an ebike loan intervention on transport behaviour in an urban area in Ireland**

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**Background:** Active travel is a co-beneficial health behaviour, with direct and indirect impacts on physical activity and the climate. Electric bikes (ebikes/pedelecs) offer a potential replacement for private car journeys, facilitating longer trips and greater load capacity than conventional bikes. The study examines the effect of a loan intervention on distance and frequency of trips per transport mode, physical activity, and transport-mode habit strength.

**Methods:** A randomised controlled trial is being conducted, with participants randomised to one of three ebike loan durations (4-, 8-, or 12-weeks) or a waitlist control. Participants in the intervention group receive an ebike that meets their transport needs (e.g., commuter, folding, cargo ebike). Cycling accessories and training are provided if needed. Measurements include self-report questionnaires and mobile and ebike-fitted GPS logging. In addition to baseline and post-intervention, measures will be repeated at 12- and 24-months to assess long-term impacts.

**Expected results:** We will report trip substitution, i.e., how many car trips were replaced by cycling trips, plus (e)bike purchases, along with secondary measures.

**Current stage of work:** In Site1, 141 participants have completed baseline: 86 have completed the intervention, with remaining participants currently completing the intervention or waitlist control. By September, we will have full interim results for Site1.

**Discussion:** Understanding if and how ebike loans influence transport behaviours will guide strategies to promote sustainable travel modes. Results from the ISCycle intervention will be relevant across policy sectors including transport, as well as health, environment and climate, with implications for inclusive and active mobility.

## Exploring the Hybrid Computational Decision Making Model Using Expert Opinion

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### Background:

Energy poverty occurs when a household must cut energy use to a degree harming residents' health and wellbeing. The MAI-Home project is an interdisciplinary collaboration, aiming to reduce energy poverty and CO<sub>2</sub>-emissions among social housing residents. By integrating insights from various disciplines, a hybrid model was developed encompassing Computational Thinking, Informed Decision Making, and Behavior Change to provide a model that can be used to design interventions to encourage informed choices regarding energy saving. This model awaits rigorous critical evaluation. Expert consultation will be conducted to evaluate its practical applicability and improve the model.

### Methods:

In order to assess and improve the model we will conduct an expert consultation study among 15 experts (n = 5 per expert area). Input from the experts will be analysed using the Framework Method.

### Expected results:

We expect that the consultations will lead to an improved model aligning with most recent insights from Computational Thinking, Informed Decision Making and Behaviour Change that can be used to design interventions.

### Current stage of work:

At this point, we combined the different theoretical frameworks and arrived at a first version of the model. Currently we are designing the expert consultation study.

### Discussion:

With this model we aim to introduce a new and less paternalistic model aimed towards behaviour change, which can be used to understand and change energy-saving behaviour, as well as other areas within health psychology. For example, we will use this model during interviews about energy saving with social housing residents.

Materials: [doi.org/mh8w](https://doi.org/mh8w)

## **Autonomous vs. Controlling Communications about Home Heating Consumption: Spillover to Energy-Saving and Health Intentions**

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In the face of looming energy supply threats, public policy aims to minimize household energy consumption. Self-determination theory recommends emphasizing arguments that promote basic needs as opposed to control. Behaviors of others (i.e., descriptive norm) and autonomy support can motivate people to reduce their energy consumption. French participants (N = 853) exposed to a communication combining autonomy support and descriptive norm arguments showed a greater intention to reduce home heating consumption (targeted behavior) but also to implement other energy-saving behaviors (non-targeted behaviors). Autonomous motivation to adopt energy-saving behaviors mediated this positive spillover effect. Adherence to a national plan promoting energy-saving (i.e., spillover on policy support) also increased. Controlling communication based on threatening power cuts yielded no effect. No evidence of spillover between domains (energy and health) was found. Exploratory analyses have shown that trust in government moderates the impact of communications. The lower the level of trust, the more controlling communication reduces public compliance. Communications that support the basic needs of self-determination encourage energy-saving behaviors and compliance with policy measures within the same domain. These findings have implications for practitioners and public policies that aim to implement and tailor communication interventions with broader impacts within the same domain.



## **An integrated TPB and VBN framework to understand plant-based meat consumption drivers**

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Background: As entire global food system accounts for a significant share of total global greenhouse gas emissions, shifting towards plant-based diets that are both environmentally sustainable and healthy has become crucial. Recent advancements in food technology have fuelled the emergence of a new generation of plant-based meat alternatives (PBMA) that closely resemble meat in texture, appearance, and aroma. Psychosocial literature has already shown that Theory of Planned Behaviour (TPB) and Value-Belief-Norm (VBN) are a solid theoretical framework to understand and predict sustainable food choices. Moreover, other studies have taken into account the additional role of green self-identity contextually to sustainable eating and food neophobia. In light of this, the present study aimed at testing an integrated TPB and VBN model (supplemented by green self-identity and food neophobia) to understand participants' intention to consume plant-based meat alternatives. Methods: 317 participants (age: 18-59; M = 20.70; SD = 3.45; 69.7% females) have completed a self-report questionnaire to assess the variables being studied. Findings: Results from a Structural Equation Modeling (SEM) showed that intention is significantly predicted by attitude, subjective norms, moral norms and food neophobia, while perceived behavioural control (PBC) was not significant. In turn, attitude was significantly predicted by green self-identity and awareness of consequences while moral norms were predicted by subjective norms and green self-identity. Furthermore, biospheric values predicted green self-identity. Discussion: Overall, the abovementioned model could inform future interventions aimed at promoting healthier and more sustainable food choices.

## **Baffling beliefs and disorienting dilemmas in sustainable healthy food choice change**

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Shifting populations towards healthier and sustainable food choice is proving problematic. The purpose of this study was to explore consumers' motivations in changing food choices towards specific sustainable and healthy (SuHe) dietary recommendations, through the lens of transformative learning theory (TLT; Mezirow, 1991, 1997). Following these recommendations required substantial shifts in food acquisition and consumption practices, particularly in relation to animal and plant protein consumption. Of particular interest was to gain insights into the facilitators of and barriers to the transformation of food related belief systems. Semi-structured online interviews were conducted with 25 volunteers from the intervention arm of a randomised controlled trial, who had completed a 12 week personalised SuHe dietary programme. This study's aim was to explore consumer acceptance and adoption of such a diet. Data from coded interview transcripts were analysed using thematic analysis.

Transforming food behaviour provoked exploration of previously held beliefs. Themes emerging from the data were (a) disorientations: resolved and unresolved challenges to beliefs relating to environmental and health impacts; (b) affective states: temporal evoked emotions facilitated the process of transforming food behaviours; (c) adaptive strategies: routes to integration of new beliefs.

We contribute to theory development by extending the TLT to the exploration of relationships between food related disorienting dilemmas and routes to changing food belief systems. Such insights can inform revisions to and information dissemination of food based dietary guidelines (FBDG). Revisions of FBDG towards healthier and sustainable food choices directly supports SDG 12 by enabling consumers to adopt sustainable food behaviours.

## **Applying health psychology in non-academic settings: opportunities, benefits, and challenges**

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### **Purpose:**

This roundtable will focus on (1) the characteristics of health psychologist/ behavioural scientist roles in non-academic settings and (2) the benefits and challenges of applying behaviour change frameworks and theories into practice.

### **Objectives:**

- To describe the opportunities to apply health psychology and behavioural science in different health settings and across different countries.
- To gather views and experiences of health psychologists and behavioural scientists working on various health issues in a non-academic setting.
- To discuss the challenges of applying health psychology and behaviour change frameworks, models, and theories into practice.
- To reflect on the development of relevant frameworks/tools/methods to help in implementing health psychology in non-academic settings.

### **Rationale:**

The use of health psychology and behavioural science to address key public health challenges has grown over the past few years. As more and more roles are created for health psychologists and behavioural scientists and to work in non-academic health organisations, it is necessary to reflect on how we can efficiently apply health psychology theories and methods into practice. While behaviour change frameworks are designed to be applied to various health behaviours, intervention developers can face challenges while trying to use them in practice (e.g., difficulty making the models understandable to the general public; timelines shorter than in an academic setting; difficulty in measuring change). The roundtable will provide an opportunity to discuss the development of relevant tools and resources in response to those challenges. We hope this roundtable will give possible answers to the following key questions:

- What are the benefits of generalising the use of health psychology and behavioural science in a wide range of settings?
- How can we make sure the use of health psychology and behavioural science in non-academic organisations is not tokenistic?
- How far can we adapt behaviour change frameworks to make them more accessible while keeping their integrity?

The contributors will be invited to share their experiences working in a non-academic setting through five brief presentations. Each of them will focus on one challenge they have faced in the context of their work.

## **Burnout during the pandemic: A multiple-group longitudinal study of the Job Demands-Resources theory**

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**Background:** The pandemic crisis underscored the inadequacy of relying solely on job characteristics to explain burnout, necessitating an expansion of the Job Demands-Resources theory to integrate individual resources. This study investigates the connections between demands (e.g., work overload and illegitimate tasks) and organizational (e.g., engaging leadership) and individual resources (e.g., self-efficacy and work-life balance) in relation to burnout changes under a socially shared chronic stressor.

**Method:** A longitudinal study was conducted among Polish employees in IT, education, healthcare, and public administration (N = 1201 before the pandemic, N = 821 during the first lockdown), using the Burnout Assessment Tool, Bern Illegitimate Tasks Scale, and constructs from Energy Compass (job demands and organizational and personal resources).

**Findings:** In a residualized change model, pre-pandemic burnout emerged as the sole predictor of future burnout, strongest among teachers. The multi-group latent growth model indicated similar associations between demands and resources at the starting point of burnout across groups, with few relationships noted for burnout change. Differences included the protective role of engaging leadership (for teachers and clerks) and the negative impact of workload (for clerks). A significant relationship between slope and illegitimate tasks was found among IT professionals and clerks. Cross-lagged analysis revealed that previous burnout predicted illegitimate tasks during the pandemic, rather than the other way around.

**Discussion:** The pre-pandemic burnout level remained the primary explanatory factor for burnout changes, suggesting that situational disruptions may particularly affect those employees already on a burnout trajectory.

## **The relationship between occupational stress and mental health in medical staff in Ukraine**

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As estimated by the UN up to a third of Ukrainians met the criteria for PTSD, but there is less information on the mental health of medical staff. The study aims to characterize the potential sources of traumatic experiences in a sample of medical staff from Ukraine. The relationships between work characteristics, including physical and psychosocial factors, and deterioration in selected mental health and well-being aspects will be analysed. The specific context of the Ukrainian medical system and possible solutions for supporting medical personnel will be explored.

The survey was conducted in November 2023 - January 2024. The study includes a sample of medical staff (N=100) including doctors and paramedics. The paper-pencil research was based on structured interviews on work characteristics of physical and psychosocial factors and standardized questionnaires on PTSD (Posttraumatic Stress Disorder Checklist; PCL-5) and depression (Patient Health Questionnaire; PHQ-9) symptoms. Additionally, qualitative data on the needed sources of support to cope with stress at work will be investigated.

The analyses will include correlation and regression analysis to reveal patterns between potential sources of traumatic experience at work and the severity of PTSD and depression symptoms among medical staff. Additionally, the analysis will focus on defining the categories of the most needed solution in coping with traumatic work experiences in the current context of Ukrainian medical personnel.

The study's results may point to the most crucial areas that should be considered in supporting and improving work conditions for medical staff in the Ukrainian context.

## **Depersonalization as emotion regulation mechanism among medical personnel in Poland**

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How would you feel not recognizing yourself when looking in the mirror? You know it is you, but it does not feel like you. You may experience one of the symptoms of depersonalization, which can manifest in experiences of unreality, detachment, or being an outside observer of one's body. Depersonalization here is conceptualized as an emotion regulation mechanism that appears in order to avoid internal experiences perceived as unpleasant. We distributed online surveys among 100 Polish medical workers – 50 men and 50 women. Participants filled the following questionnaires: Patient Health Questionnaire, Depersonalization Mechanism Scale, PCL PTSD checklist, questionnaire regarding occupational workload and social-organizational aspects of the workplace. We are planning to investigate how prone to depersonalization are medical workers from specific countries in order to regulate their emotions. In addition, we are going to focus on the aspects that medical workers indicated as the most demanding and stressful. This insight provides an opportunity for an exclusive look into the reality of working in a medical field. Preliminary analysis revealed that in the Polish population the biggest difficulties are high demands from patients and management, lack of time to fulfil obligations, and life-threatening situations involving children. This research sheds a light on the needs of medical workers and helps us to propose the most adequate forms of help to them.

## **Work characteristics and work experience in medical staff in Portugal and Spain**

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This research project aims to investigate the work characteristics and work experience of medical staff in Portugal and Spain, with a focus on understanding how these factors may vary between the two countries. The primary research questions include exploring levels of job satisfaction, burnout, workload perceptions, and perceived organizational support among medical professionals in these contexts.

This study will employ a mixed-methods approach. Quantitative data will be collected through surveys administered to medical staff members in Portugal and Spain, with a target sample size of 100 participants from each country. The survey will include measures of job satisfaction, depersonalization, burnout, workload perceptions, and perceived organizational support. Statistical analyses will include descriptive statistics, t-tests, ANOVAs, and regression analyses to compare variables and explore associations.

Qualitative data will be collected through semi-structured interviews with a subset of participants, focusing on their experiences and perceptions of work characteristics. Thematic analysis will be used to identify key themes and patterns in the qualitative data.

Preliminary results will be presented, including descriptive statistics and significant findings from the statistical analyses. Qualitative findings will include themes and categories generated from the thematic analysis of interview data.

The study's findings will contribute to a deeper understanding of the work experiences of medical staff in Portugal and Spain, highlighting potential areas for intervention and improvement. The implications for health psychology, organizational interventions, and healthcare policy will be discussed, emphasizing the importance of addressing country-specific factors in promoting the well-being and effectiveness of healthcare professionals.

## **Presenteeism among employees with chronic conditions: A scoping review**

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**Background.** Presenteeism – defined as working while feeling ill – is widespread in the workforce. Hägerbäumer's integrative model of sickness behavior in the workplace suggests that the general health status plays a significant role in the decision-making process regarding presenteeism. Around one-third of the European working population has a compromised general health status due to chronic conditions. Yet, the understanding of presenteeism among this workforce group is limited. This scoping review aims to synthesize and bundle existing research on presenteeism among employees with chronic conditions considering different study designs, types of chronic conditions, and work contexts.

**Methods.** A scoping review applying Arksey and O'Malley's framework will be conducted. The databases Econlit, Medline, Cochrane, and PsycINFO will be searched to identify relevant studies published in English and German.

**Expected Results.** It is expected, that a new set of motives plays a role in the decision-making process of employees with chronic conditions for or against presenteeism. The extent of presenteeism seems to be higher than in the overall working population based on the known literature. A research gap in presentee profiles and attendance patterns is expected.

**Current Stage of work.** The scoping review protocol is nearing completion and will undergo evaluation by a qualified librarian. Preliminary findings will be presented at the conference.

**Discussion.** The results of this review will advance the field of occupational health psychology by providing insights into the extent and nature of presenteeism research in the context of chronic conditions, disseminating findings, and identifying gaps for future studies.



## Occupational well-being and mountain therapy activities

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**Background:** Work-related stress can have negative effects on a person's mental and physical health; the impact is very strong, especially in healthcare workers. Mountain Therapy Activities (MTA) reduce work-related stress and increase well-being. Therefore, the first aim of this study is to assess and compare the levels of psychological well-being of healthcare workers in Italian Mental Health Departments who attend MTA (MT group) or do not (nMT group), hypothesizing that the first have higher scores than others. The second aim is to assess the levels of well-being within the MT group, to see if well-being during MTA is greater than one's felt during other work activities.

**Methods:** Were involved 167 operators from 11 Italian ASLs, equally distributed in the MT group and nMT group, who completed a battery of questionnaires, to analyze the levels of burnout, psychological well-being and safety, stress resilience, and job engagement.

**Findings:** Differences appear between the two groups about psychological well-being, both in total level ( $t(117.282)=-1.721$ ,  $p=.044$ ) and in general dysphoria ( $t(116.955)=-1.741$ ,  $p=.042$ ). Within the MT group, we find differences between perceived engagement at work and only during MTA, in vigor ( $t(66)=-8.229$ ,  $p<.001$ ), devotion ( $t(66)=-4.500$ ,  $p<.001$ ), and emotional involvement ( $t(66)=-8.322$ ,  $p=.002$ ), and differences in both psychological safety at the general level ( $t(66)=-5.819$ ,  $p<.001$ ) and in self-expression dimension ( $t(66)=-5.609$ ,  $p<.001$ ).

**Discussion:** MTA can improve healthcare workers' psychological well-being. MTA participants also perceive greater engagement and safety during MTA than during the other work activities. The findings provide a good basis for further studies which include other professions.

## **Longitudinal associations between psychosocial job dimensions and burnout/engagement: the role of stress mindset**

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**Background.** Adopting the Job Demands-Resources (JD-R) model as a theoretical framework, this study examines the relationships between psychosocial job dimensions (job demand and job resources) and psychological burnout/engagement over time; and if stress mindset modifies the hypothesized longitudinal relationships between JD-R dimensions at baseline and burnout/engagement measured subsequently. The construct of stress mindset refers to the extent to which one holds the belief that stress has enhancing consequences for various strain-related outcomes such as performance, wellbeing, and growth.

**Methods.** This two-wave study was carried out over a period of two years in a sample of 184 Italian employees (79% female, with a mean age of 37 years, SD=12.7). Participants completed the following measures: the J-Content Questionnaire, the Stress Control Mindset Measure, the Maslach Burnout Inventory and the Work Engagement Scale. Regression analyses were conducted to test the cross lagged main and interactive effects of JDR dimensions and stress mindset on the outcome variables.

**Findings.** Time 1 psychosocial job dimensions and stress mindset explained 3-8% of the variance in the Time 2 dimensions, but no support for a moderation effect of stress mindset was found. Furthermore, changes in stress mindset explained an additional 2-6% of variance in the Time 2 dimensions.

**Discussion.** Our results suggest that job demands and resources play an important role in predicting burnout and engagement over time. Stress mindset may act as an additional resource at the individual level, which predicts positive work-related wellbeing, regardless of JD-R variables. Limitations and implications of the study are discussed.

## **PTSD and depression symptoms as the consequences of job-related stress among medical staff**

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**Background:** The aim of the study is to characterize the sources of traumatic experiences in a sample of medical staff and compare the differences between four countries: Poland, Ukraine, Portugal and Spain. Selected aspects of mental health, such as PTSD and depression symptoms will be analyzed from the perspective of physical and psychosocial workloads.

**Methods:** The study includes the sample of medical staff (N=445) from four countries: Poland (N=105), Ukraine (N=100), Portugal (N=105), and Spain (N=135). The sample consisted of doctors, nurses and paramedics. The online and paper-pencil research was based on structured interview on work characteristics of physical and psychosocial factors and standardized questionnaires on PTSD (Posttraumatic Stress Disorder Checklist; PCL-5) and depression (Patient Health Questionnaire; PHQ-9) symptoms.

**Findings:** The analyses will include the correlation and regression analysis to reveal patterns between potential sources of traumatic experience at work and the severity of PTSD and depression symptoms among medical staff. Moreover, the comparisons between groups will be tested referring to specific characteristics of work environment (e.g., hospital, ambulatory, private practice), the level of specialization (e.g., education, work experience), and nationality which refers to differences in broader context of whole medical system.

**Discussion:** The results of the study contribute to a significant debate on work conditions in medical personnel. The analysis leads to the identification of the most important aspects of the work of medical services that should be taken into account when planning intervention and preventive actions to increase the well-being of medical personnel.

## **Older adults' depression self-care via mobile apps: a systematic assessment of app characteristics and applicability**

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### **Background**

Mobile applications (apps) can connect users and are also effective for depression management in the general population. However, older adults have specific mental health and accessibility needs. We aimed to systematically assess the applicability of depression self-care apps to older adults.

### **Methods**

Using an established app assessment methodology, we searched for Android and iOS apps in English and Chinese in 42Matters, Chinese Android app stores, and the first ten pages of Google and Baidu. Interactive mental health apps that addressed depression were included. We extracted the basic characteristics of the apps, the content specifically related to older adults, and assessed the technical features, including accessibility.

### **Findings**

We identified 23 English and 4 Chinese apps. None specifically targeted older adults with depression. Twenty-five apps had a privacy and confidentiality policy. Sixteen apps covered depression risk factors in older adults, and four apps delivered information on depression epidemiology in older adults via a chatbot. Furthermore, 19 apps mentioned topics relevant to older adults, such as pain management, grief, loneliness, and social isolation. One-third of the apps were supported by an online community. Common accessibility issues included the lack of adaptations for users with visual or hearing impairments, and incompatibility with larger font sizes in the phone settings.

### **Discussion**

Available depression apps have limited applicability to older adults based on their clinical and technical features. Existing apps may consider incorporating content more relevant to older adults, including online communities, and improving accessibility to adapt to potential health impairments in older adults.

## User engagement in nutrition apps

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**Background:** Nutrition (or dietary tracking) apps can be useful tools to support consumers in the transition toward more healthy eating behaviours. However, user-adherence is a well-known problem. Therefore, the aim of our study was to assess user and non-user preferences for various nutrition app features.

**Methods:** A choice-based conjoint study was conducted in a sample of 1,505 consumers. The experiment involved discrete choices between hypothetical nutrition apps. Each app was defined in terms of a combination of levels for six functionalities (relating to food tracking, the food database and dietary advice). Consumer preferences were determined by means of a conditional logit model.

**Results:** As for food tracking, manual product entries ( $\beta=0.071$ ) were preferred ( $p=.007$ ) over taking photos ( $\beta=-0.032$ ) and ( $p=.011$ ) scanning barcodes ( $\beta=-0.040$ ). Regarding dietary advice, healthier product alternatives ( $\beta=0.242$ ) were preferred ( $p=.002$ ) over providing an example day menu ( $\beta=0.133$ ) and ( $p<0.001$ ) no advice ( $\beta=-0.375$ ). Personal dietary goals combined with health status ( $\beta=0.126$ ) was preferred ( $p=0.030$ ) as input for a advice, over solely personal goals ( $\beta=0.058$ ) or ( $p<0.001$ ) a generic advice ( $\beta=-0.184$ ).

**Conclusions:** Users and non-users of nutrition apps generally prefer the highest level of personalization of app features. Since food database adjustability and the type of dietary advice contributed most in the choice for a nutrition app, it is recommended that app developers focus on optimizing those functionalities first to increase user engagement. Our experimental design and results are meaningful for mHealth app developers or nutrition/health scientist, following a participatory approach in designing and implementing mHealth interventions.

## **Leveraging Collective Intelligence in the design of an mHealth tool to support an anti-malaria intervention**

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**Background:** *P. vivax* malaria presents unique challenges due to the inability of conventional diagnostics to detect individuals with latent forms. The PvSTATEM study seeks to evaluate a new anti-malaria intervention in Ethiopia and Madagascar, involving serological testing, and treatment with primaquine. The intervention will be supported by an mHealth tool. Stakeholder engagement sessions, using the Collective Intelligence methodology, were conducted in Ethiopia and Madagascar to inform the design of mHealth tool features and affordances.

**Methods:** Collective Intelligence workshops took place over two days in each country. Stakeholders (N = 38), including community health workers, nurses, doctors, lab and data scientists, anthropologists, and healthcare administrators, identified challenges to testing and treatment of *P. vivax*, options for overcoming these challenges, and user needs for an mHealth tool to support implementation and service-delivery.

**Findings:** An extensive range of challenges to effective testing and treatment were identified. Categories of challenges included: Testing protocols, Skills and training, Documentation and reporting, Adherence and follow-up, and Education and engagement. Stakeholders then generated a targeted set of options for overcoming these challenges, and specific user needs from an mHealth tool to support intervention implementation.

**Discussion:** *P. vivax* elimination presents significant challenges. Stakeholder engagement using Collective Intelligence produced comprehensive intervention-supporting mHealth tool requirements, addressing patient safety, medication adherence support, training and feedback, and testing supports. These features are discussed in the context of mHealth tool design from a behaviour change perspective, highlighting the roles of stakeholder engagement and evidence-based behaviour change in the design of mHealth tools for global health.

## **Commercial Smartphone Apps for Asthma Self-management: A Content Analysis and User Testing Study**

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In Europe, almost 10 million people under the age of 45 have asthma. Adherence to medication is key to minimising the negative impact of asthma. Poor asthma self-management and adherence to medication are very common. Increasingly, mobile phone apps are used to target adherence behaviours in people with asthma.

This study aims to identify, describe, and evaluate apps that aim to support self-management in people with asthma. It will serve as a pilot study to develop a methodology to screen similar apps for other chronic conditions. Therefore, only a subset of apps will be reviewed and evaluated.

Apps were searched in the UK Google Play Store and Apple App Store. The systematic search yielded 78 apps to review according to Mobile Application Rating Scale (MARS), Behaviour Change Techniques (BCTs) and gamification elements and functions. We randomly chose 11 apps to review. Two apps were chosen to perform usability testing using a think-aloud protocol with six participants.

By the end of this study, we will have a consolidated coding framework and think-aloud protocol ready to use in similar studies. Eleven apps were reviewed using the framework described above. Common BCTs were feedback, monitoring and shaping knowledge. The next step is to consolidate the results and framework by randomly choosing four for an independent second review. For the think-aloud protocol, three participants out of the six have been interviewed so far.

This study demonstrates how important health psychology is to digital health applications to evaluate the quality and usability of self-management apps.

## **Exploring Dutch adult's experiences with mindfulness apps in a multidomain lifestyle program for brain health**

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Population aging in the Netherlands has made dementia an urgent societal issue. Projections indicate that dementia cases are set to double by 2050, placing significant strains on the healthcare system. Digital multidomain lifestyle interventions can contribute to dementia prevention by addressing modifiable risk factors in a scalable manner. One strategy to promote brain health in these interventions is to promote mindfulness, as mindfulness can support neurological processes that influence brain function and can mitigate risk factors such as high blood pressure. However, the acceptance and use of digital mindfulness by people who might be particularly motivated to work on their brain health, middle-aged and older adults (60+), remains uncertain in this specific context.

We will conduct fifteen semi-structured interviews with former participants of a multidomain lifestyle intervention study on brain health (i.e., the 'HELLI'-study) to explore barriers and motivators for using the mindfulness app in this intervention. Respondents are Dutch adults aged 60 and older who participated in the intervention for at least 8 weeks. We will employ template analysis to analyze the data and will use the UTAUT-2 framework as preliminary coding template. For trustworthiness, the study is preregistered and includes a positionality statement (see: [https://osf.io/n8yd3/?view\\_only=598b7487dade4015b1f196ae79a60f67](https://osf.io/n8yd3/?view_only=598b7487dade4015b1f196ae79a60f67)). The anonymized interview transcripts will be published on OSF. Per February 28th, we have conducted ten interviews and have planned five more before March 15th. We aim to have analyzed the data before June. Findings can help inform the design of eHealth and mHealth solutions that aim to promote brain health with mindfulness.



## **Distress and Wellbeing Effects of App-Based Cognitive Behavioral Stress Management in Cancer: Randomized Controlled Trial**

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**Background:** Access to psychosocial support remains a significant unmet need in oncology. Digital delivery of evidence-based, cancer-specific psychological interventions, like Cognitive Behavioral Stress Management (CBSM), can help expand reach. **Methods:** Patients with elevated anxiety within 6 months of treatment for stage I-III cancer were recruited from across the United States. Participants (80.6% female; 76.5% white; 25-80 years) were randomized to one of two 10-module digital apps: CBSM or health education (HE), and completed self-report assessments at weeks 0, 4, 8, 12. Recently published primary trial results showed greater group-level anxiety [PROMIS-A] and depression symptom [PROMIS-D] reductions for digital CBSM (vs. HE). Here we examine individual-level response for anxiety/depression using chi-squared, and changes across conditions over time for secondary outcomes of stress (Perceived Stress Scale [PSS]), cancer-specific distress (Impact of Event Scale-Intrusions [IES-I]), and quality of life (QoL; Functional Assessment of Cancer Therapy-General [FACT-G]) using repeated measures mixed effects modeling (N=449). Patient Global Impression of Change (PGI-C) in wellbeing was also examined. **Findings:** At week 12, a greater proportion of CBSM (vs. HE) participants reported normal-mild (vs. moderate-severe) PROMIS-A and PROMIS-D and a greater proportion of CBSM participants at week 8 or 12 had a  $\geq 7.5$  T-score reduction in PROMIS-A and a  $\geq 5$  T-score reduction in PROMIS-D ( $p < .05$ ). CBSM participants (vs. HE) showed significantly greater reductions in PSS and IES-I and increases in PGI-C wellbeing and FACT emotional and physical wellbeing ( $p < .05$ ), but not functional or social/family wellbeing. **Discussion:** Digitized CBSM improved distress and QoL outcomes, supporting use in cancer care.

## **Does outpatient follow-up through video-based value-oriented behavioural activation (ViVA) reduce fear of cancer recurrence?**

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**Background:** Tumour patients often experience fear of cancer recurrence. Value-oriented behavioural activation, adopted from depression psychotherapy, supports patients in adjusting to their changed life situation. One objective of the ViVA randomised controlled trial is to evaluate the effectiveness of this video-based, value-oriented behavioural activation in reducing fear of cancer recurrence.

**Methods:** Participant recruitment started in October 2023 at the Rehazentrum Oberharz, Germany, and is ongoing. We aim to include 146 patients. Covariate-adaptive randomisation according to gender and type of tumour disease assigns participants to either value-oriented behavioural activation or S3-Guideline-compliant aftercare. Fear of cancer recurrence is measured with the German version of the Fear of Cancer Recurrence 7 Scale (FCR7) at baseline and posttreatment. Intention-to-treat analysis with multilevel structural equation models will be used to assess the effect of the intervention on the FCR7.

**Findings:** As of February 2024, 32 participants have consented to participate. 27 showed high psychosocial distress ( $\geq 5$  on the NCCN Distress Thermometer). Of those, 70.4% were female and 29.6% male. Age ranged from 27 to 68 years. The most frequent cancer types were breast (40.7%), hematological (14.8%), prostate (11.1%), and colorectal (7.4%). The FCR7 at baseline was  $M=26.26$  ( $SD=5.03$ ). On the FCR7, scores  $\geq 17$  indicate clinically relevant fear of cancer recurrence; this was observed in 96.3% of our sample.

**Discussion:** In April, we expect to receive the first posttreatment questionnaires, which will allow us to assess intervention effects. Fear of cancer recurrence is an important public health problem and effective interventions are urgently needed.

## **A Multi-Level Meta-Analysis of the Relationship between Intrapartum Decision-Making and Postpartum Psychopathology**

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**Background.** There is accumulating evidence of ineffective decision-making in birth between women and providers. While research syntheses have demonstrated that negative birth experiences are associated with postpartum psychopathology, primary quantitative studies on the association between intrapartum decision-making and psychopathology have not been synthesized. The present study aims to fill this gap in order to provide hands-on evidence on how to further improve perinatal care.

**Methods.** A systematic literature search (up to December 2021) using Boolean logic was conducted, resulting in a final set of 34 studies from 14 different countries to be included in the meta-analysis.

**Results.** Results revealed that the less effective intrapartum decision-making the more postpartum overall psychopathology ( $r = -.25$ ), depression ( $r = -.19$ ), and posttraumatic stress disorder ( $r = -.29$ ). More precisely, while all dimensions of intrapartum decision-making (information:  $r = -.22$ , involvement:  $r = -.23$ , respect:  $r = -.28$ , control:  $r = -.25$ ) were associated with postpartum overall psychopathology, only information ( $r = -.18$ ), respect ( $r = -.25$ ), and control ( $r = -.12$ ) were associated with depression, and only involvement ( $r = -.31$ ), respect ( $r = -.32$ ), and control ( $r = -.25$ ) were associated with posttraumatic stress disorder.

**Conclusion.** Ineffective decision-making contributes to the development of psychopathology. Implications for practice concern establishing numerous antenatal care contacts as a standard to enhance both women's and providers' birth preparedness, and measuring the experience of intrapartum decision-making as an indicator of quality of care as a default to monitor, analyze, and improve decision-making and to facilitate accountability systems.

## Perceived benefits of health behaviours among cancer patients

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Cancer patients tend to adhere more to smoking and alcohol, compared to diet and physical activity recommendations. Adhering to multiple health behaviours is important for patients' general health and cancer-related outcomes. Theories, such as the Health Belief Model, posit that perceiving benefits predicts health-related behaviours. We explored whether the four health behaviours are perceived by cancer patients as differently beneficial.

A total of 197 Dutch former or current cancer patients completed our cross-sectional, online survey in which we measured their (general health and cancer-related) perceived benefits of diet, physical activity, low alcohol intake and not smoking. Linear regressions and a binary logistic regression were used to investigate the relation of perceiving benefits and engaging in respective behaviours, and a within-subjects ANOVA was performed to assess differences in perceived benefits.

We found that perceiving benefits relates to adhering to respective behaviours ( $p < .01$ ). Furthermore, health behaviours were perceived as differently beneficial. Perceived benefits were significantly higher for alcohol intake compared to diet ( $\text{padj} = .01$ ,  $\text{Mdiff} = 0.12$ ), smoking compared to diet ( $\text{padj} < .01$ ,  $\text{Mdiff} = 0.49$ ), smoking compared to physical activity ( $\text{padj} < .01$ ,  $\text{Mdiff} = 0.45$ ), and smoking compared to alcohol intake ( $\text{padj} < .01$ ,  $\text{Mdiff} = 0.37$ ). Exploratory analyses revealed that all health behaviours were perceived as more beneficial for patients' general health, than for preventing or dealing with cancer.

Diet and physical activity can have an immense effect on cancer-related outcomes, yet they are perceived as less beneficial than not smoking and alcohol by cancer patients. As perceiving benefits relates to engagement in health behaviours, these results hold important implications about patient education.

## Perception and awareness on alcohol as a cancer factor : results among regular French drinkers

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Health psychology models have shown that perceptions are a determinant of behaviour. While there are various publications analysing the perceptions of occasional drinkers in the general population, there is limited data concerning regular drinkers: this is the research's goal.

The Cancer Barometer' data was used. It's a cross-sectional phone-administered survey conducted in a representative sample of the general population in France: 15-85yo (2021 n=4938, 2015 n=3817, 2010 n=3392). Descriptive analyses, Chi<sup>2</sup> tests and binomial regressions were performed on variables: feeling informed, spontaneously citing alcohol, perceiving alcohol as a cancer factor, and drinking one glass of alcohol per day.

From 2010 to 2021, the part of regular drinkers is decreasing : respectively 14.1% & 11.3%. In 2021, 91.8% of them considered that drinking alcohol promotes cancer vs. 92.5% of abstainers. 38.6% of regular drinkers thought that one glass per day increases the cancer risk vs. 45.1% of abstainers. 43.0% perceive alcohol as a cancer factor. Those over 55 were more likely to spontaneously mention alcohol as main causes of cancer, compared with the 15-34: 55-64, OR=2.99[1.57-5.69]; 65-74, OR=2.34[1.25-4.38]; 75-85, OR=2.26[1.14-4.51]. Those with incomes >€1100/month more likely report being well informed about alcohol-related cancer risks vs. income <€1100: (€1101-€1800 OR=2.08[1.21-3.54]; >=€1800 OR=2.29[1.35-3.90]).

The decrease of regular drinkers is encouraging. They strongly perceive alcohol as a cancer risk factor, notably among older people, tending to reveal a detachment from the risk of cancer or the minimisation of risky behaviours. The information feeling reveals inequalities that could be the subject of targeted strategies.

## **Breast cancer risk perception in sexual minority women: Associations with illness perception and psychological distress**

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### **BACKGROUND**

Sexual minority women present higher rates of psychological distress, and higher incidence and mortality rates of breast cancer (BC) compared to heterosexual women. Little is known about the illness perception of sexual minority women and whether there is any relationship between it and the rates of psychological distress and risk perception (RP), which is commonly associated with preventive behaviors. Thus, this study aims to identify RP predictors among sexual minority women.

### **METHODS**

Cross-sectional online survey. A total of 203 Brazilian women participated (M.Age=38 years, SD=8.85; 109 lesbians and 96 bisexuals). Data was collected using 1) Revised Illness Perception Questionnaire for Healthy Women (IPQ-RH); 2) Depression, Anxiety and Stress Scale (DASS-21); 3) Risk perception scale. Descriptive analyses, exploratory factor analysis and multiple linear regression analysis were performed.

### **FINDINGS**

For the total group, the variables anxiety, consequences, coherence and emotional representation had a significant effect on RP ( $F(4, 198) = 9.926$ ;  $p < 0.001$ ;  $R^2_{adjusted} = 0.150$ ). For lesbian women, the variables stress, coherence and emotional representation had a significant effect on RP ( $F(3, 103) = 4.498$ ;  $p = 0.005$ ;  $R^2_{adjusted} = 0.090$ ). For bisexual women, the variables anxiety, consequences, personal control and emotional representation had a significant effect on RP ( $F(4, 91) = 13.710$ ;  $p < 0.001$ ;  $R^2_{adjusted} = 0.349$ ).

### **DISCUSSION**

There are specificities in the RP predictors of lesbian and bisexual women. Once RP may influence people's health behaviors, considering these differences related to sexual orientation can contribute to improve tailored prevention strategies for sexual minority women.

# Psychosocial Barriers and Facilitators in Familial Hypercholesterolemia Genetic and Cascade Testing Uptake: A Systematic Review

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**Background:** Familial Hypercholesterolemia (FH) is an underdiagnosed autosomal dominant genetic disorder that confers high risk for premature adverse cardiovascular events. Timely diagnosis of FH is limited by low uptake of genetic testing. This systematic review aims to identify barriers and facilitators for uptake of genetic testing (GT) and cascade testing (CT) in FH.

**Methods:** Using PRISMA guidelines, 7 databases were searched for qualitative or quantitative studies on GT/CT. Data quality was evaluated with COREQ and thematic synthesis was conducted.

**Findings:** Of the 387 studies, 14 were included (N = 9 qualitative, N = 5 quantitative). These involved 272,781 respondents (n = 225 qualitative, n = 272,538 quantitative). COREQ scores ranged 11-21.

Synthesis of qualitative data indicated five common facilitators: heightened family responsibility, family history of FH, confidence in clinical care, genetic health-literacy, and perceived gains. Diffused family responsibility, finances, low perceived risk or need for testing, care dissatisfaction, and sociocultural complexities were identified as barriers. Challenges of health disclosure to family were unique to CT.

Quantitative studies found that demographics, intention, and disclosure reasons predict testing uptake. Barriers echo qualitative study findings, including limited genetic understanding, low communication efficacy, lifestyle change concerns, familial contact issues, emotional distress avoidance, time constraints, and access limitations.

**Discussion:** Our review highlights a lack of high-quality empirical research on barriers and facilitators to GT/CT for familial hypercholesterolemia (FH). Additionally, addressing health disclosure challenges is crucial for enhancing cascade testing (CT) uptake. Future interventions should incorporate these barriers and facilitators to encourage FH genetic testing uptake.

## **Charting the decision-making process in family disclosure of genetic risk: a multi-method prospective study**

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**Background:** The widespread use of genetic testing has heightened the need to disclose and discuss genetic risks with family members. Informed relatives can make more informed choices regarding their health management and life-planning, including reproductive decisions. While family disclosure is commonly encouraged in genetic counselling (GC), this communication poses challenges. Research investigating decision-making about family disclosure is scarce and mostly retrospective.

This study aims to examine decision-making regarding family disclosure of genetic risk, focusing how GC influences patient deliberations and how family and other lifeworld factors are implicated in that process.

**Methods:** A prospective, multi-method qualitative study is being conducted. Data collection involves a sequential combination of observations and audio-recordings of GC appointments in Portuguese Medical Genetics services, patient diaries, and semi-structured interviews with patients (N=25). Participants include healthcare providers (HP) and adults undergoing predictive genetic testing for high penetrance genes associated with medically actionable cardiogenetic and oncogenetic conditions. Data analysis includes discourse analysis of GC appointments and reflexive thematic analysis of patient diaries and interviews.

**Expected results:** The results will provide an innovative, textured description of how patients' deliberations about disclosing genetic risk unfold over time, and how family and lifeworld factors shape them.

**Current stage of work:** Data collection.

**Discussion:** This study will help bridge knowledge gaps between the processes and outcomes of GC. Practice recommendations will be proposed to facilitate patients' decisions about disclosure and discussions within the family during GC. Assisting communication between HP and their end-users aligns with the goals of research in Health Psychology.



## Optimized psycho-oncological care – Identification of mentally distressed patients

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Appropriate, needs-oriented psycho-oncological care helps to reduce the psychological burden of cancer patients and their relatives and to improve the quality of life. Regarding the exact determination of objective and subjective needs, there are often discrepancies in practice between the screening instrument filled out by patients, the clinical impression of the treatment team and the assessment of the psycho-oncological team.

The present study "OptiScreen" aims to professionalize psychosocial screening in order to enable a targeted and needs-based referral to psychooncological support. Optimization and professionalization of the screening process will be achieved by training oncology nursing staff to improve targeted identification of distressed patients and to provide them with needs-based psycho-oncological care.

The non-randomized pre-post study included inpatients with gastrointestinal cancers. Initially, the comparison group (CG) was assessed with N = 400. After completion of nursing education, the intervention group (IG) with N = 413 patients was assessed using validated questionnaires. The aim is to reduce barriers on the patient and treatment side by promoting interdisciplinary dialogue and linking the screening to a personal counseling service by nurses, which should contribute to increased utilization and reduce patients' fears, shame and information deficits.

It is not enough to establish a well-validated screening process; it must also be feasible and useful in clinical practice. "OptiScreen" aims to improve the psycho-oncological care situation. In parallel, the study enables the professionalization of psycho-oncological care involving important professional groups (e.g. nursing) and thus aims at the development of a "best practice model".

## **Food for future: Implementing menu design strategies in a hospital menu**

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**Background:** Food choice architecture has the potential to influence individuals' dietary choices towards healthier and more sustainable options. This research aims to explore the effects of a modified menu design on reducing meat consumption while monitoring menu satisfaction in the university hospital Bonn. The modified menu includes an increased availability of vegetarian food options and the removal of a designated veggie day.

**Methods:** A pre/post study design is used, involving a total of 1,000 hospital patients who participate in brief in-person surveys. Additionally, meat consumption data across all hospital wards is provided by the hospital catering company. The collected data will be analyzed using multilevel analyses.

**Expected Results:** We anticipate that the introduction of the menu modification will result in reduced meat consumption at T1 compared to T0. However, we do not expect a significant difference in menu satisfaction following the menu modification.

**Current Stage of Work:** Data collection for T0 has been completed, including menu satisfaction data from 500 hospital patients and three months' worth of meat consumption data from the entire hospital. Data collection for phase T1 is projected to be finalized by June 2024.

**Discussion:** This study builds upon two online studies previously presented at EHPS 2023, highlighting the substantial influence of menu design elements on food choices within hospital settings. The findings shed light on the potential of menu modifications as a strategy to promote healthier and more sustainable dietary choices.

## **Comparing individual and group-based approaches in promoting physical activity, physical health, and well-being: A meta-analysis**

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**Background:** Many psychological theories (e.g., Self-Determination, Social Identity, and Group Cohesion) emphasize the importance of groups in facilitating health-related behaviours. The purpose of our study is to provide an up-to-date quantitative synthesis of existing literature comparing the behavioural, psychosocial and physical health benefits associated with group-based versus individual physical activity approaches in adults.

**Methods:** A systematic review with meta-analysis is currently being conducted in line with the PRISMA guidelines. The search for relevant studies was done using 8 electronic databases (Web of Science, Scopus, Proquest, PubMed, PsycInfo, ScienceDirect, MEDLINE, Cochrane Central Register of Controlled Trials), and was completed in November 2023. The review consists of experimental (including randomized controlled trials) and observational studies. N=69 studies were double-coded, and quality-rated by two independent reviewers using QualSyst.

**Expected Results:** The results will show whether group-based or individual approaches are associated with the most favourable physical activity, health and psychosocial outcomes. They will also reveal which variables (e.g., group type, group leader characteristics, health status, age and gender), if any, moderate the effect sizes.

**Current State of Work:** Analyses are due to be completed by the end of March 2024.

**Discussion:** The results will enrich our understanding of group psychological processes involved in physical activity participation and can help researchers and practitioners to better consider individual versus group factors in theoretical and applied work.

## Preventing Tiger Mosquito spreading through social mobilization : a field experiment

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**Background:** Behaviors to prevent larval breeding sites are critical in mitigating the proliferation of Tiger Mosquito (*Aedes albopictus*) and of vector-borne diseases. Behavior changes towards eliminating standing water and covering water containers plays a pivotal role in reducing breeding sites. Existing research emphasizes the significance of tailored communication, social norms and self-efficacy in adopting preventive measures, and the potential of collective action to change behaviors. Relying on these psychological insights to design prevention campaigns can enhance their effectiveness.

**Aim :** 1/ To test an intervention based on planned behavior theory (TPB) to foster collective action and behavior change, and 2/ to analyze the impact of the intervention on behaviors and on TPB components.

**Methods:** A nonblinded two-arms experimental design study involved 360 households across two neighborhoods with similar urban and sociodemographic characteristics. In test condition, households were contacted by trained professionals using an information leaflet designed to develop perceived social norm and self-efficacy. In the control condition, standard information material was used by the same professionals. Data were collected in a two months follow-up questionnaire among 142 households for the two neighborhoods.

**Findings:** Mean levels of perceived social norm ( $p < .001$ ), perceived efficacy ( $p < .001$ ) and intentions ( $p < .01$ ) were higher for the intervention group. Social interactions (discussing with a neighbor on the topic) were significantly more frequent in the intervention group (83% vs 75%), suggesting a potential for collective engagement.

**Discussion:** The study demonstrates that behavioral science informed prevention campaigns can leverage community participation and preventive behaviors to fight against vector-borne diseases.

## **Self-test availability and modifications on test-strategy communication: an experimental vignette on COVID-19 testing policy**

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Throughout the COVID-19 pandemic, governments have advised to test when confronted with corona-related symptoms. Survey studies showed a shift in testing behaviour in the Netherlands, moving from predominantly PCR-testing (at test-facilities) towards greater self-test usage, preceding official guidelines recommending self-test use when experiencing symptoms.

This study explored if changing the governmental advice for testing, by allowing self-tests use with corona-related symptoms, and facilitating easy access by having self-tests available at home, could increase overall virus detection.

Within a representative Dutch sample (n=3.270), we did an online vignette study where availability of tests and testing advice were randomized within subject over four scenario's in time. Participants indicated whether they expected to do a self-test, visit a test facility, or no test. Accounting for test sensitivity, the main outcome was the average strategy sensitivity.

Changing the test advice did not affect the strategy sensitivity scores, but having access to self-tests did. When participants assumed they had self-tests available, strategy sensitivity scores were significantly higher, implicating that more people with corona would be detected. Respondents indicated to test sooner, and more often. Self-test use doubled on day 1 of testing ( $\Delta=21,6\%$ ), at a cost of 7,7% decrease in testing at a test facility.

This study provides public health services with evidence regarding the importance of test availability. Regardless of which test is advised, more people with corona will be detected if self-tests are easily available. Providing free self-tests, or regulation on easy distribution, could help increase uptake in The Netherlands and possibly internationally.

## Psychosocial and health impacts of COVID-19 isolation periods

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**Background:** Isolating if you had COVID-19 was key for reducing transmission. Limited evidence is available regarding how different isolation durations affected individuals. This study examined the psychosocial and health impacts of isolation and different isolation periods in Canada.

**Methods:** Two representative samples (N=6119) of adults completed the iCARE survey between May and September 2022. Participants reported the frequency of isolation in the last month due to COVID-19. Participants were divided into 3 isolation groups (0, 5-7 and 10-14 days) based on recommendations in effect at the time, and reported how their mental and physical health, relationships, and economic situation were impacted.

**Findings:** 2849 (47.2%) participants self-isolated “most of the time”, while 3162 (52.1%) did “some of the time” or less. Of those who isolated “most of the time”, 1641 (57.6%) and 175 (6.1%) participants were exposed to 5-7-day and 10-14-day recommended periods of isolation respectively. Isolating (vs not), increased the odds of feeling nervous, anxious, or worried [OR 1.46; 95%CI 1.20-1.78]; having worse physical health [OR 1.78; 95%CI 1.4-2.26]; having more arguments with relatives [OR 1.54; 95%CI 1.09-2.18]; and being unable to pay rent/mortgage [OR 1.88; 95%CI 1.35-2.61]. Isolating 10/14 days vs 5/7 days was only associated with an increased odds of being unable to pay rent/mortgage [OR 1.93; 95%CI 1.03-3.61]).

**Discussion:** Findings suggest that isolation had a negative psychosocial and health consequences for Canadians, but that longer durations of isolation were generally not worse than shorter ones. Findings have implications for future pandemic policies.

## **Uptake of Patients with Mental Health Needs in Social Prescribing in Lisbon: A Mixed-methods approach**

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**Introduction:** Mental health issues pose significant challenges globally, needing holistic, community-based approaches for effective intervention. Social prescribing (SP) is an innovative approach for provision of person-centred integrated care by linking primary healthcare patients to resources in the community, and with proven effects in promotion of mental health and well-being. This study explores the uptake of patients with mental health needs in a SP project in Lisbon, Portugal.

**Methods:** Within a mixed-methods approach, this study examined registries data of 386 patients referred to SP (2018-2022) due to mental health needs, analysing sociodemographic profiles, referral details, and SP consultation uptake. Semi-structured interviews were conducted with 9 stakeholders to explore challenges and facilitators of users' uptake.

**Findings:** Users were predominantly female (71.5%) and elder (average age=64, SD±20.1 years). Mental health needs were compounded by social isolation, loneliness, anxiety, and depression. 57.3% of referrals to SP occurred during the Covid-19 pandemic. 56.7% of users had ≥ 2 chronic diseases and 43.5% were diagnosed with mental illnesses. 55.2% of referred patients attended at least one SP appointment - average appointment was 1 per user. Facilitators of users' uptake in SP included the proactive attitudes of health professionals in engaging patients, while challenges encompassed users' low awareness, motivation for and acceptability of non-traditional responses (i.e. through community-based resources) and mistrust of their efficacy.

**Discussion:** SP has the potential to foster mental health and well-being through person-centred holistic care, yet challenges in uptake related to psychosocial factors must be addressed to optimize the SP positive impacts.

## Disentangling the effect of WHO Self-help Plus on alleviating depressive symptoms

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**Background:** WHO developed a stress management intervention called Self-help Plus (SH+). A randomized controlled trial demonstrated the efficacy of an online SH+ intervention among 270 healthcare workers in Guangzhou, China. This study aims to further investigate: (1) whether probable depression at baseline moderates the effects of SH+ on self-kindness and positive affect at T2 (immediately after the intervention); and perceived stress and depressive symptoms at T3 (2-month follow-up); (2) whether self-kindness and positive affect at T2 and perceived stress at T3 mediates the effect of SH+ on depressive symptoms at T3; (3) the baseline factors that predicts intervention engagement.

**Methods:** Multivariate regression analysis was performed to examine the moderating effects and the predictors that affect engagement. Structural equation modelling was used for mediation analysis.

**Findings:** The effects of SH+ on improving all the psychological outcomes did not vary by the presence of probable depression or at baseline. The effect of SH+ on depressive symptoms was significantly mediated by reduced perceived stress (the indirect effect:  $\beta = -0.122$ , 95% CI = -0.224 to -0.033) and accounted for 64.6% of the total effect. The engagement in the practice of relevant stress management techniques was found to be higher among those with intermediate titles or above than those with primary titles. No significant moderation effects were found for baseline psychological outcomes or socio-demographic factors.

**Discussion:** SH+ proves to be a universal intervention. Perceived stress is an important intervention target. Whether findings can generalize beyond healthcare worker population requires further testing.



## **Determinants of adherence to antihypertensives and statins: a survey study using the Theoretical Domains Framework**

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### **Background:**

Poor adherence to statins and antihypertensives is common, and associated with greater risk of a cardiovascular event, and increased mortality. To inform effective intervention design, this study aimed to understand barriers and facilitators to adherence to antihypertensives and statins.

### **Methods:**

Participants across five GP practices in London completed a survey either about taking antihypertensives or statins. This included a validated 3-item scale self-reporting adherence in the past week, demographic variables and 18 psychological variables based on the Theoretical Domains Framework. Participants were categorised as “fully-adherent” or “not-fully-adherent”. Backwards stepwise logistic regression assessed predictors of adherence.

### **Findings:**

For the anti-hypertensives sample (N=236), 89.0% were classified as fully adherent. The significant predictors of non-adherence in the final model were lower age ( $b=0.043$ ,  $p=0.019$ ), lower intentions for taking medication ( $b=0.761$ ,  $p=0.043$ ), forgetting to take medication ( $b=-0.368$ ,  $p=0.048$ ), and environmental context and resources barriers (e.g. running out of medication, difficulties arranging repeat prescriptions) ( $b=-0.631$ ,  $p=0.003$ ).

For the statins sample ( $n=233$ ) 81.6% were fully adherent. Significant predictors of non-adherence in the final model were having been prescribed statins for 6 years or more ( $b=0.809$ ,  $p=0.036$ ), lower intentions ( $b=-0.859$ ,  $p=0.004$ ), forgetting to take medication ( $b=0.704$ ,  $p<.001$ ), experiencing side-effects ( $b=0.414$ ,  $p=0.004$ ), and being optimistic about their future health ( $b=0.427$ ,  $p=0.022$ ).

### **Discussion:**

The study identified common determinants of intention and memory for adherence to anti-hypertensives and statins. However, different additional predictors related to intentional and unintentional non-adherence were found for the different medications. These different specific influences should be addressed when designing interventions to promote adherence.

## **Cancer threat and efficacy of three preventive behaviors based on the Extended Parallel Process Model**

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**Background:** As global data indicate, men have a higher rate of cancer incidence and death than women. Epidemiological data confirm that the risk of many types of cancer can be reduced by changing behavior. We applied the Extended Parallel Process Model (EPPM) to predict behavioral strategies (EPPM groups) depending on threat and efficacy levels.

**Objective:** To determine men's perception of smoking reduction, physical activity, and diet as preventive behaviors for lung, prostate and colorectal cancers.

**Methods:** This cross-sectional study was conducted on a representative sample of 1,000 Polish men aged 18-65, using Computer Assisted Web Interviewing with EPPM-specific question construction methodology.

**Results:** The severity of the three cancers was assessed as significant by 91.4% of respondents for prostate cancer, 90.6% for colorectal cancer and 90.4% for lung cancer. Smoking reduction to prevent lung cancer was considered the most effective but least implementable intervention (90% versus 72% of the respondents). The EPPM groups showed good accuracy in predicting health behaviors with the exception of smoking reduction. In all behaviors, the Indifferent group was the most numerous (from 33 to 40%). Allocation to EPPM groups was associated primarily with the level of education, financial situation and subjective health.

**Conclusions:** Higher level of efficacy relates to higher frequency of healthy behaviors, regardless of the level of threat. Strengthening response efficacy and self-efficacy with reference to all three cancers should be a permanent element of health campaigns. Smoking reduction needs deeper and broader analysis in the future research.

## **Exploring mechanisms of physical activity change within the Movement as Medicine for CVD Prevention intervention**

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**Background:** Physical activity (PA) can help improve risk factors and lower incidence of cardiovascular diseases (CVD). The Movement as Medicine for CVD Prevention intervention was developed as a theory-based primary care physical activity promotion pathway for people with increased CVD risk. This study examines mechanisms of change within in a single-group pilot study of the intervention.

**Methods:** Baseline and 3-month data were collected on objective and subjective PA, PA determinants from the Health Action Process Approach and Self-Determination Theory, and measures of engagement with intervention content. Eighty-three people with increased CVD risk took part in the study. Missing follow-up data were multiply imputed and pooled multivariate regression models examined predictors of response to the intervention.

**Findings:** Baseline levels of determinants explained 38.5% of the variance in changes in moderate-to-vigorous PA. Relative CVD risk, perceived barriers to PA, identified regulation and depressive symptoms at baseline were significantly associated with changes in PA.

**Discussion:** This process evaluation identified baseline characteristics that were associated with response to the Movement as Medicine for CVD Prevention intervention. Future research could evaluate whether screening tools based on these variables could identify people likely to respond to similar interventions.

## **Parents' intention to vaccinate their daughters against HPV in Greece: the use of COM-B model**

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**Background:** The study used the COM-B model and the Theoretical Domain Framework to identify the main factors influencing Greek parents' intention to vaccinate their 11-18-year-old daughters against HPV.

**Methods:** A national cross-sectional study took place from September 2021 to March 2022 among a representative sample of parents/guardians. A probabilistic multi-stage group sampling technique was applied. 6329 students in 48 selected secondary schools received closed envelopes with the questionnaire they handed over to their parents/guardians. 3205 questionnaires were returned (50.6% response rate) referring to 4697 daughters. Descriptive statistics and binary logistic regression models were used to analyse the data.

**Findings:** 1358 parents had not vaccinated their single daughter or any of their daughters. 448 (33%) of them reported they did not intend to proceed to vaccination. In the first logistic regression model on Capability, TDF components of knowledge of HPV and the vaccine ( $p < 0.0001$ ) and behavioral regulation ( $p < 0.0001$ ) were significantly associated with parental intention. In the second model on Opportunity, the influence of experts TDF component ( $p < 0.0001$ ) was associated with intention. Finally, in the third model, the TDF components referring to beliefs ( $p < 0.0001$ ), emotions ( $p < 0.0001$ ) and the reinforced actions of the state ( $p < 0.0001$ ) significantly predicted parental intentions.

**Discussion:** The specific COM-B model's components seemed to contribute to parents' intention to vaccinate their daughters; thus, they could feed interventions to enhance HPV vaccination intentions so that Greece meets the WHO objective for 90% vaccination coverage of girls up to 15 years old.

## **Self-Perception of Aging and Engagement in the context of chronic diseases**

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The worldwide increase in the elderly population presents significant public health challenges, particularly regarding the management of chronic diseases among older individuals. Engaging patients in their healthcare has become necessary for reducing medical costs, enhancing service efficiency, and promoting healthier lifestyles.

The concept of Self-Perception of Aging (SPA) has emerged as a pivotal research area due to its critical role in enhancing the adoption of health-promoting behaviours and influencing the adjustment to chronic illness, thereby significantly impacting health outcomes.

Grounded in the theoretical frameworks of Life Span Perspective, Common Sense Model of Illness Representation, and Patient Health Engagement (PHE), this study explores the pathways through which SPA and Illness Representation (IR), another well-established health-related factor, jointly influence the quality of life (QoL) of older individuals with chronic diseases, assessing the mediating role of patient engagement in healthcare.

As part of the Age-It project, which is aimed at identifying psychological determinants for healthy aging in the context of chronic conditions, this preliminary study intends to assess the associations between SPA, IR, PHE, and QoL among older adults who are living with chronic illnesses. With a quantitative cross-sectional design, data from individuals aged 60 years and over will be collected. Preliminary results will be discussed. Findings may offer valuable contributions for improving health-promotion interventions aimed at the elderly with chronic illnesses. Strategies could be markedly enhanced by incorporating psychological aspects of aging and promoting a comprehensive view of aging that acknowledges both challenges and opportunities for growth.

## Individual drives to cancer screening attendance: a novel instrument to assess motivations

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**Background.** Due to the importance of early cancer detection in reducing mortality and severity of the illness, understanding the psycho-social determinants of cancer screening (CS) attendance is pivotal. Among the constructs providing a broad picture of the processes leading individuals to adhere, literature has highlighted the importance of cognitive and emotional factors. Still, specific motivational components have received less attention. Thus, this study aims to develop and address the varied motivations underlying participation in CSs.

**Methods.** A convenience sample of 591 participants pertaining to the target population of colorectal, cervical and breast CSs filled in an online questionnaire assessing the items formulated ad hoc to catch the motivation, as well as an adaptation of the Treatment Self-Regulation Questionnaire adapted to CS participation, the Positive and Negative Affect Schedule and a measure of attitude towards CSs.

**Findings.** Results from EFA revealed a six-dimensional structure encompassing self-care motives, caring for loved ones, vicarious experience of cancer, socially and institutionally-endorsed motives, celebrity-endorsed motives, and death- and cancer-related fears. Subsequently, a CFA demonstrated adequate fit indices and supported the superiority of the six-factor structure without a second-order factor (CFI = .91; TLI = .91; RMSEA = .06; SRMR = .05). Correlations with the Treatment Self-Regulation Questionnaire dimensions suggested adequate convergent validity. Concerning divergent validity, all correlations with attitude and positive and negative affects were small or non-significant.

**Discussion.** The results sustain the robustness and validity of the proposed scale, providing a valuable tool for understanding a diverse set of motivations underlying CS attendance behaviours.

## **Development of the Indonesian Capabilities, Opportunities, Motivations, Behaviour (COM-B) Questionnaire**

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**Background:** The study examines the psychometric properties of the Indonesian COM-B questionnaire and its cultural appropriateness as an instrument for measuring perceived capabilities, opportunities, and motivations in relation to behaviour change in Indonesia.

**Methods:** The questionnaire was developed through a systematic (forward-backwards translation) and a cognitive debriefing. The questionnaire was delivered to 3205 young adult smokers (aged 20-45) in Indonesia. The Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were generated to identify and validate the underlying factors of the questionnaire. Logistic regression and Average Marginal Effects were utilised to assess the validity.

**Findings:** Participants showed a good impression and understanding of the translated questionnaire. Factor analysis revealed significant loadings in a single factor (Eigenvalue value =3.803 and Measuring of Sampling Adequacy (MSA) =0.892. The model demonstrated  $X^2(9) = 272.558$  ( $p < .001$ ), Comparative Fit Index (CFI) =0.972, and Tucker-Lewis Index (TLI) =0.953, indicating that the model had a very good fit. The internal consistency was high, with Cronbach Alpha =0.888. Furthermore, a logistic regression indicated that scores from COM-B Questionnaire were significant predictors of previous attempts to quit smoking (coefficient =.0146,  $p < .05$ ). The Average Marginal Effects (AME) value indicated that a one-unit change in the score of COM-B was associated with a significant increase of 0.17% of previous attempts to quit smoking [CI 95%, .0003, .00031].

**Discussions:** This study offers evidence to support the reliability and validity of the Indonesian COM-B Questionnaire as a valuable instrument for clinicians and researchers to comprehend behaviour change in Indonesia.

## **Protecting pluralism or committing to consensus? Risks and opportunities of ontologies in behavioral sciences**

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### **Purpose:**

This roundtable will introduce the tension between the need for a shared vocabulary within and between disciplines and the need for conceptual pluralism, critically reflect on current approaches (e.g., classification systems like ontologies and taxonomies) and discuss ways to navigate this tension with the audience.

### **Objectives:**

Exploring the contradiction between the need for clear concepts on the one hand, and the need for (ontological / conceptual) pluralism on the other

Presenting current initiatives that provide guidance on specifying and defining concepts in research

Critical reflection on current approaches to specifying and defining concepts in health psychology

Discussing further ways to navigate these differences with the audience

### **Rationale:**

A lack of shared vocabulary within a discipline can lead to research being inefficient and difficult to find and collaboration being hindered when different words are used to mean the same thing. On the other hand, results can be misinterpreted and aggregated incorrectly when the same word is used to mean different things. An approach to solve this issue is to attempt to establish a shared vocabulary, for example using taxonomies. In recent years, ontologies have received increasing attention, primarily because they are machine-readable, interoperable (e.g., can be integrated with other ontologies) and used by an array of different applications.

However, overreliance on one or few dominant paradigms carries real risks for the progress of science, including (1) limiting the amount of perspectives we can take, (2) oversimplifying complex phenomena (3) inhibiting innovation that could take place by deviating from that paradigm and (4) centralizing perceived epistemic authority, and thus excluding voices of poorer or otherwise under-resourced researchers. This is even more so the case if the shared paradigms are primarily developed by individuals with a shared sociodemographic background and based on studies that primarily investigate individuals with a shared sociodemographic background, if those backgrounds do not represent the overall research community or target population.

During the roundtable, the conveners will introduce the participants to this tension, and engage with the audience concerning further benefits and risks associated with establishing a shared vocabulary vs embracing conceptual pluralism. Some current initiatives will be introduced to the audience (such as the Behavioural and Social Sciences Ontology [BSSO] Foundry and the Decentralized Construct Taxonomy [DCT]). Lastly, we will discuss ways to navigate this tension.



# The effectiveness of digital behaviour change interventions for improving liver disease outcomes: A systematic review

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## Background:

In 2023 liver disease was ranked as the 11th leading cause of mortality, accounting for 1 in 25 deaths worldwide. The management of liver disease relies on health behaviour change, including diet modification, alcohol reduction, and increased physical activity. However, this represents a challenge due to growing prevalence. Digital management approaches are increasingly used to address this issue. However, the effectiveness of digital interventions for liver disease is unclear. This systematic review aimed to determine the effectiveness of digital interventions and identify their active ingredients.

## Methods:

Six databases were searched to identify digital interventions targeting changes in behaviours to improve liver disease related outcomes in adults aged  $\geq 18$  years diagnosed with any liver disease. A taxonomy of theory-linked behaviour change techniques and the TiDIER framework were used to extract and report intervention content.

## Expected results:

Fourteen studies, involving seven different types of liver disease were identified. Behaviours targeted included diet and physical activity (n=5), physical activity alone (n=4), alcohol consumption (n=2), self-care (n=2), and disease monitoring (n=1). Delivery was via app (n=7), website (n=4), text-message (n=2), or multiple modes (n=1). Duration ranged from one 20-minute session to continuous access for 48-weeks. Six studies reported improvements in target behaviours, whilst ten reported improvements in liver disease related outcomes. BCTs reported included social support (unspecified), self-monitoring of behaviour, feedback on behaviour, and prompts/cues.

## Current stage of work:

Data synthesis.

## Discussion:

Findings will provide guidance for the development of future digital behaviour change interventions for liver disease management.

## **A realist evaluation of a self-management intervention for people with low back pain using SelfBack**

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Using mobile phone applications (mHealth) to help people self-manage chronic health conditions appears to be a good, affordable, and scalable option. However, reluctance to take up mHealth tools from both patients and providers may hinder implementation in clinical practice. The SelfBACK app was developed to help people with low back pain (LBP) self-manage their condition. An RCT showed positive results in relation to cost-effectiveness of the app. Therefore, it is crucial to understand how the app may be implemented in clinical practice. Using a realist evaluation, we aimed to elucidate under which conditions and how SelfBack works when used in a Danish primary care setting (chiropractors).

To identify the contextual factors and mechanisms related to outcomes of app usage, we proposed a program theory consisting of 10 CMOs and conducted realist interviews with 12 chiropractors and 10 patients with LBP who were offered to use the app. Data were analyzed using a realist-informed Thematic Analysis followed by refinement of the CMOs and consolidation of findings.

Preliminary findings indicate chiropractors were motivated to recommend the app as a result of wanting to contribute to research and develop clinical practices, but organizational and personal factors may impede use of the app. Patients with pre-existing self-management strategies were more likely to take up the app. However, more guidance is needed regarding how to motivate patients to engage with it.

While apps remain a promising new care delivery tool, there are additional factors such as patient and provider support that need to be addressed.

## Relationship of personality with body image and pain coping strategies in orthopedic surgery patients

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**Introduction:** Orthopedic surgeries often entail significant physical and psychological challenges for patients, including altered body image and the need to cope with post-operative pain. This study aims to verify the associations between dysfunctional personality traits and body image, as well as pain coping strategies, in orthopedic surgery patients. Understanding the relationships between these variables is crucial for optimizing patient outcomes.

**Methods:** Fifty-five patients aged 18-72 undergoing orthopedic surgery participated in this study within 72 hours post-operation. Measures included the Personality Inventory for ICD-11 (PiCD), Multidimensional Body Self Relations Questionnaire (MBSRQ), and Pain Coping Strategies Questionnaire (CSQ). Stepwise progressive regression analyses were used to examine associations between personality traits, body image, and pain coping strategies.

**Findings:** Dysfunctional personality traits were significant predictors of both pain coping strategies and body image evaluation. Specifically, disinhibition, negative affectivity, and anankastia were associated with catastrophizing, declaring coping, and increased behavioral activity ( $R^2$  ranging from .064 to .512,  $p < .01$ ). Regarding body image, dissociality predicted appearance and fitness evaluations ( $R^2 = .129$  and  $.11$ ,  $p < .01$ ) while anankastia predicted health and illness orientation ( $R^2 = .66$  and  $.62$ ,  $p < .05$ ). Negative affectivity was associated with weight assessment ( $R^2 = .90$ ,  $p < .05$ ).

**Discussion:** These findings underscore the importance of considering personality factors in the context of recovery from orthopedic surgery. Understanding specific personality risk and protective factors can help create targeted interventions to promote positive body image and effective pain coping strategies, which could enhance the well-being and recovery process.

## **‘Stickiness’: A framework integrating (in)flexibility, repetition, and fixation. Measure development and application to Chronic Pain**

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People can feel ‘stuck’ in pain and report poorer outcomes. Concepts reflecting inflexibility, repetition and fixation are inherent to broader psychology domains and may contribute to feeling ‘stuck’. To explore this, we present the ‘stickiness’ framework, cognitive-behavioural factors encompassing: 1. (In)flexibility of thought, 2. (In)flexibility of behaviour, 3. repetitive thinking, and 4. attentional focus/fixation. We aim to develop new general and pain specific stickiness scales and explore differences in stickiness between those with and without pain. 1000 adults from Prolific crowdsourcing platform will complete an online questionnaire of existing measures conceptually aligned to Stickiness (Cognitive Flexibility Inventory, Detail and Flexibility Questionnaire, Cognitive Immunization Scale, Perseverative Thinking Questionnaire, Updated Dogmatism Scale, Personalised Psychological Flexibility Index, Attentional Control Scale), and two new measures of general and pain-specific stickiness. We will conduct exploratory factor analysis on these existing and new measures. We will use ANOVA to explore individual differences in stickiness between those with no pain, acute pain, and chronic pain. Analysis is exploratory with no predefined latent structure for existing measures; however, we anticipate a factor structure aligned with our framework in both new stickiness measures. We predict greater levels of stickiness in chronic pain. Ethical approval gained, preparing for data collection. Stickiness and its measurement represent a novel approach to understanding challenges associated with pain. We plan future research to explore stickiness as: 1) a predictor of pain outcomes, 2) a state and a trait, 3) a risk or maintaining factor. We envisage wider application of stickiness to other health conditions.

## **User Preferences for an mHealth Intervention to Promote Physical Activity Among Adults Living with Asthma**

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**Background:** It is important to find alternative approaches to promote physical activity (PA) in adults living with asthma to improve and increase access to help and support. Mobile Health (mHealth) technology provides an opportunity to deliver a range of behaviour change techniques in a scalable and convenient way. The purpose of this study was to share initial ideas for an mHealth intervention developed to promote PA in adults living with asthma, with the intended end-users.

**Methods:** In this qualitative vignette-based study, people living with asthma (N=27) took part in focus groups to identify potential useful content and features. Transcripts were analysed using framework analysis.

**Findings:** Participants wanted an app to facilitate realistic goal setting and provide feedback so progress could be made. PA suggestions need be tailored to the user's interests, asthma status, and physical limitations. Providing information about managing symptoms and being active safely with asthma could reduce fears and anxieties about PA. Participants suggested enhancing asthma specific content by incorporating the ability to track and monitor asthma outcomes and medication usage. Including social support, competitions, and rewards, such as digital badges or trophies, could sustain engagement in the long-term.

**Discussion:** Future research should focus on developing a multifunctional mHealth platform that helps with all aspects of asthma self-management, with PA being a component of this. The BCTs Goal Setting, Action Planning, Feedback on Behaviour, Graded Tasks, and Information About the Health Consequences of the Behaviour, as well as techniques relating to Self-Belief should be considered for inclusion.

## **Behaviour Change Techniques for opioid reduction in Chronic Non-Cancer Pain in Primary Care**

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Despite limited efficacy, patients are prescribed opioids for chronic non-cancer pain (CNCP). Guidelines recommend the safe tapering of opioid prescriptions when they are no longer effective or there is a risk of harm. Given that these patients are mostly treated in primary care there is a need to ascertain the efficacy of interventions and techniques implemented in this setting.

To evaluate the effectiveness of interventions to reduce opioids in patients with CNCP in primary care and to identify the effectiveness of behaviour change techniques (BCTs) applied.

A comprehensive search was conducted in Medline, Cinahl and Web of Science databases. Studies were included if opioid reduction was an outcome or opioid dosages were included. The BCT Taxonomy v. 1 was used to identify techniques employed in the interventions.

Thirteen studies were examined, seven were RCTs and six cohort studies with a total of 3130 patients. The studies used various methods for tapering and intervention delivery. Upon quality assessment, one study was deemed strong, two were moderate. Eight interventions demonstrated success in opioid tapering. A broad spectrum of BCTs was identified, with Credible Source and Instruction to perform the behaviour being the most practised across the interventions. Behaviour Substitution was repeated across the effective interventions tapering opioids.

Consideration of how BCTs are implemented may help identify how BCTs enhance interventions trying to wean opioids for CNCP patients. This is the first review to identify BCTs that may contribute to supporting patients in tapering opioids in CNCP in primary care settings.

## Unraveling Emotion: Exploring Alexithymia in Elderly Individuals with Mild Cognitive Impairment

Giulia Marselli<sup>1</sup>

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**Background:** The term “alexithymia” is used to describe a condition characterized by difficulties in verbalizing affect. Some studies have shown that age is strongly associated with alexithymia, since higher alexithymia scores are often reported in older adults. However, the degree to which alexithymia is associated with cognitive deficits in patients with conditions such as mild cognitive impairment (MCI) is unknown.

**Methods:** 304 adults (mean age: 62 years; SD: 7.8) participated in the study: 174 were healthy controls (HC), while 60 had amnesic MCI (aMCI), and 70 had non-amnesic MCI (naMCI). A comprehensive neuropsychological assessment was used to assess cognition, while the Toronto Alexithymia Scale (TAS-20) was used to measure alexithymia.

**Results:** ANOVA showed significant differences between groups in the TAS-20 score ( $F=5.42$ ,  $p=.005$ ). Indeed, aMCI had a significantly higher total score (mean: 46.6; SD: 12.8), when compared to both naMCI (mean: 41.6; SD: 11.3) and HC (mean: 41.0; SD: 11.2). In addition, the TAS-20 score was significantly and negatively correlated with general cognition, attention, memory, language, visuo-spatial abilities and executive functioning.

**Discussion:** The present study suggests that a decline in cognition may be associated with an inability to identify and describe emotions in older adults.

**Take Home Message:** By supporting emotional expression, we could potentially target cognitive decline in elderly with MCI.

## **A Qualitative study: How middle-aged women managed their long covid symptoms in the UK**

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**Background:** The research aimed to explore how middle-aged women, who contracted covid during the first wave of the pandemic, managed and treated their long covid symptoms.

**Methods:** An interpretative phenomenological analysis approach explored the lived experience of 9 middle-aged women managing long covid symptoms and health seeking behaviours. Participants were recruited from long covid Facebook groups. Semi-structured interviews were conducted and recorded remotely using MS Teams. The sample consisted of eight women from the UK and one from Poland, and their ages ranged from 42-59.

**Findings:** Four themes were generated from the data: 1) inequality and inconsistent medical treatment; 2) uncertainty and ambiguity of managing long covid symptoms; 3) managing other people's expectations and, 4) perceptions of long covid and the changing identity. The findings indicated mistrust in health care services to provide adequate support and individualized treatment plans. This lack of support led the women to self-advocacy and to seek alternative support and treatment such as the lightning process, spoons theory and pacing.

**Discussion:** The study raised questions about the possible unfair treatment (medical misogyny and medical gas lighting) of women seeking medical care for long covid. Highlighted how some symptoms were misattributed as mental health and how discrimination from health care professionals could contribute towards stigma and prevent appropriate diagnosis and treatment. The study concluded with recommendations for service improvement such as validating the patient's pain and the use of evidence-based therapeutic practices such as mindfulness. The study has implications for women's health (SIG's activity).



## **Not by choice: A qualitative study of barriers and facilitators to effective mandatory rehabilitation treatment**

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**Background:** In Germany, statutory health insurance and the Federal Employment Agency can request that people on long-term sick leave apply for rehabilitation treatment. In the event of non-compliance, social benefits will be discontinued. Hence, in these cases, the attendance of rehabilitation treatment becomes mandatory. Previous research proposes this may negatively affect rehabilitation success. The purpose of the study was to conduct an in-depth exploration of patients' and key stakeholders' views, attitudes, and experiences, informing the development of a tailored digital pre-rehabilitation intervention.

**Methods:** Individual semi-structured interviews were conducted in Germany with a sample of future and current patients (in total n = 15) and stakeholders (n = 17) from statutory health insurance, Federal Employment Agency, social associations, rehabilitation clinic doctors and staff, who all have contact with the patient group of interest. The recorded data was transcribed and is being analyzed using qualitative content analysis.

**Expected results:** Preliminary results highlighted major differences in support provided and between patients. Hence, there is not one homogeneous target group. As the respective needs vary greatly, the pre-rehabilitation intervention must provide individual needs-based support.

**Current stage of work:** Following deductive coding with a coding frame developed through thematic analysis, we expect to gain a nuanced and systematic understanding of these individual needs, barriers, and facilitators through further inductive fine coding.

**Discussion:** Applying the knowledge translation approach, these results are valuable for the aspired intervention but can also contribute to more effective health services, ultimately improving the health and well-being of people with long-term illnesses.

## Mapping the patient journey: Lessons learned from Life Grid Interviews

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**Background:** Chronic illnesses with poorly understood or medically unexplained symptoms present significant challenges to both patients and healthcare providers. The present study employed the Life Grid method to explore patients' life stories and healthcare journeys, focusing on the identification of barriers and facilitators to their care. We reflect on the lessons learned through the conduct of this study.

**Methods:** Twelve adults with conditions like Fibromyalgia, ME/CFS, and Ehlers-Danlos Syndrome participated in Life Grid interviews. Patient narratives were analysed using Interpretative Phenomenological Analysis (IPA). The content of accompanying grids was used to identify key patient pathways, with a particular focus on timelines, referral and investigation practices, and services used.

**What went wrong:** The Life Grid's participatory nature led to interviews of unpredictable depth and duration. The significant emotional impact on participants and researchers was unanticipated, with many interviewees finding the process transformative yet demanding. Aggregating, analysing and representing Life Grid data remains a challenge as it is difficult to maintain narrative richness while distilling insights about the typical patient journey. We recommend incorporating methodological reflection within the research process as this allows for the continual adaptation and refinement of approaches, particularly when employing novel research tools.

**Conclusions:** Results suggest that the Life Grid Interview is a powerful and flexible research method which enables a comprehensive exploration of health across the lifespan. The challenges encountered during the conduct of the study highlight the importance of flexibility in participatory research and illustrate the emotional work involved for both the researcher and participant.

## **Identifying the underrecognition of childbirth-related post-traumatic stress disorder among the public and mental health professionals**

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**Background:** Childbirth-related posttraumatic stress disorder (PTSD) poses significant challenges, impacting both mothers and infants. This work investigates whether childbirth-related PTSD is less recognized than PTSD caused by other index events.

**Methods:** In two preregistered experimental studies we investigated the public and professional perception of PTSD resulting from childbirth compared to other traumatic events (i.e., sexual assault, car accident, terror attack, and an earthquake).

**Findings:** Study 1, conducted among the general population in the U.S. revealed that a woman depicted as experiencing PTSD symptoms due to childbirth was less likely to be recognized and legitimized than a woman with the same symptoms resulting from other traumatic events. Study 2 extended this finding, demonstrating that mental health professionals worldwide are also less inclined to diagnose PTSD when childbirth is the index event.

**Discussion:** Due to the importance of social recognition in the treatment of PTSD, the findings underscore the urgent need for heightened awareness and education regarding childbirth-related PTSD to bridge the recognition gap among the general population and mental health professionals.

## **Identifying psychosocial barriers and facilitators of genetic services uptake: A systematic review of qualitative studies**

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**Background:** Despite evidence supporting genetic testing's utility in hereditary cancer risk management, uptake remains low among these patients and their at-risk relatives. This systematic review aims to identify the psychosocial barriers and facilitators associated with uptake of genetic counseling services and/or genetic testing (GC/GT).

**Methods:** A systematic literature search was performed across six databases in June 2023, limited to studies published in English from 2010 onwards. Qualitative studies interviewing hereditary cancer patients, their relatives, and/or healthcare providers to identify psychosocial barriers and facilitators associated with uptake of GT for hereditary cancer syndrome were included. Thematic analysis was conducted on extracted data from 41 eligible qualitative studies.

**Findings:** 54% of the studies were from the United States and 75% of the participants were female. 14 psychosocial barriers and nine facilitators to the uptake of genetic testing services were identified. The most frequently cited psychosocial barriers to genetic testing uptake were "emotional roller coaster", "threat of genetic discrimination", and "no perceived benefit of genetic testing". In contrast, the most common facilitators were "concern for family", "easing personal worries", and "knowledge is empowering". Further analysis of data post-2015 revealed increased knowledge and awareness of GC/GT, particularly regarding utility of testing in assessing cancer risk in carriers and their families.

**Discussion:** Our findings reveal complex, multifaceted factors affecting GC/GT service uptake, some with dual effects. These findings are important for development of personalized approaches to delivering GC/GT services. Further research should explore these factors across diverse populations to better tailor culturally sensitive interventions.

# **Systematic Review of Decision Fatigue in Medical Practice: Antecedents, Consequences, and Theoretical Perspectives**

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**Background:** The demanding nature of medical decision-making (DM) renders physicians susceptible to decision fatigue (DF), a condition that can lead to impaired judgment, decreased diagnostic accuracy, and increased likelihood of medical errors. The dispute between theoretical principles underlined to DF, based on the Strength Model of Self-Control and Process Model of Ego Depletion, is still under debate. At the same time, a previous review identified a lack of consent on its theoretical definition. The present systematic review outlines the antecedent and consequent aspects of DF in medical contexts. **Method:** Six databases were systematically searched applying a pre-settled combination of terms/MESHterms. Two authors independently judged paper inclusion according to a-priori criteria and PRISMA guidelines were applied. **Results:** 16 quantitative studies, 5 qualitative studies, 2 mixed methods studies, and 17 narrative papers have been included. Four papers directly mention the concept of DF and only one attempts to provide an operationalization. The review identified several protective and risk factors regarding DM stressors, emotional processes, and DM contextual factors. **Conclusion:** DF has been studied mostly indirectly, inferring its presence in the case of impulsive or avoidant DM. Only a few studies directly measure DF without providing a full conceptualization and operationalization of the construct. Future development involves a comprehensive definition of DF, its measurement, and a test of the principles of the two main theories.

## **Barriers and enablers to screening and treatment for Hepatitis C among Egyptian immigrants in Canada**

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**Background:** Despite availability of effective screening and treatment for Hepatitis C (HCV), the uptake remains suboptimal. Immigrants from HCV endemic countries comprise 35% of cases in Canada. There is an average 10-year diagnosis delay, causing poor health outcomes and high healthcare system costs. Therefore, we aimed to understand the barriers and enablers to HCV care among immigrants. Because of Egypt's high HCV infection rates and Ottawa's large Egyptian community, this community was chosen.

**Methods:** We established a Community Advisory Group to provide advice on all stages. We used a qualitative-descriptive design guided by the Theoretical Domains Framework (TDF) to perform semi-structured interviews with immigrants from Egypt (with or without HCV) in Ottawa. The interviews were double-coded according to TDF and key findings were identified.

**Findings:** We interviewed 18 individuals, seven with a history of HCV who were treated in Canada. Most without a history of HCV would not go for screening in absence of major symptoms, because they believed they should resolve their own minor symptoms and that doctors would not take them seriously. Perceived stigma about HCV and ethnocultural discrimination discouraged some respondents to seek care. Difficult access to family doctors and long wait times were mentioned as barriers by many. Those who received HCV care recalled a positive experience and were committed to follow up visits.

**Discussion:** We identified key factors contributing to the low uptake of HCV care among Egyptian immigrants in Canada. These findings will inform a theory-based intervention to optimize HCV care in immigrant communities.

## **Patients' perceptions of quality of care from public and private primary care providers in Singapore**

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**Background:** Singapore's recently introduced Healthier SG programme includes incentives for patient enrolment with a specific primary care clinic. How Singaporeans respond to patient enrolment is potentially related to their perceptions of public and private sector providers. We explored patients' perspectives of quality of care and its relationship to choice of primary care providers.

**Methods:** We conducted semi-structured interviews with 29 adults before and early in Healthier SG. Maximum variation purposeful sampling was used to select interested persons from health and non-health sources. Data were analysed with reflexive thematic analysis.

**Findings:** Participants assessed quality of care using a range of factors—including diagnostic accuracy and efficiency, physicians' interpersonal skills, waiting times, service availability, and the cost of care—with factor salience generally varying by individual health needs and personal preferences. Care that felt rushed or mechanical was frequent cited as lower quality. Both private and public providers were identified as high quality due to comprehensive care availability, although in different ways. Private primary care providers were described as providing higher quality care than public providers when time factors, diagnostic expertise, and doctors' interpersonal skills were prioritised. Participants desired affiliation with physicians delivering acceptable quality of care, although this would not be the only factor driving provider choice.

**Discussion:** Patients' perceptions of quality of primary care were assessed using multiple factors, influenced by individual needs, preferences, and expectations. Leveraging these nuances around quality of care and their importance to provider choice would help ensure the success of patient enrolment under Healthier SG.

# Having a more compassionate doctor does not mean patients will feel more cared for

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## Background and Objective

Compassion is central to healthcare – it is ethically mandated, valued by patients and physicians, and predicts better outcomes. However, while research is increasing, studies have focused on providers, assuming that increasing compassion among providers will lead to patients feeling more cared for. Empirically testing this assumption was the broadest aim of the current project.

## Methods

An anonymous cross-sectional online survey study conducted in Aotearoa/New Zealand recruited 1065 patients from the community with 219 physicians recruited based on referrals. Patients provided demographic and health variables and their experience of compassion while physicians independently completed measures of trait compassion and compassionate clinical behaviours. Linear regression was used to identify patient and doctor-related predictors of the patient experience of compassion.

## Results

Patient age ( $\beta = 0.08$ ,  $p < 0.05$ ) and being diagnosed with chronic illness ( $\beta = 0.08$ ,  $p < 0.05$ ) predicted greater compassion, whereas better self-reported health ( $\beta = -0.12$ ,  $p < 0.01$ ) predicted less. However, patient predictors only explained 1.7% of the variance in experienced compassion. Reports of compassion were greater when physicians were younger ( $\beta = -0.15$ ,  $p < 0.05$ ), but physician trait compassion was unrelated ( $p > 0.05$ ) and compassionate behaviour was only marginally significant ( $p = 0.06$ ).

## Conclusions

These data imply that the experience of a doctor's compassion by the patient might be independent of the experience of caring in the doctor. Consequently, this work implies a need to supplement the study of compassion among providers with an equally systematic, rigorous, and empirically-based study of the patient experience of care.



## **Think global, act local: Health psychologists' engagement in local impact-oriented sustainability projects**

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### **Purpose:**

Health Psychology has generated theories, evidence, and tools that can be very valuable in tackling current local and global challenges. This roundtable highlights local sustainability projects of health psychologists with a focus on direct real-world impact on health and sustainability, and in collaboration with other stakeholders (e.g. cooperating with canteens, citizen assemblies, local employers on changing diets, active mobility, or support for local sustainability policies). It showcases the reciprocal relationship between theory and practice, emphasizing how theoretical insights inform practical applications but also how practice can inform research in health psychology. These local solutions can be a blueprint for addressing health and sustainability challenges in other locations and, using a bottom-up approach, eventually show how health psychological research can contribute to “act local, think global”.

### **Objectives:**

Share examples of impact-oriented local projects to inspire and facilitate collaboration across European countries.  
Discuss and collect lessons learned, practical tips, and research/ intervention materials to support the success of future similar projects.  
Provide a platform for networking, fostering connections among health psychologists and other stakeholders interested in implementing and evaluating local sustainable development projects.  
Encourage active participation of the health psychological community in tackling local challenges, which are part of the puzzle of global changes.

### **Rationale:**

This roundtable addresses the imperative of implementing the sustainable development goals on a local level, particularly through the lens of health psychology. By showcasing projects with a strong emphasis on local impact and collaboration with local stakeholders, the session aims to inform, inspire, and facilitate mutual learning. The discussion will contribute a new perspective on how health psychology can actively shape societal well-being and a more sustainable future from the bottom-up, aligning with this year's conference theme.

Association with a SIG: Equity, Global Health and Sustainability

## **Navigating change for occupational wellbeing: pediatricians' perspectives on telehomecare integration in an Italian pediatric hospital**

Chiara Guglielmetti<sup>1</sup>, Maria Adele Piccardo<sup>1</sup>, Marta Marsilio<sup>1</sup>, Martina Pisarra<sup>1</sup>, Letizia Magnani<sup>1</sup>, Chiara Bernuzzi<sup>1</sup>

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**Background:** Telemedicine holds the promise of reshaping conventional medicine, offering a more sustainable practice for healthcare systems and patients. However, the implementation process entails changes in healthcare professionals' knowledge, skills and working practices, potentially undermining their occupational wellbeing. Under a project assessing the economic, organizational, and psychological impact of a telehomecare service in an Italian pediatric hospital, this study was conducted to investigate pediatricians' expectations regarding benefits, concerns, and changes associated with the integration of telehomecare into their practice. **Methods:** All pediatricians involved in the study (N=13) participated in semi-structured interviews. Data were analysed using thematic analysis. **Findings:** Although participants anticipated numerous benefits in patients' experiences and healthcare structures, they expressed concerns about the risk of losing key clinical information and potential difficulties for parents in using the device correctly. Anticipated changes in their working practice included a potential increase in workload and the need for adequate spaces and resources. Furthermore, participants expected alterations in their relationships with patients and parents, recognizing the relevance of personal characteristics, such as the ability to engage patients and parents. **Discussion:** By identifying how pediatricians preconceived the adoption of telehomecare in their working practice, this study contributes to telemedicine literature and provides valuable insights into designing programs to assist clinicians in managing the changes related to the adoption of telehomecare service. As change is widely recognized as a potential source of work-related stress, providing effective support to pediatricians is crucial to sustain their occupational health and ensuring the successful integration of telemedicine.

## **Determinants of patient satisfaction with telemental health services: Representative cross-sectional evidence from Germany**

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**Background:** Increasing patient satisfaction with telemental health services is essential for widespread implementation and consistent utilization in the future where the services could be an effective alternative to in-person mental health services. Nevertheless, only little is known about key determinants of patient satisfaction with the services. Therefore, we aimed to explore determinants of patient satisfaction with telemental health services.

**Methods:** A cross-sectional, quota-based online survey was conducted in December 2023 in Germany. The sample included individuals (18-74 years), who had received telemental health services since March 2020 (n=961). Satisfaction with video, telephone and asynchronous services was measured using the Telemedicine Satisfaction Questionnaire or the Client Satisfaction Questionnaire. Associations of various determinants with satisfaction were tested using multiple linear regression.

**Findings:** Satisfaction rates for telemental health services were high in our sample. A positive patient attitude towards teletherapy and fear of COVID-19 as well as a positive provider attitude and skills for using the services were positively associated with satisfaction in all user groups (each  $p < .05$ ). Moreover, the patient's education, employment status, relationship status, certain personality factors, technology commitment, loneliness, self-efficacy, and internet connection quality were associated with satisfaction in at least one group.

**Discussion:** Patient satisfaction with telemental health services may be particularly associated with psychosocial characteristics of patients, which should be considered when choosing target treatment groups. Furthermore, the provider's attitude towards and skills for using the services seem to be strongly associated with patient satisfaction. Teletherapy training and support for providers should be prioritized to promote patient satisfaction.

## **Rates and Predictors of Engagement and Attrition from Digital CBT for Insomnia: A meta-analysis**

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**Background:** Digital Cognitive Behavioural Therapy for Insomnia (dCBTi) is an effective and scalable treatment option for insomnia that is currently being used in routine clinical practice and could meet population level health needs. However, like most digital health interventions, dCBTi is associated with relatively high attrition rates and low engagement that often differs across studies and serve to inhibit implementation and limit effectiveness. **Aim:** The present study aims to estimate engagement with, and attrition from, dCBTi across the evidence base, and to investigate factors relating to the target population (e.g., insomnia severity, comorbidities), the study design and setting (e.g., 'real-world' vs. tightly controlled), and the intervention itself (e.g., number of CBTi components, use of behaviour change techniques) that might predict attrition and/or engagement. **Method:** We will first perform a systematic search of the literature to find relevant studies (including a search of the 'grey literature') before using meta-analysis to calculate the pooled engagement and attrition rate (and 95% confidence intervals) across included studies. Moderation analysis will be used to investigate variables that are associated with attrition and engagement. **Conclusion:** The proposed research will not only provide an accurate estimate of attrition from, and engagement with dCBTi, but will also further our understanding of factors that might be more or less likely to lead to attrition or low engagement. We anticipate that the findings from the proposed study will allow adaptations and enhancements of dCBTi interventions with lower levels of attrition and better engagement.

## Language Patterns in Depression: A Closer Look at Offensive Language

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**Background:** Previous studies have shown that individuals with depression use more swear words in their private messages on Facebook. However, offensive language encompasses more than just harmless profanity, it can also take the form of abusive language, such as hate speech. In this work, we aim to provide a comprehensive analysis of offensive language usage among individuals with depression.

**Methods:** We analyzed offensive language use in a large social media dataset, using posts from the Reddit platform. Our focus was on individuals who mentioned a depression diagnosis online, and a control group of users who made no such mention. The dataset contained 9,210 participants who mentioned a depression diagnosis and 107,274 participants in the control group. We utilized machine learning models to identify offensive language in the posts of participants, and we categorized the type of offensive content and whether it targeted other individuals.

**Findings:** Our research indicated that individuals who have self-mentions of depression diagnoses tend to use more offensive language in their posts, as compared to the control group. However, most offensive language is not targeted toward other individuals, it does not represent hate speech.

**Discussion:** Our findings are in line with the previous research showing that individuals with depression use more language conveying negative emotions. Our research paves the way for further exploration of the language patterns of individuals with mental health issues and future research can be done to study if periods with more frequent offensive language use are associated with worsened depressive symptoms.

## **Feasibility of personalized networks to improve an intervention to reduce or quit cannabis use**

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To address the diverse mechanisms underlying cannabis use, personalized interventions are crucial. This study investigated the perceived usefulness and feasibility of a tailored intervention using Experience Sampling Method (ESM) and personalized networks for individuals seeking to reduce/quit cannabis use.

In a pilot randomized controlled trial involving 26 young adults, both groups received a standard motivational interviewing and cognitive behavioral intervention. The experimental group also completed ESM five times daily for three weeks, which were analyzed using personalized networks and descriptive graphs with an application developed for this study. The results were discussed with the experimental group participants during the first intervention session to better choose coping strategies. Semi-structured interviews were conducted with experimental group participants. The transcripts were analyzed using deductive thematic analysis in ATLAS-ti, based on the Technology Acceptance Model and the Theory of Planned Behaviour.

Preliminary findings suggest that participants generally found the ESM and personalized feedback useful. They gained insights into their cannabis use, found coping strategies, felt motivated to reduce consumption, and collaboratively discussed the feedback in the session. Reasons for lower perceived usefulness included not using cannabis during the ESM and no variation in ESM responses. While participants mostly found the tool easy to use, difficulties arose, e.g., in quantifying ESM items on a scale of 0 to 100. Data collection and interviews' coding is complete, and analyses will be finalized before the conference.

This innovative approach demonstrates promise for personalizing health behavior change interventions. The difficulties identified will guide the optimization of the intervention.

## **In pursuit of closeness and social connection: digital solutions to combat loneliness**

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In Germany, there are increasing reports of perceived loneliness, which is one of the most significant factors in the worsening of stressful mental health conditions such as anxiety and depression, particularly among people with mental illness. As this is often associated with social isolation and limited personal contact, digital applications could be a solution to create social connectedness. However, due to the attention economy, social networks that are intended to generate connectedness promote self-deprecation tendencies among vulnerable target groups and are not very suitable for building reparative social relationships.

Therefore, a systematic review based on the PRISMA scheme will identify studies (duration until summer 2024) that investigate how technically supported closeness and connectedness can be generated, maintained, and consolidated by bundling different strategies, especially in target groups that find it difficult to actively seek and maintain contacts. The studies are analyzed using a narrative synthesis and integrated into a working model.

The analysis indicates which aspects of closeness and connectedness are particularly relevant or in need of strengthening (i.e. which model of closeness and connectedness can be used) for people who find it difficult to actively seek and maintain contact and for people with mental health problems, particularly depressive symptoms. It also shows that digitally supported offers can be helpful, which contribute to strengthening connectedness through elements such as gamification, challenges, and feedback functions adjusted for specific target groups. In this context, there are further potential risks for building closeness and connectedness among people who are not very active themselves.

## **The effects of immersive virtual nature on psychological outcomes: Systematic review and meta-analysis**

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The study of immersive virtual nature has been yielding compelling results in recent years. Data shows that VR is viewed as an innovative and user-friendly tool, and immersive nature is considered to be a pleasant and positive experience, capable of promoting better psychological outcomes, such as lower levels of stress and negative mood. Yet, if immersive virtual nature is to be used to intervene in mental health problems, it is important to systematically synthesize the results of the existing studies and assess its overall effectiveness. For this purpose, we are conducting a systematic review and meta-analysis focused on assessing how effective immersive virtual nature is in improving affect, emotion regulation, stress, mental health, restoration, and well-being among both clinical and non-clinical adults. We have searched Scopus, Web of Science, PubMed, PsycINFO, and PsycArticles for relevant peer-reviewed articles published in English, between 2013 and 2023 (inclusive of January 2023). Out of 16323 initial results, 64 articles were included for full-text screening (which we are currently finishing). The protocol has been registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY; registration number INPLASY202310068), and the study is being conducted according to the “Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)”. We expect the results to show which type of immersive virtual nature yields better psychological results and which variables play an important role in this relationship, thus providing a more integrative and realistic overview of the effectiveness of immersive virtual nature.



## **The aiCARE chatbot: A Smart Tool for Mental Health Screening**

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**Background:** The aiCARE chatbot, accessible via Discord, is designed as a versatile platform capable of integrating any Likert-scale-based screening instrument. This bot underwent evaluation through two synergistic studies; the first detailing its creation and machine learning efficacy, and the second focusing on its psychometric reliability in assessing key psychopathological conditions: anxiety, depression, and post-traumatic stress disorder (PTSD).

**Methods:** In the initial study, we engaged 861 participants across two phases: one for initial testing and the other for data training purposes. The subsequent study involved 773 volunteers who completed traditional online and chatbot-mediated screenings for anxiety, depression, and PTSD.

**Findings:** The AI-driven models demonstrated robust performance in detecting anxiety, depression, and PTSD. User feedback indicated high levels of satisfaction with the chatbot's usability. Comparative analysis revealed that the chatbot's screening metrics—specificity, sensitivity, and psychometric precision—mirrored those of conventional online assessments.

**Discussions:** The aiCARE chatbot stands as a promising tool for automated mental health screening and part of a stepped care mental health system.

## **From pixels to forest: A pilot study on effectiveness of virtual forest bathing**

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This pilot study evaluates the effectiveness of a 30-minute virtual reality (VR) forest exposure, comparing it to VR city exposure among 36 non-clinical adult participants in Slovakia. The study explores the impact of VR forest exposure on stress, self-compassion, self-criticism, and self-protection. Recruitment utilizes [www.ksebe.sk](http://www.ksebe.sk) and social networks.

Questionnaires (Nature Exposure Scale II, Self-Compassion and Self-Criticism Scales, Forms of Self-criticizing/attacking and Self-reassuring Scale, Perceived Stress Scale, Sussex-Oxford Compassion Scale Other-compassion/Self-compassion, and Short version of Scale for Interpersonal Behaviour), including sociodemographic information, will assess participants' psychological states based on their self-rating, while HRV serves as an objective physiological indicator.

Quantitative analysis entails within-subject and between-subject comparisons across three measures (before, after, and follow-up). A mixed model ANOVA and Friedman's test will be used for parametric and non-parametric data, respectively, incorporating covariates. IBM SPSS software will handle data analysis. The study features an experimental (virtual forest) and a control (virtual city) group, randomly assigned through a computer program. Data is anonymized, and informed consent is obtained and signed.

Ethical approval is granted by the Faculty of Social and Economic Sciences ethics committee (part of VEGA 1/0075/24 grant). Data collection is scheduled from February to April 2024.

This study lays the groundwork for future research and introduces a virtual forest bathing option, particularly beneficial for individuals without real nature access, such as patients.

## **Developing and evaluating a chatbot for informed decision-making in National Health Service bowel cancer screening**

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**Background:** Colorectal cancer (CRC) is the fourth most common cancer and the second leading cause of cancer deaths in the UK, yet uptake of CRC screening remains low. Barriers such as concerns about colonoscopy and handling faecal matter often hinder participation. To overcome these concerns, we are developing a chatbot to counter perceived barriers and improve informed decision-making regarding participation in the National Health Service Bowel Cancer Screening Programme.

**Methods:** Chatbot development is through an iterative mixed-methods approach, targeting individuals aged 50-75 eligible for CRC screening. A crowdsourcing survey (n=252) identified screening barriers. Subsequent co-development workshops (n=40) and think-aloud interviews (n=20) with hard-to-reach groups helped refine the chatbot, considering cultural barriers and usability. A forthcoming randomised control trial (RCT) (n=1500) will test the prototype chatbot's impact on screening intentions compared to a static website.

**Expected Results:** The survey and workshops suggested barriers to screening including fear, absence of symptoms, and language barriers. These findings inform the chatbot's dialogue to encourage participation. Ongoing think-aloud interviews explore the chatbot's potential to inform decisions and identify barriers and facilitators to its use. We hypothesise that the chatbot will be more effective than a static website in improving screening intentions.

**Current Stage:** The crowdsourcing survey and workshops are complete, with results ready for presentation. Think-aloud interviews are in progress, with recruitment for the RCT about to begin.

**Discussion:** Through personalised interaction, the chatbot could increase participation in CRC screening, particularly among first-time participants or previous non-responders. Findings may inform development of future healthcare chatbots.

## **Detecting Social Anxiety in Dyadic Interactions in Social Virtual Reality (Social VR)**

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**Background:** Social interactions can alleviate, but also elicit and social anxiety and social stress in individuals. Non-verbal signs of social anxiety (such as eye contact aversion) are sometimes easily detected by humans, but to date remain intricate to assess automatically for research purposes.

**Methods:** We assessed gaze and speech behavior in 128 participants who interacted in dyads for 30 minutes in social virtual reality (Social VR), a computer-mediated form of interaction which allows for the mutual observation of movements, facial expressions and gaze (allowing for direct eye-contact) in a shared space.

**Results:** Participants consistently showed behavior markers known from face-to-face interactions (more gaze at the partner's eyes while listening compared to while speaking; more gaze at the partner's eyes when ending a speaking turn compared to when starting a speaking turn). Social anxiety, but also other markers of social stress were associated with reduced gaze to the partner's eyes and with reduced verbal interrupting of the partner.

**Discussion:** Dyadic interactions in Social VR resembled face-to-face interactions in known behavioral markers. The possibility to automatically detect behavioral correlates of social anxiety or social stress more generally in such an environment may facilitate basic research in the field, but may additionally allow to integrate social stress sensing software in future Social VR environments. Additional research is needed to monitor the association between behavioral measures and social anxiety / social stress in individuals across social situations and time points.

## **Chatbot ELME: The effects of a chatbot-based intervention on stress and health-related parameters**

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**Background:** Stress levels and the prevalence of mental disorders in the general population have been rising in recent years. Chatbot-based interventions represent novel digital approaches to improve health-related parameters. However, there is a lack of research on chatbot-based interventions in the area of mental health. The present study investigated the effects of a three-week chatbot-based intervention on stress, mindfulness, interoception, subjective well-being, and emotion regulation in a stressed sample.

**Methods:** In this multicenter, two-armed randomised controlled trial, 118 individuals with a medium to high stress levels were randomised to the intervention group (n = 59) or to a treatment-as-usual control group (n = 59). Chatbot ELME guided participants of the intervention group through three weeks of training based on the topics stress, mindfulness and interoception in two daily interactive sessions via smartphone. Perceived stress, interoception (interoceptive sensibility), subjective well-being, and emotion regulation (subfacets reappraisal and suppression) were assessed pre-intervention, post-intervention (after three weeks), and follow-up (after six weeks). During both conditions, participants underwent ecological momentary assessments of stress and interoceptive sensibility.

**Findings:** Mindfulness and reappraisal significantly increased due to the intervention over time. There were no significant changes in perceived stress, momentary stress, and suppression. Subjective well-being and momentary interoceptive sensibility increased in both groups over time.

**Discussion:** The innovative chatbot-based intervention seems to be a promising approach to improve mindfulness and emotion regulation. To gain insight into how the intervention can be improved to achieve its full potential, a longer intervention duration and specific samples could be considered.

## **KImAge - AI-supported systematization of views on ageing in everyday life across the lifespan**

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**Background:** Undifferentiated, negative age stereotypes lead to discrimination in different domains of everyday life, particularly at work or in health care. Views on ageing also significantly influence people's health behaviour and health. Still, we lack knowledge on how views on ageing develop across the life span and which issues prevail in which domain and life phase. Questionnaire-based assessments get biased when being used in different age groups. Hence, we will use a Photovoice-Method validated in a pilot study to capture photographs in a representative sample to then assess which views on ageing prevail in which people and settings.

**Methods:** N=1.200 participants (aged 18–80+ years) will upload their photographs on what are their views on aging in everyday life together with a written comment. The database (12.000 photographs) will be analysed using a mixed method approach: An artificial intelligence model will be trained by a category system developed by an expert panel to then provide a satisfactory solution for analysing the large-scale qualitative data that will then also be subjected to quantitative analyses (e.g. chi-square tests).

**Expected results:** We will reveal different accentuations and systematically varying views on ageing across age-groups, life domains, regions, and settings (e.g. work, health care). This allows to identify blind spots but also levers to sensitize for ageism and to promote differentiated views on ageing.

**Current stage of work:** Data collection will start in due course. Pilot study results, preliminary data of the main study, and a prototype AI algorithm will be presented at EHPS.

## **The relationship between sports practice and risk of eating disorders: a cross-sectional study**

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Eating disorders are characterized by the presence of a disrupted perception of weight and one's body image.

Although the prevalence of eating disorders in athletes has not been sufficiently analyzed.

This study aims to investigate eating behaviors and one's body's perception in a sample of athletes and to assess the existence of sport-specific characteristics that exacerbate the risk of the onset of dysfunctional eating behaviors.

An online data collection was performed through Qualtrics platform. The sample included 562 subjects (n= 395 females; n= 161 males; n= 6 non-binary), mean age 25.6 at.

Eating disorder inventory 3 (EDI-3), Uneasiness Test (BUT), Muscle Dysmorphic Disorder Inventory (MDDI), and Recovery Stress Questionnaire were used to assess the presence of eating disorders, perception of body image, body dysmorphism and the perceived stress during sports activity respectively. Statistical analyses were performed using SPSS (version 25.0) for Windows.

ANOVA results show that women have higher scores ( $p < 0.01$ ) than men in all EDI-3 scales except B and OC ( $p < 0.05$ ) and in the BUT scale ( $p < 0.01$ ), while men scored higher than women on the MDDI ( $p < 0.05$ ).

The prevalence of a moderate/high score in EDI-3 is lower in subjects who participate in sports than in those who don't, while the prevalence of a high MDDI is higher in subjects who participate in sports.

In contrast to literature, these preliminary results show a lower tendency for athletes to develop eating disorders than the general population, deeper analysis will be performed, and more results will be presented.

## Characterising users of community-based interventions designed to improve the food practices of low-income populations

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**Background:** Promoting change in dietary behaviours to help low-income families achieve a healthy weight represents a priority for UK public health policy. The present study aimed to assess the dietary practices and psychological characteristics of users of community-based interventions in Aberdeen City that are designed to support low-income communities to engage in healthier food practices.

**Methods:** Between January and June 2023, a cross-sectional survey was conducted with users of community-based interventions using convenience sampling (N=105; 73 females). The questionnaire assessed household food insecurity (HFIAS), diet quality (SFFQ), mental health (PHQ-4), well-being (Cantril Ladder), intention and self-efficacy toward healthy eating and sociodemographic variables. Data were analysed using descriptive statistics, group comparisons, correlation and regression analyses.

**Findings:** Results indicated that service users have a diet high in discretionary foods and drinks (26% consume daily >1 portion of fizzy juice, 18.2% sweets, 16.7% crisps vs. 11.5% fruits and 10.6% vegetables). In addition, 73.8% of participants rated their diet as below satisfactory. Household food insecurity was common, with 53.3% of participants being severely food insecure and 18.1% moderately food insecure. Higher food insecurity and lower diet quality were significantly associated with lower mental health ( $r=.41$ ,  $p<.001$ ;  $r=-.33$ ,  $p=.001$ ) and well-being ( $r=-.460$ ,  $p<.001$ ;  $r=.462$ ,  $p<.001$ ).

**Discussion:** This study is part of a larger project aiming to optimise community-based dietary interventions for low-income populations. The results provide a clearer picture of the intended beneficiaries of such interventions and highlight user needs that need to be addressed in optimisation efforts.



## **Social-ecological stress, risk and health resilience in Mexican-origin adults living in a US-Mexico border community**

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Mexican-origin adults have higher rates of many chronic disease relative to overall US trends, while like many immigrant groups throughout the Global North also have notable population-level mental and physical health advantages as compared to overall trends in their host nations. This research clarifies contextual stressors in a low-income, medically under-served, border community while also exploring psychological, social, and social-environmental sources of resilience, or health advantages. This community participatory research study is in progress. Thirty participants completed in-depth qualitative interviews that elucidated safety, calmness and embeddedness in origin culture contributed to resilience. This current presentation reports on the subsequent quantitative component (baseline sample of 282 participants). Due to the leadership of a partnering community organization and their community health workers, as of February 2024 (completion scheduled April 2024) >80% of third-wave follow-ups have been completed. Relationships between contextually embedded stressors (economic, family, migration, discrimination) and resilience factors (protective individual, social and culturally tied factors) to objective measures of physiological stress/systemic inflammation and health will be tested over 12 months. Hypotheses are guided by the Sociocultural Resilience Model. Minimally invasive, community responsive, biomarker data collection methods are being implemented--specifically from point of care devices (glucose, cholesterol, blood pressure), dried blood spot (hsCRP, IL-6, A1c) and fingernails (cortisol). This will be the 1st presentation on interrelations of depressive symptoms/anxiety (PHQ-4), perceived & ecologic stress, social support, general health, and point of care biomarkers. Findings will inform stress assessments appropriate to field settings and community-participatory prevention trials to reduce stress and chronic disease.

## Dealing with Parental Migration: The Role of Emotional Intelligence and Reflective Processes

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Given the increasing rate of migration in the modern world, a growing number of adolescents are left behind in the care of other family members when parents migrate. The results regarding the impact of parental migration are paradoxical: Financial gain can provide adolescents with better facilities, yet parental migration is also a potentially adverse event that may hinder psychological well-being. What are the individual factors contributing to adolescents' ability to cope with negative life events, how do they restore well-being, and gain psychological benefits (personal growth) in the case of parental migration? Do individual differences in personality have a direct effect, or are there any mediating and moderating factors at play? A total of 201 adolescents (Mage=14.74; SD=1.74) with at least one migrant parent participated in the study. We explored the relationship between trait emotional intelligence (EI) (Petrides, 2009), well-being (Diener & Biswas-Diener, 2009), and Posttraumatic Growth (PTG) (Cryder et al., 2006). We also examined whether reflective processes such as forgiveness and rumination (Nolen-Hoeksema, 1991) affect the relationship between emotional intelligence and well-being or PTG. The findings indicate that emotional intelligence is a predictor for both psychological well-being and PTG. Forgiveness mediates the relationship between emotional intelligence and well-being, while rumination affects the relationship between EI and PTG. The proposed theoretical model sheds light on how adolescents maintain or restore their well-being and achieve personal growth following a stressful event, based on their individual characteristics.

## **Chronic pain and women with and without experience of intimate partner violence: work on progress**

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Women victims of intimate partner violence (IPVAW) are up to 5 times more likely to develop disabling chronic pain (CP), experience increased pain severity, pain medication abuse as well as other negative health outcomes. Besides these two health issues being of mayor concern for Europe, their study as two interrelated phenomena has received little attention. This project will contribute to bridge this gap by: (1) acquiring knowledge on the meaning and implications of living with CP for victims of IPVAW compared to women with CP only, and; (2) analyzing if women with CP only, with CP and current victims of IPVAW and with CP and past victims of IPVAW present different profiles based on risk and protective factors for disabling CP and health outcomes. To achieve the first aim, a qualitative study will be performed. Individual semi-structured interviews will be conducted with at least 10 women with CP currently victims of IPVAW and 10 women with CP who have never experienced violence. With regard to the second aim, a quantitative study will be carried out with 412 women with CP only, CP and currently victims of IPVAW and CP and past victims. They will have to answer to questionnaires on relevant risk/protective factors and health outcomes highlighted in the scientific literature such as self-efficacy, pain worrying, exercising, activity patterns, or physical functioning. By means of machine learning, we will identify patterns linked to each group and within each group which will allow improving detection and treatments.

# Screening and mental health interventions for persons with physical disabilities in Cambodia

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## Background

The goal of this project is to develop and evaluate a mental health screening and support programme for patients with physical disabilities in Cambodia.

Specific aims of the project are to;

1. Determine the rates of psychological distress, and PTSD, in patients treated at prosthetic and orthotic clinics (P&O) across Cambodia.
2. Identify psychological and social factors that increase the risk of psychological distress, and PTSD.
3. Determine the effects of 1/a peer support (PSP), and 2/a mindfulness-based programme (MBP) on psychological distress, and PTSD.

## Methods

Data were collected from 600 patients as part our screening programme. The rates of psychological distress (K-10), and PTSD (PC-PTSD-5) will be identified. Bivariate and multiple linear regression analyses will be conducted to identify factors associated with psychological distress, and PTSD. Feasibility RCTs with repeated measures (pre-post intervention) will be conducted to evaluate the effects of the PSPs and MBPs on psychological distress, and PTSD.

## Expected Results

High rates of psychological distress, and PTSD, and a number of potentially important psychological and social risk factors will be identified. PSPs and MBPs will reduce psychological distress, and PTSD

## Current stage of work

Data collection from the screening programme has ended. PSPs and MBPs are currently running.

## Discussion

Our results will guide prioritization of health services, as well as support policy development specifically aimed at addressing SDGs 1 (poverty), 3 (health), 10 (inequality), and 17 (implementation). The project will also provide valuable information regarding whether PSP and MBP models could be applied with P&O users.

## **Exploring environmental effects on walking and mental well-being in epilepsy through qualitative walk-along interviews**

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### **Background**

Regular engagement in physical activity (PA) has antiepileptic effects. However, only 35% of the people with epilepsy (PWE) meet the physical activity guidelines. Walking is an accessible and feasible way to be active, and should be encouraged in PWE. However, certain physical and social environmental factors may trigger anxiety and/or stress among PWE and, therefore, may present environmental barriers particularly for PWE. This study aims to gain in-depth qualitative information regarding which physical and social environmental characteristics influence anxiety and perceived stress and, consequently, impact PA among PWE.

### **Methods**

Twenty patients with drug resistant epilepsy participated in qualitative walk-along interviews, engaging in in-depth conversations during walks in their residential environments. While walking, participants were encouraged to identify and discuss physical and social attributes that (positively or negatively) affect their acute stress and anxiety levels and how this affects their walking levels. Transcripts were processed inductively with NVivo-12.1, and member checking ensured validity of the results.

### **Expected results**

The majority of PWE reported elevated anxiety, stress and reduced mental well-being. In addition, preliminary results show that participants preferred calm, green environments for walking, while busy streets and traffic noise induced stress. Few participants expressed concerns about crowded areas due to seizure-related embarrassment.

### **Current stage of work**

Further qualitative analyses will be conducted and results will be presented at the conference.

### **Conclusion**

The study offers insights into environmental factors influencing walking. These findings may contribute to interventions to promote walking in PWE as an additional non-pharmacological strategy to manage epilepsy.

## Understanding adolescent sexual and reproductive health stigma: psychometric analyses among adolescent mothers in South Africa

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**Background:** In South Africa, adolescent girls and young women (AGYW) face heightened risks of early motherhood and HIV acquisition, experiencing disproportionate stigma relating to sexual and reproductive health (SRH). However, quantitative studies are limited by the lack of validated SRH stigma scales, particularly in high HIV contexts where stigma experiences likely vary by HIV-status. We aim to establish the reliability, factor structure and measurement invariance of the Adolescent SRH Stigma Scale in AGYW mothers with and without HIV in South Africa.

**Methods:** We analysed cross-sectional data from the second wave of a longitudinal study of AGYW mothers and their children residing in urban and rural parts of South Africa (N=868; Mage = 22.42, SD = 2.24). Reliability analysis, exploratory factor analysis, and multi-group confirmatory factor analysis evaluated the factorial invariance of the Adolescent SRH Stigma Scale.

**Findings:** The original factor structure of the Adolescent SRH Stigma Scale was not supported, however, an adapted 10-item and 4-factor scale demonstrated acceptable internal consistency and strong fit ( $\omega = .704$ ; chi-squared p-value = .010; root mean square error of approximation = 0.03; standardised root mean square residual = .034). Configural, full metric and full scalar invariance was established, indicating equivalent assessment of SRH stigma independent of HIV-status.

**Discussion:** The adapted Adolescent SRH Stigma Scale is a brief and reliable tool for capturing SRH stigma among AGYW mothers living with and without HIV. The scale can be used in future research on adolescent SRH stigma, thus improving access to SRH services for AGYW in low-resource settings.

## **Congruence between Reflexive-Reflective Processes in the Prediction of Unhealthy Snacking Behaviours**

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Background: Dual process theories propose that behaviour stems from the two distinct cognitive systems: the reflexive and the reflective. The reflexive system is activated rapidly and automatically, often without conscious awareness, while the reflective system operates more deliberately, requiring substantial cognitive resources. Previous research has shown evidence to support the individual impacts of these systems on behaviour across various contexts. However, the interplay between them remains unclear. Theoretically, the congruence or divergence of the two systems should moderate the strength of each system on behaviour. Yet, empirical, evidence is limited and it remains uncertain whether the interaction between them varies depending on whether the processes are instrumental or affective in nature. Methods: A two-wave prospective study recruited psychology undergraduate students (N = 271) from an Australian university who completed online implicit association tasks and self-report measures. A path analysis is used to determine the moderating effect of congruence on reflexive and reflective processes in the prediction of limiting unhealthy snacking behaviour. Results: Analysis found significant positive associations between instrumental and affective reflective attitudes and unhealthy snacking, and a significant negative association with reflexive affect. Regarding reflexive-reflective congruence, the only significant moderation effect was found between instrumental reflective attitude-reflexive affect, such that congruence between the two constructs increased the strength of reflexive affect. Discussion: Results validate theory by supporting the moderating effects of congruence/divergence on reflexive and reflective processes and extends findings by revealing interactions between the two systems can differ depending on whether they are instrumental or affective in nature.

## Predicting stress-induced eating behaviour using an integrated dual-process model

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**Background:** University students report high levels of stress compared to their non-student peers. Overconsumption of unhealthy foods to cope with stress, referred to as stress-induced eating, is common among students and can have various negative health consequences. To date there has been little investigation of the social psychological processes that underpin engagement in coping behaviours such as stress-induced eating, which can inform theory-based behaviour change interventions. We applied an integrated dual-process model to identify the correlates of reducing stress-induced eating.

**Methods:** Participants were university students aged 17 or older (N = 208). A prospective correlational design with a 1-week follow-up was adopted. At the first data collection occasion (T1) participants completed measures of reasoned social cognition constructs (affective and instrumental attitudes, subjective norms, perceived behavioural control), and behavioural automaticity, regarding stress-induced eating. At a follow-up occasion (T2), participants reported their stress-induced eating behaviour.

**Findings:** A well-fitting structural equation model indicated that instrumental and affective attitudes, and perceived behavioural control, predicted intentions at T1. Intentions and behavioural automaticity at T1 predicted T2 stress-induced eating behaviour. The model accounted for 54% and 40% of the variance in intentions and stress-induced eating behaviour, respectively.

**Discussion:** Results indicate that stress-induced eating behaviour is associated with constructs representing reasoned and non-conscious processes, with the latter explaining more variance in behaviour. Findings provide initial evidence that interventions to reduce stress-induced eating should consider behaviour change techniques known to change instrumental and affective attitude forms, and automaticity.



## **Older adults' capabilities, opportunities and motivation to change their sedentary behavior: a latent profile analysis**

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**Purpose:** A recent realist review examining sedentary behavior (SB) interventions in older adults, highlighted the importance of considering individuals' capabilities, opportunities, and motivation (COM) when designing effective interventions. Therefore, the aim of this study is to describe COM to reduce SB, and to identify profiles of older adults' COM.

**Methods:** An online questionnaire was administered, incorporating validated COM-measures specifically focused on physical activity and SB, alongside questions on socio-demographics, physical and psychological functioning (PROMIS-12) and social network size (LSNS). Latent profile analysis (LPA) was performed on cross-sectional data from 381 older adults. Six indicator variables were included in the analysis: physical and psychological capabilities, physical and social context, and reflective and automatic motivation.

**Results:** Participants reported on a seven point Likert scale that they had the physical (M=6.52, SD=0.87) and psychological (M=5.72, SD=0.90) capabilities, physical (M=5.78, SD=1.06) and social opportunities (M=4.00, SD=1.51), and reflective motivation (M=5.45, SD=0.89) to change their SB. Furthermore, the analysis identified three distinct profiles. Profile one (n = 249, 65%) scored significantly higher than the other groups on all indicator variables, except for social opportunities. Profile two (n=101, 26.5%) and three (n=31, 8.4%) notably differed in physical capabilities and social opportunities. Profile three, characterized by the lowest physical capabilities, reported a significantly higher supportive social context compared to profile two.

**Conclusions:** Although most older adults in this sample had the COM to change their SB, the study resulted in profiles that can inform efforts to tailor interventions targeting sedentary behavior in older adults.

## Physical Activity engagement in People with Type 1 Diabetes undergoing CSII Treatment

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**Background:** Physical activity is a cornerstone of the treatment for patients with Type 1 Diabetes (T1D) who wear insulin pumps, however, the adoption of this health behavior remains low. Little research using the Theory of Planned Behavior (TPB) as framework has been employed to predict this behavior in patients with T1D. Thus, this study aims to assess an extended model of TPB for predicting this behavior in a sample of Chilean patients with T1D who wear insulin pumps.

**Methods:** Through healthcare centers and media outlets, 97 individuals with T1D who wear insulin pumps were recruited (M = 32.7 years; SD = 10.44, 73% female). Valid and reliable self-report questionnaires were administered. Path analyses were conducted to evaluate the proposed pattern of associations in the data.

**Findings:** Behavioral intention ( $\beta = 0.19$ ;  $p < 0.05$ ) and self-efficacy ( $\beta = 0.43$ ;  $p < 0.05$ ) predicted physical activity behavior. Similarly, attitude ( $\beta = 0.20$ ;  $p = 0.05$ ), descriptive norm ( $\beta = 0.18$ ;  $p < 0.05$ ), outcome expectancies ( $\beta = 0.22$ ;  $p = 0.05$ ), and self-efficacy ( $\beta = 0.28$ ;  $p < 0.05$ ) predicted the intention to practice physical activity. Our model exhibits good fit indices (SB $\chi^2 = 7.31$ ,  $p = 0.94$ ; CFI\_SB = 1.00; RMSEA\_SB = 0.00; SRMR: 0.01).

**Discussion:** The results of this study support the applicability of TPB in predicting physical activity in patients with T1D who wear insulin pumps. The identification of relevant variables such as intention and self-efficacy can serve as a foundation for designing interventions to enhance this health behavior.

## The role of automatic-reflective affect on physical activity habits: does convergence matter?

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Background: Dual process theories suggest that behaviour results from both the automatic and reflective systems and that congruence between these systems influences behaviour. The automatic system includes constructs such as habits. However, the congruence hypothesis has not been assessed on physical activity habits.

Methods: A sample of 210 participants (65% female, mean age 44 years) were recruited from Prolific Academic and completed an the Implicit Association Test and the Affective Experiences Questionnaire and the Godin Leisure Time Questionnaire (GLTEQ) at time one and two weeks later completed measure of habit strength.

Findings: A moderation model analysis using PROCESS (model 14) indicated that physical activity ( $B = 0.28$ ,  $p = .001$ ) and affective judgements ( $B = 0.35$ ,  $p = .045$ ) at time one were the only significant predictors of habit strength at time two.

Discussion: Congruency or non-congruency of affective associations or affective judgements did not moderate the relationship between physical activity and habit strength, nor did affective associations predict habit which is inconsistent with previous research. Perhaps due to the complex nature of physical activity, affective associations and habits do not develop in parallel. In addition, the reflective conscious process may have a stronger impact at the beginning of habit formation than the reflective, particularly for more complex behaviours such as physical activity.

## **Enhancing intention to reduce meat consumption: The role of self- and social pro-environmental identities**

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**Background.** Existing research highlights the pivotal role of pro-environmental identity in promoting pro-environmental behaviors adoption. This study aimed to examine the effect of increasing self- and social identity salience, by recalling past pro-environmental behavior, on intention to reduce meat consumption while also exploring the mediating role of the Theory of Planned Behavior variables (attitude, subjective norms, and perceived behavioral control).

**Methods.** Participants (N = 678) were randomly assigned to four conditions: 1) Past behavior plus personal feedback, where they indicated the frequency of six common sustainable eating behaviors and then received feedback aimed at reinforcing their pro-environmental self-identity; 2) Past behavior plus social feedback, where participants indicated the frequency of the same behaviors but received feedback to enhance their pro-environmental social identity; 3) Past behavior only, where participants recalled their past behavior without receiving feedback; and 4) Control condition, where participants reported behaviors unrelated to sustainability.

**Findings.** Results revealed that recalling sustainable food consumption behaviors increased both pro-environmental self- and social identity, regardless of feedback. Identities subsequently influenced intention to reduce meat intake through various pathways: all experimental conditions indirectly affected intention via self-identity alone, self-identity and attitude, self-identity and perceived behavioral control, and social identity and subjective norms.

**Discussion.** Findings suggest that recalling past behaviors can activate a self-influence process leading to an increased intention to reduce meat consumption by boosting the effects of the Theory of Planned Behavior variables. This indicates that behavior change strategies tailored to leverage both identities can be effective in promoting sustainable dietary choices.

## Cigarette dependence is greatest in people who start smoking young

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**Background:** Most smokers have their first cigarette during childhood, where they may be most sensitive to developing cigarette dependence. We aimed to estimate whether age of starting smoking is associated with three core markers of cigarette dependence.

**Methods:** Two decades (1998-2019) of yearly data were used from the Health Survey for England, a representative cross-sectional survey. Cigarette smokers (25+ years) were asked at what age they first started smoking. Three cigarette dependence outcomes were used: (A) saliva cotinine concentration, a biomarker of recent nicotine intake; (B) cigarettes smoked per day; and (C) smoking soon (<15min) after waking. Log-normal (for A/B) and log-binomial (C) regression was used to estimate how cigarette dependence differs by age of starting smoking, before and after covariate adjustment for age, sex, survey year, housing tenure, social grade, and car ownership.

**Findings:** For every five-year delay in age of starting smoking, smoker's saliva cotinine reduced by 21.4% (95% Confidence Interval [CI]= 18.9 to 23.9,  $p<.00001$ ), cigarettes smoked per day by 22.0% (95%CI = 20.5% to 23.5%;  $p<.00001$ ), and likelihood of smoking soon (<15min) after waking by 34.3% (95%CI = 32.2 to 36.3;  $p<.00001$ ). These associations were not explained by differences age, sex, or socioeconomic position; they remained strongly associated after covariate adjustment (all  $p<.00001$ ).

**Discussion:** Cigarette dependence is greatest in smokers who start young. If causal, policies (e.g., tobacco-21, smoke-free generation) that delay the age at which people start smoking later into adulthood will reduce the level of dependence in the smoking population.

## Psychological and medical aspects of ichthyosis throughout life

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**Background:** The ichthyoses are rare dermatological conditions associated with extracutaneous symptoms, including psychological challenges. This study aimed to explore how individuals with ichthyosis experience aspects of their condition throughout life.

**Methods:** Using an established online survey approach, we recruited 245 participants with numerous types of ichthyosis. Participants completed rating scales and free-text responses to assess their health across multiple domains at multiple timepoints; they also described their experiences with healthcare provision and concerns for their future health and wellbeing.

**Findings:** Generally, the overall impact of the ichthyosis lessened throughout the lifespan, potentially attributable to a combination of enhanced social experiences fostering improved emotional wellbeing, advancements in available treatments, and better condition management. However, participants encountered a notable decline in overall health with age, which was especially evident in females and during the transition from adolescence (12-18 years) to young adulthood (18-30 years). This decline may stem from the anticipated long-term physiological effects of ichthyoses, side effects of medication, and a perceived lack of health and social care provision among this population.

**Discussion:** This study provides new information on the ageing process in the ichthyoses, revealing enduring physiological and psychological impacts. The findings emphasise the necessity of adopting a personalised medicine approach for effective long-term management. Moreover, the data highlights gaps in understanding around female health, hearing impairment, and the necessity for enhanced psychological support.

## **Preventing dropout and distress at university: a study on the mediating role of academic engagement**

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**Background.** Academic drop-out in higher education has implications both on individuals' well-being and on a public health level. The present project, entitled drOpout pRevention and EngagemenT At The University Of Naples (ORIENTATION), aims to analyze the relationships of one of the psychological variables most influencing university dropout, namely academic engagement (EA), with academic motivation, psychological distress, academic performance, and intention to and actual dropout itself.

**Methods:** The project aims to include first-year students of Federico II University enrolled in the bachelor's degree courses in the STEM area that report among the highest dropout rates. Students participating in the first year will also be recruited in the second and third years through the administration of the following measures: 1) SInAPSi Academic Engagement Scale; 2) Academic Motivation Scale; 3) Depression Anxiety Stress Scale; 4) Academic Performance Inventory. Structural equations and models belonging to the item response theory family will be performed.

**Expected results.** It is expected to verify the mediating role of AE in relation to the above-mentioned variables, especially drop-out and psychological distress, testing moderated mediation models and analyzing profiles.

**Current stage of work.** Currently, data of the first year, on which analysis will be performed, are to be collected.

**Discussion.** The project will have a series of implications, such as the development and testing of interventions to prevent university drop-out and psychological distress, activities to support academic engagement processes for students in the first years of the STEM area, and school orientation projects that aim to reduce the "leaky pipeline".

# Will you get what expected? The effect of expectations of using social networks on well-being

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## Background

Virtual social networks are becoming an integral part of everyday life. Although online behaviour is often discussed in general terms, according to Regulatory focus theory (Higgins, 1997) there is a big difference in what expectations lead to the use of social networks. This study aimed to assess the effect of positive expectations and avoidance expectations of using social networks on users' well-being and anxiety.

## Methods

A heterogeneous sample of 388 participants completed a survey assessing positive and avoidance expectations to use social networks (Brand et al., 2014) and various indicators of well-being, including the WHO-5 index (WHO, 1998), social anxiety while using social media (Alkis et al., 2017), trait anxiety (Goldberg et al., 2006), loneliness (Hughes et al., 2004) and six items assessing satisfaction in various areas of life. We used correlational and conditional process analysis for data analysis.

## Findings

Avoidance expectations were more strongly related to social anxiety while using social media, lower psychological well-being and satisfaction than were positive expectations. Moreover, positive expectations had a protective effect in moderating the relationship between loneliness and trait anxiety, psychological well-being.

## Discussion

Results show that not only the fact of using social networks is important for psychological well-being and its various indicators, but also the motives of what individuals seek. While avoidance expectations are a clear risk factor for well-being, the effect of positive expectations is multifaceted. The results provide grounds for more purposeful individualization of preventive and interventional measures for social network users.



## **Stress, recovery and personal growth - the role of positive place experiences in micro niches**

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**Background:** Personal growth (PG) is associated with increased resilience, social-emotional well-being and health. Social-ecological approaches view PG as a subjective process emerging among facilitating environmental experiences, for example, in persons' favorite places. Extending the favorite place model of coping with stress, we present the personal niche model of health and well-being and demonstrate that positive environmental experiences may lead to PG across several types of real-life niches, including stressful situations.

**Method:** In a cross-sectional study (N = 674, mean age 36,7 years, SD = 14,7), we asked respondents to name their places of stress, recovery, and personal growth, along with a description of the situation. Moreover, we measured situation-specific positive and distressing self-experiences, excitement, and PG (Personal Growth and Development Scale), related to each of the three types of places.

**Results:** SEM modeling (Chi<sup>2</sup> = 2224.7, df = 771, p < .001, CFI = .92, RMSEA = .052) showed similar pattern across the three micro niches. Higher positive self-experience and excitement in the niche predicted higher niche-related PG experiences, even in the place of stress (std. path coefficients = between 0.244 and 0.339, all ps < .05). No significant associations were found between distress and PG experiences.

**Conclusion:** Positive experiences in a specific social-ecological environment (i.e., a micro niche) may be supportive of the person's emergent growth tendencies, even in adverse circumstances such as in places of stress. Consequences for everyday positive functioning and mental and physical health will be discussed.

## Trajectories of self-esteem and their association with weight 5 years following metabolic and bariatric surgery

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**Background:** This study aimed to: (1) examine the five-year trajectories of self-esteem post metabolic bariatric surgery (MBS); and (2) the association of these with 5 year weight loss post-surgery.

**Methods:** Participants (n=540, 78.2% females; Mage=43.9 yrs; MBMI=48.5 kg/m<sup>2</sup>) undergoing a first MBS in Montreal, Canada completed anthropometric measurements and the 10-item Rosenberg Self-Esteem (RSE) questionnaire at baseline, 6-, 12-, and 60-months post-surgery. Latent Class Growth Analysis was used to derive trajectories of change in RSE over 5-years post-surgery, followed by multiple linear regression analysis to predict %excess weight loss (%EWL) at 5-years FU.

**Findings:** We observed three RSE trajectories: (1) low baseline RSE (RSE<sub>baseline</sub>=15.59) that decreased at 1-year FU (RSE<sub>1Y</sub>= 15.21), and increased at 5 years (29.5% of the sample; RSE<sub>5Y</sub>=16.62); (2) moderate baseline RSE (RSE<sub>baseline</sub>=21.00), that increased at 1-year FU (RSE<sub>1Y</sub>=24.88) and decreased close to baseline at 5 years (51.6% of the sample; RSE<sub>5Y</sub>=21.91); and (3) higher RSE (RSE<sub>baseline</sub>=25.03), that gradually increased at 1-year FU (RSE<sub>1Y</sub>= 27.27), and stabilized at 5 years (18.9% of the sample; RSE<sub>5Y</sub>=27.56). Trajectory 1 was associated with lower %EWL at 5 years (B=-29.31, p=.001) compared to the other profiles.

**Discussion:** Participants with initial low self-esteem that remained stable throughout the 5 years post-surgery FU experienced reduced weight loss. Future interventions could target the enhancement of self-esteem pre- and post-MBS to potentially improve surgical outcomes.

## **Social relationships, psychological distress, and health in sexual minority and heterosexual middle-aged and older adults**

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**Background:** Social connections are crucial for healthy aging, and health disparities are particularly pronounced among sexual minorities (SM). This study explores the associations between social relationships, objective health, and health behaviors in middle-aged and older SM and heterosexual adults, and whether these associations are mediated by psychological distress.

**Methods:** Leveraging data spanning 10 years from the Canadian Longitudinal Study on Aging, our analysis includes 1,057 SM participants (Mage=59 years; 62% male; 38% female; 76% homosexual; 24% bisexual) and a matched heterosexual control group. Participants reported social support, social isolation, and health behaviors (nutritional risk, physical activity) every 3 years. A subset (n = 665) provided physiological assessments for a quantification of allostatic load.

**Findings:** SM individuals reported lower social support, higher social isolation, higher psychological distress, and lower physical activity (only male participants), compared to heterosexual controls. There were no significant group differences in nutritional risk or allostatic load. Follow-up analyses showed that social vulnerabilities were most prominent among gay and bisexual male as well as bisexual female participants, but did not apply to lesbian females. Controlling for autoregressive effects, we found little evidence for longitudinal associations of social support or isolation with health outcomes. However, we found significant indirect associations between lower social support and subsequent worse health (nutritional risk, physical activity, allostatic load) mediated by increased psychological distress for both groups.

**Discussion:** This research underscores the need for targeted interventions to increase social belonging and to address the unique social and health challenges faced by aging SM individuals.

## Childhood emotional neglect and meaning in life: the role of self-perceptions

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**Background:** Individuals who experienced childhood emotional neglect (CEN) might be inclined to form self-critical patterns. These, in turn, can profoundly impact an individual's sense of meaning in life. The present study explored a parallel mediation model with CEN as the predictor, inadequate self, hated self, reassured self as the parallel mediators, presence of meaning (PoM) and search for meaning (SfM) as the outcomes.

**Methods:** This cross-sectional research engaged 1086 Italian emerging adults (50% women) with an age range of 18 to 25 years ( $M=21.69$ ,  $SD=2.20$ ), sourced through a combination of offline and online recruitment methods. Each variable was evaluated using validated self-reports. The study applied Structural Equation Modeling (SEM) with latent variables to assess the mediation model, and Multigroup Path Analysis (MGPA) to examine gender invariance.

**Findings:** The results highlighted good fit indices:  $\chi^2(156)=605.94$ ,  $p<.001$ ,  $CFI=.97$ ,  $RMSEA=.05$  (90% CI=.05 – .06), and  $SRMR=.04$ . Inadequate self mediated CEN's relationship with SfM ( $\beta=.13$ ,  $p<.001$ ). Hated self mediated CEN's relationship with PoM ( $\beta=-.09$ ,  $p<.001$ ) and with SfM ( $\beta=-.08$ ,  $p<.001$ ). Reassured self mediated CEN's relationship with PoM ( $\beta=-.18$ ,  $p<.001$ ). Gender invariance was confirmed.

**Discussion:** Clinicians should be vigilant in recognizing signs of emotional neglect during childhood, enabling timely interventions to mitigate the potential long-term consequences on individuals' self-concept and meaning in life and raising awareness among caregivers and teachers. Simultaneously, different dimensions of self-perception exert unique impacts on the link between CEN and meaning in life. Therapeutic interventions should consider these nuances and tailor approaches to address specific self-critical tendencies aligned with individuals' experiences.

## **The value of health psychology in nationally implemented programmes to achieve behaviour change at scale**

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Health services interventions are typically more effective in randomised controlled trials than in routine healthcare. One plausible explanation for this is a reduction in intervention fidelity, i.e. the extent to which a programme is implemented as intended. Commissioners of large-scale programmes sometimes select external provider organisations to deliver the programme on their behalf, following central guidance, to allow delivery at scale and with efficiency. However, independent providers have their own staff and systems in place, including their own programme designs, staff recruitment criteria, and different approaches to staff training, which can all influence the extent to which a national programme is implemented as intended. Despite this, there are very few thorough examinations of fidelity in behaviour change programmes implemented at scale using independent providers.

This presentation reflects on methods to systematically examine fidelity of large-scale programmes and employing the NIH Behaviour Change Consortium framework to assess programme design, training, delivery, receipt and enactment, using an evaluation of the English National Health Service Diabetes Prevention Programme as an exemplar; an intervention delivered by four providers, which has received over 500,000 referrals to date. We further describe how we worked with NHS-England to improve the behaviour change content of these programmes in light of research findings. We discuss the potential for health psychologists to help large numbers of people achieve behaviour change at scale via working with providers of behaviour change interventions. Such work includes (1) advising programme commissioners, (2) clarifying the theory of change, and (3) training provider staff in the delivery of behaviour change techniques.

Large-scale programmes to encourage behaviour change across diverse populations are increasingly being used. Therefore, assessing and improving fidelity in such programmes is a key research area that has received little attention to date, and has huge potential for health psychology expertise to have wide-reaching impact.

## **Understanding UK policy- and decision-makers' use of behavioural science advice during a public health emergency**

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**Background:** During 2020-22, behavioural science advice related to COVID-19 was provided to the UK Government via the Scientific Pandemic Insights group on Behaviour (SPI-B). It has since been reported in the UK COVID-19 Inquiry that the advice was not disseminated or used effectively in Government. This study aims to investigate the barriers and enablers to translating behavioural science advice into UK COVID-19 policymaking.

**Methods:** The following activities will be conducted: (i) Delphi exercise with the study advisory group (consisting of SPI-B participants) to identify key advice statements from the SPI-B reports; (ii) mapping the evidence translation pathways of these advice statements; (iii) interviews with UK policy- and decision-makers involved in translating advice during 2020-22, using the advice statements as prompts; (iv) documentary review of public documents; and (v) reflective exercises with stakeholders on lessons learned. We will use inductive thematic analysis to generate themes, and deductive framework analysis to categorise barriers and enablers, using the Theoretical Domains Framework.

**Expected results:** We expect to gain insights into where and how behavioural advice was disseminated; whether and how it was received, engaged with and acted upon; and barriers and enablers to using advice. We will present recommendations for improving the advisory process and evidence translation pathway, both during emergencies and more broadly.

**Current stage:** The protocol has been finalised. The Delphi exercise and interview piloting are underway.

**Discussion:** COVID-19 presents a rich case study and opportunity to inform future efforts to support the UK Government in using behavioural advice to inform policy.

## **Process evaluation of a participatory developed school-based healthy sleep intervention in adolescents**

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**Background:** Insufficient sleep among adolescents negatively impacts their mental and physical health. This study evaluates the process (fidelity, dose delivered, exposure and satisfaction) of a theory-based participatory developed healthy sleep intervention to provide insight into the underlying mechanisms of intervention effects and to formulate recommendations for future healthy sleep interventions in adolescents.

**Methods:** After implementation in three secondary schools, questionnaires were administered in students (N = 1075) and teachers (N = 13). In addition, 14 focus group interviews with students (N = 92) and three individual interviews with school management were conducted. SPSS and NVivo were used for descriptive and thematic content analyses.

**Findings:** Participants were generally satisfied with the intervention. Intervention components that were visible within the school context (i.e. kick-off event, posters, gadgets, class competition with Fitbits) were considered most successful since they sparked conversations about sleep. Opportunities for social comparison (e.g., class discussions, polls on Instagram) and tailoring to their school context (e.g., picture of a teacher on poster) were appreciated by students. Implementers reported a lack of adequate information to implement intervention components, which resulted in low dose delivered for some intervention components (e.g., mobile application, classes about sleep).

**Discussion:** The intervention was generally well received. Future interventions could consider a participatory approach as it provides intervention components that match the adolescents' living environment and the context of the school, but involving implementers earlier in the participatory process of implementation planning could optimize implementation.

## **Paving the Way to PA: Factors that Influence Physical Activity among South Asian Immigrants**

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Engaging in regular physical activity (PA) is important for good health, but South Asian immigrants (SAIs) consistently report low levels of PA, putting them at risk for chronic conditions. Efforts to increase PA may benefit from a consideration of factors at multiple levels of analysis. This study employed a social-ecological approach to test associations between three empirically informed factors (i.e., acculturation, satisfaction in relationships, and motivation) and PA in a sample of SAIs living in the U.S. Secondary data collected from a randomized controlled trial of a culturally-tailored, community-level intervention that incorporated hypertension management strategies (including, but not limited to, increasing PA) were analyzed. All factors were assessed with self-report measures. Acculturation was assessed by proxy. Participants (N = 303; 54% female) lived in the U.S. for 13.7 years on average. Significant cross-sectional associations were observed between PA and factors at the cultural, interpersonal, and individual level ( $p$ 's  $<.05$ ). When testing these associations over time and controlling for age and gender, motivation was directly associated with PA ( $\beta = 0.22$ ,  $p <.05$ ), while acculturation was indirectly associated with PA through satisfaction in relationships ( $\beta = 0.36$ ,  $p <.05$ ). Findings suggest these factors (which were measured but not directly manipulated in the intervention) influence PA for SAIs, even if the associations do not sustain over time. Continuing to explore the connections between factors at different levels of the social ecological model (i.e., individual, interpersonal, and cultural), and how they are associated with each other, may help to increase PA among SAIs.



## **Exclusive Breastfeeding among Australian Mother-Father Dyads: An Extension of the Theory of Planned Behaviour**

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The many health benefits of breastfeeding include both short and long-term outcomes for both mother and infant. The aim of this research was to examine the predictors of exclusive breastfeeding at 6 and 26 weeks postpartum using a dyadic mother-father extended theory of planned behaviour.

A sample of 1,139 first time mother-father dyads completed measures of attitudes, subjective norms, perceived behavioural control and intention. In addition they completed measures of psychological distress, childcare stress, partner support, problems with breastfeeding, and the frequency and time of their first breastfeed in public. Confirmatory factor analyses and structural equation modelling were used to analyse the data.

Exclusive breastfeeding at six weeks was significantly predicted by self-efficacy, intention to breastfeed exclusively, and frequency of prior public breastfeeding, but childcare stress, partner support, time of first public breastfeed, and fathers' variables were not significant. Self-efficacy mediated the relationship between mothers' attitudes, psychological distress, and breastfeeding problems with breastfeeding exclusively at six weeks. Breastfeeding at 26 weeks was significantly predicted by mothers' attitudes, self-efficacy, breastfeeding exclusively at six weeks, and frequency of prior public breastfeeding.

The results highlight the importance of self-efficacy and confidence to breastfeed in public as crucial constructs in promoting long-term exclusive breastfeeding and provides support for an extended theory of planned behaviour model in predicting breastfeeding outcomes. Future research should focus on building self-efficacy in mothers, given its importance as a mediator of attitudes, psychological distress, and breastfeeding problems. Additionally interventions need to focus on alleviating barriers to breastfeeding in public.

## Adherence to glaucoma management: The application of Health Belief Model

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**Background:** Treatment adherence is crucial for the glaucoma management. However, it is reported that up to 40% of patients discontinue treatment in Japan, making adherence a significant challenge. To provide effective treatments, empirical studies are needed to investigate psychosocial factors contributing to treatment adherence. This study was designed to explore psychosocial processes related to glaucoma treatment adherence, using the Health Belief Model (HBM).

**Methods:** A two-wave panel survey was conducted on individuals diagnosed with early to moderate glaucoma. The survey was administered online in two phases: T1 (N=2391) and T2 (N=1877). The following HBM components were measured: perceived severity, behavioral evaluation (barriers), self-efficacy, social norms, and eye drop compliance. Additionally, lifestyle and personality were measured as individual differences.

**Findings:** Structural equation modeling (SEM) analyses were performed with glaucoma and HBM variables at T1 as exogenous variables and treatment adherence at T2 as the indigenous variable. The model fit was adequate ( $\chi^2$  (947) 4179.43,  $p < .001$ , CFI = .90, RMSEA = .04, AIC = 4539.43). Life style and personality and glaucoma-related variables predicted the HBM components. Barriers ( $\beta = -.29$ ,  $p < .001$ ) and social norms ( $\beta = .18$ ,  $p < .001$ ) significantly predicted glaucoma treatment adherence.

**Discussion:** Findings suggested that glaucoma managements should reduce perceived barriers such as forgetting the eye drop use and side effect concerns as well as enhance perceived social norms.

## **Understanding the public's decision-making about seasonal flu vaccination: Application of the precaution adoption process model**

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**Background:** In the current public health context, characterised by the coexistence of flu and COVID-19 variants, seasonal flu remains a pressing public health issue. Understanding the factors influencing flu vaccine uptake is essential for mitigating the impact of seasonal outbreaks. This study used the Precaution Adoption Process Model (PAPM) to profile the public's decision-making about having the seasonal flu vaccine and to examine associations between each PAPM stage and attitudes and beliefs about the vaccine, personal health characteristics, and socio-demographic characteristics.

**Methods:** An online survey was administered to a sample of 2,004 people  $\geq 50$  years in England, UK in October 2021. A multivariate, multinomial logistic regression model was used to examine associations between psychological factors and PAPM stages of decision-making.

**Findings:** Results showed varying stages of decision-making: 7% of participants were in Stage 2 (unengaged), 10% in Stage 3 (undecided), 7% in Stage 4 (decided not to vaccinate), 39% in Stage 5 (decided to vaccinate), and 38% in Stage 6 (vaccinated). Regression modelling revealed factors common across stages and unique to certain stages, such as flu vaccination history distinguishing those who received the vaccine across all stages. Vaccine knowledge (Stage 3), perceived benefits (Stage 4), and perceived control and fear of needles (Stage 5) were uniquely associated with specific PAPM stages. Overlapping factors included subjective norms, anticipated regret, perceived safety, beliefs about the immune system, and age.

**Discussion:** Public health interventions promoting flu vaccination programmes may improve uptake through targeted messaging according to influential factors for each stage of decision-making.

## What predicts mpox vaccination uptake among men who have sex with men? It's not intention...

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**Background:** In response to the mpox outbreak, vaccination was offered in the Netherlands to men who have sex with men (MSM). We assessed the predictive value of intent-to-vaccinate and other predictors on vaccination uptake among participants of the Amsterdam Cohort Studies (ACS).

**Methods:** In July 2022, prior to the mpox vaccination campaign, we distributed a survey regarding mpox intent-to-vaccinate and other predictors among ACS participants. Vaccination uptake was self-reported during study visits after August 2022. The associations between vaccination intent and uptake, and determinants of intent (such as attitudes, norms, perceived risk and response efficacy) were, in a first step, jointly assessed using a structural equation model (SEM) following direction principles of the Theory of Planned Behavior. In a second SEM, determinants of intent were also allowed to also have a direct effect on vaccination uptake.

**Results:** 492 MSM were included. 380 (77%) had a high intent-to-vaccinate and 238 (48%) received at least one vaccine dose. In the first model, high intent-to-vaccinate was associated with getting vaccinated ( $\beta=1.1$ , 95%CI=0.6-1.5). However, 175/380 (46%) participants with high intent-to-vaccinate did not get vaccinated. The second model had an improved model fit. The effect of intent on uptake became non-significant, and only perceiving to be at higher risk of mpox infection significantly predicted vaccination uptake ( $\beta=0.42$ , 95%CI=0.26-0.59). Having a steady relationship decreased the probability of vaccination ( $\beta=-0.59$ , 95%CI=-1.0- -0.18).

**Conclusions:** in the case of Mpox, risk perception predicted vaccination uptake better than intention. Helping MSM recognize mpox self-risk should increase vaccination uptake.

## **Exploring determinants of substitute decision-making for deceased organ donation: a theory-based qualitative study**

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**Background:** At the time of death, families/significant others take responsibility as substitute decision-makers (SDMs) to consent to deceased organ donation. Leveraging behavioural theory can help elucidate what barriers and enablers influence end-of-life decision-making among SDMs to ultimately inform the development of behavioural interventions to support SDMs.

**Methods:** We report qualitative findings from a mixed-methods study across multiple intensive care units in Canada. We conducted semi-structured interviews with SDMs 6-8 weeks after the patient's death and included: 1) SDMs that consented to donation, 2) SDMs that declined, 3) SDMs that were not approached about donation. Interviews were guided using the Theoretical Domains Framework (TDF) and data were analysed using deductive directed content analysis.

**Findings:** Our sample comprised 44 SDMs (consented = 17, declined = 10, not approached = 17). Key barriers included limited knowledge about the donation process (TDF domain: Knowledge), viewing donation refusal as the default position when uncertain about the patient's wish (Memory, attention, decision-making), and family disagreements which sometimes resulted in decisions being deferred to others (Social influences). Key enablers included knowing the patient's wishes beforehand (Knowledge), respecting the patient's wishes (Intention), weighing up the pros and cons of donation (Memory, attention, decision-making), seeing donation as an altruistic behaviour (Beliefs about consequences), and being comfortable having the role as an SDM (Social, professional role and identity).

**Discussion:** Our theory-based approach has highlighted a range of barriers and enablers which could potentially be targeted for behavioural interventions such as optimizing tools and training for healthcare providers to support SDMs.

## Testing HAPA model for predicting daily physical activity of women survivors of breast cancer

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**Background:** Benefits are identified for regular physical activity (PA) after breast cancer, but a decline has been reported after diagnosis and treatments. Health Action Process Approach (HAPA) model has been good predictor of various health behaviors, including PA. Our aim was to test how the constructs of HAPA model changed over time and how this change predicted PA for women survivors of breast cancer, and whether the pattern of relationships happens in similar or different ways for individual participants.

**Methods:** N-of-1 longitudinal study. PA behaviors (N=338) by nine survivors of breast cancer were observed for six weeks. A multilevel model of behavior prediction tested the associations between HAPA constructs and PA over time. Single-case time series regression analyzes was then performed. A daily questionnaire with HAPA constructs and PA behavior was used.

**Findings:** Group analysis identified social support and self-efficacy as positively related to intentions to be active. PA was directly predicted by planning and by confidence to resume PA after a break. The specificity of individual within-participants analysis showed that self-efficacy and social support predicted individual participants' PA intentions. But planning was significant for PA only in one participant and recovery self-efficacy in three of nine.

**Discussions:** Multilevel approach for psychological predictors of PA was useful in identifying self-efficacy, social support and planning as associated with PA behavior within women survivors of breast cancer over time. This study highlights the importance of tailoring interventions to promote PA in this population to the specific needs and circumstances of individual women.

## **Can a brief online self-compassion writing intervention improve intra- and interpersonal outcomes?**

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**Background:** Given that both subjective and social context are important to health and well-being, there is a need investigate the potential personal and interpersonal benefits of self-compassion interventions.

**Objective:** This pre-registered study tested whether a 3-day, brief online self-compassion writing intervention enhanced indices of psychological and physical well-being (intrapersonal outcomes) as well as compassion for others (an interpersonal outcome) in a general population sample. Measurements were taken at pre-intervention, post-intervention, and one-month follow-up.

**Results:** A within-group repeated measures ANOVA, data from 174 participants (of the 180 who completed the entire intervention) showed that self-compassion increased across all timepoints and there were significant intervention effects for both psychological and physical well-being as well as compassion for others across the different time points. Attrition analyses indicated a 64% initial response rate, and a 98% retention rate from post-questionnaire to one-month follow-up. Among those who completed all components of the study, 91% of the participants had engaged in all three days of the intervention.

**Conclusion:** In summary, the current study shows that a brief, online self-compassion intervention is a feasible and scalable approach to support the general population in developing better psychological well-being, reducing physical symptoms, and, potentially, increasing compassion for others. While our findings provide valuable proof-of-principle evidence, more research is needed to substantiate these early findings.

## Childhood personality and adolescent performance in physical education: A sibling fixed-effects study

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**BACKGROUND:** Examining the link between personality traits and physical education (PE) performance is essential given their potential to influence motivation and engagement in physical activity. Schools, households, and genetic factors could influence both personality and PE. However, we lack evidence on whether such higher order factors confound any childhood personality - PE association. This study seeks to clarify the relationship between personality traits at age 8 and later PE performance at the end of lower secondary school (age 16) by comparing siblings.

**METHODS:** The study utilized data from 6300 sibling pairs within the Norwegian Mother and Child Cohort Study (MoBa). We estimated standardized effects of the Big Five personality traits with PE grades. We added sibling fixed effects to mitigate bias from unmeasured familial and school confounds.

**FINDINGS:** Neuroticism ( $\beta=-0.13$  [95%CI -0.15--0.11]) and Conscientiousness ( $\beta=0.16$  [95%CI 0.14-0.18]) were most strongly related to PE performance. Agreeableness ( $\beta=0.09$  [95%CI 0.07-0.11]) and Openness to Experience ( $\beta=0.08$  [95%CI: 0.06-0.10]) showed weaker associations. Extraversion ( $\beta=0.02$  [95%CI -0.00-0.04]) showed no association with PE performance. Interestingly, childhood conscientiousness was a to a greater extent transacted into a high PE grade in boys ( $\beta_{\text{boy}}=0.21$ ;  $\beta_{\text{girl}}=0.11$ ;  $p=0.017$ ). Associations all remained consistent in sibling fixed effects models, indicating no familial confounding.

**DISCUSSION:** The study supports the relevance of personality traits for PE performance, independent of family and school background influences. The stronger association of conscientiousness and PE grades among boys indicates potential gender differences in how personality traits impact PE outcomes, providing a direction for future inquiry.



## **Investigating the time course of motivational processes relevant to dietary restraint**

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Restrained eaters (dieters) are known to cycle between periods of restriction and periods of overindulgence, due to a motivational shift following a broken diet. However, the duration of these motivational shifts remains unknown. Rather than relying on retrospective reports, the current study (for which data collection is underway) tracks the trajectory of motivational processes in real-time after an individual's diet has been threatened. Female participants (50 restrained and 50 unrestrained eaters) are randomly assigned to consume a high-calorie preload or no preload. Over the next 24 hours, participants are signaled five times and are asked to report their desire to indulge and motivation to restrict. Multilevel modelling will be used to examine whether the trajectory of the desire to indulge and motivation to restrict differs for restrained and unrestrained eaters. For restrained eaters, their desire to indulge is expected to be high immediately after a high-calorie preload, but then to dissipate after a short period, whereas their motivation to restrict their food intake is expected to remain low until the next day. For unrestrained eaters, there is no expected effect of the preload on the desire to indulge or the motivation to restrict. Examining the time course of psychological processes relevant to the cycle between restriction and overindulgence is important to better understand the nature of dietary restraint and develop effective interventions to address the negative consequences of dietary cycling.

## **Is the effect of Sensory Processing Sensitivity on physical and psychological distress mediated by resilience?**

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The purpose of this prospective study was to examine (a) whether Sensory Processing Sensitivity (SPS) measured at baseline (T0) predicts physical and psychological distress at one year follow-up (T1), and (b) whether and in what way resilience mediates the effect of SPS on distress.

The study sample consisted of gifted adults. A total of 738 respondents participated in the study at T0 and T1 (mean age of 44.86; 63.4% female). Structural Equation Modeling and logistic regression analysis were conducted.

A high level of SPS at T0 predicted psychological (anxiety and depression) and physical (physical symptoms and fatigue) distress at T1. As far as indirect effects are concerned, results depended upon whether we looked at the negative or positive higher-order dimension of SPS. A higher score on negative SPS was associated with lower resilience which in turn led to more distress, indicating that low resilience increased the negative impact of negative SPS on distress. In contrast, a higher score on positive SPS was related to more resilience, resulting in less distress, suggesting that in this case resilience had a buffering effect. As resilience is a buffer between SPS and distress, follow-up research could focus on psychological interventions aimed at increasing resilience.

## Early maladaptive schemas, illness representations, and distress in breast cancer patients

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**Background:** Illness perceptions and Early Maladaptive Schemas (EMSs) play a significant role in shaping emotional self-regulation processes. EMSs are trait-like structures that constitute vulnerability factors associated with psychopathology in adulthood. Adverse life events, such as a breast cancer (BC) diagnosis and treatment, are assumed to trigger these schemas. The present study examined, in a sample of breast cancer patients, whether EMSs are related to anxiety/depression, directly as well as indirectly, through illness perceptions.

**Methods:** The study employed a prospective design, and newly diagnosed BC patients (N=95; mean age=50.4) completed self-report questionnaires within 4 weeks (T0), 4 months (T1), and 12 months (T2) after surgery. The Young Schema Questionnaire-Short Form (YSQ-S3), the Brief Illness Perception Questionnaire (Brief IPQ), and the Hospital Anxiety and Depression Scale (HADS) were used.

**Findings:** Path analysis revealed a statistically significant direct effect of T0 vulnerability to harm on T2 anxiety ( $\beta = 0.25$ ,  $p = 0.021$ ). Vulnerability to harm also predicted anxiety and depression through emotional representations ( $\beta = 0.15$  and  $0.12$ , respectively,  $p < .05$ ). A direct effect of the enmeshment schema was also observed on anxiety ( $\beta = 0.20$ ,  $p = 0.009$ ).

**Discussion:** Vulnerability to harm and enmeshment schemas both fall under the “impaired autonomy/performance” domain, which implies lower self-esteem and ability to function independently and exaggerated fear. Dispositional factors seem to have a significant impact on patients’ levels of psychological distress in the long-term and should be identified early in the cancer journey.

## **Illness Perception and Distress in HCM Patients after Hybrid Cardiac Telerehabilitation - a randomised-control trial**

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**Background.** Hypertrophic cardiomyopathy (HCM) is a complex cardiac disorder influencing patients' quality of life and causing threatening illness perception and emotional distress. This part of the broader RCT focuses on evaluating the illness perception and level of distress of HCM patients referred for hybrid cardiac telerehabilitation (HCTR) compared to usual care.

**Methods.** An RCT study was conducted with 60 HCM patients, NYHA Class II or III. Both groups (HCTR-rehabilitation; CG-control) were completing questionnaires assessing illness perception (Brief IPQ) and overall psychosocial distress (GHQ-28). Psychological assessment was performed at the beginning (T1) and at the end (T2) of care, and at 3, 6 and 12 months after the T2 (T3/T4/T5).

**Findings.** There were no significant differences in the overall illness perception ( $p=0.200$  for the HCTR group and  $p=0.090$  for the CG), although the HCTR showed short-term improvement after three months of intervention (T2) ( $p=0.032$ ). An unfavourable change was observed in the perceived consequences of illness in CG ( $p=0.036$ ) but not in the HCTR group ( $p=0.249$ ). The HCTR, but not the CG, experienced a positive change in understanding the illness ( $p=0.019$  for the HCTR;  $p=0.673$  for the CG). There was a significant improvement in the overall distress level only in the HCTR ( $p=0.003$ ;  $p=0.559$  for the CG). It remained significant for the T2 ( $p<0.001$ ), T3 ( $p=0.008$ ), and T4 ( $p<0.001$ ).

**Discussion.** Hybrid cardiac telerehabilitation can enhance understanding of illness and has an impact on the perceived burden for HCM patients. It can help decrease the level of distress, although this improvement is short-term.

## **The Time-Lagged Impact of Microaggressions on Emotional Exhaustion amongst Transgender and Gender Diverse Employees**

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Despite the widespread adoption of workplace protections for transgender and gender diverse (TGD) individuals, past research has suggested that stigma is still present and discrimination takes place in subtle ways. Using a longitudinal design with lagged measures over a period of three months, we explored the lagged impact of workplace microaggressions on emotional exhaustion, the core component of burnout. We also examined perceived social support, identity centrality, and identity pride as moderators of the effects of microaggressions on emotional exhaustion as these may inform us of potential mitigating factors and targets for interventions. Results reveal that there is a direct significant prospective effect of workplace microaggressions on emotional exhaustion. None of the hypothesized factors moderated the time-lagged relationship of microaggressions on emotional exhaustion, which addresses the urgency to develop strategies that directly reduce microaggressions in organizational settings. In order to provide a safe space for gender minorities in the workplace, we recommend that organizations address microaggressions directly and explicitly within their human resource management (HRM) policies in an authentic non-tokenistic way. In doing so, organizations should incorporate the experiences of various gender identities and gender expressions, alongside with defining clear processes for assessment and monitoring, corrective action, and best practice sharing.

# The Brexit winner-loser gap and wellbeing: The roles of value inconsistency and intergroup dynamics

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## Background:

Referenda can enliven political interest and enhance democracy, but little is known about the longer-term implications for the wellbeing among “winners” and “losers”. This study examined indices of wellbeing among UK Leavers and Remainers four years after their divisive debate over Britain’s exit from the European Union. We examined the extent to which wellbeing is predicted by discrepancies in attitudes about Brexit and by perceived strained relationships between the two opposing sides. We further tested whether and how positive intergroup contact experiences can alleviate negative wellbeing outcomes.

## Methods:

Self-identified Remainers (n=394) and Leavers (n=192) participated in an online survey that assessed Brexit attitudes, intergroup relations (captured through perceived outgroup respect, intergroup anxiety, outgroup contact quality), and two wellbeing indicators (Short Warwick-Edinburgh Mental Wellbeing Scale, Satisfaction with Life Scale).

## Findings:

Well-being was as expected higher among Leavers than Remainers. Pro-Brexit attitudes positively predicted wellbeing for Leavers, but not Remainers. Perceived outgroup respect positively predicted wellbeing for both, with a stronger association observed for Leavers. Remainers reported higher intergroup anxiety than Leavers and in return lower wellbeing. Contact quality positively predicted wellbeing for both groups, via lower intergroup anxiety.

## Discussion:

Our findings suggest that greater well-being among Leavers may be attributed to the congruency between personal and environmental values resulting from Brexit formalization. Strained intergroup relations (low perceived outgroup respect, intergroup anxiety) were linked to lower wellbeing, which was mitigated by positive contact. This study offers insights for interventions aimed at promoting wellbeing in polarized contexts by considering intergroup dynamics.

# Mitigating Obesity Stigma through Avatar Embodiment: A Pilot Study Using Virtual Reality

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## Background:

This study addresses the impact of weight stigma on individuals with obesity, leading to health disparities. Stigma affects perceived fitness, influences relationships with healthcare providers, and contributes to adverse emotional and physical health consequences. Our research focuses on combating weight stigma by investigating the effects of intergroup contact in virtual reality (VR) on attitudes towards individuals with obesity.

## Methods:

We employ a validated VR paradigm that integrates intergroup contact and embodiment of an outgroup member. Using VRChat, participants engage in a ball toss game where they embody either an avatar representing an individual with obesity (experimental) or an average weight person (control). In our pilot sample (N=14), attitudes towards people with obesity are assessed through explicit (feeling thermometer) and implicit (Implicit Association Test) measures. Quantitative analysis involves ANCOVA, controlling for variables such as body ownership and co-presence.

## Findings:

No significant differences in explicit attitudes between the control and experimental groups were observed. However, participants in the experimental condition displayed improved implicit attitudes towards people with obesity. While these preliminary findings are promising, further investigation in a larger context is essential to validate these results.

## Discussion:

This research holds significance in contributing to the understanding of interventions combating weight stigma. The potential prejudice-reducing effects of positive intergroup contact, particularly when combined with embodying an avatar representing a person with obesity, open avenues for further exploration. These findings hold implications for health psychology, emphasizing the role of VR interventions in shaping implicit biases and fostering understanding of weight stigma.

# Opening Up? Findings from an iterative usability test of a mental health disclosure decision aid

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## Background

Inclusive universities should support all students and staff, including those facing stigmatized conditions like mental health issues. Nevertheless, individuals with mental health issues may hesitate to disclose them due to societal stigma, hindering potential support. Decision aids have been shown to be able to facilitate such complex decisions and may in turn act as an empowerment tool for those facing internalized mental health stigma. Therefore, they could provide potential assistance to university students and staff. This research focuses on testing and refining an initial version of such a (digital) decision aid.

## Methods

To evaluate the usability of the decision aid, a preregistered qualitative think-aloud study was conducted with five students and five employees. Participants were asked to use the decision aid while verbalizing their thoughts. The data was analyzed using rapid analysis.

## Findings

In general, participants found the decision aid user-friendly, clear, and a valuable addition. Areas for improvement mainly revolved around: (1) addressing the volume of text and introducing more visual elements, (2) resolving technical issues, such as non-functioning tailored elements, (3) considering an expansion of the scope, e.g., by incorporating information in relation to non-university contexts, and (4) enhancing clarity regarding the Dutch context.

## Discussion

Our approach, notably the rapid analysis, facilitated a quick evaluation of our decision aid, helping us pinpoint lingering issues. Participants generally praised the decision aid for its user-friendliness and clarity but highlighted areas for improvement, including addressing text volume, resolving technical issues, considering scope expansion to non-university contexts, and enhancing clarity.



## **Shifting stigma: Dutch perspectives on stigma reduction and HIV cure strategies**

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**Background:** In addition to biomedical research, it is imperative to understand the possible psychological and societal implications of an HIV cure. HIV-related stigma is detrimental to the psychological, social, and physical health of those affected by it. A cure for HIV can potentially mitigate, but is unlikely to eliminate stigma. Furthermore, varying cure strategies (eradicator and suppressive) are under research, with possible differing implications. Therefore, it is crucial to investigate the expectations and perspectives of those affected by HIV.

**Methods:** Thirty semi-structured online interviews were conducted with people with HIV residing in the Netherlands. Interviews were analysed using thematic analysis.

**Results:** The majority of participants indicated an anticipated decrease in stigma after the availability of a cure for HIV. This anticipated decrease occurred more often for eradicator cure strategies compared to suppressive cure strategies. Furthermore, concerns about potential new stigmatisation after possible reinfection emerged. A minimal number of participants voiced expectations of complete elimination of stigma after a cure. Participants expressed stigmatisation was rooted in a lack of knowledge, suggesting that education about HIV and curative strategies could potentially decrease stigma.

**Discussion:** The results demonstrate the anticipation of HIV-related stigma shifts after the availability of curative strategies. Whilst the overall consensus of anticipated decreases in HIV stigma seems promising, the acknowledgement of potential new forms of stigma highlights the insufficiency that a cure alone cannot eliminate stigma. These results further underscore the complexity of stigma dynamics and provide insights for tailoring effective strategies in the battle against stigma.

# Knowledge is healthy? Parental sugar, salt and fat estimation in foods and family health

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## Background

Knowledge about nutrients is an essential resource for parents to choose healthy foods for their children. Previous studies show that parents greatly misestimate the sugar content of foods. Does this pattern also apply to other nutrients such as salt and fat? And how does estimation accuracy relate to parental numeracy, product information usage and family health?

## Methods

508 parents estimated the sugar, salt and fat content of various foods commonly found in children's diets. They answered three numeracy items, reported on various indicators of their own (e.g. tooth decay, cardiovascular disease) and of their children's (6-12 years) health and on their use of information when doing the groceries. The height and weight of children and parents were measured.

## Results

Parents misestimate the amount of nutrients by significantly more than 50% ( $M_{\text{sugar}}=406.34\%$ ,  $M_{\text{salt}}=411.2\%$ ,  $M_{\text{fat}}=63.65\%$ , all  $p<.001$ ). The better the parents' numeracy, the more accurately they estimated the salt and fat content - but not the sugar content (salt:  $b=169.70$ ,  $p=.021$ , fat:  $b=45.89$ ,  $p=.011$ ; sugar:  $b=80.08$ ,  $p=.221$ ). Surprisingly, no significant correlation was found between the underestimation of nutrients and indicators of family health.

## Discussion

Numeracy, but not product information usage, explained a more accurate estimation of nutrients, which is an interesting finding when discussing the value of nutrition tables. Unlike previous studies on sugar, we found no associations between estimation accuracy and health, which could be due to low variance on these variables. More clinically diverse samples could to a better understand the effect of nutrient misestimation on family health.

## **Energy-dense food intake and physical activity changes after a planning intervention: a dyadic parent-child study**

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**Background:** This study investigated the effects of individual (“I-for-me”), dyadic (“we-for-me”), and collaborative (“we-for-us”) planning on moderate-to-vigorous physical activity (MVPA; primary outcome) and energy-dense food intake (secondary outcome) in dyads of parents and their 9-15 years old children.

**Methods:** N = 247 dyads were randomized to one of four conditions: three types of physical activity (PA) planning or the control condition (education about PA, sedentary behavior, nutrition, the energy intake-expenditure balance). MVPA was measured with ActiGraph wGT3X-BT accelerometers at baseline, 1-week, and 36-week follow-ups. Energy-dense food intake was self-reported at baseline, 9-week, and 36-week follow-ups. Linear mixed models were fit for parents and children separately.

**Findings:** At 36-week follow-up, children in the dyadic (“we-for-me”) planning condition decreased their MVPA compared to the control condition. At the same time, children in the dyadic planning condition also decreased energy-dense food intake at the 36-week follow-up. No effects were found among children in individual and collaborative PA planning conditions. Across all experimental conditions parents decreased their energy-dense food intake.

**Discussion:** Children’s decrease in MVPA in dyadic PA planning condition was offset by a reduction of energy intake, which may represent a compensatory mechanism. The limited effectiveness of the dyadic “we-for-me” interventions in parent-child dyads may result from young people’s needs for individuation and their reactance to parental support.

## **Meat reduction among young adults in the transition to adulthood**

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**Background:** Current food systems are environmentally unsustainable, and they are associated with health problems. Using consumer socialization theories and scrutinizing the idea of holding (young) consumers responsible for solving societal sustainability problems, the objective of this paper is to study young adults' meat consumption and their perceptions of responsibility for meat reduction. Further, how changes in contexts and relations and "transitional life experiences" matter for consumption and reduction behaviours are studied.

**Methods:** Young adults (21-26y), were interviewed by qualitative, semi-structured interviews using novel stimuli to discuss notions of responsibility and to gauge the importance of social relations (e.g., parents, peers) and events (e.g., education, travel) on the young adults' meat reduction. Transcripts were analyzed by thematic analysis.

**Findings:** Based on young adults' perceived responsibility for meat reduction and attempts to cut down on meat consumption, four positions were identified; (1) Meat protagonism, (2) Loving meat, (3) Meat reduction, and (4) Vegetarianism. Different barriers and facilitators for each position were identified.

**Discussion:** Unlike the meat eaters, and to some extent the vegetarians, the meat reducers were seen to be living through a double transition process putting an additional burden on them. They were challenged through adaptation issues of taking on new roles and simultaneously inventing new, greener habits. It is underlined that the idea of putting the responsibility for the green transition onto the shoulders of the young generation is a challenge; many are open towards making this change, but resistance and feeling incapable are also common outcomes.

## Peer and Friend Influences on Young Adults' Meat and Plant-based Eating in Different Social Contexts

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**Background:** Plant-based eating is beneficial for human and planetary health. Encouraging individuals to eat more plant-based meals is important, but less is known about the influence of peers and friends on the consumption of these meals.

**Methods:** We examined whether perceived descriptive (perception of the behaviour of others) and injunctive (perception of the approval of others) norms were associated with young adults' self-reported meat and plant-based meal intake in two studies. In Study 1 (n=218 young adults, aged 18-25 years, mean age=19.54 years, SD=1.50 years, mean BMI=24.31, SD=5.40, 91.2% cisfemale, 92.0% omnivores), norm perceptions were measured in general. In Study 2 (n=153 young adults (aged 18-25 years, mean age=19.62 years, SD=1.49 years, mean BMI=24.31, SD=5.00, 88.4% cisfemale, 70.3% omnivore), we examined norm perceptions in several social contexts (i.e. university, restaurants).

**Results:** Hierarchical regressions analysed the data in both studies. In Study 1, perceived descriptive norms about peers and friends, and perceived injunctive norms about friends were positively associated with young adults' frequency of plant-based meal intake ( $p < .05$ ). Whereas, only perceived descriptive norms about friends were associated with young adults' frequency of meat intake. In study 2, perceived injunctive norms about friends were associated with plant-based meal intake in all contexts, whereas, perceived descriptive norms about friends were associated with meat intake in all contexts ( $p < .05$ ).

**Conclusions and implications:** Across both studies, friends appear to be the more important social group. These findings have important implications for further research in terms of designing interventions to promote plant-based eating in young adults.

## **Social embeddedness of healthy and sustainable eating: A social network study of parents and adult-children**

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**Background:** Eating is a deeply social facet of health behavior. Nevertheless, studies on the relational context and influences on eating are scarce. Our aim is to gain deeper insights into the role of individual's social network partners for their eating attitudes and behavior. We focus on ties between parents and their adult children as one primary social unit for the development of eating habits. To capture this relational subset and the broader network that influences eating, dyads embedded in their broader networks are investigated. We integrate aspects of the Theory of Planned Behavior (TPB) to additionally grasp the main psychological influences on behavior. Emphasizing the intersection of planetary and human health, we focus on healthy and sustainable eating.

**Methods:** An online panel study surveyed 1000 parents-adult child dyads with a representative distribution for Germany's demographics. We assessed: General social networks, eating networks and topic-relevant characteristics of the networks for both dyadic partners; TPB constructs for both dyadic partners; eating behavior targeted via a Food Frequency Questionnaire and combined with a sustainability rating of food items. Egocentric social network analysis will be used for analyses and illustrated graphically.

**Expected results:** This study is largely exploratory. We anticipate similar eating behaviors of network partners, especially in closer relationships. Eating networks of parents and adult children are expected to differ in terms of size, composition and density.

**Stage of work:** Data collection (in progress) will be completed by March 2024.

**Discussion:** This interdisciplinary study offers insights into potential mechanisms for eating interventions.

## Using computational modelling to understand pain-related avoidance

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**Background:** Pain-related avoidance has been posited as a key factor in the development and maintenance of chronic pain. A way to better understand the emergence of pain-related avoidance is to study the exploration-exploitation dilemma (EED). In a pain context, the EED represents a trade-off between the option that has been the most beneficial so far (e.g., taking painkillers to reduce pain) and other options carrying more uncertainty (e.g., trying an alternative therapy), with pain-related avoidance being conceptualised as excessive exploitation. Within this framework, computational models offer a powerful tool for understanding pain-related avoidance, uncovering underlying mechanisms that may not be easily observable through traditional analytical procedures.

**Methods:** In a series of 7 experiments, participants with chronic pain and/or healthy controls completed a 4-armed bandit task with rewards (i.e., points) and pain-related stimuli (i.e., pain-related pictures or electro-cutaneous stimuli) as outcomes. Each experiment carried distinct manipulations to systematically analyse their effect on decision-making (e.g., contingencies changes). We used hierarchical Bayesian computational models to translate the behavioural data into mathematical parameters reflecting the psychological constructs behind decision-making (e.g., learning rate) and model trial-by-trial changes during the task.

**Findings:** Our results enabled the identification of internal (e.g., learning rate or sensitivity) and external factors (e.g., uncertainty) influencing pain-related avoidance in dynamic environments.

**Discussion:** The current research provides evidence of the dynamic nature of pain-related avoidance, entailing potential implications for its conceptualization and clinical practice.

## **A sequential sampling approach to the integration of habits and goals**

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**Background:** Habits often conflict with goal-directed processes in determining health behaviours. Recent computational models explain such conflicts as the competitions between two separate learning systems, arbitrated by a central unit. In this research, we show that habit-goal conflicts can be more parsimoniously explained by a dynamic integration of habit and goal values in a sequential sampling process.

**Methods:** A computational model was developed by extending the multialternative decision field theory with the assumption that habits bias starting points of preference accumulation. We performed three simulation studies to test the model's ability to reproduce empirical findings from three instrumental learning paradigms. Moreover, a parameter recovery exercise was conducted to evaluate the feasibility of estimating model parameters based on data. Finally, we applied the model to re-examine whether the statistical habit-intention interaction effect actually corresponds to the underlying cognitive mechanism.

**Findings:** The model was able to reproduce classic findings from outcome-devaluation and reversal learning experiments. In addition, model parameters could be accurately estimated, at least with simulated data and limited parameter spaces. By simulating the data of a typical prospective study in health psychology, we found that even when habit-goal competition is implemented as a data-generating mechanism, regression analyses do not necessarily reveal the presumed negative habit-intention interaction effect.

**Discussion:** Our work demonstrates the potential of considering sequential sampling as a key cognitive mechanism for habit-goal interactions. The model can aid researchers in studying real-world habits, for example, in quantifying individual differences and calibrating the match between theoretical mechanisms and statistical hypotheses.



## The participatory development of a computational model of smoking lapse and relapse

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**Background:** Lapses (i.e., temporary slips after the quit date) among smokers attempting to quit are common and often lead to full relapse. Available theories are imprecise about when and why lapses occur; such knowledge is needed to develop personalised interventions which can target lapses before they occur. We therefore aimed to develop a computational model of smoking lapse and relapse, drawing on participatory design principles.

**Methods:** In line with the first three (out of five) steps of Borsboom's Theory Construction Methodology, we 1) identified relevant phenomena which the computational model seeks to explain through an informal literature review, 2) formulated a 'prototheory' of when and why lapses occur through in-depth, one-to-one stakeholder interviews with researchers, stop smoking practitioners, policymakers and people with lived experience (N=15), and 3) translated the prototheory into a formal model.

**Findings:** Stakeholders hypothesised that lapses occur when cravings (which arise from the interaction of withdrawal symptoms, stressors, and external cigarette cues) exceed the emotional, cognitive, and behavioural self-regulatory effort mounted, providing that cigarettes are easily available. Lapses are hypothesised to lead to full relapse through their impact on self-efficacy, which in turn impacts the motivation to stop and the self-regulatory effort mounted. Our interdisciplinary team formalised the prototheory into a series of difference equations which capture the hypothesised dynamics.

**Discussion:** We describe the participatory development of a computational model of smoking lapse and relapse. Next steps will be discussed, including the examination of the model's adequacy (step 4) and overall 'goodness' (step 5).

## **SOCITS: a co-produced agent-based model of adolescent mental health**

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### **Background:**

Despite copious research into adolescent mental health, issues such as stress and loneliness within young people remain stubbornly high. A possible explanation for this is the broad nature of interventions, which due to the heterogeneous and unique environments within schools, lack the specificity to target situations in which their need is most acute.

### **Methods:**

To address this, the SOCITS project developed an agent-based model (ABM) to study the social dynamics based within specific school environments, before using the model to generate possible interventions. ABMs are an excellent way to investigate dynamics in heterogeneous environments, whilst developing them through co-production helps generate perspectives on how to intervene in specific locations.

To generate the rules for our model we ran participatory workshops with around 20 students (plus teachers) in two Scottish schools. By asking about the situations (such as the lunch hall or exams) which led to strong emotions we investigated how the interactions between the students and the environment impact adolescent mental health, and by doing so generated the information that is often missing from our theories and models.

### **Findings:**

Key themes such as crowded corridors, interactions around uniform, and unguarded spaces such as toilets emerged from the workshops, whilst our model showed the importance of different timescales, and pinpointed teacher/student interactions as key.

### **Discussion:**

This work demonstrates the importance of investigating social interactions using dynamic models to develop health interventions, and how considering the environment is key. Participatory methods show the value of local information in developing effective interventions.

## **Examining perceptions of general practitioner traits and health behaviour change: A general population survey**

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**Background:** Primary healthcare professionals (most notably General Practitioners [GPs]) are often the first point of contact for people engaging with the healthcare service. GPs are an expected and trusted source of health behaviour change advice (e.g. advice about quitting smoking, increasing physical activity, reducing alcohol intake), yet there are few studies examining people's perceptions of healthcare professional traits and how these may affect health-related decisions. This study aimed to assess the extent to which: (a) psychosocial variables, and (b) perceptions of healthcare professional traits (including competence, morality, assertiveness, warmth, respect and liking) were associated with self-reported intentions to modify health behaviours following health behaviour change advice from GPs.

**Methods:** Cross-sectional online survey of UK adults who were recruited through a survey panel company (n = 256). Participants were asked about their: (a) current health behaviours in relation to national guidelines, and (b) perceptions of General Practitioners. Data were analysed using descriptive statistics and multiple linear regression.

**Findings:** The traits warmth, competence, and liking were associated with greater intentions to modify health behaviours following advice from GPs. With respect to participants breaching health behaviour guidelines, perceptions of competence and liking were associated with greater intentions to modify health behaviours following advice from GPs.

**Discussion:** Findings suggest perceptions of healthcare professional traits may influence the likelihood of adhering to health behaviour change advice. Understanding the predictors of intentions to adhere to health behaviour change advice from GPs is crucial to inform the development of interventions to support future practice.

## **How do professionals use behaviour change strategies in improving their motivating styles? MotiStyleSport intervention study**

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**Background:** Self-determination theory related research has shown that in counseling patients, teaching physical education classes, and coaching athletes, motivating interaction behaviours by professionals result in stronger and more high-quality motivation and sustained health behaviours, e.g. physical activity, and decrease in drop-out from sports. However, professionals may encounter difficulties in adopting motivating behaviours. Thus, developing a novel training intervention, MotiStyleSport, we systematically incorporated behaviour science strategies to promote interaction behaviour change, including habit formation/breaking techniques.

**Aims:** We examined intervention acceptability, use of behaviour change strategies and changes in motivating behaviours conducted online for professionals (e.g. health nurses, sports coaches).

**Methods:** In a feasibility study, participants (n=145) attended six two-hour sessions online every other week and filled in an online survey mid-intervention and post-intervention, 14 weeks after baseline. Interviews were conducted in a subsample.

The intervention was highly acceptable among all professional groups. Self-reported behaviour change technique enactment varied, with over 96% using the most popular technique (problem solving to overcome barriers) and only a minority using the least favored (social support strategies). Habit-related techniques were popular: almost three-thirds reported having created an if-then plan for habit formation or breaking. Content analysis of habit plans revealed the relevance of emotion regulation related cues. Professionals motivating styles improved in the desired direction.

**Discussion:** Systematic use of behaviour change approaches seems useful to promote changes in interaction behaviours. We call for more research in comparative designs and with evaluation of impacts on target groups.

## **Do patient-centered treatments of IDB patients lead to wellbeing through the therapeutic alliance and reassurance?**

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**Background:** There has been a significant increase in the incidence of inflammatory bowel diseases (IBD) in recent years. Patient-centered-care is known as a significant factor in recovery and well-being. This study examined the relationship between the patient's wellbeing and the perception of the medical treatment as patient-centered; and whether this association is mediated by the therapeutic alliance and perception of the treatment as reassuring. These issues have not yet been examined among patients with IBD.

**Methods:** 300 patients with IBD responded to an online questionnaire that examined all the above variables. Path analysis was performed using the "Indirect effects" plugin of IBM SPSS Amos version 24.

**Findings:** All the fit indices of the final model indicated an excellent fit of the model to the data [ $\chi^2(1) = 1.45$ ,  $p = .228$ , RMSEA = .01, NFI = .999, TLI = 1.00, CFI = 1.00]. There was a direct association between patient-centeredness and the therapeutic alliance and reassurance; and direct significant connections between reassurance and the therapeutic alliance and wellbeing. Examining the general indirect effect supported the hypothesis of an association between the perception of the medical treatment as patient-centered and wellbeing, and that this relationship is mediated and strengthened by both the therapeutic alliance and reassurance.

**Discussion:** This study expands the body of knowledge regarding physician-patient relationships and communication by examining, for the first time, patient-centeredness in treating IBD patients and wellbeing; and the mediating role of reassurance by the attending physician and the therapeutic alliance.

## **Cognitive Impairment in Chronic Kidney Disease: an Occult Burden for provision of care and adjustment**

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**Background:** End-stage renal disease and its treatments are associated with increased risk of cognitive impairments, which can affect patients' functional capacity and self-care ability. Prior work is dominated by quantitative studies to diagnose cognitive impairments but practical implications for patients and clinicians are understudied. This qualitative study aimed to describe patients' and healthcare providers' perspectives on the lived experience of cognitive difficulties, impacts on daily living and care delivery, and associated needs.

**Methods:** Semi-structured interviews and focus groups were conducted with 29 haemodialysis patients and 27 renal healthcare providers (e.g., nephrologist, nurse, social worker, etc.). Data were audio-recorded, transcribed verbatim, and thematically analysed.

**Findings:** Six themes emerged: (1) manifestation of cognitive difficulties, (2) perceived risk factors, (3) impacts, (4) attitudes toward cognitive difficulties, (5) compensation/mitigation strategies, and (6) unmet needs. Participants recognised patients' difficulties in multiple cognitive domains that compromised functional independence, increased caregiving burden, and interfered with dialysis delivery. Healthcare providers noted health/safety risks associated with cognitive impairments, whereas patients viewed these impairments with different attitudes (e.g., normalisation, denial, etc.). Patients and providers adopted different strategies to manage these difficulties. Societal awareness, social support, and guidelines/tools to assess and manage cognitive difficulties were identified as key areas for support.

**Discussion:** Cognitive impairment is a major issue in renal care that affects the well-being of dialysis patients and their family and interferes with care provision. Several modifiable individual- and system-level barriers to the identification and management of cognitive impairments in renal settings were identified that could be targeted with interventions.

## **Barriers and facilitators of referral of overweight patients to combined lifestyle interventions: general practitioners' views**

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### **Background:**

In the Netherlands, combined lifestyle interventions (CLIs) are implemented as a possible strategy to tackle overweight and obesity, reimbursed by health insurance companies since 2019. General practitioners (GPs) are authorized as the primary referrer of patients to CLIs. Due to limited referral, dropout, and underrepresentation of specific target groups, a qualitative study was conducted, aiming to gain insight into barriers and facilitators that GPs experienced concerning referral of patients to CLIs.

### **Methods:**

A qualitative descriptive study was conducted using semi-structured interviews with GPs in the Netherlands (n=16). The interview guide and analyses were guided by the COM-B model and Theoretical Domains Framework (TDF). The interviews were audio-recorded and transcribed verbatim. Data were thematically analyzed by two independent coders.

### **Findings:**

A distinction in referral behaviors to CLIs was made, including 1) extensive referral, 2) critical referral, and 3) limited referral. GPs' referral behavior to CLIs was influenced by an interaction of their capability, opportunity, and motivation to refer. Perceived barriers were GPs' disagreement of their role as referrer to CLIs, habits, lack of knowledge, doubts about effectiveness, unmotivated patients, and limited cooperation with CLI providers. Perceived facilitators were GPs' awareness and knowledge of CLIs, beliefs about effectiveness, beliefs about capabilities, and ease of use of referral systems.

### **Discussion:**

This study provides insights into factors influencing GPs' referral to CLIs. Barriers and facilitators should be considered to optimize the referral process, enhancing accessibility and inclusiveness of the program, leading to enhanced reach of the target group and prevention of early dropout.

## **Enabling physiotherapists for the implementation of the MyBack programme: design of a training package**

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**Background:** Exercise practice has been suggested as an effective strategy to prevent recurrences of low back pain. However, it has been reported that its facilitation by physiotherapists is challenging. Therefore, this study aimed to explore and identify physiotherapists' barriers and facilitators to the implementation of an exercise and behaviour change intervention. The identified determinants guided the design of the MyBack Training Programme for physiotherapists.

**Methods:** Two focus groups were conducted with physiotherapists, using a semi-structured guide informed by the Behaviour Change Wheel (BCW), including the Capability, Opportunity, Motivation–Behaviour (COM-B) model and the Theoretical Domains Framework (TDF). Focus groups were held through videoconference, audio and video recorded and transcribed verbatim. Barriers and facilitators were codified through a deductive content analysis, independently performed by two researchers. A third researcher settled disagreements. The BCW then allowed the identification of intervention functions, behaviour change techniques (BCTs) and modes of delivery.

**Findings:** Fourteen physiotherapists were included. The analysis revealed 13 barriers and 23 facilitators to physiotherapists' implementation of the intervention. They were classified within 13 TDF domains and 5 COM-B components. This allowed the identification of 7 intervention functions and 27 BCTs, resulting in the development of the MyBack Training Programme. This programme will be delivered through a 3-day course and a 6-month mentorship plan.

**Discussion:** This study identified modifiable determinants to the implementation of an exercise and behaviour change intervention by physiotherapists. The BCW allowed for a systematic, theory and evidence-informed way of developing the MyBack Training Programme, to support physiotherapists' implementation.



## **A critical exploration of the presentation of recovery capital across private and public recovery settings**

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**Background:** Recovery capital (RC); personal, social, and community resources supporting substance misuse recovery are unequally distributed across society. This unequal distribution likely translates into inequitable access across recovery settings. From a critical social-linguistic perspective, discourses surrounding RC potentially reinforce these inequities, impacting health outcomes and attempts at mobility during recovery.

**Methods:** A multi-modal critical discourse analysis (CDA) framework was used to analyse online promotional video content from three private and two publicly funded substance misuse recovery providers. The analysis explored language, discursive practices, and social context to identify the presentation and impact of discourses related to RC.

**Findings:** Three critical discourses emerged: (1) Medicalisation vs Client Responsibility (Personal RC), shaping agency and blame; (2) Authenticity: Credentials vs Lived Experience (Social RC), influencing staff expertise; (3) Privacy-centred Individualism vs Community-Focused Support (Community RC), social support expectations and the impact of privacy on this process.

**Discussion:** Contrasting discourses within treatment sectors appeared to perpetuate inequities in the presentation and accessibility of RC. The private sector's focus on medicalisation, individualism, and commodified privacy reinforced institutional social hierarchies, primarily benefiting clients' personal RC whilst obscuring economic disparities. The public sector focused on individual responsibility, efficacy, social RC, and lived experience. This emphasis on social RC, public disclosure, and reliance on peer expertise has the potential to both empower and further marginalise individuals through reinforcing "neo-liberal" ideologies of responsibility. These findings underscore the need to critically examine how RC discourses shape access and experiences of recovery and the need to address systemic barriers to RC.

## **Implementing digital screening and treatment for distress in inflammatory bowel disease (IBD): Healthcare providers' perspective**

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### **Background.**

Increasing evidence highlights a mind-body link in inflammatory bowel disease (IBD). Evidence suggests that treating con-current psychological distress (anxiety and depression) improves both mental and physical health outcomes in IBD. There is a need for sustainable pathways which integrate psychological support into IBD care to identify and treat distress. As part of a larger study assessing the feasibility of implementing mental health screening and delivery of digital CBT-based therapy into routine IBD care, researchers aimed to qualitatively explore the barriers and facilitators of implementing these tools from the perspective of healthcare providers (HCPs).

### **Methods.**

Semi-structured interviews were conducted with eleven HCPs in the gastroenterology outpatient service (including pharmacists, a senior and trainee clinical psychologist, a consultant, a dietician, and a gastroenterology registrar). Inductive reflexive thematic analysis was employed to analyse transcripts and identify key themes. Themes were further explored and mapped onto constructs of the Normalization Process Theory (NPT).

### **Findings.**

Four overarching and interconnected themes were inductively identified: 1) Perceptions and attitudes, 2) Programme efficacy, 3) Organizational factors and 4) A need for streamlined and integrated treatment pathways. These themes closely aligned with NPT constructs of Cognitive Participation, Collective Action and Reflexive Monitoring, suggesting these may be targets for increasing intervention sustainability.

### **Conclusion.**

HCPs identified specific training in mental health, clear stakeholder champions, and a greater streamlining of digital healthcare platforms and systems as important factors to consider in the implementation of digital tools that can support the identification and provision of support for psychological distress in IBD patients.

## **Machine says yes, Doctor says no: A qualitative exploration of antibiotic prescribing in intensive care**

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**Background:** Rapid molecular diagnostic (RMD) tests are designed to improve antibiotic stewardship (AMS) by providing swift results, enabling clinicians to; i) avoid using a broad-spectrum antibiotic (BSAB), and ii) stop a BSAB early, if indicated by the test result. The INHALE trial (ISRCTN16483855) examined whether RMDs improve AMS. We report on an embedded behavioural study exploring the psychology of prescribing, specifically examining clinicians' perceptions of RMD and their effects on prescribing behaviour.

**Methods:** Semi-structured interviews were conducted with 20 intensive care clinicians after using RMD to guide antimicrobial prescribing for patients with suspected pneumonias. Transcripts were analysed using thematic analysis, applying the Necessity Concerns Framework.

**Findings:** Most were convinced by the necessity for AMS and valued the speed of RMD. However, the impact of RMD results on individual prescribing decisions to i) guide the initial prescription, and ii) to stop a BSAB early, was limited. Concerns about the potential consequences of under-treatment to the patient (e.g., mortality) and prescriber (e.g., litigation) were frequently described as more salient in the prescribing decision-making process, with an antibiotic sometimes prescribed just-in-case of infection. This resulted in the recommendation from RMD to avoid prescribing a BSAB, or to stop one early, often being overridden by clinicians' perceived necessity for a BSAB prescription as a mechanism to protect the patient, 'erring on the side of caution'.

**Discussion:** Technological and guideline solutions to antimicrobial resistance alone fail to recognise the human-to-human nature of medicine. Doctors' beliefs and emotions are often key drivers of their antibiotic prescribing.

## **Measuring patients' return to work after breast cancer using electronic healthcare data: a mixed-methods study**

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**Background:** Electronic healthcare data (EHD) open research possibilities for measuring processes and outcomes of relevance for health psychology. The complexity of data analysis and interpretation at a population level currently limit their use in clinical practice. We aimed to calculate EHD-based return to work (RTW) indicators and trajectories after breast cancer, and explore stakeholders' perceptions on their validity, limitations and utility.

**Methods:** We used mixed methods to 1) quantify RTW indicators and trajectories from a representative sample of patient records diagnosed with early-stage breast cancer from the French National Health Data System, based on sickness absence and disability pension information in a 3-year follow-up period and 2) explore via focus groups and interviews patient representatives (n=5) and healthcare professionals' (n=6) perceptions of the methods and results. Results were discussed with participants.

**Findings:** Records of 317 women (aged 25-55 years) showed a median of 2 sickness absence periods for a total of 434 days on average, and a median time to sustainable RTW of 240 days. Trajectory analyses identified 3 clusters: "early RTW" (49.5%), "RTW after partial resumption" (37.5%) and "continuous compensation" (13%). Stakeholders highlighted the complex causality of RTW, including mental health issues. They advocated for a personalized approach to patient support based on population-level estimates. RTW trajectories opened new perspectives to tailor solutions. New indicators were deemed necessary to better integrate psychosocial dimensions.

**Discussion:** A mixed methodology engaging stakeholders in the implementation of EHD-based measures of patient care and outcomes is feasible and holds value for health psychology research.

## **A systematic review on Blood Pressure Check behavioural influences among adults at-risk of developing hypertension**

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**Background:** Exploring patient-reported factors that influence their engagement with blood pressure (BP) checks can help support the development of interventions to prevent hypertension and cardiovascular disease.

**Methods:** A systematic review focusing on adults without hypertension was carried out on 4 databases: Embase, Emtree, MEDLINE and Web of Science (published 2015-2023). Studies were eligible for inclusion if they reported primary data on patient-reported influences on BP check engagement. Extracted data were coded onto the Capability-Opportunity-Motivation model of Behaviour (COM-B) and Behaviour Change Wheel (BCW). Thematic analysis was then carried out based on this extracted data.

**Findings:** 18 studies were included and 8 themes generated during the analysis: 1) 'Easy-to-use devices with accessible information on how to use them', 2) 'Lack of awareness about hypertension and benefits of screening', 3) 'Stigma and disconnect with identity', 4) 'Beliefs about the value of screening', 5) 'Fear and uncertainty', 6) 'Lack of appropriate and comfortable local services', 7) 'Financial cost of engaging with BP screening', 8) 'Someone recommended a BP or health check.' These themes corresponded most frequently with 'education', 'enablement', 'training' and 'environmental restructuring' BCW intervention options.

**Discussion:** The findings presented here enhance what is known about patients' engagement with BP checks, particularly regarding the impact of peer networks and environmental factors, which are key influences of behaviour in this context. Potential intervention strategies include utilising the positive impact of social connections and trusted sources to recommend that patients engage more frequently with BP checks to reduce their risk of future hypertension diagnosis.

## Optimising antimicrobial stewardship education and training: a systematic review and strategic behavioural analysis

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**Background:** Antimicrobial resistance remains a public health threat. Tackling it requires behaviour change, particularly more judicious use of antibiotics (antimicrobial stewardship-AMS). Education and training interventions have been widely implemented in hospitals to encourage AMS, yet over-prescribing persists. We applied behavioural science frameworks to synthesise evidence on AMS education/training and identify opportunities for optimising intervention design and delivery.

**Methods:** We conducted a systematic review of published, hospital-based AMS education/training interventions (PROSPERO CRD42023405711). We extracted data on modes of delivery, intervention functions (coded using Behaviour Change Wheel), and component Behaviour Change Techniques (BCTs; coded using BCT TaxonomyV1). Meta-regressions explored modalities and components associated with improved outcomes. We extracted barriers/enablers to AMS in hospitals from published reviews and synthesised these using the COM-B model. Using the Theories and Techniques Tool, we triangulated both sets of findings to explore whether existing interventions included BCTs targeting key barriers/enablers.

**Results:** We included 61 interventions. Interventions were more effective in reducing antibiotic consumption when delivered face-to-face ( $\beta=-2.65$ , 95%CI: -5.23 to -0.07,  $k=21$ ), and using Modelling ( $\beta=-2.23$  (95%CI: -4.27 to -0.18) or Restriction ( $\beta=2.95$  (95%CI: 1.10 to 4.79) intervention functions. No individual BCT was associated with reduced antibiotic consumption. Although key barriers/enablers fell within Social Opportunity (team dynamics/culture, doctor-patient communication) and Motivation (balancing uncertainty/fear/competing priorities in decision making), interventions rarely included BCTs targeting such influences.

**Discussion:** AMS education/training interventions often focus on shaping knowledge and changing physical opportunity, rather than addressing motivational and social influences. These gaps can inform the design and refinement of AMS education/training to optimise effectiveness.

## **Are health services for patients with severe epilepsy meeting families' needs? Caregiver priorities for improvement**

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**Introduction:** Developmental and epileptic encephalopathies (DEE) are the most severe group of epilepsies. Patients with DEE typically have multiple comorbidities and high healthcare needs. Whether health services meet the needs of this patient population and their families is not well understood. This study explored caregiver perspectives on their child's health service use, satisfaction with health services, and priorities for improvement.

**Methods:** Caregivers of young people with DEE completed online questionnaires containing purposively designed quantitative and qualitative questions to assess their perceptions of their child's health service use over a 12-month period. We analysed the quantitative data using descriptive and non-parametric statistics and the qualitative data using content analysis.

**Results:** Seventy-five caregivers participated. Over 12-months, 52 patients (69.3%) had presented to the emergency department, and most had seen  $\geq 3$  medical professionals ( $n=70$ , 93.3%) and  $\geq 3$  allied health professionals ( $n=45$ , 60.0%). Caregivers reported satisfaction with their child's healthcare when they perceived healthcare professionals (HCPs) to be compassionate and knowledgeable. Caregivers reported dissatisfaction when they encountered HCPs who were not knowledgeable about DEEs, felt unheard and unsupported, needed to advocate for their child's healthcare and disability funding, and perceived care coordination to be lacking. Emergency/hospital care and parent psychosocial support were caregivers' top priorities for improvement to the healthcare system.

**Discussion:** Care coordination and access to knowledgeable HCPs plus psychological supports should be prioritised to achieve more appropriate models of care for DEE. Further research should pilot and evaluate models of care which incorporate these features to determine if they improve patient/family satisfaction.

## **Lengthy shifts and decision fatigue in out-of-hours primary care: a qualitative study**

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**Background:** Demands on healthcare workers are high: services are stretched, and healthcare professionals regularly work prolonged periods without a break. According to the 'decision fatigue' phenomenon: decision makers progressively opt for the less cognitively effortful option as the time worked without a break increases. This has been observed repeatedly in quantitative observational studies; however, healthcare workers' subjective experiences have not been explored. This qualitative study aimed to explore general practitioners' (GPs) and advanced nurse practitioners' (ANPs) experiences of working for lengthy periods.

**Methods:** Semi-structured qualitative interviews were conducted. The interview sample (n=10) comprised of ANPs (n=5) and GPs (n=5) who regularly worked within the out-of-hours primary care service in National Health Service (NHS) Grampian, Scotland. An inductive thematic analysis was conducted to identify and summarise salient issues articulated by participants.

**Findings:** Most participants perceived changes in their decision making across shifts in line with decision fatigue. Related changes in behavioural, physiological, emotional, and cognitive responses were identified. GPs and ANPs identified specific barriers and facilitators to consistent decision making related to workload, social aspects, their own physiological state, systems, and identity, and named strategies that help them to make consistent decisions such as self-regulation, structural strategies, and routine approaches to task.

**Discussion:** Our study is the first to explore health professionals' subjective experiences of decision fatigue. The findings highlight barriers and facilitators of consistent decision making which should be addressed and extended respectively. Strategies utilised to support consistent decision-making should be reviewed for effectiveness and possible refinement and expansion.



## **(M)eating together: The role of shared meals in individual meat consumption reduction**

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Background: Nutrition, especially reduced meat consumption, can significantly promote health and sustainability. Theories and interventions often focus on individuals, few consider "shared food systems" in cohabiting households. These systems involve joint decision-making in food-related activities and regular shared meals as socially connecting activities. Based on the "Dyadic Health Influence Model," we investigate the significance of dyadic food systems in attempts to reduce meat consumption. Method: Longitudinal intervention with cohabiting dyads across two time points: t<sub>0</sub>—usual eating behavior, t<sub>1</sub>—eating behavior during a "Challenge Week," where one dyad member aimed to reduce their meat consumption. N=101 "challengers" participated, N=63 complete dyads. Frequency of meat consumption and shared meals were self-reported and analyzed with correlations of dyadic and intraindividual data. Findings: The self-reported meat consumption of cohabiting dyads correlated ( $r=.43$ ,  $p<.001$ ), and 65% of meals were typically shared. During the Challenge Week, challengers reduced their meat consumption more when the other person also reduced their meat consumption more ( $p=.028$ ), and when the dyad usually shared fewer meals ( $p=.011$ ). The more challengers reduced their meat consumption, the more the dyad tended to decrease their shared meals ( $p=.088$ ). Discussion: Household members had similar meat consumption, most meals were shared, and individual meat reductions of the dyad-partners were associated. Frequent shared meals were a potential obstacle to meat reduction. These findings highlight the relevance of "shared food systems" in understanding dietary changes and underscore their importance in theories of eating behavior and interventions for healthier and more sustainable nutrition, such as reduced meat consumption.

## **Effectiveness of a dynamic social norm message on meat-free food selection in cafeterias: an RCT**

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**Background:** Reducing meat consumption is necessary to mitigate climate change and improve human health. While leveraging dynamic descriptive social norms (DDSN) appear to be a promising method for this (Sparkman & Walton, *Psych Sci*, 28(11), 1663-1674, 2017), evidence is mixed about their success in different populations and food purchasing contexts (Aldoh et al., *Sustainability*, 13(15), 8315, 2021; Çoker et al., *Appetite*, 169, 105824, 2022).

**Methods:** We tested the effectiveness of DDSN messages on selection of meat-free meals within worksite cafeterias across England. We collaborated with a global catering company and recruited consenting worksite cafeterias (N=25) which were randomized in an 8-week, parallel controlled trial (N=12 intervention, N=13 control). The intervention comprised of DDSN messages designed by the researchers and implemented by the cafeteria marketing team and displayed on posters, free-standing banners, and floor stickers at each intervention cafeteria.

**Findings:** The percentage sales of meat-free dishes (based on weekly aggregated sales records from till data) were analyzed with a linear mixed model and no evidence of an effect of the intervention was found (B= -2.22, 95% CIs: [-7.33, 2.90], p=0.378), controlling for baseline sales and intervention fidelity. A subgroup of cafeteria customers (N=188) were surveyed to assess salience and credibility of the norm messages and to understand barriers to meat-free food selection.

**Discussion:** To our knowledge, this is the first RCT that tested a DDSN message for meat reduction in a real-world setting measuring actual food purchase data and provides a robust piece of evidence for the ineffectiveness of such interventions.

## The effectiveness of a social norm intervention to encourage plant-based consumption: a quasi-experiment in supermarkets

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**Background** Communicating social norms is considered a promising tool to stimulate healthy and sustainable food choices such as meat substitute consumption. The aim of the present study was to increase meat substitute sales (grams per week) of meat alternatives (i.e., meat substitutes and legumes) through the implementation of a combined social norm nudge intervention in real-life supermarkets.

**Methods** In a quasi-experimental design, three intervention and three control supermarkets participated during a twelve week period. The intervention stores had increased visibility of meat substitutes and dynamic descriptive norms were textually communicated in store. The availability of meat substitutes was optically increased and legumes were conveniently placed near the meat and meat substitutes. Weekly sales data over a period of 75 weeks were obtained and comparative interrupted times series analysis was conducted to measure the extent to which meat alternatives were sold more during the intervention in the intervention locations compared to the control locations.

**Findings** Preliminary results indicate that the intervention did not significantly affect meat alternative sales ( $\beta = -685.9$ , [95% CI -9904.8, 8527.7]), neither were secondary outcome measures such as sales of dinner meats ( $\beta = -130.9$ , [95% CI -27127.5, 26858.3]) significantly affected.

**Discussion** The social norm nudge intervention conducted in this study was not effective in stimulating meat alternative sales or reducing dinner meat sales in the supermarket. Although supermarkets play an important role in modulating food choices, social norm nudge interventions may not be enough to move the needle in encouraging a shift towards plant-based consumption in a complex food environment.

# **Cocreating healthy and sustainable food environment interventions with food outlet managers and consumers**

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## **Background**

Food outlet managers have an important role in stimulating healthy and sustainable diets (such as more plant-based), through the foods they offer and how they market them. Yet, managers are hesitant in taking action, as they perceive little demand for plant-based options, or fear psychological resistance among consumers. Cocreation of environmental interventions with consumers and outlet managers may address this challenge by calibrating managers' perception of demand and result in more accepted interventions. Furthermore, interaction between managers of different food outlets may facilitate collective intervention, mitigating the fear of losing customers to neighbouring outlets. The aim of this study was to cocreate an intervention; and to investigate how cocreation may be beneficial in this process.

## **Methods**

Central in the cocreation was a three-hour workshop with twenty-three participants (ten food outlet owners and managers and thirteen inhabitants) from a Dutch middle-large city. Participants were facilitated, using individual-, subgroup- and plenary work forms, to design interventions and reflect on implementation. The workshop was followed-up by smaller working group meetings. Transcripts and generated materials from the workshop and notes from follow-up meetings were used for thematic analysis. During coding there was particular attention to the interactions between participants that may have affected managers' perceptions of demand and resistance.

## **Current stage of work**

Data have been collected during the main workshop and the first follow-up.

## **Discussion**

The results show which interventions may have potential, from the perspective of outlet managers and consumers, and why; and how cocreation may accelerate food outlets taking action.

## **Literature review on strategies towards a more plant-based diet - Individual and contextual differences**

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The consumption of large amounts of animal proteins negatively impacts human and planetary health. Therefore, a shift in diets away from animal proteins is urgently needed. But shifting consumers towards more plant-based choices is a challenge, and can benefit from tailoring behavioral strategies towards individual and contextual preferences. Therefore, this review aims to gain insights in individual and contextual preferences for behavioral strategies that consumers can apply to shift towards a more plant-based diet.

A systematic review has been conducted in Scopus and Web of Science to identify recent studies that (1) focus on the transition towards more plant based foods, (2) include behavioral outcomes and (3) take differences across individuals and/or contexts into account. 299 articles were identified, of which 25 articles were included in the final data synthesis. Key data were extracted and tabulated to gain insights in the different behavioral strategies, the outcome variables and individual and contextual differences.

The strategy to use meat substitutes (analogues) is most often studied, followed by the consumption of more traditional sources of plant proteins such as legumes and nuts. Studies focusing on meat reduction (e.g. smaller portion sizes) or novel protein sources (e.g. seaweed) are less common. These studies mainly look at individual differences, and often relate to motivational differences. Studies on contextual differences are more rare, and mainly look into country differences or situational appropriateness.

Learnings from the synthesis can be used to tailor behavioral interventions to preferences of different target groups and in different contexts.

## **Eating behavior: Beyond calories and health**

Gudrun Sproesser<sup>1</sup>

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There is a worldwide increase in the prevalence of diet-related diseases, posing a challenge to health psychology. The prevailing paradigm to fight this trend has been to equate food with nutrients and health. However, this paradigm does not seem to have solved the problem as prevalences of diet-related diseases are further increasing. In contrast, it might have even resulted in paradoxical eating patterns, that is eating too much of foods that are perceived as healthy. A potential reason for the presumable failure of the food=nutrients=health-paradigm is that most people do not sit down to eat a plate of nutrients. Instead, people eat food that means, for example, sociability or satisfaction for them.

This State-of-the-Art presentation aims to provide empirical evidence showing that (1) eating goes beyond nutrients and health; and (2) positive effects on health are possible without a focus on nutrients or health.

First, I will show that, next to health considerations, there are 14 further basic motives why people eat what they eat, such as eating for social or emotional reasons. Furthermore, eating is not only characterized by what people eat (e.g., how much fat) but also by how they eat (e.g., where or with whom). Second, I will present experimental and survey data demonstrating that intuitive eating, that is eating without focusing on nutrients and health, does not have negative effects regarding overall consumption and health parameters. Beyond that, I will show that leaving the focus on nutrients and health behind and being positive in and about one's eating can have positive health effects.

In conclusion, this State-of-the-Art presentation provides new impulses how to think about eating behavior and how to prevent diet-related diseases. The generalizability to other challenges that require a change in eating behavior, such as global warming, will be discussed.

## **Adolescents' perceptions of their school food environment and the factors influencing their food choices**

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**Background:** Current efforts in secondary schools to stimulate healthy and sustainable diets primarily focus on increasing knowledge and food skills. Yet, it is widely acknowledged that food environments significantly influence dietary choices. Therefore, the aim of this study is to explore a) adolescents' perceptions and use of their food environment, and b) factors influencing their food choices within this environment.

**Methods:** A participatory study was conducted with 308 adolescents (aged 12-16 years) at four Dutch secondary schools in rural and urban areas. Participants completed a baseline questionnaire and a food environment mapping exercise. 50 focus groups were conducted with 5-8 participants each. Questionnaire and exercise data were analyzed using descriptive statistics. Focus groups were analyzed inductively through thematic analysis.

**Findings:** Of all possible food outlets, adolescents marked their home (n=307), the supermarket (n=269), and the school canteen (n=196) as the top three locations to obtain food during an average school week. The home and supermarket were indicated most as locations to get healthy and/or sustainable food. Adolescents perceived consuming healthy food as important (M=3.68 on a 1-5 scale), while they perceived the importance of sustainable food as neutral (M=2.76). Focus groups revealed factors underlying adolescents' food choices including eating as a social activity, taste, convenience and price.

**Discussion:** Adolescents eat healthy and sustainably mostly at home, while food choices at other locations are influenced by other factors such as taste and price. Future research should explore, together with adolescents, how healthy and sustainable diets can be stimulated in out-of-home contexts.

## **Exploring forces shaping food choices beyond the micro-environment: unravelling systemic drivers of poor eating behaviors**

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Overweight, obesity and diet-related non-communicable diseases (NCDs) pose a major public health problem. More than 50% of the adult population in the European Union is overweight, of which 15% were obese. Unhealthy diets are an important preventable risk factor for NCDs and it is widely acknowledged that food consumption, eating behavior and underlying sociopsychological determinants (self-control, capability, motivation) are heavily influenced by the micro-environments people interact with (e.g. supermarkets, restaurants, canteens, schools). Consequently, there has been a significant increase in health psychology research focusing on food environment interventions aimed at improving food consumption (e.g., nudging, labelling). However, we argue that, in the field of health promotion, we need to elevate our perspective further than the current emphasis on micro-environmental interventions to support healthy and sustainable eating, and delve deeper into the underlying drivers that shape these micro environments people encounter, and address the more structural (meso, macro) impediments to behavioral change. To that end, we will argue that we, as behavioral scientist, could address and study the systemic drivers of poor eating behaviors and act upon the systemic leverage points for public health promotion and disease prevention. In this talk, we will leverage insights gained from our different (European) research projects, examining the systemic, commercial, and political influences that shape our food environment and subsequently impact our eating behaviors. Furthermore, we address how psychological and behavioral insights are essential to (further) develop and evaluate these meso- and macro level health promotion strategies (e.g., food policies) and move beyond the micro environment to understand how systems approaches could support health and sustainable eating. We specifically will shed light on these systemic forces and make the case for elevating current approaches to food environment interventions in the field of health psychology to sustain health promotion efforts.



## **Driving dietary behaviour change for salt reduction to improve hypertension control in South Africa**

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**Background:** The objective was to reduce salt consumption for hypertension control among adults. The research question was: Will the multi-pronged behaviour change approach for salt consumption reduction achieve reduced hypertension prevalence in adults? A primary aim was to reduce salt consumption by 2g within 5years. **Methods:** An intervention package was used for behaviour change to align with the WHO's SHAKE package which recommends 5g of sodium daily. The intervention included salt reduction legislation, M&E, the national NCDs Strategy, and national "Salt Watch" campaigns. **Expected results:** Over the next 5-years, salt consumption levels in South Africa will continue to drop. Hypertension measures will be the proxy indicator for salt consumption. Earlier studies showed that adults were consuming an average of 8g of salt daily. Following the legislation and the first national campaign, results showed a 20% ( $p < 0,0001$ ) increase in awareness and positive behaviour change among adults 18-55 years for salt consumption reduction. An evaluation study is planned to determine whether the intervention package for dietary behaviour change leads to a further reduction in salt consumption, improving hypertension control and CVD burden. **Current stage of work:** Salt legislation is undergoing further revisions. Another campaign is planned for 2024. **Discussion:** Using behaviour change theory to implement health promoting strategies to improve hypertension control and CVD outcomes, is a key contribution. The value of the applicability of health psychology is highlighted. **Conclusion:** Behaviour change interventions are effective in reducing salt intake by  $>1$  g/d. Partial hypertension control was achieved. The initiative meets SDG 3.4.

## **Qualitative process analysis of the SuMMiT-D text message intervention for people with type 2 diabetes**

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**Background:** Many people with type 2 diabetes do not take their medication as prescribed, increasing their risk of complications. The Support through Mobile Messaging and Digital health Technology for Diabetes (SuMMiT-D) randomised-controlled trial assessed an evidence-based text message intervention. The aim of this qualitative process analysis was to understand (i) how context might interact with the intervention and (ii) to explore potential mechanisms of action of the intervention.

**Methods:** Text messages targeting medication adherence were sent to participants for 12 months. Each message was based on a single Behaviour Change Technique. Trial participants were purposively sampled and interviewed at 4 weeks post randomisation and again at 12 months (n=23) or only at 12 months (n=20). The interviews were analysed thematically.

**Findings:** Two over-arching themes were identified: (i) 'What my life looks like' highlights how the intervention interacted with individuals' routines and perceptions of diabetes; and (ii) 'Changes in self-management of diabetes over time: what and how' shows participants with a broad range of pre-existing behaviours and beliefs about self-management reporting changes to their behaviour, thoughts and feelings as a result of receiving the messages. The potential mechanisms described suggested a combination of the evidence-based content, and delivery by short message may have acted together to provide the benefits experienced.

**Discussion:** Text messaging interventions may benefit a wide range of people and can be implemented at low cost. We have identified potential mechanisms that, together with a quantitative process analysis, will help to optimise this intervention and other medication adherence interventions.

# Exploring fidelity and tailoring of improvement actions in diabetes care: The EQUIPD trial process evaluation

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## Background

EQUIPD is a cluster-randomised trial of a 15-month Quality Improvement Collaborative (QIC) delivered alongside a national diabetes audit to increase the use of insulin pumps for patients with Type 1 diabetes. The QIC aims to stimulate specific target behaviours by specialist diabetes teams to improve care.

Our process evaluation alongside the EQUIPD trial has three objectives: to examine implementation and engagement with the intervention; to describe fidelity; and to explore tailoring, that is, how teams analyse influences on care delivery and select improvement strategies.

## Methods

Observations of workshops and monthly calls (48 hours), documentary analysis (n=78) and inductive and deductive thematic analysis of qualitative interviews (n=24) were used to assess fidelity and explore tailoring. 39 specialist diabetes teams participated in the QIC.

## Findings

Tailoring activities within the QIC workshops supported teams to develop logic models identifying both influences upon care behaviours and implementation strategies to address these influences. Intended strategies evolved into actual strategies over the course of the QIC.

Data describing the fidelity of delivery and recipients' receipt of the intervention will be presented.

## Discussion

Insulin pumps support diabetes self-management but there is variation in their implementation. Exploring what factors diabetes teams identify as influencing their practice, their intended actions, and what they actually do to improve care enables wider implementation. Describing how teams undertake tailoring informs how this work can be supported.

Assessing fidelity of intervention delivery, receipt and response enhances the reliability and replicability of the QIC intervention and will support the interpretation of trial results.

## **Randomized controlled trial of an online program for people with diabetes with ACT therapy**

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**Background:** Diabetes can cause, in addition to medical symptoms, a deterioration in mental health. The aim of this research is to create an online intervention for patients based on Acceptance-and-Commitment Therapy (ACT) to improve the psychological-flexibility and the quality-of-life. The main objective of this study is to compare the evolution of these outcomes between diabetic patients following this e-program and two others control groups: one following an intervention from the French Federation of Diabetics ("Slow Diabète") and one with no intervention.

**Methods:** Videos based on ACT therapy processes were created in collaboration with health professionals and then sent to one hundred participants of the ACT program by e-mail. Two methods were used to exchange with them: 1) a questionnaire using validated scale to measure several outcomes such as acceptance of the disease and anxiety-depressive symptoms, and 2) semi-structured interviews. Quantitative and qualitative analyses are respectively planned to assess the program's effect on participants.

**Expected results:** The expected results are improved quality-of-life and psychological-flexibility for diabetic patients who have followed the online ACT intervention compared with control groups. Other outcomes such as therapeutic adherence and motivation toward treatment are also expected to improve.

**Current-stage of work:** Quantitative and qualitative analyses of this research project are still in progress. At the EHPS 2024 conference, the results will be outlined and presented.

**Discussion:** In line with efficacy results, the online program could be offered to a larger number of diabetic patients across France. This could enable them to improve their quality-of-life through psychological-flexibility.

## **Understanding factors influencing behaviour change maintenance after attending a type 2 diabetes structured education programme**

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**Background:** Diabetes self-management education and support (DSMES) programmes for type 2 diabetes improve outcomes in the short term, but subsequent maintenance of behavioural changes can be difficult. This study aimed to understand factors influencing behaviour change maintenance after attending a type 2 diabetes DSMES programme and to refine a pre-existing framework of factors developed from a systematic review of existing studies.

**Methods:** A longitudinal qualitative study using semi-structured interviews and experience sampling was conducted with adults with type 2 diabetes who had attended a DSMES programme in Ireland. Interviews were conducted via phone, online, or in-person at two, five, ten, and fifteen months post-programme from May 2022 to February 2024. Participants were also invited to collect data between interviews through experience sampling (written notes and photographs). Data were analysed using a combined deductive framework and inductive thematic analysis approach.

**Findings:** Twenty-one adults, predominantly female (67%, mean age = 59 years, range 39 – 74) participated in the study, seventeen of whom completed all four interviews. Analysis suggests the data supports and extends the existing framework, with additional constructs/sub-constructs added to the framework to capture newly identified factors. Commonly identified factors include support from others, access to ongoing support and guidance post-programme, access to resources and positive reinforcement from positive outcomes.

**Discussion:** The refined framework resulting from this study will contribute to an improved understanding of behaviour change maintenance in the context of type 2 diabetes self-management and provide an evidence base for refining and developing type 2 diabetes self-management programmes.

## **The 'Healthy Living' nationally implemented type 2 diabetes self-management programme: User engagement and content exposure**

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**Background:** 'Healthy Living' is a web-based self-management intervention for people with type 2 diabetes, nationally implemented across England from 2020. We have previously shown that the intervention has good fidelity to the content of the precursor 'Help Diabetes' intervention which demonstrated effectiveness in a trial. Despite this, it was unclear how much users engage with intervention content once rolled out, including their exposure to intended Behaviour Change Techniques (BCTs) and other self-management content.

**Methods:** Anonymous usage data was obtained for registered users who activated a Healthy Living account between 2020 and 2023. All elements of the Healthy Living programme were reliably coded for BCT and self-management content.

**Findings:** Of 27,422 users who activated an account, 69% of users (n=19,137) accessed at least some website content. With regard to self-regulatory BCTs, of those who accessed website content, 18% (n=3,523) were exposed to 'action planning' and 53% (n=10,071) were exposed to 'self-monitoring of outcome(s) of behaviour' at least once. Although most participants were not exposed to the majority of BCTs, a sizeable minority were exposed to BCTs multiple times. Exposure to self-management content was higher, with 77% (n=14,662) exposed to emotional self-management and 89% (n=17,050) exposed to medical self-management content.

**Discussion:** The engagement rates in this national rollout are sub-optimal but consistent with other digital programmes. There is a need to identify how to encourage engagement in web-based interventions. This may include considering how content might be better structured to encourage engagement. Future research will examine engagement as a moderator of effectiveness.

## **Bystanders reactions to excluding people with obesity at work**

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Stigmatising and excluding people with obesity is ubiquitous in various contexts also at the workplace. People diagnosed with obesity (of BMI 30+) face discrimination in all aspects of work activity: recruitment, assessment, cooperation with colleagues. However, research on observing ostracism indicates that if ostracism sources are driven by clear stereotypes, bystanders tend to attribute excluding a target to sources' malicious motive (instead of blaming a target). The present studies aim at examining bystanders' responses to ostracism directed to employees with obesity. We assumed observers would be more likely to exclude and blame employees with high BMI (compared with those of regular weight). In two experimental studies we used vignettes scenarios (study 1, N = 427) and a CyberMail procedure (study 2, N = 400). Participants observed edited photos of excess or regular weight employees being excluded or included in a workplace context. Contrary to our expectations but in line with observing ostracism literature, observers were more favourable to ostracised than to included employees, as well as to employees with obesity compared to those of regular weight. Moreover, observers considered sources who excluded a person with obesity to be more prejudiced towards people with high BMI. This research contributes to literature on ostracising and victimising people with obesity at the workplace. Although the findings are not in line with previous results indicating common ill-treatment of colleagues with excess body mass, the studies contribute to understanding bystanders' reactions to their discrimination.

## Utilising qualitative research to support intervention development: Stigma amongst people living with/at risk of HIV

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**Background:** HIV-related stigma remains a significant barrier to help-seeking, testing and treatment. Understanding contemporary HIV stigma is vital to develop stigma-reducing interventions contributing to eliminating HIV transmission. We explored HIV stigma in Scotland to inform the development of a stigma-reducing social marketing intervention delivered on national television and targeted social media.

**Methods:** As part of an inter-agency collaboration, a cross-sectional exploratory qualitative study employed inductive thematic analysis. Thirty-two participants took part in focus groups or one-to-one interviews (face-to-face/online), including PLWH (n=7), representatives from the Black African Community (n=7), men who identified as gay, bisexual, or as men who have sex with other men (GBMSM) (n=5), people who have injected drugs (PWID) (n=8), and members of the general public (n=5). These findings informed intervention development via logic model and programme theory development.

**Findings:** (i) 'Experiences of HIV stigma' (varied historically and geographically across settings, including services (e.g. NHS), workplaces, and public spaces); (ii) 'Impact of HIV stigma' (i.e. perceived as 'Real' (physically and emotionally) or 'Imagined' (anticipated)); (iii) 'Knowledge and awareness of HIV stigma' (particularly poor among the general public); (iv) 'Temporality' (e.g. changes in attitudes over time); and (v) 'Support for interventions to reduce HIV stigma' (e.g. using diverse media, targeting specific contexts (e.g. schools), sub-groups (IDU) and environments (rural/urban)).

**Discussion:** We provide a transparent account of working within an interagency collaboration to develop a national intervention and detail the ways in which the findings helped support and shape the production of Scotland's intervention 'Stigma is more harmful than HIV'.



## **Physical activity as a moderator of the association between alcohol consumption and hangovers**

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**Background:** Frequently mentioned anecdotally, hangovers are under-investigated within the scientific study of alcohol. The well-established positive association between alcohol use and exercise suggests that physical activity may buffer negative physiological consequences of alcohol consumption, including hangovers. The present study was therefore conducted to determine whether physical activity influences hangovers. **Methods:** Undergraduates (N = 1676) were recruited for participation from two large universities in the United States. Inclusion criteria were: 1) between the ages of 18 to 25 years; 2) experienced a hangover in the three months prior to data collection; and 3) engaged in at least 30 minutes of weekly moderate physical activity. Participants completed online questionnaires about their alcohol use, physical activity, and frequency and severity of hangover symptoms. Both between- and within-person associations between alcohol consumption and hangovers were examined, factoring in the potential moderating effects of both moderate and vigorous physical activity. **Findings:** Results revealed that individuals who consumed more alcohol per month experienced hangovers more frequently and experienced more severe hangovers. However, these associations were attenuated among individuals who spent more time engaging in vigorous physical activity. **Discussion:** The current study is the first to demonstrate that physical activity plays a substantial role in the experience of hangovers, which we postulate may partially explain the positive relationship between physical activity and drinking. Our findings supplement the growing literature on physical activity and alcohol consumption and may contribute to the development of health guidelines for alcohol use disorders.

## Quality of life in patients with atrial fibrillation: an exploratory study

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**Background:** Atrial fibrillation (AF), a prevalent cardiac arrhythmia, represents a significant medical concern. AF patients experience comorbidities, leading to an elevated risk of adverse health outcomes, including psychological distress (PD), cognitive decline (CD), and decreased quality of life (QoL). Finding QoL determinants in AF patients is essential to guide effective management strategies and interventions.

**Methods:** Seventy outpatients with documented AF were assessed on QoL, psychological distress, cognitive decline, and AF symptom severity. Data on sociodemographic, clinical, and inflammatory biomarkers were also collected. Pearson's correlations and T-tests were performed. A hierarchical linear regression was performed to explore the variables contributing to QoL.

**Results:** Higher levels of stress, anxiety, depression, and severity of symptoms were associated with lower QoL. Gender differences were found with women reporting lower QoL, more depression, more stress, and more severe symptoms compared to men. Elevated levels of C-reactive protein correlated with greater depression and severe symptoms as expected. Patients with longer illness duration reported more cognitive decline. Overall, being female, and having severe symptoms contributed to poorer QoL in AF patients.

**Discussion:** This study underlines the significance of PD, gender, and symptom severity in AF patients concerning QoL. The association between depression and elevated C-reactive protein levels in AF patients highlights the interplay of these two inflammatory conditions, leading to worse outcomes. Patients with longer diagnosis should undergo regular cognitive function assessments to prevent dementia. Targeting these variables may promote better QoL outcomes and reduce healthcare costs and hospitalizations AF associated.

## **Insights into Intimate Partner Violence: Validating the Hebrew Translation of the HITS Questionnaire**

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Intimate partner violence (IPV) represents a global challenge, impacting the health, well-being, and human rights of individuals and families. Recognizing the significant role of cultural attitudes towards IPV, this study underscores their influence on IPV risk and emphasizes the importance of these attitudes in developing prevention initiatives. We focused on adapting and validating the Hurt, Insult, Threaten, and Scream (HITS) questionnaire for Hebrew-speaking populations. This involved a comprehensive translation process, including evaluation by an expert panel and cognitive assessments by 19 participants. After this, 219 social work undergraduate students in Israel completed the tool's finalized version. Our analysis confirmed the effectiveness of the Hebrew translation of the HITS questionnaire, validated by a satisfactory fit to the collected data and a significant chi-square value of 7.610 ( $p=0.022$ ) with 2 degrees of freedom. Using the Hebrew HITS, we identified a strong correlation between having experienced violence during youth and encountering IPV in present adult relationships ( $R=0.67$ ,  $p<0.01$ ). Furthermore, our findings revealed gender differences; women reported less (!) IPV from their current partners than men ( $F=9.81$ ,  $p<0.01$ ) and showed less tolerance for IPV than men ( $t=2.94$ ,  $p<0.001$ ). This study's insights contribute to the broader understanding of IPV dynamics and support the tailoring of intervention strategies to diverse cultural contexts.

## **When theory-based interventions don't work: explanations, and benefits of experimental pre-testing**

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### Background:

Theory is useful in reducing the muddle of evidence, modelling the process of behaviour change and suggesting how 'meddling' might effect behaviour change. Thus, theory is frequently recommended as a basis for behaviour change interventions. Nevertheless, even when using theory, results are often disappointing and it is tempting to abandon theory. The aim of this presentation is to examine reasons for theory-based interventions being unsuccessful in changing behaviour and how experimental testing of interventions might be used.

### Methods:

Development of a checklist of possible explanations for theory-based interventions being ineffective.

### Findings:

#### Reasons include:

- a) the theory is incorrect;
- b) selection of an inappropriate theory, e.g. using theory of emotion rather than behaviour;
- c) ignoring the range of applicability of the theory, e.g. a theory applicable to other populations or settings;
- d) inadequate evidence-base for the theory, e.g. only tested correlationally;
- e) application of the theory, e.g. selection of some but not all causal entities;
- f) operationalisation of the intervention, e.g. failing to change the mechanisms of action;
- g) delivery of the intervention, e.g. too infrequently;
- h) intervention not received, e.g. non-attendance of intended participants;
- i) choice of behavioural outcome, e.g. a behaviour already at maximum;
- j) methods of evaluation, e.g. inappropriate statistical design;
- k) choice of comparator group, e.g. unrandomized participants.

### Discussion

When theory-based interventions are unsuccessful, analysing the reasons may advance understanding of the process of behaviour change. Experimental pre-testing of interventions may identify reasons for failure to translate theory into effective intervention and so avoid expensive implementation.

## Experimentally testing messages increasing bowel cancer screening

Chantal den Daas<sup>1</sup>, Diane Dixon<sup>2</sup>, Gill Hubbard<sup>3</sup>, Marie Johnston<sup>1</sup>

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**Background:** Early detection of bowel cancer can save lives, yet uptake of screening is low in some populations. Theory-based messages were co-designed with NHS professionals. We tested whether the messages changed intention to screen.

**Methods:** In an online cross-sectional experimental survey using Prolific (N=404), people over 50 years (M=59.85, SD=7.31, N=248 (61.7%) female, N=384 (95.3%) white) were randomly allocated to one of the four messages (Mechanisms of Action (MoA): belief in capabilities (self-efficacy), norms, behavioural cueing, or emotion) or no message condition. These evidence-based MoA were connected to their behaviour change techniques and turned into written text interventions. Participants reported their past behaviour, negative beliefs about bowel cancer screening, and test intentions. After testing, effective messages were implemented through NHS Highland social media.

**Findings:** There was a 3-way interaction between past behaviour, negative beliefs, and message condition: Self-efficacy and emotion-based messages increased intentions but only for participants with negative beliefs about screening, who either had not received a kit or who had not used their kit,  $F(14, 370)=4.29$ ,  $p<.001$ ,  $\eta^2=.14$ . The social norm message reduced intention to use the kit in participants who had not received a kit,  $F(4,384)=3.88$ ,  $p<.001$ ,  $\eta^2=.004$ . Implementation of three messages in practice reached over 6000 people, and 164 people actively engaged.

**Discussion:** The messages worked under some condition to increase intentions. However, not in all conditions and some even had detrimental effects. Thus, even theory-based interventions benefit from pre-testing to select messages to implement, evaluating the impact on behaviour and ultimately on bowel cancer detection.

## **Experimental studies to understand key mechanisms of digital psychological support for respiratory disease**

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### **Background**

Asthma affects over 300 million people worldwide. It's characterised by airway constriction and experiencing unpleasant breathlessness. Psychological dysfunction leads to lower quality of life, increased hospitalisation and higher mortality. In these experimental studies, we explored the mechanisms of psychological/behavioural interventions (breathing exercises and mindfulness meditation) to optimise their delivery as digital interventions. Study 1 compared the effects of different components of a breathing intervention, and Study 2 examined the addition of a breathing-biofeedback device to improve engagement with a digital breathing intervention.

### **Method/Findings**

Study 1: In this randomised-controlled double-blind lab experiment, 87 asthma patients completed a task that measured the frequency of intrusive worrying thoughts. They were randomised to 3 guided-audio practice groups: i) control their breathing, ii) accept their breathing or iii) non-breathing-related control. They then took part in a worry induction, before re-completing the thought intrusion task. We found no between-group differences on task performance.

Study 2: In another randomised-controlled study, 58 healthy volunteers completed anxiety-related cognitive measures (including the thought intrusion task) in the lab, before randomisation to i) an audio mindfulness practice or ii) audio mindfulness practice + biofeedback. After practicing they re-completed cognitive measures in the lab. Between-group comparisons found that people receiving breathing biofeedback engaged more with the digital intervention, and had fewer thought intrusions and better task performance.

### **Findings**

These studies illustrate how carefully designed experiments can identify key psychological and behavioural mechanisms that drive treatment effectiveness. This is crucial to maintaining treatment effectiveness across new delivery paradigms (eg. in-person to digital)

## **How environmental justice values and sustainable behavior norms influence the sustainable food transition: Two experiments**

Michèle Bal<sup>1</sup>, Renate Bosman<sup>1,2</sup>, Marijn Stok<sup>1</sup>

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**Background:** Food consumption is responsible for 20-35% of greenhouse gas emissions. A sustainable food transition is thus essential to curb climate change. Motivating individuals to engage with this transition remains challenging. Using insights from Value-Belief-Norm theory and the Theory of Planned Behavior, we test whether activating environmental justice values or injunctive and descriptive sustainability norms can increase people's willingness to engage with the food transition.

**Methods:** We manipulated environmental justice values (Study 1: intergenerational vs global vs ecological vs control, N = 197) and social norms (Study 2, descriptive vs injunctive vs control, N = 143). We examined effects on intentions for sustainable food behavior, willingness to pay for policies aimed at increasing sustainable food consumption, and reciprocal effects between norms and values.

**Findings:** Study 1 showed that ecological justice values in particular increased policy support and sustainability norms, but not sustainable behavior intentions. Study 2 showed that the descriptive norm in particular increased sustainable behavior intentions, whereas the injunctive norm had a marginal negative effect on policy acceptance.

**Discussion and conclusion:** Values and norms both play important roles in the sustainable food transition. While environmental justice values, and ecological justice in particular, increase sustainable policy acceptance, sustainability norms, and descriptive norms in particular, increase sustainable behavior intentions. Injunctive norms, in contrast, may backfire, reducing a willingness to engage in the transition.

## **Threat appraisal interventions in a climate change setting: two experiments on doom communication**

Janna de Graaf<sup>1</sup>, Michèlle Bal<sup>1</sup>, Marijn Stok<sup>1</sup>, John de Wit<sup>1</sup>

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**Background:** In the context of climate change communication through mass media, doom framings emphasizing negative consequences have become prevalent. Threat appraisal models suggest that inducing threat can be a powerful persuasive technique to change behavior but might also lead to defensive behavior. While experimental research exists in the domain of (especially) individual health behaviour, such investigations are lacking in diverging contexts, such as the collective context of addressing climate change, where individual adaptive behaviour is likely not enough to reduce the source of the threat.

**Methods:** In two experimental studies (n = 154; n = 368), we examined the effects of high-threat communication compared to low-threat communication on a wide range of responses aimed at addressing climate change. We varied the climate change severity manipulation, using text in Study 1 and videos in Study 2.

**Findings:** No significant differences were found between high-threat and low-threat communication on adaptive responses (i.e., intentions, acceptance of policies, and motivation) or maladaptive responses (i.e., climate change scepticism, reactance, avoidance, rationalization, or denial of guilt; all p's > .05).

**Conclusion:** Our results highlight the necessity for expanding experimental testing of theory-based communication or interventions.



## Exploring socio-cognitive beliefs of sustainable transport in a general adult population using a CIBER approach

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**Background:** Knowledge on socio-cognitive beliefs is needed to create specific intervention content whereas research has focused mainly on behavioral determinants of pro-environmental behavior at a higher level (e.g., attitudes). Building on a Reasoned Action Approach framework, this study explored associations of and room for improvement in socio-cognitive beliefs of active and public transport.

**Methods:** An online survey was conducted among Belgian adults (representative sample, 18y+), on intentions, behavior, behavioral beliefs, inductive and descriptive norm beliefs, self-efficacy beliefs and environmental constraints, for active and public transport for commuting and shopping (<10, or >=10 kilometers). A CIBER approach was used to determine associations and room for improvement for each belief in relation to intention and behavior.

**Findings:** The sample comprised n=2225 adults (53.1% women, 44% between 35-54y). Across behaviors, normative beliefs showed very small ( $r < .10$ ) to small correlations ( $r < .30$ ) with intention and behaviors, except for using public transport for small shopping at >10km, showing moderate correlations ( $r < .50$ ), but lower levels of agreement, thus indicating room for improvement. Self-efficacy beliefs and environmental constraints showed small to moderate associations, but only for few beliefs with intention or behavior. Behavioral beliefs (e.g., 'active transport is comfortable', 'public transport helps avoid traffic jams') showed the strongest correlations across all behaviors. Environmental constraints had moderate associations with active transport but not public transport.

**Discussion:** Addressing social norms (except public transport for shopping >10km) may not have much impact in changing intentions and behavior of sustainable transport, whereas targeting behavioral beliefs offers the greatest potential for intervention impact.

## **Greencity4aging: healthy and active aging in sustainable cities**

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**Background:** Population ageing is rising in the 21st century, and most live in urban areas. Thus, planning an age-friendly city is paramount as a primary driver of quality of life. At the same time, climate change mitigation and adaptation has induced the development of different mobility policies and types of street design.

At this moment, it becomes urgent to identify the best designs that promote active and healthy aging, grounded on walkability and the social integration of older people in the urban public space.

Therefore, it urges to understand the level of awareness about the importance of longevity and aging in the planning of public spaces and mobility in a changing climate and to identify which are the determinants of street design that ensure a good level of service for older people.

**Methods:** 26 semi-structured interviews were conducted to a wide diversity of stakeholders, namely the scientific community, policymakers and government, private companies, civil society organizations, the public, social and health services and professionals in the area. Thematic analysis was used to analyse the data.

**Findings:** Five main themes were identified, related with the main determinants to promote the design of age-friendly environments in a changing climate, that include pedestrian infrastructure, safety, presence of cycle paths, access to facilities and green spaces. Other themes identified rely on climate change, public policies and specification of case studies.

**Discussion:** The knowledge of these key determinants by decision makers will assist the promotion of active aging and older people health and well-being.

# **A Global Research and Action Agenda for Climate Change and Mental Health**

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## **Background**

The field of climate change and mental health is rapidly growing yet remains uneven, disconnected, siloed, with significant gaps in geographies and topics. The international collaboration, 'Connecting Climate Minds', conducted over 20 cross-sector dialogues, 21 surveys, and in-person and virtual expert consultations with over 600 experts across disciplines and sectors from over 80 countries to produce 10 research and action agendas on climate change and mental health for different regions and communities.

## **Method**

The dialogues produced seven regional and three thematic (youth, small farmers and fisherpeople, and Indigenous Nations and Peoples) research and action agendas. The regional and thematic research and action agendas were synthesised to produce one global research and action agenda. We followed meta-aggregation methodology to extract the data and 'Framework Methods' to form and organise categories to develop synthesised global agendas.

## **Findings**

The global research and action agendas identified four high-level categories for priority research themes: 1) Mental health impacts, risks and vulnerable groups, 2) Pathways and mechanisms through which climate change impacts mental health, 3) Mental health benefits of climate action and 4) Mental health solutions in the context of climate change.

## **Discussion**

We hope this agenda will serve as a "go-to" rallying focus to mobilise and align efforts in an increasingly vital field, serving to create a safer climate for mental health. The agenda is inherently transdisciplinary, and both encourages and requires people from different disciplinary backgrounds, including health psychology, to incorporate considerations at the nexus of climate and mental health in their research.

## **Exploring the overview effect: Can observing earth from space in virtual reality stimulate pro-environmental actions?**

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### **Background:**

The planet's health is in jeopardy, necessitating interventions to promote pro-environmental behavior. Astronauts (and recently businessmen) often express a renewed sense of responsibility for taking care of the environment, after observing the overwhelming beauty of Earth from space. The potential of experiencing this so-called 'overview effect' using Virtual Reality, so as to spur pro-environmental behavior, has been reported frequently in the media and inspired educational programs and museum exhibitions. Despite recent attention, its direct impact on pro-environmental behavior remains uncertain.

### **Methods and Findings:**

Through two experimental studies using virtual reality (VR), this research assessed the immediate and prolonged effects of an immersive overview experience on pro-environmental behaviors, such as donating to environmental NGOs and reducing dairy and meat consumption. Study 1 (N = 145) investigates the influence of VR technological immersiveness and the mediating role of connectedness to nature. However, a seven-minute overview effect VR video showed no discernible impact on pro-environmental behavior. In Study 2 (N = 304), a longer 15-minute video was used to re-examine the role of technological immersiveness, yielding similar results of no direct effects on short- or longer-term pro-environmental behavior.

### **Discussion:**

Despite the interest for the overview effect in e.g., the media, we found no direct effects of a virtual reality experience on pro-environmental. Based on indirect effects, insights from our practice partner, and other research, we will discuss specific features that potentially determine the effectiveness of the overview effect VR-experience on pro-environmental behavior, providing important insights to e.g., academics, businesses and educational institutions.

## Understanding adolescent exposure to UV radiation: a psycho-socio-environmental approach

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**Background:** The Solsteen project aims to investigate the exposure practices of teenagers to ultraviolet (UV) radiation in schools, as well as their evolution following health promotion interventions (i.e., installation of sunshades in schools and health education sessions with pupils). This study is part of a multidisciplinary and psycho-socio-environmental approach. The first phase of this study aimed to identify the psychosocial factors associated with UV exposure behavior in this young population.

**Methods:** Two qualitative data collection tools were used in volunteer schools in the Lyon Metropolitan Area. A total of 16 semi-structured interviews were conducted with secondary school students, aged between 11 and 13 years old. In addition, 18 observations were made in schoolyards, using a pre-established observation grid. Thematic analyses were carried out on both sets of data.

**Results:** The teenagers interviewed were aware of the risks associated with UV exposure, and of how to protect themselves. However, other factors appeared to play a role in exposure choices, such as feelings of well-being or aesthetics (i.e., tanning). The results underline the role of family and peers in shaping these exposure and protection norms. Observations highlight the role of structural factors such as the regulations of certain establishments (e.g., prohibition of wearing a cap within the establishment) or the layout of courses.

**Discussion:** The factors identified will support the development of recommendations for schools, as well as the improvement of health education sessions for students. Health education interventions will be tested in the second phase of the Solsteen project.

## **Ecological distress and coping in activists and non-activists: A qualitative study**

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Recent evidence demonstrates that young people and adults are worried about climate change (Marks & Hickman, 2023; EPA, 2024) and the IPCC has outlined current and predicted mental health impacts of climate change (IPCC, 2022). There is evidence suggesting climate activism may act as a coping mechanism for climate distress (Schwarz et al., 2023) and evidence that climate activism is an efficacious method of reducing carbon emissions (Thiri et al., 2022).

The aims of this qualitative study were to provide a) a preliminary understanding of whether the transactional model of stress (Lazarus & Folkman, 1984) could be applied to climate related distress and coping and b) a qualitative understanding of risk and efficacy perceptions in relation to climate change and climate activism. Sixteen self-defined activists and eleven non-activists aged 18-70 years took part in individual semi-structured interviews and the resulting data was analysed using thematic analysis (Braun & Clarke, 2006).

Both activists and non-activists expressed similar fear and worries about climate change, but non-activists expressed a more pessimistic outlook and feelings of lack of control over climate change, whereas the activists demonstrated a perception of efficacy in climate activism and belief in their own ability to respond to the climate crisis.

This study suggests that climate activism may offer coping mechanisms in relation to climate distress and that climate activists may perceive activism as an efficacious intervention for climate change.

## Daily relationship between air pollution, weather, and objectively-measured physical activity in industrial regions

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### Background:

Physical activity (PA) has profound benefits for physical and mental health, yet its insufficient levels pose a world-wide issue. Air pollution (AP) and various weather-related parameters have been found to affect PA. We examine daily relationships between AP, weather, and PA levels of individuals living in industrial regions.

### Methods:

Data comes from the first 14-day intensive monitoring burst of the 4HAIE study conducted in the Czech Republic 2019-2022. A sample of 643 participants living in the Moravian-Silesian region (5891 person-days, 48.10% women; Mage=38.82, SD=12.42, 18-65) was included in the analyses. Daily step counts were measured objectively using Fitbits. AP and weather parameters were derived from the nearest monitoring station to the participants' locations.

### Results:

Preliminary analyses using multi-level models have indicated that temperature, humidity, and precipitation were related to step counts at the daily level. AP was not correlated with daily step counts on average, but participants showed varying degrees of association, suggesting potential exploration into individual differences in this regard. We controlled for the effect of socio-demographic variables on step counts. Further suitable analytical approaches (e.g., modeling non-linear associations) will be explored and AP and weather data will be validated.

### Discussion:

Our work brings important findings on daily relationships between AP, weather and PA, which may inform future PA interventions. Individuals living in industrial regions might be engaging in physical activity regardless of the air pollution status. Health-related implications of present analyses are important for policymakers in industrial regions.

## **Beliefs about antiretroviral therapy: Changes over time and associations with viral load suppression**

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**Background:** Adherence to Antiretroviral Therapy (ART) can be suboptimal and may be associated with patients' attitudes to ART. This study aimed to: (1) explore how attitudes to ART changed over time in people with HIV who were enrolled in a trial or an observational cohort, and (2) explore the impact of these attitudes on clinical outcomes (viral suppression).

**Methods:** Four groups of ART-naïve patients were followed: those who had negative ART attitudes at baseline, who consented to a trial of a behavioural intervention and were randomised to Cognitive Behaviour Therapy (CBT; Group 1) or Care as Usual (CAU; Group 2), those who had negative attitudes but declined to take part in the trial (Group 3), and those with positive ART attitudes (Group 4). All participants completed the Beliefs about Medicines Questionnaire (BMQ) at 0, 3, 6 and 12 months. Viral load was collected from clinical notes.

**Findings:** Across the 12-month period, ART attitudes became more positive in all groups, but the improvements were significantly greater in the trial acceptors (CBT/CAU) than the trial decliners. Decliners were less likely to be virologically suppressed at 12 months. Across all groups, changes in ART attitudes across the 12 months predicted viral load suppression at 12 months independently of demographic characteristics.

**Discussion:** The findings highlight the role of attitudes about ART in maintaining clinical outcomes and show that it is possible to improve attitudes to ART. Patients' beliefs should be assessed regularly throughout treatment to identify those at need of further support.



## **Mechanisms of mindfulness in health behaviours: Global pragmatic RCT of a digital mindfulness-based intervention**

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**Background:** Mindfulness-based interventions can improve psychological health, yet the mechanisms of change are underexplored. This pre-registered remote RCT evaluated a free app-based mindfulness programme aiming to improve wellbeing, mental health and sleep quality. Psychological constructs associated with regular engagement in health behaviours were explored as possible mediators.

**Methods:** Participants from 91 countries (N= 1247, Mage= 27.03 [9.04]) were randomised to 30 days of mindfulness practice or attention-matched control condition. Measures of wellbeing, depression, anxiety, stress, sleep quality, barriers self-efficacy, self-regulation and behavioural predictors (e.g., attitudes and behavioural intentions) were taken at baseline, 1-month (post-intervention) and 2-months (follow-up). Linear regression examined intervention effects between and within groups. Longitudinal mediation analyses explored indirect effects through health behaviour-related constructs.

**Results:** 300 participants completed post-intervention measures. Intervention condition reported significantly better wellbeing (Mdifference= 2.34, 95%CIs 0.45 to 4.24, p= .016), lower depression (Mdifference= -1.47, 95%CIs -2.38 to -0.56, p= .002), and anxiety symptoms (Mdifference= -0.77, 95%CIs -1.51 to -0.02, p= .045). Improvements in wellbeing and depression were maintained at follow-up. Intervention effects on all primary outcomes were mediated by self-regulation, attitudes towards health maintenance and behavioural intentions. Mediating effects of attitudes remained when controlling for prior scores in models of depression, wellbeing, and sleep.

**Conclusions:** Digital, self-administered mindfulness practice for 30 days meaningfully improved psychological health, at least partially due to improved self-regulation and attitudes towards health behaviours. This trial found that digital mindfulness is a promising and scalable wellbeing tool for the general population and highlighted its role in supporting health behaviours.

## **Consumers' perceptions of the effectiveness and feasibility of self-control strategies for reducing meat consumption**

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A growing number of individuals desire to cut down on meat consumption, yet translating this into action poses challenges. Self-control strategies offer a potential solution but remain under-researched in the area of meat reduction. Guided by the Process Model of Self-Control, we explored consumers' knowledge and perceptions of self-control strategies to reduce meat consumption. The model differentiates between preventive (situation selection and modification) and interventive strategies (attentional deployment, cognitive change, and response modulation) and predicts that the former are more effective than the latter. In Study 1, participants (N = 158) described challenging situations and possible self-control strategies that were then categorized according to the Process Model. In Study 2, participants (N = 503) evaluated these strategies in terms of effectiveness and feasibility. Results showed that reducing meat intake was perceived as more challenging when eating out (vs. at home), in company (vs. alone), and during dinner (vs. other meals). In addition, although situation modification strategies were mentioned most frequently, their evaluations were less positive compared to other strategies. Attentional deployment strategies, in contrast, were only rarely mentioned but revealed particularly positive evaluations. Furthermore, individuals who found the strategies overall more effective and feasible indicated lower meat intake, suggesting the potential usefulness of these strategies. Notably, participants' perceptions of strategy effectiveness differed from the model's predictions. Our findings not only highlight strategy knowledge gaps but also pinpoint promising self-control strategies for interventions. To test the actual effectiveness of self-control strategies for meat reduction, longitudinal studies are needed.

## **Test-Operate-Test-Exit? Examining the dynamic role of feedback loops in self-regulation with intensive longitudinal data**

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**Background:** Cybernetic models of self-regulation propose positive and negative feedback loops as the fundamental mechanisms through which individuals strive to attain goals dynamically over time. However, neither the cognitive nor the behavioural feedback processes implied have been adequately empirically tested to date.

**Methods:** To do so, we leverage intensive longitudinal data on three different health behaviours, sugar-sweetened beverage consumption (N = 136, total assessments = 3,340), smoking (N = 83, total assessments = 3,090), and physical activity (N = 116, total assessments = 7,910). We model the hypothesized directional, interacting, and auto-regressive dynamic processes between behavioural intentions and actual behaviour within a Dynamic Structural Equation Modelling framework.

**Findings:** We find that after falling short of previously intended behaviour, individuals increased their intentions to make up for it. However, this cognitive adjustment did not consistently translate into behaviour change, particularly for avoidance goals.

**Discussion:** This discrepancy questions how the proposed cognitive feedback processes support goal attainment through behavioural adaptation and, in turn, cybernetic models' usefulness and general applicability to understanding and intervening on human health behaviours.

## **Developing and evaluating behavioural science informed messaging promoting health services in local authorities**

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Danielle Paddock<sup>1</sup>, Martin Lamb<sup>1</sup>

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**Background:** Two studies developed and evaluated messaging interventions to promote family service uptake in 2 local authorities.

**Methods:** Stakeholder workshops (studies 1 & 2), and interviews (study 1) based on COM-B, informed the development of two different messaging interventions. Study 1: Advertising a support group for new fathers. Study 2: Invitation letters for the statutory 2-2.5yr health visitor review.

In study 1, interviews (n=5) identified barriers to uptake. Lack of knowledge and anxiety about attending were addressed by adverts that were positive, supportive, and social. Two adverts were tested against the local authority's previous advert in an online repeated measures design (n = 49).

In study 2, the letter was developed based on stakeholder workshops. Qualitative interviews with parents of 2-2.5yr olds (n=5) explored the acceptability of the new letter. Data were analysed using the Theoretical Framework of Acceptability. Quantitative appointment uptake data was compared for time windows when the new vs. old letter was used.

**Expected results:** In study 1, one or both behavioural science informed adverts resulted in higher ratings regarding appeal, clarity; knowledge; not feeling nervous; expecting to meet 'dads like me'; willingness to leave email address; and wanting to attend, compared to the local authority's previous advert (ps <.05).

Study 2 data analysis will be completed by April 30th.

Current stage of work: Study 1 is complete. Study 2 is ongoing.

**Discussion:** These studies illustrate that behavioural science can be usefully applied in 'messy' real world contexts, even when the target behaviour is poorly defined.

## Illness perceptions in adolescents with chronic diseases

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### Background:

According to the Common-Sense-Model, illness perceptions are core elements of self-regulation. As with adults, there is also evidence from research with adolescents with chronic diseases that illness perceptions are associated with illness-related self-management or quality of life. However, research has mostly focused on single diseases. In this study, we compared adolescents' illness perceptions across different chronic diseases.

### Methods:

The sample of this cross-sectional study (N=294) included mainly four diagnostic groups (following the ICD-10): E6 "obesity" (n=75), M4 "diseases of spine/back" (n=52), F9 "behavioral/emotional disorders" (n=45), and J4 "respiratory diseases" (n=25). Participants were 14.06 years old (SD=1.5), 55.8% were female. Illness perceptions were assessed with the Illness Perception Questionnaire–Revised for adolescents. We conducted multiple hierarchical regression analyses to test the association between diagnostic groups and illness perceptions, controlling for age and sex.

### Findings:

There were associations between the diagnostic groups and all illness perception dimensions. For example, adolescents with M4 attributed fewer symptoms to their illness. Participants with M4 and J4 perceived their disease as more chronic, and diagnostic group F9 was associated with more consequences. Adolescents with E6 perceived stronger personal and treatment control, and more illness coherence, while they experienced their illness as less cyclical. The diagnostic groups explained between 7.2% and 21.1% incremental variance in illness perceptions.

### Discussion:

Adolescents with different chronic diseases perceive their disease in many different ways. From a clinical perspective, exploring these perceptions could be an important step in supporting adolescents' illness-related self-regulation.

## **Cognitive Changes During Menopause Transition: Investigating Verbal and Visuo-spatial Working Memory**

Prerita Chawla<sup>1</sup>, Chhanda Karmaker<sup>1</sup>, Karen Barnor<sup>1</sup>, Harriet A. Allen<sup>1</sup>, Lucy Cragg<sup>1</sup>

<sup>1</sup>University of Nottingham, United Kingdom

Title: Cognitive Changes During Menopause Transition: Investigating Verbal and Visuo-spatial Working Memory

Author: Prerita Chawla, Chhanda Karmaker, Karen Barnor, Harriet A Allen, Lucy Cragg ; School of Psychology, University of Nottingham, UK University of Nottingham, UK

Background: Previous research indicates that women with elevated levels of estrogen and follicle stimulating hormones demonstrate enhanced performance on working memory tasks. This study examines cognitive changes during menopause transition, focusing on verbal and visuo-spatial working memory. We aim to compare performance across menopause stages and explore associated cognitive and structural brain biomarkers.

Methods: Participants (N > 350) recruited across menopause stages (pre, peri, post) undergo cognitive assessment using verbal (Backward Digit Span, Letter Number Sequencing) and visuo-spatial tasks, using computerized lab-based experiments. Analysis includes a 2-way ANOVA comparing task performance, controlling for covariates. Exclusions encompass relevant medical conditions and hormone treatments.

Expected Results: Anticipated findings suggest a significant decline in working memory performance from pre- to perimenopause, with no significant change from peri- to post-menopause. Preliminary data support these hypotheses.

Current Stage of Work: Pilot data collection is complete, with ongoing recruitment and cognitive assessments. The ongoing study investigates cognitive domains of attention, memory, and inhibitory control.

Discussion: Understanding cognitive changes during menopause transition contributes to women's health knowledge. It aligns with UN SDG goals for Good health and Wellbeing and Reduced inequality, benefiting medical communities and affected individuals. This research helps create policies for effective treatments and social support frameworks for menopausal women experiencing cognitive changes.

## **A longitudinal analysis of neighborhood social vulnerability and cognitive function in older minoritized adults**

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**Background:** We examined longitudinal associations between four indices of neighborhood social vulnerability and cognitive function in a cohort of older minoritized adults in the U.S. (N=1,500), for whom limited research is available.

**Methods:** We used mixed-effects linear regression analysis with three waves of data (wave 1, n=1500; wave 2, n=943; wave 3, n=444). Neighborhood vulnerability was measured from the CDC/ATSDR Social Vulnerability Index (SVI) developed with 16 U.S. census variables data. Four factors of SVI were included (Socioeconomic Status, Household Characteristics, Racial/Ethnic Minority Status & Language, and Housing Type/Transportation). Participants were matched to census block groups and linked with SVI. A factor score of global cognition was derived from a battery of cognitive tests administered at 3 in-person visits. Mixed-effects linear regression models were fit to assess changes in global cognition scores (GCS) at baseline and over time adjusted for age, sex, education, health behaviors (smoking, alcohol use, BMI, high blood pressure), and health conditions (heart disease, diabetes, and depressive symptoms).

**Results:** At baseline, mean age was 57.1 y SD=7.6, and 71.5% were female. In adjusted analyses, no significant associations between GCS and the four factors of SVI at baseline were found. However, a protective effect of Neighborhood Racial/Ethnic Minority Status & Language on GCS was observed in wave 2 ( $\beta=0.97$ , SE=0.05, 95% CI 0.006 – 0.189).

**Conclusion:** Beyond individual characteristics, neighborhoods with higher proportions of ethnic minorities may positively impact the cognitive function of older diverse adults despite the socioeconomic vulnerability that characterizes them.

## Self-rated health in urban older adults: Examining predictive domains of city age-friendliness

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**Background.** In response to the global trends of population aging and urbanization, the importance to address healthy ageing in urban older adults is widely recognized in health psychology research. Self-rated health (SRH) in older adults strongly predicts various health outcomes, including future morbidity, mortality, functional limitations, and health-related quality of life, thus revealing individuals' potential capacities for healthy ageing. The study aimed to identify predictors of the self-rated health in urban older adults by examining the social and physical environmental domains of city age-friendliness proposed by the World Health Organization.

**Methods.** A quantitative cross-sectional survey was conducted in a sample of community-dwelling older adults aged between 60 and 89 years (N=217; M=71.68; SD=6.77). Data were collected using the Age-Friendly Cities and Communities Questionnaire (AFCCQ), the readiness for digital technology (RDT) scale, and the widely used single-item measure of self-rated health. A multiple regression analysis was conducted. Socio-demographic variables such as age, gender, education level, and living in partnership, along with presence of chronic diseases and mobility-limiting health conditions, were controlled.

**Findings.** The nine age-friendliness domains, and RDT were investigated as predictors of SRH. A preliminary regression model suggested inclusion of six social and physical environmental domains, and RDT,  $F(15, 201) = 35.48$ ,  $p < .001$ , explaining 70.5 % of variance in the SRH results. The final results of the ongoing study will be presented at the conference.

**Discussion.** Further research is needed to examine the identified predictors and their relationship to self-rated health in urban older adults.



## **Feasibility and acceptability of ecological momentary assessment in older adults with multimorbidity and depression**

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**BACKGROUND:** Depression management is complicated by symptom heterogeneity, with > 1000 possible symptom combinations. For older adults with depression and multiple chronic illnesses or multimorbidity (MM), depression heterogeneity is further exacerbated by the heterogeneity of MM—as stressors that affect depression (e.g., pain), lead to even greater symptom profile diversity. Despite this heterogeneity, research and treatment for depression in patients with MM has focused on nomothetic approaches that are not tailored to patients' unique symptom profiles. Using idiographic methods to establish individual symptom patterns constitutes an unexplored approach to developing tailored treatments for this population. We sought to explore the feasibility and acceptability of an idiographic approach to symptom measurement in depressed older adults with MM.

**METHODS:** Ecological momentary assessment (EMA) data collected from adults (ages 60+) with comorbid depression and MM (N=30), using an iterative approach to refining data collection based on participant feedback through user-centered design. Data on depression and MM symptoms (e.g., physical symptoms, pain intensity) will be collected for 2 weeks in bursts of 3 times/day.

**EXPECTED RESULTS:** Feasibility and acceptability will be examined through descriptive statistics for enrollment rates, missing data, and attrition; Likert-scale items will assess participant satisfaction and acceptability.

**CURRENT STAGE OF WORK:** Participant recruitment and feasibility testing.

**DISCUSSION:** Study results will provide pilot data on feasibility and acceptability of EMA approaches to studying patterns of depression and MM symptoms in older adults, laying the foundation for a larger study examining a precision medicine approach to improving outcomes for this population.

## **Evaluation of a flourishing group program for older adults: preliminary findings**

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**Background:** The main goal of the research is to assess the effectiveness of the Flourishing Groups Program (FGP), an evidence-based positive psychology intervention designed to enhance wellbeing in older New Zealanders.

**Methods:** The FGP is grounded in a community-centered approach, involving discussion groups of 5-10 older adults over 12 months. Two months each are spent on discussing and learning about six domains of flourishing. Meetings are facilitated by volunteer older adult group leaders/hosts, who are provided with regular training. We collect qualitative (open text and semi-structured interviews) and quantitative (survey) data pre- and post-intervention to evaluate the effectiveness of the program.

**Findings:** Preliminary analyses of 18 participants from three groups who completed the program found significant increases in hopefulness and meaning in life from pre- to post-intervention. Content analysis of interviews complement the quantitative results. Participants discussed benefits in terms of social connection, finding a sense of purpose and new ways of understanding flourishing in old age. Four additional groups will complete the program by September. Our presentation will report findings from seven groups (45 older adult participants in total).

**Discussion:** Wellbeing needs are often unmet during older adulthood due to ageist bias in health systems and deficit model thinking about health. Health programs designed to support older adults' wellbeing beyond functional ability are rare. The evaluation of the FGP will not only provide robust evidence for its effectiveness in Aotearoa/New Zealand but can also produce internationally impactful research outcomes and new knowledge about flourishing in older age.

## **A home-based behaviour change service for older adults with mild frailty and cognitive impairment: RCT**

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We evaluated a home-based service (HomeHealth) to support older adults with mild frailty which aimed to prevent a decline in functioning and maintain independence. Over half of the sample had mild cognitive impairment (MCI), which we hypothesised may impact on outcomes. Due to a lack of behaviour change interventions for these populations, we developed HomeHealth through co-design, delivered by trained facilitators to support people to achieve personalised goals around mobility, nutrition, socialising, and/or psychological wellbeing.

HomeHealth was compared to TAU in a multicentre RCT in 388 older people with mild frailty in England. Secondary analysis compared intervention effectiveness according to the presence and absence of MCI, rated using the Montreal Cognitive Assessment. Semi-structured interviews were conducted to explore barriers and facilitators to engagement.

The main trial showed no effect on the primary outcome, activities of daily living, at 12 months (MD=0.25, [-0.93 to 1.43]). Unplanned admissions and costs were reduced (OR=0.65 [0.54 to 0.92], -£586 per participant, [-£351 to -£821]). No relationship between MCI and activities of daily living were found at 12-months, ( $\beta$ =0.290 [-0.342 to 0.920]). Analysis of MCI and unplanned admissions is ongoing. Interviews with 49 participants, 29 with MCI, found goal progress was successful among those who set clear goals. Engagement was challenging when participants did not feel the need or had competing health needs, especially in those with MCI.

HomeHealth shows potential to reduce unplanned admissions in people with mild frailty. People with MCI can benefit similarly from a personalised goal setting intervention.

## **Adjusting to the role of caregiving for older-adults with TBI: Towards the development of support-tool**

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**Background:** There are limited clinical tools available to support the psychological adjustment of caregivers of older adults who sustained traumatic brain injury (TBI). The aim of this study was to gain a better understanding of the facilitators and the challenges faced by these caregivers in the first year after the injury.

**Methods:** In a longitudinal qualitative design with three assessments time points (4, 8, and 12 months post-TBI), 65 caregivers of persons with TBI (mild to severe TBI) answered two open-ended questions: "What have you found most difficult since your loved one's accident?" and "What have you found most helpful since your loved one's accident?". A thematic analysis was performed.

**Findings:** Participants mentioned almost as many challenges as facilitators at each time point. Among the challenges, the following themes emerged: health issues in the injured loved one, psychological impact on the caregiver, assuming a new role, relationship strain, and decrease in activities and outings. The facilitators identified were: receiving social support, having access to rehabilitation, improvement of the injured loved one's health condition, returning to live at home, having access to home services, feeling useful, effective communication, and having time for oneself.

**Discussion:** Difficulties are present throughout the first-year. However, this study highlights that several facilitators can also be leveraged by caregivers of older persons with TBI to help them cope and adjust to this new role. These results were used to initiate the creation of a clinical tool to support caregivers throughout the first year to optimize their adjustment.

## Assessing Task-Related Changes in Self-Reported Stress: Validation of the Short Stress State Questionnaire in German

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The relationship between stress and health is characterized by the multifaceted impact of stress on various physiological and psychological aspects. Compared to the assessment of the physiological stress response, the measurement of task-related subjective stress has received less attention. While a small number of validated questionnaires measuring task-related stress in English have been developed, currently, no equivalent measure in German exists. Addressing this gap, we translated the Short Stress State Questionnaire into German (SSSQ-G) and utilized it in five studies employing either the Trier Social Stress Test (TSST) or the Virtual Reality Stroop Room (VRSR). The final sample across all studies consisted of 213 participants (112 women; age:  $23.36 \pm 3.62$  years). The total score of the 24-item SSSQ-G showed high reliability. However, factor analysis indicated that a six-factor solution with the factors Distress, Worry, Confidence, Negative affect, Motivation, and Self-evaluation best fit the change score data (post – pre) of the SSSQ-G. Participants undergoing the TSST showed stronger stress-induced changes compared to participants in the VRSR. Furthermore, the magnitude of stress-induced changes on the SSSQ-G was larger than on the Positive and Negative Affect Schedule (PANAS) for TSST participants. These results indicate strong construct validity and underline the sensitivity of the SSSQ-G to moderate-to-intense stress. In summary, these findings demonstrate that the SSSQ-G is a reliable, valid and economical tool for assessing task-related subjective changes in stress.

## Emotional Exhaustion in Mental Health Professionals: Evidence for Compromized Psychophysiological Flexibility

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**Background:** Emotional exhaustion among mental health care providers is an increasing concern in health service. Due to high demands on emotional labour, empathy and challenging working environments, mental health professionals are exposed to various chronic stressors that could lead to emotional exhaustion and burnout. **Methods:** In this study we aimed to examine momentary psychological (affect, psychological resilience) and cardiac variables (heart rate variability; HRV) in mental health professionals (N = 52) undergoing their daily routines. They participated in an ecological momentary assessment (EMA) across 3 consecutive working days. Emotional exhaustion was assessed via questionnaire. HRV (the root mean squares of successive differences), bodily movement, momentary resilience, negative affect and location were recorded via wearables. Mixed effects modeling was applied. **Results:** Relative to being at home, emotional exhaustion was associated with less psychological resilience and intensified negative affect at work and other contexts. Moreover, emotionally exhausted individuals evidenced a less pronounced change in HRV to different contexts (and especially, to work), while individuals low in emotional exhaustion showed a significant increase of HRV to work, potentially indicating self-regulatory capacity. **Discussion:** Together, the findings suggest that emotional exhaustion among mental health care providers manifests in impaired psychological and autonomic nervous system flexibility, thus imposing health risk.

## **Emotion processing and self-harm in young people (EMERGE) study**

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**Background:** Self-harm is a complex phenomenon that affects millions of young people worldwide. Our understanding of self-harm has been largely limited to studies of psychological or psychiatric factors. To this end, the current study investigated the extent to which electrodermal activity (EDA), a physiological index of emotion regulation/processing, distinguishes between young people who have had self-harm thoughts versus those who have self-harmed and those with no history of self-harm.

**Methods:** 187 young people (16-25 years old) took part in an experimental study assessing EDA across three task types (non-emotive, emotive and a stressor task) along with psychological and clinical measures.

**Findings:** Those with a history of self-harm demonstrated heightened physiological arousal compared to the other groups. Following stress induction, those who had enacted self-harm were more likely to rate negative images less negatively (affect and intensity). Regarding associations between psychosocial factors and EDA, evidence suggests that those with a mental health diagnosis reported higher physiological arousal during a stress task, which may indicate an important factor to consider when examining the relationship between EDA and self-harm.

**Discussion:** These findings highlight the complexity of the relationship between emotion regulation and self-harm. The findings show that those with a history of self-harm may experience greater sensitivity to a stressful task than those without. This hypersensitivity has important implications for understanding self-harm in young people. This suggests that hypersensitivity, as indexed by EDA, may be a physiological biomarker that may help us to better identify those who are more likely to enact self-harm.

## Association of depression and inflammation in Inflammatory Bowel Disease (IBD)

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**Background:** Depression is common in Inflammatory Bowel Disease (IBD). Previous studies examining contemporaneous relationships between disease activity and depression in IBD are methodologically limited, relying on self-reported disease activity indices, without acknowledging IBD heterogeneity. Depression may influence self-report and/or inflammation differently between IBD sub-groups. **Aims:** 1) Understand how self-reported disease activity and inflammation relate to depression. 2) Explore whether cluster profiles based on depression and disease activity emerge.

**Methods:** Cross-sectional analysis of baseline data collected for a randomised controlled trial of a digital intervention for symptom self-management in IBD (n=599). Correlation and regression analyses assessed the relationship between self-reported disease activity (IBD-Control), depression (Patient Health Questionnaire-9 (PHQ-9)) and intestinal inflammation (faecal calprotectin (FCP)). Latent Profile Analysis (LPA) on baseline measures collected pre-randomisation explored clustering of depression and disease activity.

**Results:** Depression was significantly predicted by a disease measures model ( $F(2,596)=175.1, p<0.001$ ), with variables (FCP and self-report) explaining 37% of the variance. Although self-reported disease activity independently predicted depression ( $\beta = -0.82, p<0.001$ ), FCP was nonsignificant. FCP had a small, significant association with self-reported disease activity ( $r = -0.16, p<0.001$ ). LPA identified cluster profiles based on depression and disease activity.

**Discussion:** Using a large sample and an objective measure of disease activity, this study demonstrated a relationship between self-report disease activity and depression, but not with objective inflammation (FCP). The weak association between inflammation and self-report suggests there are other factors involved in the subjective experience of the disease. Self-report measures, although important, should not be used instead of inflammatory markers.



## **Are catastrophes opportunities? A Mindset Approach to Alleviating Depression and Inflammation in the Post-Pandemic Era**

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Individuals who endure major societal crises like the COVID-19 pandemic face an elevated susceptibility to mental health issues in the subsequent years. Amidst these challenges, individuals may also discover opportunities for positive transformations, experience enhancements in self-esteem, a deeper appreciation for life, enriched personal relationships, and an augmented sense of meaning, among other domains. We hypothesized that the mental health trajectories following the COVID-19 pandemic could be influenced, in part, by individuals' mindsets about the long-term effects of living through catastrophic events. To explore this, we conducted a decentralized randomized-controlled trial among a healthy adult sample in the United States ( $n = 650$ ). Participants were randomized into an active control condition or an intervention condition which involved a brief, psychologically-wise intervention aimed at instilling the mindset that "catastrophes can be opportunities in the long term." This intervention demonstrated a notable reduction in depression symptoms ( $B = -0.33$ ,  $p = 0.01$ ) and peripheral concentrations of C-reactive protein ( $B = -0.66$ ,  $p = 0.04$ ,  $n = 117$ ) at a 3-month follow-up. Additionally, we identified that changes in the targeted mindset played a significant mediating role in the intervention's impact on depressive symptoms and other aspects of mental health and well-being. These findings contribute to our understanding of the relationship between psychoneuroimmunology and the mind. Moreover, our research provides valuable insights into the utilization of mindsets to improve various aspects of health in the aftermath of crises, with practical implications for shaping effective and scalable public health strategies to mitigate future crises.

## **Longitudinal study on change in students' mental health and the influencing factors across the pandemic**

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**Background:** Several cross-sectional studies reported increased mental health issues among university students during the early phase of the COVID-19 pandemic. However, there is a lack of longitudinal studies on the change in students' mental health issues and the influencing factors across the pandemic phases. The aims of the longitudinal study were to investigate the change in students' depression, anxiety and stress during the first and second years of the pandemic in Germany and the association between protective and risk factors and students' depression, anxiety and stress.

**Methods:** Using a longitudinal study design, 911 university students were surveyed at four points during the pandemic. Linear mixed-effects modelling was used to examine the questions. Outcome variables were depression, anxiety and stress. The models investigated protective (mindfulness, coping strategies, self-efficacy) and risk factors (financial and academic worries) as time-invariant and time-varying covariates.

**Results:** The findings showed that depression and anxiety increased slightly, whereas stress decreased slightly over the pandemic. In addition, all protective factors remained equally important over time for reducing depression. However, self-efficacy and acceptance became more critical for reducing anxiety or stress over time. The effects of both worries on depression and anxiety remained equally crucial over time. However, academic concerns became less important over time for stress.

**Conclusion:** Findings demonstrated the adverse effects of the pandemic on university students' mental health. The results highlight the importance of examining time-invariant and time-varying predictors of mental health issues. Further, the findings implicate that universities should provide interventions and professional psychological services.

## **Social support satisfaction is associated with elevated hair cortisol levels during the COVID-19 pandemic**

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**Introduction:** Although there is evidence of the negative mental health effects of the pandemic, few studies have documented its long-term effects on stress-sensitive physiological systems such as the hypothalamic-pituitary-adrenal (HPA) axis. In the present study, we tracked hair cortisol concentrations (HCC) across the first 10 months of the pandemic and attempted to predict elevated and/or worsening hair HCC across the early part of the pandemic from two well-known risk factors, internalizing symptoms and low social support satisfaction at the beginning of the pandemic. **Methods:** Data were collected every three months between May 2020 and January 2021, for a total of three time points. A sub-sample of participants provided hair samples (n=105) and completed measures of social support satisfaction and internalizing symptoms. **Results:** HCC concentrations were highest at time 1, at the beginning of the pandemic, and significantly declined over time as social interaction restrictions were eased. Consistent with our prediction, multilevel modeling showed a significant effect of social support satisfaction (T-ratio = 2.11,  $p < 0.05$ ) and the social support X internalizing symptoms interaction (T-ratio = 2.35,  $p < 0.05$ ) on HCC intercept (time 1). However, neither variable predicted slope (change over time). **Discussion:** These data show that low social support satisfaction and high internalizing symptoms have deleterious effects on chronic HPA axis functioning during a period of prolonged uncertainty and stress, but do not predict a worsening decline over time. These data highlight the importance of promoting social support during periods of social isolation among vulnerable populations.

## **Understanding lived experiences of LGBTQIA+ youth with appearance-affecting conditions or injuries**

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**Background:** Existing research suggests that young people who identify as LGBTQIA+ may be more at risk of negative body image than their heterosexual and cisgender peers. Similarly, having an appearance-affecting condition or injury in adolescence has been linked to low self-esteem, and increased anxiety and depression. It can be argued that LGBTQIA+ young people with appearance-affecting conditions or injuries may be at greater risk of negative psychosocial outcomes compared to cisgender and heterosexual young people with similar conditions or injuries. However, little research examines the unique experiences of this population. Therefore, the aim of this study is to explore the lived experiences of young people (aged 15-24 years) who self-identify as LGBTQIA+ with an appearance-altering condition or injury.

**Methods:** Between 50-100 online qualitative survey responses will be collected, with the option for follow-up interviews to be conducted with 5-10 participants to explore key points of interest.

**Expected results:** Initial themes will be generated using reflexive thematic analysis to be presented by the date of the conference.

**Current stage of work:** The survey is currently being piloted and will shortly be advertised to the wider public.

**Discussion:** This study would provide valuable insight into the unique experiences of this underrepresented population. Results could be used to guide the development of support resources as well as future research focused on addressing the health inequalities experienced by LGBTQIA+ young people compared to their cisgender, heterosexual peers.

# Experiences regarding participation of people with limited health literacy: a qualitative study among researchers

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## Background

Limited health literacy is considered a major public health concern since it affects a large number of people (25%-64%), has multiple unfavorable health impacts, and it is an important determinant of health inequality. Different interventions have been developed to address limited health literacy. However, involving this group appears difficult. Therefore, the aim of this study is to gain insight into how researchers work to reach people with limited health literacy, and to create an overview of practices by establishing key themes, using the 'Ecological theory of research participation'.

## Methods

From March-July 2023, a qualitative design with semi-structured interviews was used. The study population consisted of 11 researchers, found through a detailed search strategy in online databases, and experienced in involving people for health literacy interventions in Australia, the United States, Spain, Ireland, and Germany. The seven steps of the Framework Method were used for data analysis.

## Findings

Ten key-themes were identified, such as the need for a 'dynamic individual strategy' and 'building relationships and trust in interdisciplinary settings'. It is important to take into account the different needs and contexts of peoples' lives, and partnerships with community workers are essential for successful participation.

## Discussion

This study showed that to involve people with limited health literacy, it is required to use a tailored approach, as well as to invest in relationships with community networks. The identified key-themes may be used to enhance current practices to engage people with limited health literacy, as a next step to reduce health inequality.

## **“Accept who you are”: A qualitative study on how men foster positive body image**

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**Background:** Body dissatisfaction has become increasingly prevalent among men, which is a potent risk factor for eating pathology; underscoring the need for preventative interventions. However, existing interventions often overlook the crucial aspect of positive body image, particularly relevant to men who may exhibit a stronger body appreciation compared to women. This questions the efficacy of existing interventions and highlights health inequality as it limits support for men who struggle with body image concerns.

**Objective:** This qualitative study explored how men conceptualize and foster positive body image.

**Methods:** A diverse sample of 20 men, aged 18-60 years, residing in the UK, and reporting positive body relationships, participated in online semi-structured interviews.

**Results:** Reflective thematic analysis revealed four overarching themes: 1) “Society breeds insecurities”: establishing men’s understanding of appearance ideals and their impact; 2) “Current fitness trends are a double-edged sword”: related to the advantages and toxicity around fitness trends; 3) “Importance of a holistic relationship with the body”: related to how men understand their positive relationship with their body, which is multifaceted; 4) “Strategies to foster a positive relationship with the body are imperative”: highlighting the importance of designing interventions that focus on improving men’s relationships with their bodies, and strategies that could be helpful to foster this relationship.

**Conclusion:** This study provides valuable insights into how men perceive and nurture positive body image. It generates knowledge to inform the development of body image interventions for men that will close the health inequality gap that currently exists.

## **Experiences of promoting Breast Cancer Screening Among Ethnic Minority Women: A UK Qualitative Study**

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Ethnic minority women continue to face challenges that result in lower breast cancer screening rates. Numerous initiatives have attempted to promote uptake for screening in various ethnic minority groups, but evaluations are sparse, so knowledge is not cumulative.

This study aims to investigate the experiences of healthcare providers and other people involved in implementing initiatives for breast cancer screening among ethnic minority women in the Northwest of England. Specifically, it seeks to understand their views of which initiatives work and why; and to understand the challenges and facilitators encountered by healthcare providers in addressing inequalities in breast cancer screening.

The research will employ a qualitative approach, using in-depth semi-structured interviews and focus group discussions with healthcare providers. Informed by the notion of information power the study aims to recruit 25 participants which should be sufficient to achieve data saturation. This will include clinicians, nurses and community-based healthcare workers engaged in delivering breast cancer screening initiatives. Thematic analysis will be used to identify and interpret patterns and themes within the data, shedding light on the experiences, perceptions, and strategies of healthcare providers in this context.

The findings of this study are anticipated to inform the development of tailored, culturally adapted interventions aimed at increasing breast cancer screening uptake among ethnic minority women. By synthesising these experiences, it will allow future initiatives to be informed by what has worked or not worked in the past. The study is currently under ethical review at the University of Manchester, UK.

## **Understanding fitness professionals' weight biases and uptake of weight-inclusive practices: Findings from a mixed-methods survey**

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**Background:** Weight bias is highly prevalent in the fitness industry, posing significant challenges for people in larger bodies seeking to engage in health-promoting behaviours, such as exercise. Despite small ideological shifts in the fitness industry calling for more weight-inclusive practices, little is known about fitness professionals' engagement with such approaches. This study explores weight bias attitudes among weight-normative and weight-inclusive fitness professionals and factors influencing their adoption of inclusive approaches.

**Methods:** We employed a mixed-methods survey among 120 fitness professionals (Mage=34yrs) to gather quantitative data on weight bias (Fat Attitudes Assessment Toolkit) and experiences of working with people in larger bodies (analysed using correlations and t-tests), and qualitative data on facilitators and barriers to adopting weight-inclusive approaches (analysed using thematic analysis).

**Findings:** Weight bias was positively associated with negative attitudes towards working with people in larger bodies. "Weight-inclusive" fitness professionals reported higher empathy ( $p < .001$ ;  $d = -.86$ ) and size acceptance ( $p < .001$ ;  $d = -.79$ ), and less negative attitudes towards working with people in larger bodies ( $p < .001$ ;  $d = .81$ ) than "weight-normative" fitness professionals. Thematic analysis resulted in four higher-order themes: (1) Inclusivity and accessibility; (2) Weight as a motivator; (3) Does weight equal health?; and (4) What's body image got to do with it?.

**Discussion:** Our findings advance existing knowledge on weight bias attitudes among fitness professionals. Insights gained from this research will serve as a basis for developing future weight bias interventions for fitness professionals that are relevant, acceptable, and effective, to ensure all people feel comfortable accessing fitness spaces.



# Advancing Equality, Diversity, and Inclusion Considerations in Health Psychology Research

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**Background:** There is a growing recognition of the critical role that equality, diversity, and inclusion (EDI) considerations play in shaping robust, meaningful research outcomes. As the field of health psychology continues to evolve, inequalities and biases persist in research practices hindering the advancement of knowledge. Moreover, with increased consideration of EDI within funding applications, there is an urgent need to address EDI considerations in research culture and practice.

**Methods:** A comprehensive scoping review was carried out to establish existing best practice in EDI and research. Furthermore, a survey, workshops and semi-structured interviews were carried out to establish levels of knowledge, barriers and facilitators to EDI matters. Findings were synthesised and drawn together to develop an EDI Research Toolkit.

**Findings:** Researchers understand the importance of EDI matters when designing and conducting research but lack the skills and knowledge to execute those considerations meaningfully and usefully. Moreover, EDI was most often seen as a 'tick-box' exercise, leading to tokenistic inclusion, and 'telling funders what they want to hear'. The EDI labour is clearly being done by researchers from marginalised groups with lived experience.

**Discussion:** It is crucial we consider EDI to ensure everyone can participate in, contribute to and benefit from research and innovation. Guidance on how to implement and operationalise EDI within current research, research environments, design and within funding applications goes some way to address the current lack of knowledge in our academic community and allows the field of psychology to move forward in new and important directions.

## Psychosocial variables impacting physical activity in biologics-treated rheumatoid arthritis patients

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**Background:** Physical activity is currently highly recommended for people with rheumatoid arthritis (RA). Yet studies show that the majority of patients lead physically inactive lifestyles. Besides, there is insufficient research on various sociodemographic and psychological factors that may enhance physical activity in RA, particularly psychosocial variables. Thus, we aimed to assess the potential psychosocial factors impacting RA patients' physical inactivity.

**Methods:** Our study involved 146 RA patients (84.9% female; mean age 56.6±13.6 years; mean disease duration 19.6±9.2 years). All patients completed the General Health Questionnaire-28, EuroQol-5D, and the Physical Activity Scale. Correlation analyses and multiple linear regression were used to analyze the data.

**Findings:** Our research revealed that 78% of RA patients engage in less physical activity than the WHO's minimum recommendations. Bivariate analyses showed that lack of physical activity was significantly associated with lower education, higher disease activity, age, anxiety, depression, and social dysfunction. No association was found with sex or functional disability. In the final regression model, only education ( $\beta=0.20$ ;  $p\leq 0.05$ ) and social dysfunction ( $\beta=-0.21$ ;  $p\leq 0.05$ ) remained significant. The total explained variance of physical activity in the final model was 14.7%.

**Discussion:** Lower education and higher social dysfunction may pose significant challenges for RA patients in planning and maintaining physical activity. For a comprehensive understanding of the interactions holistic approach is needed to create an encouraging atmosphere that increases physical activity and improves RA management. Non-pharmacological interventions that strengthen patients' social networks and promote an active lifestyle are essential for effective and sustainable behavioral change.

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## Unique Physiological Response to Acute Pain among Patients with Chronic Pain and Opioid Use Disorder

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**INTRODUCTION:** Among patients with opioid addiction, 80% report pain. Individuals with comorbid pain and opioid addiction are 3-5 times more likely to relapse than those with opioid addiction but without pain. Previous research showed that prolonged opioid use creates elevated pain reactivity and decreased pain tolerance. However, little is known about the psycho-physiological links between opioid addiction and pain perception in relation

to demographic factors.

**METHOD:** 29 participants with chronic pain in residential treatment for opioid use disorder were assessed using a Cold Pressor Test (CPT). Measurements of pain sensitivity, tolerance, and sensitivity were recorded with physiological variables (frontalis muscle EMG, Heart Rate, Peripheral Temp) at baseline, CPT, and recovery. Analysis included correlations, ANOVAs, and T-tests.

**RESULTS:** Unique patterns emerged among demographic groups with regard to gender, and race. When collapsed across demographics, distinct physiological patterns emerged in response to acute pain exposure. Both peripheral temperature, as well as frontalis EMG measures, were significantly related to initial reports of pain (pain sensitivity) during the baseline, acute pain exposure, and recovery timepoints ( $p$ 's < .05). Peripheral temperature, was significantly related to greater pain endurance at baseline, CPT, and recovery ( $p$ 's < .05)

**DISCUSSION:** Physiological stress indices relate to the psycho-physiological perception and tolerance of acute pain among individuals with comorbid pain and opioid use disorder. These findings reinforce the psychophysiological relationship between physiological measures and psychological perception of pain. Chronic pain and OUD patients also showed unique patterns compared to other psychophysiological pain studies among non-chronic pain and non-OUD patients.

## **Childhood trauma, PTSD/CPTSD, and chronic pain: a systematic review**

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**Introduction:** Despite the growing body of research on PTSD and chronic pain comorbidity, evidence on the role of childhood trauma remains limited.

Additionally, survivors of childhood trauma oftentimes develop more complex and multifaceted reactions, typically categorized as complex trauma or CPTSD.

Considering the recent introduction of CPTSD within diagnostic nomenclature, it seems of timely interest to address current knowledge of described associations.

**Objective:** The aim of this study was to assess existing evidence on childhood trauma in relation to PTSD/CPTSD and pain outcomes in adults with chronic pain.

**Methods:** Following PRSIMA guidelines, a systematic review was performed using the databases Pubmed, PsychInfo, Psychology and Behavioral Sciences Collection, and Web of Science. Articles in English or French that reported on childhood trauma, PTSD/CPTSD and pain outcomes in individuals with chronic pain were included. Titles and abstracts were screened by two authors independently. Full texts were consequently evaluated and assessed on methodological quality using JBI checklist tools.

**Results:** Of the initial 295 search records, 13 studies were included in this review. Only four studies explicitly assessed relationship between trauma factors and chronic pain symptomatology. The present findings highlight the long-term and complex impact of cumulative childhood trauma (e.g., abuse and neglect) on both PTSD/CPTSD and pain symptoms in individuals with chronic pain.

**Conclusion:** This review contributes to current conceptual models of PTSD and chronic pain comorbidity, while adding to role of childhood trauma and CPTSD. Recommendations for future research and clinical practice are discussed, including the need for trauma-informed pain management.

## The long-term use of nasal decongestants- an addictive health-risk-behaviour?

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**Background:** Medication dependency and its negative effects have been studied extensively. However, little is known about psychological effects of long-term nasal decongestant use (LT-NDU), despite considerable health consequences. This study examined whether LT-NDU represents and is perceived as an addictive health-risk-behaviour with effects on mental health and well-being.

**Methods:** Qualitative investigations and DSM-5 criteria for addiction formed the basis for a questionnaire to collect information about characteristics of LT-NDU. Together with several health-screeners (PHQ-8, GAD-7, PSQI, SWLS) the questionnaire was administered to an online sample (N = 277). We assessed group differences between users with LT-NDU and non-users, relationships with health-outcomes, as well as risk perception of users via endorsements of the labels “dependence” and “addiction” for LT-NDU.

**Findings:** There were no significant group differences between users (n = 50) and non-users (n = 227). We observed a marginally significant correlation between consumption intensity and impaired sleep quality ( $p = 0.28$ ,  $p = .050$ ). According to DSM-5 criteria, 91% of the consumers could be classified as clinically addicted (11% with severe symptoms). However, only 75% of the users endorsed the label of “dependence” for LT-NDU, while only 40% considered themselves as being “addicted”.

**Discussion:** The findings show that LT-NDU is an addictive but not entirely prototypical health-risk-behavior with a disproportionate perception of its actual risks. To better understand the phenomenon of LT-NDU and to promote education and intervention, models of health behavior should be considered as a framework for future research in addition to clinical frameworks of addiction.

## **Are chronic pain and obesity related? A qualitative investigation on patient perspectives**

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**Background:** Chronic pain (CP) and obesity have a significant negative reciprocal impact on one another. Understanding this comorbidity is essential to develop comprehensive and streamlined interventions. This study aims to explore patients' perceptions of the relationship between CP and obesity, and is part of a research project aiming to adapt the BIS-BAS model to this comorbidity.

**Methods:** The study design is cross-sectional, exploratory, descriptive and qualitative. Participants are adults with CP (recurrent/persistent pain experienced at least half the days in the last 3 months) and obesity (BMI $\geq$ 30 kg/m<sup>2</sup>). Thirty eight individual semi-structured interviews were conducted and are now being analysed using content analysis.

**Preliminary results:** Nine interviews have already been analysed (all women; Mage = 38.11; SDage = 4.29; MBMI = 35.99; SDBMI = 3.70). Seven identified a two-way relationship between their pain and their weight. They reported pain interference with weight management behaviours and weight gain at the onset of pain (or intake of pain medication). Conversely, they attributed their pain or increases in pain severity to excessive weight, identified some eating and physical activity behaviours as pain triggers, but reported/expected pain relief after weight loss, recognizing the need to lose weight to improve their pain. Two participants considered that there was no pain-obesity relationship in their case, but provided hypothetical examples where a relationship could exist.

**Current stage of work:** Interview analysis is estimated to finish around May 2024.

**Discussion:** We highlight the importance of considering comorbidities when designing interventions, for these may constitute barriers to effective treatment.

## **Uncovering the (pain) chain: Psychological and behavioral mediators between interoceptive sensibility and chronic pain adjustment**

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**Background:** Interoceptive sensibility (IS), i.e., the ability to sense, interpret, and self-regulate internal bodily sensations, has been associated with better chronic pain (CP) adjustment. However, the mechanisms underlying this relationship remain unclear. Based on the Psychosomatic Competence Model and the Fear-avoidance Model of Pain, this study investigates the psychological and behavioral mediators of the relationship between IS and CP adjustment.

**Methods:** Adults with chronic musculoskeletal pain (N=173) filled out self-report measures of IS, psychological and behavioral processes (pain-related self-efficacy, fear-avoidance beliefs, activity patterns), and CP outcomes (psychological health, functional limitations, and vitality). Multiple/parallel mediation models were tested, controlling for years of education and/or sex.

**Findings:** The main results showed that higher body trust predicted better psychological health. This relationship was mediated by pain self-efficacy and fear-avoidance beliefs. Self-efficacy also mediated the positive associations between the ability to self-regulate based on bodily sensations and both psychological health and vitality. Higher body listening predicted higher functional limitations via the increase in activity avoidance.

**Discussion:** These results align with the Psychosomatic Competence model, suggesting a role of IS skills in the fear-avoidance cycle of pain. Trusting in the body and self-regulation skills seem to play a critical role in CP adjustment. These findings support the importance of interventions targeting IS skills, along with psychological and behavioral pain-related processes.

## The Highly Sensitive Brains: Analyzing Links Between Sensory Processing Sensitivity and Migraine-Type Headaches

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**Introduction:** Migraine-type headaches (MTH) are often associated with increased sensitivity to various physical stimuli. In this study, we hypothesize that migraine may also be related to Sensory Processing Sensitivity (SPS), an inheritable trait characterized by deep cognitive processing.

**Methods:** A cross-sectional study of 300 Lithuanian employees (mean age 37.3, SD=12.7; 78% female) completed surveys, including the Highly Sensitive Person Scale (HSPS), Migraine Screen Questionnaire (MS-Q), Migraine Disability Assessment (MIDAS), PHQ-2, GAD-2 questionnaires, and other headache-related factors.

**Results:** 13.3% of participants met MTH criteria (95% CI 9.5-17.3%). MTH participants scored higher on HSP scale ( $m=126.89$  (21.11); 95% CI 119.85-133.93) vs. non-migraineurs ones ( $m=120.39$  (19.21); 95% CI 118.03-122.75), suggesting HSP's significance as a migraine prognostic factor (OR=1.019;  $p=0.04$ ). However, its predictive value diminishes when controlled by demographic factors (OR=1.08,  $p=0.083$ ). Among MTH individuals, higher HSP scores correlated with earlier migraine onset ( $r=-0.644$ ,  $p<0.001$ ), more frequent pain episodes ( $r=0.424$ ,  $p=0.007$ ), increased pain triggers ( $r=0.525$ ,  $p=0.001$ ), elevated anxiety ( $r=0.371$ ;  $p=0.018$ ), and depression ( $r=0.317$ ,  $p=0.047$ ). Additionally, higher HSP levels predicted severe migraine disability (OR=1.04,  $p=0.014$ ), likely due to heightened sensitivity to pain triggers, as their number was the only significant predictor of disability when included alongside HSPS in the regression model.

**Conclusions:** SPS was significantly associated with migraine manifestation, suggesting that individuals with higher SPS may be predisposed to earlier migraine onset, increased sensitivity to triggers, and more frequent episodes, resulting in greater disability. These findings stem from the pilot study, with ongoing main research expected to expand upon them for presentation at the conference.



## **Accommodating the pain: A cross-sectional examination of chronic pain and academic performance among post-secondary students**

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**Background:** Post-secondary education enrolment has increased for emerging adults aged 18-29. Also growing is the number of individuals experiencing chronic pain (CP), but little is known about emerging adults with CP. CP can negatively affect productivity and academic performance. However, supportive relationships, such as with a romantic partner, can have protective factors against consequences of CP. Using the buffering model of social support, this study examines associations between pain reports and academic performance among emerging adults, and the potential buffering role of relationship status.

**Methods:** Using a cross-sectional design, 523 Canadian post-secondary students with CP reported on pain (affective and sensory pain, and pain intensity), test anxiety, cumulative grade-point average (CGPA), and relationship status. An independent samples t-test compared means between partnered and unpartnered participants.

**Expected Results (preliminary or expected):** Analyses (n=523; 80% women, Mean age=20.5) demonstrated correlations between affective pain, sensory pain, and intensity and test anxiety ( $r=.18$  to  $.24$ ,  $p<.001$ ), affective pain and CGPA ( $r=-.09$ ,  $p=.048$ ), and test anxiety and CGPA ( $r=-.27$ ,  $p<.001$ ). Pain reports and academic performance did not significantly differ between partnered and unpartnered participants.

**Current stage of work:** Recruitment is ongoing and will be completed prior to presentation of this work.

**Discussion:** This work addresses the common, yet unacknowledged, experience of post-secondary students with CP. Social and environmental interventions focused on health promotion and, perhaps, the potential buffering of non-romantic supportive relationships may improve availability of accommodations within academic settings, thereby increasing providing more opportunities for success and quality education for students coping with CP.

## **Effect of medication on breastfeeding continuation in postpartum women: initial findings from a systematic review**

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**BACKGROUND:** Although many medicines are not licensed for use during breastfeeding, post-marketing data often suggests they are safe. Yet, breastfeeding women often remain apprehensive about using medication. Healthcare professionals may also see maternal medication as a barrier to breastfeeding. Understanding medication-related breastfeeding discontinuation could guide interventions supporting continued breastfeeding while addressing maternal health needs. This review aims to determine the incidence of medication-related breastfeeding discontinuation and explore factors influencing this decision.

**METHODS** Embase, PubMed, The Cochrane Library, PsycINFO, Scopus, and CINAHL were searched, with a 20-year date limit. Forward and backward citation searches of included papers were conducted. Only studies from high-income countries were included. Combination feeding and expressed breastmilk administration studies collecting data directly from women were included. Exclusions include unpublished studies, conference proceedings, abstracts, case studies and series, articles in non-English languages, studies involving alternative or illicit medicines, and studies focussing on women who never initiate breastfeeding. An initial narrative synthesis has been completed.

**FINDINGS** Seventeen papers were included. Breastfeeding discontinuation due to medicine initiation appears more common in women with chronic diseases (range 4-58%, n=751) than in undifferentiated populations (2-19%, n=184). Drugs linked to discontinuation often have data supporting use in breastfeeding. Five studies explored factors influencing women's behaviour; healthcare professional advice appears important. No studies described associations with socio-economic, geographic, or demographic background.

**DISCUSSION** Medication-related breastfeeding discontinuation is common despite safety data. Study is needed to identify factors associated with this decision and the healthcare professional's role in supporting women to continue breastfeeding whilst using medication.

## **Qualitative study on interpersonal barriers in psychosocial care for adolescents with emotional and behavioral problems**

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**Background:** The system of psychosocial care for adolescents with emotional and behavioral problems (EBP) consists of many institutions and professionals who are expected to be able to help adolescents and their families to solve their problems. The institutions and care providers do not operate in isolation, the care is happening in relationships – between care providers, but also between care providers and clients. Our aim was to assess which barriers in provision of psychosocial care for adolescents with EBP on interpersonal level are experienced by care providers.

**Methods:** We conducted 25 semi-structured interviews in 17 institutions which are a part of psychosocial care to collect qualitative data about care providers' experiences of potential barriers with providing care for adolescents with EBP. Thematic analysis of the transcribed audio recordings was performed in MAXQDA.

**Findings:** We identified four themes of barriers in providing psychosocial care for adolescents with EBP on interpersonal level: 1. (Un)coordinated care, 2. (In)sufficient information exchange, 3. (In)sufficient recommendations, 4. Relationship and trust.

**Discussion:** To improve cooperation and communication between providers, it is important to create sufficient space for cooperation, networking and building relationships between providers, as it was personal relationships that were mentioned by the providers themselves as important facilitators of effective psychosocial care. It is also important to create a sufficiently safe space for clients (adolescents and their parents) in which they would be involved in the individual steps in the process of providing care, and at the same time their motivation would be supported.

## **Barriers and facilitators in providing psychosocial care for adolescents with mental health problems at schools**

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**Background:** Emotional and behavioural problems in adolescents (EBP) became a major problem because of increasing prevalence and consequences. Previous research has indicated ineffectiveness of the healthcare system for adolescents with EBP with several barriers. However, evidence from perspective of the care providers is still limited. Therefore, the aim was to assess which barriers and facilitators care providers experience regarding providing psychosocial care for adolescents with EBP in schools which are one of the key actors in the system of care.

**Methods:** We conducted a qualitative study using data from 25 semi-structured interviews with 49 care providers from 17 institutions providing preventive-counselling, social and mental healthcare for adolescents with EBP. Data were analysed using consensual qualitative research approach in combination with conventional content analysis.

**Findings:** We identified seven main themes regarding barriers in providing healthcare for adolescents with EBP: missing connectedness of healthcare system; lacking specialists in the institutions; ineffective communication between institutions and schools; bureaucratic obstacles; complicated cooperation; complicated implementation of recommendations at schools; parents as a barrier. On the other hand, as main facilitators in providing care was active cooperation between all actors participating on healthcare, especially active involvement of the schools in care, based on mutual respect.

**Discussion:** Aiming to the identified barriers experienced in providing psychosocial care for adolescents with EBP at schools, provides the opportunity to improve the healthcare system effectively what in turn would be beneficial not only for adolescents with EBP. Moreover, facilitators identified by care providers themselves represent potential options for starting.

## **Exploring Expressions of Pre-treatment Cancer Related Cognitive Impairment during a Bimodal Prehabilitation Program: Preliminary Findings**

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**Background:** Approximately 10-30% of cancer patients can experience cancer related cognitive impairment (CRCI) impacting cognitive function from diagnosis to survivorship. Little is known about the prevalence or development of CRCI. This study aims to explore CRCI within a rare cancer cohort who are scheduled for surgical treatment as they engage with a bimodal prehabilitation programme.

**Methods:** Patients with peritoneal malignancy (n=50) scheduled for CRS-HIPEC are recruited from the Mater Hospital, Dublin. Patients are randomised to care as usual or bimodal intervention. Intervention patients receive structured exercise and nutrition support pre- and for 6 weeks post-surgery. Patients are assessed at 5 timepoints (baseline to 6-month follow-up). **Outcomes:** Health related quality of life (Euro-Qol EQ5D, FACT-G), cognitive reserve (CRIq), subjective cognitive function (FACT-Cog), qualitative experience (semi-structured interviews), self-efficacy (GSE). During the 6-month follow-up, patients' objective cognitive function is assessed (MoCA, TMT, COWAT).

**Expected Results:** Data collection will allow for the longitudinal analysis of prevalence and patient experience of CRCI from baseline to 6 month follow-up based on correlations between cognitive variables and self-report measures, and reported impact metrics of the effects of the prehabilitation program. Baseline data collection will be completed February 2024.

**Current Stage of Work:** The first 10 patient interviews have been analysed (reflexive thematic analysis). **Assessment Stages:** Completed the intervention programme (n=10), 6-month follow-up (n=4). Recruitment is ongoing (n=35).

**Discussion:** This study will potentially increase our understanding of this under-researched area of CRCI, whilst also providing evidence for the benefits of a bimodal prehabilitation program within a rare cancer cohort.

## **Screening for psychopathology among oncological patients – pilot for a new hospital procedure in Poland**

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Patients admitted to hospitals for oncological diagnostics or treatment often experience depressive and anxiety symptoms.

We introduced a new policy regarding screening for anxiety and depressive symptoms among patients. Since November 2023 they are given a Patient's Health Questionnaire (PHQ-9). Based on the results we decide who's in need for an emergent psychological evaluation. Scores higher than 12, suggest significant anxiety and/or depressive symptoms.

The choice of the tool (PHQ-9) was not circumstantial. Many European oncology centers use this tool to examine patients' psychological state. It gives a chance to follow patient's results along the whole treatment (identifying symptoms, designing care paths and following changes regarding psychological state).

Nevertheless, handing the toll to newly admitted patients is not deprived of limitations. Not being able to collect all the data, due to for example patients' inability to fill in the questionnaire or an insufficient distribution of the screening tool is commonly observed in other European countries. For that reason, we will gladly share our observations after almost a year of collecting data. So far, what we have already observed is that on the one hand, the screening is making prioritizing patients indeed easier. On the other hand, not every patient returns the questionnaire and reasons for that vary. We'd like to present our findings in regard to both average results and effectiveness of the tool that concerns real psychopathological diagnostics, but also limitations and our suggestions regarding more effective ways of performing psychological screenings in oncological hospitals.

## **The Continuity of Care Outpatient Clinic: an integrated intervention model between oncology and clinical psychology**

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**Background:** Cancer and its treatment have a significant impact on the somatopsychic balance of the patient and their caregivers especially in the advanced stages of the disease.

**Methods:** We developed a multidisciplinary outpatient care model aimed at advanced cancer patients and their families as part of the continuity of care across hospitals. Various medical professionals are involved in the Continuity of Care outpatient clinic: Palliative oncologists, psychotherapists specializing in clinical psychology, social workers and nurses. It is available to patients who have completed active treatment or are undergoing active treatment but have no other validated lines of therapy available.

**Findings:** The activity of the outpatient clinic is not only focused on the control of physical symptoms, but on a comprehensive accompaniment of patients and family members in the final stages of the disease, with the aim of bringing to life the thinking in the actors involved, opening up the possibility of including previously alien, and dissociated aspects of experience and bringing back into play the possibility of feeling entitled to live and occupying an affective space.

**Discussion:** The implementation of multidisciplinary care protocols that pay adequate attention to the interrelationships between somatic, psychological and environmental components in the terminal stage of an oncological disease makes it possible to promote the construction of a concrete and mental space in which it is possible for the patient and their family members to deal with the somato-psychological effects of the end of life.

## Early clinical predictors of developmental outcomes in preterm infants

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Preterm infants face an elevated risk of language, cognitive, and motor impairments. Identifying high-risk infants early is crucial for implementing effective interventions that can improve developmental outcomes.

This study aims to assess the predictive capacity of clinical variables in the early neonatal period (gestational age, APGAR score, reanimation, duration of mechanical ventilation, sepsis) and MRI and EEG abnormalities at the term age, for cognitive, language, and motor outcomes at the age of 2 years (measured by the Bayley-III).

The study included 64 preterm infants (34 male, GA:24-32 weeks) admitted for treatment at the Neonatal Intensive Care Unit of the University Hospital Centre Zagreb. Correlation analysis was used to examine the relationships between individual predictors and developmental outcomes and linear regression was used to determine the predictive power of a set of predictors for developmental outcomes.

All given predictors, except for APGAR-scores, were significantly related to developmental outcomes. The set of predictors explained 51% of the variance in motor ( $R^2=0.514$ ,  $adjR^2=0.472$ ), 45% in cognitive ( $R^2=0.453$ ,  $adjR^2=0.395$ ), and 35% in language outcomes ( $R^2=0.35$ ,  $adjR^2=0.3$ ). Notably, MRI and EEG abnormalities at term age, along with the duration of mechanical ventilation emerged as the most significant predictors of motor; EEG and MRI abnormalities at the term age of cognitive; and EEG abnormalities and duration of mechanical ventilation of language outcomes at the age of 2 years. These findings may aid to the early recognition of at-risk infants, enabling targeted interventions and specialized support in order to improve outcomes for this vulnerable population.



## **The Predictive Role of Spontaneous Self-Affirmation and Self-Esteem in Well-Being**

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Emerging evidence indicates that an individual's tendency to spontaneously self-affirm in response to psychological threats predicts well-being, but this has not yet been investigated in Turkey. Therefore, in this study, we aim to investigate the predictive role of spontaneous self-affirmation in well-being in Turkey, while controlling for self-esteem, an established predictor of it. Well-being was operationally defined by increased life satisfaction, positive affect, optimism, and decreased negative affect. Four hundred thirty-two participants responded to scales measuring spontaneous self-affirmation, self-esteem, life satisfaction, positive affect, negative affect, and optimism. The spontaneous self-affirmation scale was adapted to Turkish within the scope of this study. The results indicated that the scale adapted to Turkish was a reliable measure of spontaneous self-affirmation. The results also showed that self-esteem predicted life satisfaction, positive affect, negative affect, and optimism after controlling for spontaneous self-affirmation. Spontaneous self-affirmation predicted life satisfaction and positive affect but did not predict negative affect and optimism, over and above self-esteem. In conclusion, this study provided partial support for the predictive role of an individual's tendency to spontaneously self-affirm in response to psychological threats on the indices of well-being, specifically life satisfaction and positive affect.

## Measuring Psychological Restoration: Psychometric properties of the Italian version of the Restoration Outcome Scale

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**Background:** The purpose of this study was to investigate the psychometric properties of the Italian version of the Restoration Outcome Scale (ROS), based on the Attention-Restoration Theory. Restorativeness is defined as the ability of an environment to provide a concrete and available means for the reduction of suffering and the enhancement of the individual's effectiveness. The ROS consists of nine items measuring restorative cognitive and emotional outcomes.

**Methods:** Participants were 505 Italian adults (Men=34.1%; Women=65.6%; mean age=37.79, SD=13.96). Exploratory (N= 252) and confirmatory factor analyses (N=253) were performed to confirm the structure of the ROS. The ROS was accompanied by measures of convergent validity (nature connectedness) and criterion validity (life satisfaction). Cronbach's alpha was used to assess its reliability.

**Findings:** The ROS showed high reliability ( $\alpha = .94$ ) and a unidimensional structure with high factor loadings (range=.64-.91). A strong association with nature connectedness demonstrated an optimal convergent validity ( $r = .54$ ;  $p = .000$ ). The criterion validity of the ROS was confirmed by its greater predictive power in explaining the variance in life satisfaction than that of connectedness to nature.

**Discussion:** This study fills the gap in non-English validations by assessing the psychometric properties of the ROS and its relationship with some health outcomes. The Italian version of the ROS confirms its reliability and validity and highlights its potential applicability across various cultural backgrounds. The research reveals significant associations between restorative experiences, nature connectedness, and life satisfaction, advocating for their integration into health psychology and well-being promotion interventions.

## **Positive Life Orientation, Coping Strategies, and Well-being in Prisoners: Exploring Gender Differences**

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Research has indicated that a positive life orientation (PLO) is associated with higher levels of well-being, lower levels of psychological stress, and adaptive coping strategies. However, research on the relationships between these dimensions in inmates is scarce. The present study explores the interconnection between these variables in prisoner population, specifically emphasizing gender.

Three hundred eighteen inmates (180 males and 138 females) aged 21 to 75 years ( $M = 41.91$ ;  $SD = 10.74$ ) participated. Various measures were employed: Brief COPE for coping, Positivity scale for positive orientation, Mental Health Continuum Scale for well-being, and Depression, Anxiety, and Stress Scale for psychological distress.

Male and female inmates showed mild stress levels and moderate depression and anxiety levels. Active coping, acceptance, planning, positive reappraisal, and self-blame were commonly used for both genders. Significant gender differences in coping strategies and psychological distress were found: Female inmates had higher mean values for instrumental support, emotional support, religion, emotional ventilation, depression, anxiety, and stress.

For both genders, coping strategies significantly predict well-being. Positivity was a positive predictor of well-being and a negative predictor of depression, anxiety, and stress for both genders. Positivity mediated the relationship between behavioral disinvestment and well-being in both genders. For female inmates, Positivity mediated the relationship between acceptance and well-being.

Coping strategies and Positivity play crucial roles in predicting well-being and psychological distress, with Positivity mediating certain relationships between coping strategies and outcomes. The importance of focusing on coping strategies and positive orientation towards life in the intervention with inmates is discussed.

## **Positive emotions and time spent on sedentary behaviors: A longitudinal study in parent-child dyads**

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**Background:** The aim of this study was to establish the relationships between positive emotions (enjoyment) related to physical activity (PA) and time spent on sedentary behavior (SB). In particular, we explored within-individual and across-person associations in parent-child dyads, testing the order in which the SB and positive emotions are chained.

**Methods:** Secondary data from an intervention trial (#NCT02713438), including 247 parent-child dyads. Children aged 9-15 years and parents/legal guardians aged 29-66 years participated. Enjoyment was assessed using The Groningen Enjoyment Questionnaire: A Measure of Enjoyment in Leisure-Time Physical Activity (Stevens, 2000), whereas SB time was assessed with accelerometers at three time points: Time 1 (T1, baseline), Time 2 (T2, 1-week follow-up), and Time 3 (T3, 8-month follow-up). All participants received complex SB education after T1.

**Findings:** Analyses demonstrated within-person effects, for example, higher PA-related positive emotions (T1) predicted less time spent on SB among children at T3. Parental PA enjoyment at T1 predicted less time spent on SB by parents (T2). Moreover, children's PA enjoyment at T1 was associated with less time spent on SB by their parents (T2).

**Discussion:** These results emphasize the importance of fostering positive emotions towards physical activity to mitigate sedentary behaviors in parent-child dyads. It underscores the necessity of family-centered approaches in promoting active lifestyles, leveraging enjoyment to improve health outcomes.

## **The meaning of social participation in life stories among Japanese middle-aged and elderly adults**

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In later adulthood, individuals are required to engage in psychosocial developmental tasks relating to generativity and ego-integrity (Erikson & Erikson, 1986) to maintain and promote their physical and psychological health. However, in a transitional period from middle age to old age, individuals might face difficulties achieving generativity owing to shrinking social networks. Additionally, it is important to integrate gains and losses in social relationships into life stories, and by doing so construct integrated self-narratives. Therefore, the present study explores the meanings of social participation in the context of life stories. Participants comprised 26 middle-aged and elderly Japanese adults performing voluntary work such as suicide-prevention telephone counseling and criminal rehabilitation. Narratives of social participation were obtained through life-history interviews. Through a narrative analysis of participants' life stories, meanings of social participation—for example, creating new social relationships, compensating lost relationships, attempting to solve past conflicts, and engaging in lifelong learning—were revealed. The results indicate a diversity of meanings relating to social participation in life stories and various pathways to engage in psychosocial developmental tasks in later adulthood. The results imply the significance of paying attention to the lifespan context to promote social participation.

## Psychophysiological effects of affective touch

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**Background:** Affective touch, the gentle slow stroking of the hairy skin, evokes a pleasant sensation and improves mood. Our knowledge on its peripheral physiological effects is limited, at certain points equivocal.

**Methods:** In a within-subject experiment with 79 young individuals, participants' psychological and physiological responses were measured in three conditions: focusing on the skin, rhythmic touching of the skin, affective touch.

**Findings:** Repeated measures ANOVA showed significant differences ( $F(2)=93.752$ ,  $p<.001$ ,  $\eta^2=0.527$ ) between the three experimental conditions in perceived pleasantness with affective touch being the most pleasant ( $p<.001$ ). Heart rates were significantly ( $p<.001$ ) lower in the rhythmic and affective touch conditions than at baseline and in the attention condition ( $F(3)=96.328$ ,  $p<.001$ ,  $\eta^2=0.556$ ). For HRV-HF (Friedman's  $\chi^2=13.338$ ,  $df=3$ ,  $p=.004$ ,  $W=0.057$ ), affective touch was characterized by higher values than baseline ( $p=.005$ ). For HRV-RMSSD (Friedman's  $\chi^2=63.800$ ,  $df=3$ ,  $p<.001$ ,  $W=0.273$ ) rhythmic touch and affective touch evoked more positive responses ( $p<.05$ ) than pure attention. Respiratory rates were significantly ( $p<.05$ ) higher in the rhythmic and affective touch conditions than at baseline and in the attention condition ( $F(3)=33.588$ ,  $p<.001$ ,  $\eta^2=0.306$ ). Finally, skin conductance levels were uniformly higher in the three experimental conditions than at baseline ( $F(3)=73.406$ ,  $p<.001$ ,  $\eta^2=0.501$ ).

**Discussion:** Physiological changes suggest a parasympathetic effect of affective touch on the cardiovascular system. Activation of the respiratory system might be the consequence of affective change, whereas heightened electrodermal response might reflect attentional processes. Lack of difference between rhythmic touch and affective touch is particularly interesting. From a practical point of view, affective touch can reduce acute cardiovascular stress.

## Perfectionism predicts compulsive exercising in women? The mediating role of body appreciation and body dissatisfaction

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**Background:** Perfectionism represents a risk factor for certain compulsive behaviors, including exercising, although findings are mixed. While research predominantly examines negative body image predictors of compulsive exercising, few consider positive body image as a protective factor. Therefore, this study aims to test the parallel mediating role of body dissatisfaction and body appreciation in the relationship between perfectionism and compulsive exercising.

**Methods:** A total of 304 (Mage=36.48; SDage=12.55; age range=17-73; MBMI=22.88; SDBMI=4.65) Italian women practicing noncompetitive exercise were recruited. Psychometrically sound questionnaires were administered to assess perfectionism, body appreciation, body dissatisfaction, compulsive exercising. Correlation analyses and a parallel mediation model was performed to test the hypothesized model.

**Findings:** Pearson' correlations showed significant positive associations between all variables. Moreover, the parallel mediation of body appreciation and body dissatisfaction in the relationship between perfectionism and compulsive exercising emerged. Notably, higher perfectionism predicted lower body appreciation ( $b=-.22$ ,  $p<.001$ ) which, in turn, predicted higher compulsive exercising ( $b=.30$ ,  $p<.001$ ). Furthermore, higher perfectionism predicted greater body dissatisfaction ( $b=.37$ ,  $p<.001$ ) which, in turn, predicted higher compulsive exercising ( $b=.14$ ,  $p<.001$ ). Also, the direct path of perfectionism on compulsive exercising was significant ( $b=.27$ ,  $p<.001$ ). The model explains 17% of the total variance.

**Discussion:** Clinical implications call for a holistic approach that integrates perfectionism and targeted interventions addressing both positive and negative body image for the prevention of compulsive exercising. Specifically, interventions in health promotion and prevention should focus on fostering body appreciation and alleviating body dissatisfaction among women with higher levels of perfectionism as a preventive measure against compulsive exercising.

## **Gamification-based Positive Psychology Intervention for Enhancing Well-being**

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**Background:** This study aimed to develop the gamification-based Positive Psychology Intervention (PPI) and examine the effects of the PPI on well-being.

**Methods:** Eligible participants were undergraduate or graduate students at Y University and had a mobile phone. Twenty-four Japanese participants were assigned to the intervention group. Moreover, 24 students were included in the control group. We developed the app which consisted of three PPI activities (character strength, gratitude letter, and three good things) for two weeks. Participants recorded the progress of PPI activities into app. The app also applied gamification elements to encourage participants to continue using the app. If participants accomplished some PPI activities, they could get the points. When they accumulated the points, the color of Prince Shotoku's icon changes on the top screen of the app.

**Findings:** ANOVA was conducted to assess the effect of the intervention. A significant interaction was observed in the scores of engagement and achievement factor in the PERMA-Profilier. Significant increases in the scores of engagement and achievement were found only in the intervention group after the intervention.

**Discussion:** The app mainly promoted engagement and achievement in well-being (PERMA). This result is likely due to the use of character strengths. The participants were likely to challenge themselves with something new because they were instructed to use their character strengths in new ways during the orientation session before the intervention.



# Investigating acute expectancy effects on affective state and intention to exercise after a short workout

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## Background

Short exercise programs can have positive effects on the affective state, which in turn could influence the intention for future exercise. Such positive effects may be enhanced by manipulating expectations. Therefore, the aim of this study was to examine whether the affective state after exercise or the intention to exercise in the future can be influenced by manipulating affective expectations in a naturalistic setting.

## Methods

In an online experiment, 121 participants were randomly assigned to either a 10-minute workout (PA), a 10-minute workout after manipulation of affective expectations (PA+EXP) or a control intervention (CG). Questionnaires were used to collect data before and after the intervention, including affective state and intention.

## Findings

After the intervention, PA and PA+EXP showed significantly more positive scores than CG in several affective state parameters (e.g. scale Activation, Elation, Fatigue), in some scales (e.g. Affective Valence, Depression) only PA+EXP compared to CG. The mean scores in the intention to physically active did not differ significantly between PA+EXP ( $27.00 \pm 4.57$ ), PA ( $27.41 \pm 6.79$ ), and CG ( $27.70 \pm 5.78$ ) after the intervention,  $p = .836$ .

## Discussion

No direct effects of the expectation manipulation on affect or intention were found. However, the expectation manipulation was decisive for the differences to the control group in several affective parameters, so that more subtle effects of the expectation manipulation cannot be ruled out. These differences in affective state may have long-term effects on physical activity behavior, so the importance of word choice when describing physical activity should be further investigated in interventions to increase physical activity.

## **Psychodynamic insights into Anticipation, Attribution and Agency**

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**Background:** Psychodynamic theories link specific attributes to the severity/ occurrence of mental issues. It can be assumed that hypothesized mechanisms also affect life satisfaction. In this exploratory reanalysis we aim to enlighten relations between psychodynamic constructs and life satisfaction, anticipation, attribution and agency.

**Methods:** The data was originally gathered to describe a sample of a study assessing effects of maladaptive relationship styles on face perception. For this purpose, a sample size of 182 was calculated. For the current reanalysis, Spearman Correlations are planned to estimate strengths of relations between life satisfaction, anticipation, attribution, agency and psychodynamic attributes assessed by self-report questionnaires in accordance with the Operationalized Psychodynamic Diagnosis.

**Expected results:** We expect that life satisfaction is related to anticipation and therefore to attributions of problems and feelings of agency to be able to deal with them. Certain relationship styles, defense styles and internal conflicts are assumed to have an impact on attributions. Abilities and styles to regulate others and oneself as well as to cope with internal conflicts are assumed to affect agency. Detailed hypotheses are pre-registered ([https://aspredicted.org/XGW\\_RMX](https://aspredicted.org/XGW_RMX)).

**Current stage of work:** Data collection is in progress (presumably finished by September).

**Discussion:** To our knowledge, there is no comprehensive computational model that links presumed psychodynamic mechanisms to life satisfaction in general. The current reanalysis aims to lay the groundwork for a stronger formalization of models based on these assumptions. Future studies will assess the value of these models to predict and foster health behavior.

## **"Creating a place for remaining human"**

Orsolya Gyöngyösi<sup>1</sup>, Tamás Martos<sup>1</sup>, Viola Sallay<sup>1</sup>

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**Background and aims:** Although a large number of studies have looked into environmental elements in hospitals that can have a significant impact on patient care, few have focused on the people working in them (i.e. physicians) and their relationship with the socio-physical environment. In our research, we explore how physicians create their well-being and optimal conditions in the socio-physical environment of the workplace, as well as aspects and processes that help or complicate this.

**Methods:** Using a qualitative inquiry method, the Experience Map of the Workplace Interview schedule, we conducted semi-structured in-depth interviews with physicians. We asked the interviewees to draw a layout of their workplaces, and asked them to mark the places of the following on the layout: security, insecurity, success/development, tension, loneliness, and togetherness. Thereafter, we explored these experiences in detail. The sample consisted of 28 physicians (12 male, 16 female). We applied the Grounded Theory methodology throughout the interviewing and analysis.

**Findings:** Using an inductive approach, we uncovered variations in workplace self-regulation processes. The core process is "Creating a place for "remaining human". The main categories i.e. "Territorial struggles" describe the variations in physicians' workplace experiences.

**Conclusion:** The Experience Map of the Workplace procedure proved to be useful in uncovering the hidden aspects of the physicians' workplace-related experiences. Our findings shed light on the lived experiences of everyday environmental self-regulation. Moreover, based on our findings, a new conceptual construct can be developed that can be used in providing better support for physicians in highly demanding work environments.

## Effectiveness of a peer-support-program at the Austrian Hietzing Clinic (KoHi-III-study)

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**Background.** Second Victims (SVs) are healthcare workers involved in and negatively impacted by unanticipated adverse events, healthcare errors or patient injuries. The Second Victim Phenomenon (SVP) is widespread and also affects healthcare institutions and patients negatively. To mitigate possible negative effects, a collegial support program (KoHi) was implemented in which collegial helpers (KoHis) were trained to offer emotional first aid to SVs. The KoHi-III-study aims to explore the satisfaction of peer supporters with their sessions with SVs and correlations with any modifiable factors (i.e.; duration, time between event and beginning of the session, ...) to possibly improve the peer support program.

**Methods.** KoHi-III is a cross-sectional, descriptive study conducted by telephone among 37 of the trained KoHis upon completion of a peer support session. Descriptive analysis was carried out reporting means, standard deviations, and median. Further analysis involved Spearman's rank, Pearson's product-moment correlation matrix and independent sample t-Tests. Moderation analysis was carried out at 95% confidence intervals. The significance level for correlations, t-Test and moderation analyses was set at  $p < 0.05$ .

**Findings.** Main reasons for the session were bad news from the private sphere and death of a patient. The peer supporters rated their satisfaction with the sessions as very high ( $M=8.5$  on a scale of 1-10). Only few significant correlations could be discovered.

**Discussion.** Main concern was the possible underutilization of the program perhaps due to self-stigmatization. This should be addressed by KHI. The quantitative data could be complimented by qualitative data to gain further insights.

## **Exploring work-related wellbeing promoting factors among software developers: a qualitative study in Italy**

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The software industry is a human capital-intensive industry: its competitive advantage and the quality of the services/products offered depend on the software industry's ability to attract and retain talented employees by investing in factors that promote professional well-being and reduce workplace stress. The SD work context has its own unique characteristics, dictated by the current economic system, which demands short time to market, high quality and adherence to budget. Although the literature on well-being at work is well developed in other occupations, there is little empirical evidence for the software development context. With this in mind, the aim of the present study was to identify the factors that promote well-being and stress reduction in software developers.

To this end, we conducted four focus groups with SDs from three different companies in Italy (January to March 2024). The focus groups were led by an experienced moderator and comprised no more than 12 people each. The Job Demand Resources Model served as a theoretical background. The data collected was then recorded and analysed using a template analysis. This enabled the following categories to be identified:

**Demands:** 1) high cognitive demands (intensity, uncertainty); 2) technostress; 3) relational demands (internal and external customers)

**Resources:** 1) opportunities for skills development; 2) social support (colleagues and superiors); 3) organisational support.

The present study, which focuses on the software industry, could help to identify factors that promote healthy working conditions and thus provide the software industry with tools to promote employee well-being and productivity.

## **Enhancing forgiveness skill and employee well-being through expressive writing and reappraisal**

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**Background:** Interpersonal transgressions are unavoidable in workplace contexts, and they can have profound negative impacts on employees' well-being. We propose that an intervention designed to enhance employees' forgiveness skill can help them better proactively deal with and recover from such experiences. We adopted skill development, expressive writing, and emotional regulation frameworks to develop the intervention protocol.

**Methods:** Participants were randomly assigned to one of five conditions: a control condition and four experimental conditions (either compassionate or regular reappraisal, with or without an additional forgiveness knowledge component). Each day, participants read a workplace offense scenario (same across conditions), wrote for five minutes under their assigned instructions, and completed measures of forgiveness skill, life satisfaction, and general well-being. Participants completed three writing sessions with a 2-day separation.

**Findings:** Although there were no effects on well-being measures, the intervention appears to be effective between-individuals in enhancing forgiveness skill, especially when incorporating knowledge-based components. Despite these promising trends, significant within-participant changes in forgiveness skill were not achieved. Specifically, maintenance or even a slight decline in average daily scores across all conditions was observed, suggesting that fatigue possibly affected the results.

**Discussion:** We extend the concept of forgiveness beyond a trait or state and investigate its development as a skill through an intervention. The intervention shows promise vis-à-vis forgiveness skill, particularly when knowledge-based components are included. These findings highlight the importance of tailored interventions to foster positive workplace outcomes. Future research could investigate possible fatigue effects and consider a broader spectrum of well-being variables.

## Exploring Healthcare Workers' Engagement with Headspace: A Longitudinal Application of the Theory of Planned Behaviour

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Mindfulness meditation offers various health and wellbeing benefits, akin to other health behaviours. Meditation interventions have become more accessible with the rise in popularity of smartphone apps such as Headspace. Yet, user engagement with these digital interventions remains low. This study explores associations between Azjen's (1985) Theory of Planned Behaviour (TPB) and engagement with the Headspace app.

The study included 673 NHS staff members who completed at least one Headspace session between baseline and 35 days post-baseline. Participants completed questionnaires on TPB constructs before accessing Headspace. Headspace engagement data, such as session quantity and duration, was supplied by Headspace and analysed at 35 days and between 36 to 365 days post-baseline. Sequential path analysis explored relationships between TPB components and our engagement outcomes.

Our primary model revealed that attitudes ( $b = .23, p < .001$ ) and behavioural self-control ( $b = -.27, p < .001$ ) predicted the intention to meditate via Headspace. This intention, in turn, predicted short term frequency of Headspace meditation sessions from baseline to 35 days; ( $b = .17, p < .001$ ). Secondary models revealed that longer-term Headspace engagement (from 36 to 365 days) was significantly predicted by engagement at 35 days ( $b = .50, p < .001$  [frequency];  $b = .55, p < .001$  [duration]), but not by behavioural intentions.

Findings underscore the potential utility of the TPB for understanding engagement with digital meditation practice and emphasise the potential of interventions targeting behavioural self-control and attitudes towards practice.

## **Understanding influences on waste in operating theatres: an interview study about unnecessary glove use**

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**Background:** Approximately 5.5 billion disposable gloves are used across NHS England annually. Many of those are used in operating theatres (OTs), often unnecessarily: alcohol hand gel and hand washing have a lower environmental impact and are in many cases safer alternatives. However, the influences on unnecessary glove use are not well understood. Therefore, we investigated the key behavioural determinants for overuse of non-sterile, single-use gloves in OTs.

**Methods:** Nineteen surgeons, nurses and anaesthetists (of different specialties and seniority) were interviewed using a semi-structured technique based on the Theoretical Domains Framework (TDF). Transcripts were analysed using framework analysis and mapped to the TDF.

**Findings:** Six themes were identified, covering ten of the 14 TDF domains. Participants described the influence of the wider context of the NHS, including having finances taking precedence over sustainability, and a lack of incentivisation to reduce waste. Patient outcomes were described as the highest priority, resulting in a reluctance to change current practices. There are strong social influences: a less communicative or familiar team results in more waste, and junior staff model the glove wearing of more experienced staff. Alternatives to gloves were reported to be much less readily available, resulting in higher glove use. There are no clear guidelines for glove use, and limited training, leading to the influence of individual differences, such as 'common sense', habits, values and years of experience.

**Discussion:** This study provides insight into an important behaviour affecting sustainability in healthcare, and will inform the design of appropriate and effective interventions.



## **Work-family balance: a comparative study between Italian and Spanish educators after parental leave**

Matteo Cicchetti<sup>1</sup>, Gloria Guidetti<sup>2</sup>, Alberto Conforti<sup>1</sup>, Lara Colombo<sup>1</sup>, Daniela Converso<sup>1</sup>, Lia Corrieri<sup>1</sup>, Sara Viotti<sup>1</sup>

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The double presence is the necessity to simultaneously answer the requests of both paid work and family needs. This experience, especially in double-income couples, can represent a critical moment with negative repercussions on personal and work life. Work-family balance could become critical especially in those couples who just had a newborn. Transitioning towards parenthood could represent a difficult moment, due to more responsibilities and concerns, to which the relationship is required to adapt (Colombo e Piccardo, 2008; Feldman, 2000).

Coming back to work after a period of parental leave represents a delicate moment of adaptation.

To better understand the nowadays relationship related to work-life balance of new parents with double income, an interview has been developed, ten of which have already been administered in the northeast of Spain. At least the same number of interviews are currently being administered in the northwest of Italy, until March of 2024.

These interviews are meant to evaluate similarities and differences around organizations' role in the promotion or obstruction of the work-family balance in two different cultures.

It is expected to analyze the interview through the Template Analysis (King, 1998) method.

Literature shows how dual-earner parenthood couples are prone to higher levels of stress, reduced access to coping strategies (Galinsky, Bond e Friedman, 1996) and are subject to episodes of work-family backlash among colleagues.

Separation from the newborn correlates with not wanting to return to work or perception of a decreased working competence.

**KEY WORD:** Work-family balance; Cross-national comparative research; biographic transitions.

## **How Effectively Are Intentions Translated into Physical Activity? Linking Mechanisms and Moderators in Intervention Studies**

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**Background:** Behavioral intention is a primary target for physical activity (PA) interventions, but the conditions under which this mechanism is effective is not well specified. Indeed, a 2012 meta-analysis of eleven PA interventions found sizeable changes in intentions, but smaller and more heterogeneous effects for PA. Guided by the Operating Conditions Framework, we present a preregistered systematic review and meta-analysis (PROSPERO CRD42022312865) to examine 1) the effectiveness of PA interventions that target intentions, 2) moderators of whether interventions successfully engage intentions, and 3) moderators of whether changes in intentions lead to changes in PA. **Method and current stage of work:** Our systematic search identified 142 eligible articles (published 2010-2021), from which we extracted study-relevant information (e.g., sample size; study design), potential between-study moderators (e.g., population characteristics, intervention techniques), and relevant effect sizes. Following our preregistered plan, we are preparing to conduct random effects meta-analysis of intervention effects on intentions and PA, test between-study moderators of intervention effectiveness using meta-regression, and estimate heterogeneity of effects using the I<sup>2</sup> statistics. **Expected results:** Findings will update estimates of intervention effectiveness. We expect to find considerable heterogeneity across studies which our moderator analyses should help explain by identifying when, for whom, or in what contexts interventions successfully change PA intentions, and when, for whom, and in what contexts changes in intentions lead to changes in PA behavior. **Discussion:** Understanding the moderators of intervention effectiveness can guide future efforts and highlight the populations for whom and contexts in which interventions could be improved.

## **How effective are credible sources in changing behaviour? A systematic review and meta-analysis**

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**Background:** Credible source is a widely-used behaviour change technique. However, the literature underpinning this (a) largely focuses on hypothetical decision making, attitudes and intentions or (b) does not explore the unique effect of credible source. Thus, the review aims to understand the unique effects of credible sources on behaviour and when they are optimally effective.

**Methods:** A systematic review with meta-analysis was conducted. Six databases were searched, and 25,177 records were screened. Studies were included if they (1) used credible sources to target behaviour, (2) were randomised controlled trial designs and (3) measured the unique effect of credible source.

**Expected Results:** Overall, 40 effect sizes were extracted from 37 included papers. A random effects model indicated a small positive effect of credible sources on behaviour,  $d=.14$  (CI [.05, .23]).

**Current stage of work:** Ongoing analyses seek to understand: (1) for which behaviours credible sources are most effective, (2) what features maximize their effect, (3) what contexts they work in, (4) what populations they work with, (5) how to encourage engagement with credible sources, (6) how credible sources are best delivered, (7) how frequently they should be used, (8) their effects relative to other behavior change techniques, and (9) what are the mechanisms of action.

**Discussion:** The findings encourage intervention developers to use credible sources, but they should consider the cost-effectiveness of this. Developers must assess the expense associated with credible sources and their contextual effectiveness. The moderation analysis will seek to offer guidance on the optimal implementation of credible sources.

## **The role of confidence in creating durable preference change with go/no-go training**

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People acquire preferences for products such as smartphone apps, candy or apples through experiences. When these experiences are very positive, behavior toward the products is reinforced, which may lead to durable behavior toward the products. However, sometimes these products may not be very healthy or sustainable, which raises the question whether and how previously acquired preferences can be changed to durably change behavior. We will present work integrating insights from two lines of research to gain a better understanding of what durable preference change may look like. The first research line suggests that preferences can be very reliably changed by go/no-go training. Second, research on evaluation confidence suggests that when experiences are more similar (candy is almost always tasty) we gain more confidence in our preferences than when the experiences are more dissimilar (apples can be tasty or bland), and behavior toward such products is more durable. Confidence in preferences is useful as it summarizes previous experiences, and as a predictor of durable consistent, but it may cause difficulties when trying to change preferences. We present new work suggesting that go/no-go training changes preferences independent from the confidence in these preferences. Implications for durable health behavior change are discussed.

## **Predicting non-adherence in dietary behaviour maintenance using passive sensing: First part of a registered report**

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**Background:** Overweight and obesity pose substantial health risks and reduced quality of life. The current emphasis on short-term outcomes in behavioural weight loss interventions neglects the crucial aspect of dietary behaviour maintenance. Gaps persist in understanding and predicting non-adherence, i.e. when and why lapses, relapse, and disengagement occur in dietary behaviour maintenance. The aim is to present the work in progress of a registered report to study these processes in daily life.

**Methods:** This is the first part of a registered report of a 12-month intensive-longitudinal observational study with 82 adults in a weight loss maintenance phase. Passive sensing and daily e-diaries capture dietary lapses, relapses, and disengagement during weight-loss maintenance and their contextual (e.g., location) and psychosocial determinants (e.g., stress, affect). Smart scales monitor body weight. Multi-level modelling is used to predict dietary non-adherence at different time scales (e.g., days, weeks, months).

**Expected results:** This first part of a registered report describes a protocol to investigate the phenomena of non-adherence (i.e., lapses, relapse, and disengagement) and their predictors in dietary behaviour maintenance regarding timescales, patterns, psychosocial and contextual factors.

**Current stage of work:** We are currently in the preparation phase of the study and plan to submit the first part of our registered report in July 2024.

**Discussion:** This poster will showcase a study protocol that uses innovative sensing methods to address an important research gap on behavioural maintenance. Further, the registered report demonstrates how this rigorous open science format can be used for intensive-longitudinal studies in health psychology.

## Can a valued-framed message increase motivation for dietary change in Young People?

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**Background:** Value-aligned health messages have the potential to impact food choice behaviours in adolescents if they are receptive to receiving the messages. Self-affirmation can facilitate openness to health messages. In this study, we examined (a) whether a value-framed health message can increase autonomous motivation to choose healthy foods in adolescents and (b) if a self-affirmation task can affect the extent to which adolescents engage with the value-framed health message.

**Methods:** In an experimental design, adolescents (N = 100) were required to watch a video exposing the influence of social media outlets on food choices for the experimental group, while the control group watched a similar-length video about the 5-a-day campaign. Baseline measures of motivation and self-efficacy for healthy food choices were completed and repeated immediately after watching the videos. The experiment also assessed whether the experimental manipulation influenced the processes by which narrative information was hypothesized to work (narrative acceptance and engagement).

**Findings:** No statistically significant differences were found between experimental and control groups after watching the video on motivation to choose healthier foods. Individual acceptance and engagement scores indicated there were significant differences between the experimental and control groups, with the experimental group reporting significantly higher Message Credibility and Narrative Engagement.

**Discussion:** The current findings do not allow any confident conclusions to be drawn. Nonetheless, considering that this study may have been underpowered to detect differences and that previous studies have shown the beneficial effects of value-aligned messages in changing motivation, future studies should aim to explore this area.

## **EAT Family Style in Portugal: Study protocol and preliminary findings about feasibility and impact**

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Childcare educators play a relevant role in promoting children's healthy eating habits through strategies used to shape children's eating behavior during mealtimes. There is, however, a widespread need for training on responsive feeding practices in Portugal. The EAT Family Style is a web-based program developed in Nebraska to promote evidence-based childcare staff's responsive feeding practices with 2- to 5-year-old children. Its theoretical grounds are based on the Theory of Self-Determination and the Reggio Emilia's approach. A brief Portuguese version of the program was developed and adapted. We are conducting feasibility (recruitment, retention, intervention fidelity, participants' involvement, and satisfaction) and preliminary effectiveness studies (changes in self-reported and observed feeding practices) of the program. We also identified barriers and facilitators in adopting responsive practices through qualitative analysis of the sessions, recurring to the COM-B model as a framework. So far, 24 childcare teachers filled out the baseline questionnaires and 11 completed the program and the post-intervention assessment. Despite the positive intervention acceptability indicators, the active involvement during the sessions was moderate. There were no significant differences in self-reported use of responsive and controlling feeding practices. We identified several obstacles when adopting responsive practices, mostly related to kindergarten resources, communication with parents, and children's characteristics. The program mobilized educators to identify solutions and to plan specific changes in their behavior during mealtimes. We are still pursuing the study with new registrations. The Mealtime Observation in Child Care tool, introduced this year, will help to clarify the program's impact on the educators' feeding behavior.

## Process evaluation of implementing a motivational interviewing tool to support parent-supervised toothbrushing

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**Background:** Dental caries, although preventable, is the most prevalent chronic disease worldwide, particularly among young children. Parent-supervised toothbrushing can reduce children's caries risk, but evidence persistently associates increased toothbrushing barriers with socioeconomic deprivation. In Scotland, Dental Health Support Workers (DHSWs) address this inequality through motivational interviewing with underserved families to encourage parent-supervised toothbrushing. We are investigating the effectiveness of the STAR tool, a booklet to guide motivational interviewing for supervised toothbrushing support.

This project evaluates the feasibility of integrating the STAR tool into existing DHSW activities and the acceptability and usability of the STAR tool for DHSWs and families.

**Methods:** This mixed-methods process evaluation combines a survey of all DHSWs in Scotland (N=146) and focus groups with 36 DHSWs and 16 DHSW line managers, and interviews with 20 families to rigorously investigate acceptability and usability of the STAR tool at the organisational, provider-, and service-user levels. Survey data will be analysed using descriptive statistics. Qualitative data will be analysed using Thematic Analysis.

**Expected results:** Survey and qualitative findings will be triangulated to comprehensively describe barriers and facilitators to implementing the STAR tool and opportunities to maximise acceptability and usability.

**Current stage of work:** Preliminary findings will be available in September 2024.

**Discussion:** If effective, the STAR tool will improve parent-supervised toothbrushing rates and reduce caries risk among the most vulnerable children. This process evaluation will ensure that the STAR tool's acceptability and usability can be optimised for key provider and service user groups to maximise effectiveness and uptake.



## **A rapid review of reviews for behavioral adaptation to ambient air pollution in urban areas**

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### **Introduction:**

Air quality improvements have been achieved through policy, regulatory, and advocacy efforts. However, majority of the world's population is still subjected to air pollution levels above the safe limit recommended by WHO. While self-protective behaviors such as staying indoors can reduce the exposure - especially for those at risk of serious health consequences - the drivers and barriers of these behaviors are poorly understood. Hence, the primary aim of this rapid review would be to assess existing evidence of the facilitators for these protective behaviors and targeted interventions that could be implemented.

### **Methods:**

Five scientific databases and relevant reference lists will be searched for reviews (systematic, scoping, narrative, umbrella) from inception to May 2024 without year restrictions. Only studies published in English will be included. Reviews that report on drivers or barriers of the three target behaviors (use of air quality information, staying indoors, altering commute routes) and/or interventions aimed at changing them will be included. At least two independent reviewers will screen the included reviews for identification of drivers and barriers using the COM-B factors and the TDF domains, and of interventions targeting these.

### **Expected Result:**

This review will extend and expound upon the rapid review commissioned by the WHO. The drivers, barriers, and interventions identified can provide a foundation for policy discussion and well-informed public health interventions toward achieving the ambitious European zero-pollution vision for 2050.

### **Current stage of work:**

Stage of review at the time of submission is at preliminary searches.

## **How does the social and physical context affect sun-protective behavior in the Netherlands?**

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**Background:** Excessive sun exposure can lead to skin cancer, one of the most prevalent forms of cancer worldwide. Exposure can be reduced by seeking shade, wearing protective clothing or applying sunscreen. Previous research in the Netherlands has shown how often these sun-protective behaviors are displayed. However, but there is insufficient insight in drivers behind the choice for a specific behavior, including the influence of the context on behavior.

**Methods:** In total 30 interviews were held with participants, ranging from 16 to 80 years old. The interview guide was based on the Behavior Change Wheel and Health Belief Model. Various scenarios were presented to the participants where the social and physical context differed. They were subsequently asked about their typical behavior and motives or barriers of the various sun-protective options. Specifically, concerns about the use of sunscreen were explicitly explored.

**Expected results:** We expect that not only risk perception determines the determines sun-protective behavior, but also context-dependent social norms, the physical environment and financial costs. Some participants also might have concerns about the environmental impact of sunscreens or side effects on their health.

**Current stage of work:** Currently the interview guide is being developed and participants are being recruited. By May the study will have been concluded. During the conference the full study will be presented, including detailed results.

**Discussion:** The study shows that sun-protective behavior is not a static personal preference, rather it is also dynamically shaped by external factors. Furthermore, misinformation on social media can hamper protective behaviors.

## **Promoting physical activity among older adults through a six-month pragmatic randomized experiment: mixed method study**

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**Background:** A pragmatic approach was used to examine how older adults can be supported to engage in physical activity (PA) through an online or onsite exercise intervention. Two main questions were: (1) How did the intervention affect PA engagement and physical and mental health? (2) What influenced the participants' participation in the intervention?

**Methods:** A mixed-method design was used to study older adults 65 years or older who participated in an online or onsite PA intervention. Quantitative data was collected thrice over six months (i.e., PA, physical and mental health) and continuously over the intervention period (i.e., step counts and adherence). Qualitative data (i.e., interviews) were conducted when participants either discontinued or completed the intervention. Within-and-between group analysis and regression analysis will be used for quantitative data (n = 34). Content analysis will be used for qualitative data (n = 26).

**Expected findings:** Quantitative data can show differences between online or onsite interventions on participants' PA engagement and health. Adherence is assumed to be related to intervention outcomes. Qualitative data is expected to clarify reasons for dropping out or continuing in PA interventions. Combined, the data will identify ways to support PA engagement among older adults better.

**Current stage of work:** Data collection completed. We are currently analyzing data. Results will be available for the conference.

**Discussion:** It is important to understand how older adults can find opportunities to be physically active through different interventions, such as online or onsite interventions, to promote PA engagement and physical and mental health.

## **Affect Regulation and Help Seeking for Dementia**

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**Background:** The primary goals of the research are to learn more about peoples' experiences of formal help seeking for dementia, their affect regulation, and the relationship between these topics.

**Methods:** A mixed-methods program of research is in progress, comprising part of the primary researcher's Psychology PhD. A preregistered scoping review is underway, exploring research on the relationship between affect regulation (emotion regulation, mood regulation, coping) and help seeking for dementia. Additionally, data from the Determind Project is being analysed, collected through interviews with 900+ people recently diagnosed with dementia and their carers. This includes principal component analysis of participants' coping strategies, as measured by the Brief COPE, as well as linear regression, examining the role of coping and sociodemographic factors in predicting diagnostic delays.

**Expected results:** Regarding the scoping review, a mixed pattern of results appears likely. Most included papers focus on coping, often prominently described in qualitative literature but producing inconsistent quantitative findings. Within the Determind data, principal component analysis produced highly similar three-component models for both people with dementia and carers.

**Current stage of work:** The scoping review is in the process of being written up. Principal component analyses have been conducted and regression analyses are being planned.

**Discussion:** Help seeking for dementia is often severely delayed, especially in regard to diagnosis; our research aims to help further understand this issue, as well as the role that individuals' coping strategies may play.

## **Application of the Good Lives Model as a new framework for substance misuse intervention**

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### **Background:**

The Good Lives Model (GLM) is a holistic, strengths-based rehabilitation framework which has previously been applied to offending. The GLM suggests everyone has 11 basic human needs which they must attain to have a happy, healthy and meaningful life. However, due to personal and/or environmental circumstances, some attempt to fulfil these using harmful means (e.g., substance misuse). The Nehemiah Project (TNP) provides residential recovery facilities for ex-offenders who face addiction issues. The current project aims to enhance TNPs current provision by utilising the GLM, increasing quality of life and long-term abstinence.

### **Methods:**

Qualitative, semi-structured interviews were conducted one-to-one with TNP staff and residents, exploring perspectives of the current provision. Interviews were analysed using deductive thematic analysis.

TNP service provision guidelines and observations from attending sessions with clients were analysed using content analysis. Co-production activities were undertaken to embed the GLM in an updated intervention.

### **Expected Results:**

Preliminary findings from the semi-structured interviews and content analysis indicates that TNP does not fully target all 11 basic human needs in the current intervention. It is expected that co-production activities will produce resources which enhance TNP provision by embedding the GLM systematically.

### **Current Stage of Work:**

Thematic and content analyses are currently being finalised, with co-production work due to start imminently.

### **Discussion:**

This is the first time the GLM has been applied to a substance misuse population. Findings from this project will contribute towards increasing long-term abstinence rates within the addiction recovery sector.

## **How health beliefs shape physical health: Investigating perceived immunity**

Liron Rozenkrantz<sup>1</sup>

<sup>1</sup>Bar-Ilan University, Israel

Health beliefs play a significant role in influencing physical health outcomes, as evidenced by research in psychosomatic and nocebo effects. A critical next step in further investigating the mechanisms behind this relationship is to identify the specific health beliefs leading to the experience of poor physical symptoms. In this talk, I will discuss a specific health belief termed perceived body's immunity (PBI), which reflects individuals' beliefs about their body's ability to protect them from diseases. I will introduce PBI, demonstrate its predictive value across published and unpublished data, and present its psychometric validity as a novel scale. Additionally, I will introduce a novel framework for studying the relationship between health beliefs and physical symptoms. Finally, I will discuss the possibility of harnessing the malleability of health beliefs, including PBI, to improve physical health and daily functioning. Together, this talk aims to underscore the importance of considering specific health beliefs in shaping physical health and offers a framework for advancing our understanding in this area, bridging psychosomatic research, neuroscience, and placebo effects.

## Health literacy, health-related behaviours and Self-Rated Health among migrants in Portugal

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### Background:

Understanding health literacy needs and strengths is essential for promoting healthy behaviours, and improving health outcomes among vulnerable populations such as migrants, to achieve equity within the healthcare system. We aimed to characterize different health literacy domains, health-related behaviours and self-rated health among migrants in Portugal.

### Methods:

A cross-sectional survey was applied to a sample of 1070 migrants (53.2% men; aged 18-77, M= 37.6, SD = 11.63; origin: 32.3% Africa, 27.1% Brazil and 25.2% Asia). Data were collected using Health Literacy Questionnaire (HLQ) and eHealth Literacy Questionnaire (eHLQ) items, health-behaviors indicators, and a single-item measure of self-rated health. Descriptive statistics were used.

### Findings:

Health literacy strengths included “Access to digital services that work” and “Using technology to process health information”, particularly among the younger, with Higher Education. Needs were related to “Feeling understood and supported by healthcare providers” and “Navigating the healthcare system”, particularly among the younger and residing in Portugal <5 years. Most individuals classified health as “Good/Very Good” (74%) and reported no disease (64%), not consuming illegal drugs (95%) or antidepressants/anxiety medications (86%) and not smoking (79%). Sweets or fat consumption some days per week was reported by 50%, not drinking alcohol by 48%, and regular physical activity by 35.2%.

### Discussion:

Our findings point to the need of increasing migrant-related competencies in health professionals. In addition, access barriers should be addressed by improving the navigability of health services. These underscore the relevance of health literacy, health-related behaviours, and health status for optimal health outcomes and advance equity.

## Understanding the uncertainty of the future. Time horizon sensitivity in risk perception

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**Background:** The prevention of disease through reducing the impact of risk factors on human health is receiving more and more attention. When making the patient aware of the risk of contracting a certain disease, it is necessary to assume a particular time horizon, e.g. 5, 10 years, or a lifetime. The study aimed to determine the relevance of the time horizon in subjective risk perception.

**Methods:** An experimental study. Respondents were presented with six hypothetical situations containing numerical data on the probability of contracting various diseases. They were then asked to subjectively rate the risk of getting the disease on a scale from 1 (low risk) to 10 (high risk). The survey was conducted in two groups. The first group received version A, and the second version B. Version A differed from version B only in the time horizon used. A total of 156 respondents ages 30- 89 (Mage=59; SD=12.45) participated in a study, subjective risk ratings were compared.

**Findings:** Risk perceptions did not significantly differ between groups who received version A and B in five of the six situations, despite using a different time horizon.

**Discussion:** The study results indicate that in most cases when assessing the risk of contracting a disease respondents ignore information about the time horizon. In other words, information on the potential timing of an occurrence is not suitably considered.



## **Challenging Assumptions: Reassessing Risk among Men who Have Sex with Men in Sexual Health Research**

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**Background:** Sex between men has been associated with risk since the start of the AIDS epidemic. This study explores how risk has been conceptualised in the context recent biomedical and social changes, specifically the introduction of HIV Pre-Exposure Prophylaxis and "Undetectable equals Untransmittable" messaging. The aim is to better understand how to improve sexual health outcomes of gay, bisexual and other men who have sex with men (gbMSM) by better understanding contemporary conceptualisations of risk.

**Methods:** A systematic search of three databases was performed. Papers were included if published between 2015-2020 and from Europe, North America, Australia, New Zealand and South Africa. A data saturation methodology was used to synthesise the data. Papers were reviewed and coded for implicit and explicit definitions of risk, this continued until no new conceptualisations emerged in three consecutive papers.

**Results:** Data saturation was achieved at 24 papers and no new conceptualisations were identified in the second coding. The conceptualisation of risk was found to be broad and heterogeneous. Six distinct but interconnected concepts emerged: outcome-oriented risk, behavioural risk, demographic risk, biomedical risk, Individual risk, and Interpersonal risk. Within these overarching concepts, over 100 more granular definitions were found.

**Conclusions:** Definitions of risk are broad and heterogenous and appear to lack consensus in the papers reviewed. Risk language may have become meaningless through its ubiquity and this could lead to miscommunication in clinical settings. More work needs to be done to better understand if the concept of risk meets the needs of contemporary sexual healthcare.

## **Dentists' perceptions of practicing patient-centred care: A qualitative exploration guided by the Theoretical Domains Framework**

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**Background:** There has been growing interest in adopting patient-centred care (PCC) into dental practice. However, it is unclear what PCC looks like within the dental context and dentists report facing several barriers to practicing PCC. This study aimed to explore dentists' understanding of PCC using the Theoretical Domains Framework (TDF) to identify dentists' perceived barriers and facilitators to practicing PCC.

**Methods:** An exploratory cross-sectional qualitative design was adopted. Nine dentists who completed  $\geq 50\%$  of their practice as a private dentist in the UK were recruited through convenience and snowball sampling to participate in an in-depth semi-structured interview. Data were first analysed inductively using reflexive thematic analysis to generate themes which were then mapped deductively onto TDF domains.

**Findings:** Thirteen subthemes corresponded to eight domains of the TDF; 'knowledge', 'skills', 'beliefs about capabilities', 'optimism', 'beliefs about consequences', 'memory, attention and decision processes', 'environmental context and resources', and 'emotion'. One additional subtheme ('Conceptualisation of PCC') did not map onto the TDF and reflected dentists' perceptions about the components of PCC.

**Discussion:** Findings revealed that whilst dentists' understanding of PCC aligns to academic definitions of PCC, there is a lack of consensus about patients' responsibility for decision-making in a patient-centred approach. Through the TDF, the study identified several barriers and facilitators to PCC which could be addressed to support dentists to practice PCC. Future health psychology research should explore how establishing a patient-centred dental practice could facilitate PCC in dental consultations and offer training to dental teams wishing to practice PCC.

## **Qualitative study on Slovak healthcare workers' responses to a patient safety incident**

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### **BACKGROUND**

Preventable patient safety incidents pose a significant threat to patient safety. Therefore, it is crucial that patient safety incidents are duly reported and resolved by healthcare workers. The aim of the study was to explore Slovak healthcare workers' responses after the occurrence of a patient safety incident in their workplace.

### **METHODS**

Qualitative research design was used. From November 2022 until January 2023, healthcare workers (n = 16) employed in hospital settings participated in an individual, semi-structured face-to-face interview. The analysis included the use of the conventional content analysis method combined with the consensual qualitative research method.

### **FINDINGS**

Results of the study captured two main categories: healthcare workers' responses when they were alerted to a patient safety incident, and healthcare workers' responses to a patient safety incident. In the first category, four sub-categories emerged: a) acceptance of notification; b) making an effort to correct and prevent a patient safety incident; c) willingness to discuss the incident, and d) non-acceptance/unwillingness to admit a mistake. The second category involved six sub-categories: a) a notification; b) communication/discussion; c) solution, correction, and prevention; d) incident analysis; e) non-interference; f) withholding.

### **DISCUSSION**

The active efforts of healthcare workers to openly communicate and to resolve patient safety incidents could have a positive impact on reducing the number of such incidents in healthcare. However, some healthcare workers may need a psychologically safe work environment to support the "speak-up" behavior, instead of the "withholding" behavior.

# Using patients' experiences on their health and illness in education from students' perspective

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## BACKGROUND

Database of Individual Patients' Experiences (DIPEX) offers hundreds of modules on health and illness issues available in 13 languages, what creates unique opportunity for educational purposes. The aim of the study was to explore students' perspectives about using patients' experiences on health and illness in education.

## METHODS

In three consecutive years(2021-2023), three lecturers in 7 students' groups(78 participants) run a course based on following patients' experiences using DIPEX database and presenting narrative reports by students. Participants were asked to fill semi structured anonymous online questionnaire as feedback on a course, and 41 did it (response rate: 52.6%). Conventional content analysis was used.

## FINDINGS

Three major categories and 13 subcategories were grouped from identified codes. Engaging lecturers, appropriate educational tools, and safe and stimulating environment were identified as Enablers. Novelty, language barrier, risk of rising negative emotions, and organizational issues were identified as Challenges. Following 6 subcategories were identified as Benefits: Learn a lot about patients' perspective and health issues, competence development, inspiration for personal life, career orientation, experiencing novel educational approach, arousing interest. Most students went beyond the requirements of their assignments. While 14.8% respondents focused only on their assigned topic, 74.4% looked at other topics sometimes or often, with 7.4% even being inspired to look at modules that we did not cover in the course.

**DISCUSSION:** Using patients' experiences in education has the potential not only to offer knowledge, but also to develop sensitivity, empathy, and narrative competences of students and last but not least their intrinsic motivation.

## Exploring Source Reliability in Influenza Vaccine Arguments and Inferences: An Experimental Study

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**Background:** The study examined associations of source reliability manipulations and individuals' arguments/inferences after reading texts about the influenza vaccine (Reliable-Text1), side effects (Unreliable-Text2: condition1; Reliable-Text2: condition2), and cost-effectiveness (Reliable-Text3: condition1; Unreliable-Text3: condition2). While controlling past vaccine behaviors and attitudes, we hypothesized a positive correlation between reading Reliable-Text2 and Text2 arguments/inferences (i.e., coverage) for side effects question (Q1) and reading Reliable-Text3 and Text3 coverage for the economic aspect question (Q2), and no correlation between conditions and Reliable-Text1 coverage for Q1 and Q2.

**Methods:** 130 university students read Reliable-Text1 and were randomly assigned to conditions. Online questionnaires covered vaccine attitudes (unforeseen effects and commercial profits) and past behaviors (pre-manipulation), with two integrative questions (post-manipulation). Outcome variables included Reliable-Text1 coverage for both questions (T1\_Q1Q2), Text2 coverage for Q1 (T2\_Q1), and Text3 coverage for Q2 (T3\_Q2). Hierarchical multiple regressions addressed hypotheses.

**Findings:** Participants showed average concern for the vaccine's unforeseen effects and disagreed on commercial profits; 46% received at least one influenza vaccine dose.

In T1\_Q1Q2 regression ( $F(4,129)=2.98$ ,  $p<.05$ ;  $R^2=9\%$ ), past behavior was the sole significant predictor ( $\beta=.24$ ;  $t=2.77$ ,  $p<.01$ ). For T2\_Q1, adding condition made the model significant ( $F(4,129)=2.82$ ,  $p<.05$ ;  $R^2=8\%$ ), with this variable as the only predictor ( $\beta=.19$ ;  $t=2.20$ ,  $p<.05$ ). For T3\_Q2, despite the model's non-significance, the only predictor was condition ( $\beta=.20$ ;  $t=2.25$ ,  $p<.05$ ).

**Discussion:** Individuals reading texts on topics they have neutral attitudes, like side effects, may rely more on ideas from unreliable sources. In health psychology, understanding how attitudes are linked to source perceptions could help effective vaccination communication strategies.

## Unveiling the Association Between Information Sources and Young Adults' Attitudes and Concerns during COVID-19

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**Background:** Amid COVID-19, diverse information on virus spread and preventive measures circulated. Young adults, often relying on social rather than traditional media, showed lower adherence to recommended behaviours than middle-aged adults. This study examines associations between information sources, attitudes toward public health measures and concerns in young adults.

**Methods:** We analyzed a sub-sample of 2121 Canadians aged between 18 and 29 from the iCARE study. Employing a repeated cross-sectional design, participants were recruited through a web panel of a polling firm between October 2020 and June 2021.

**Results:** In fully adjusted models, regression analyses revealed that those who consulted traditional media to a great extent were likelier to report that implementing preventive measures was important (OR=2.5, 95%CI:2.0-3.1) and less likely to report that they were too strict compared to those who didn't extensively consult traditional media (OR=0.5, 95%CI:0.4-0.7). Consulting social media to a great extent was not associated with perceptions of either the importance or strictness of preventive measures ( $p=0.2$ ). Consulting traditional media to a great extent was associated with greater health ( $\beta=0.3$ ,  $p<0.001$ ) and social ( $\beta=0.2$ ,  $p<0.001$ ) concerns. Consulting social media to a great extent was associated with greater social concerns ( $\beta=0.1$ ,  $p<0.01$ ) but not health concerns ( $\beta=0.1$ ,  $p>0.05$ ).

**Conclusion:** Results suggest that heavy reliance on traditional media was associated with greater concerns and more positive attitudes toward preventive measures. Heavy reliance on social media was not associated with health concerns or positive attitudes. Findings highlight implications for government policy about health-related information in future public health crises.

## **Psychological variables associated with hypersexuality and substance abuse in people who practice chemsex**

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**Background:** The practice of chemsex is a growing public health problem since it is associated with a greater risk of anxiety and depression, social isolation, overdose and a greater probability of risky sexual practices and of sexually transmitted infections (STI). The objective of this study is to analyze the relationship of hypersexuality, low condom use, frequency of STI diagnosis and substance abuse in people who practice chemsex with internalized homophobia, loneliness, intimacy skills and psychological inflexibility.

**Methods:** This is a correlational ex post facto cross-sectional design. An anonymous online survey will be administered to 200 users who have practiced chemsex in the last year. It includes sexual practices and the standardized questionnaires Hypersexual Behavior Inventory, Drug Abuse Screening Test, AAQ-II, Short Internalized Homonegativity Scale, Social and Emotional Loneliness in Adults, and Awareness, Courage and Responsiveness Scale. The relationships between the variables will be studied using Pearson correlation and multiple linear regression analysis.

**Expected results:** It is expected to find information on the weight of the variables studied in the risk that people who practice chemsex have more STIs and low condom use and show significant levels of hypersexuality and substance abuse.

**Current stage of work:** 50% of participants have already been recruited and actions are being designed to increase the dissemination of the form.

**Discussion:** It is expected that the results will contribute to a better understanding of the phenomenon of chemsex and to know key variables that contribute to designing psychological intervention protocols and prevention and risk reduction plans.

## Health literacy, health and health behavior among German students

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**Background:** Health literacy (HL) is intended to help improve the way people deal with their own health in the case of illness, as well as to promote health prevention. Aim of this work is to investigate HL among students and whether there is a connection between HL, health, health behavior, and stress among students.

**Methods:** The HSL19-Q12-DE questionnaire and items from the German health questionnaire (DEGS study) as well as TICS9, questions regarding subjective health status, and health behavior were used in an online study (06/2023-01/2024) in 443 students (25.1 years,  $\pm 6.3$ ; 82% female).

**Results:** An outstanding health status described 7%, 30% a very good, 49.7% a good, 11.5% a less good and 1.8% a bad health status. According to HL, 4.7% reported very good and 16% reported sufficient HL. 46.5% described it as problematic and 32.7% stated inadequate HL.

Associations were found between HL and chronic stress ( $r = -.28$ ), mental health ( $r = -.22$ ), general ( $r = -.17$ ) and physical health ( $r = -.13$ ), but not between health behavior and HL. Furthermore, there was a clear difference in the level of HL depending on the subject of study; medical students had the highest HL compared to engineers and social work/education students, but did not differ from students from the fields of health/nursing/psychology ( $F(3)=4.67$ ,  $p=.003$ ,  $\eta^2=.031$  (CI 95%: .004-.065)).

**Discussion:** Overall, students show very low HL, which needs to be promoted through targeted education. In this context, it is important to reduce stress and establish health-promoting behavior.



## **Do you trust me? – Navigating conflicts over restrictive pandemic containment measures to maintain health**

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Conflicts over Covid-19 containment measures can harm relationships and mental health. However, the severity and negative effects of social conflicts may be modulated by trust in the social partner. Trust, including perceiving the other as benevolent, likely shapes conflict behavior by prompting cooperative rather than reactant responses. Based on psychological reactance theory, this might be the case because either (a) the social partner is not perceived as infringing on one's freedom or, alternatively, (b) higher trust buffers the effect of a threat to freedom on reactance, resulting in lower reactance. This study investigates these competing hypotheses and subsequent effects on health and conflict behaviors.

Data from two studies will be used (Study 1: correlational data from N = 533 participants; Study 2: data of a subsample of N = 200 family and friendship dyads reporting conflicts over pandemic measures). Trust, indicators of health, conflict behavior, perceived threat to one's freedom, and reactance are assessed via self-report. Data will be analyzed with regression analyses.

We expect that trust is positively associated with constructive conflict behavior and mental health. In addition, data from Study 2 allows to test hypotheses (a) and (b) against each other.

Data from Study 1 were collected in summer 2023. Study materials for Study 2 are currently being developed; data collection will start in summer 2024.

The findings will offer insights into how trust affects psychological reactance, protects health, and preserves relationships in the context of stressful pandemics requiring to adopt controversial health-protective measures

## Promoting health information seeking behavior prior to vaccination decisions

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Patient-centered care involves encouraging patients to seek health information to empower themselves in making an informed vaccination decision. Health-behavior research consistently finds a positive association between knowledge of vaccination and vaccination intention. While this offers a promising approach to promoting vaccine uptake, most information campaigns rely on one-way communication channels, leading to limited engagement.

In a preregistered randomized controlled trial, we tested three theory-informed interventions to increase information-seeking behavior before a vaccination decision. Participants could either take notes on their search (knowledge collection), collect badges (gamification), or compare their knowledge to other participants in a quiz (social comparison). Integrating the interventions into a newly developed and pilot-tested paradigm, we directly observed health-information seeking behavior. The study setting simulates a health website that can be searched by the participants before making a fictitious, incentivized vaccination decision. We measured the interventions' effects on both subjective and objective knowledge.

With an online sample of 345 participants, all three interventions (vs. control) resulted in longer seeking times during the information-search task ( $d = 0.48$ ,  $p < .001$ ). Only the gamification intervention showed a higher number of topics viewed during the task ( $d = 0.49$ ,  $p = .003$ ). While we find a correlation of the amount of information-seeking with subjective and objective knowledge, the three tested interventions did not increase subjective or objective knowledge.

The findings can be used to further develop web-based interventions targeting patients seeking information on vaccinations. In addition, our paradigm may be useful to measure information-seeking in future research.

## Equalizing the playing field in school food literacy programs: a gender and sport participation lens

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**Background:** School food literacy programs (e.g., home economics) are an opportunity to improve adolescents' eating behaviours. However, girls and athletes often have better food literacy, and it is not clear how school programs contribute to this inequality. To address this, we sought to generate a theoretical understanding of how to improve all adolescents' food literacy experiences.

**Methods:** We recruited 33 adolescents (13-18 years) to balance sport participation (n=18 athletes) and gender (n=15 boys; n=14 girls; n=4 non-binary). Using semi-structured interviews and informed by Grounded Theory methods, the theory generated aligned with principles of the Competencies, Opportunities, Motivation and Behaviours (COM-B) Model, and was subsequently mapped against it.

**Findings:** Adolescents expressed four main categories to improve their experiences. First, programs needed to Provide challenge (e.g., more advance recipes) progressively to increase competencies and maintain interests. Establishing importance of the delivered material further motivated desires to learn (e.g., health impacts), as did Make it fun by tailoring material to unique interests (e.g., ethnic foods). Finally, adolescents emphasized Practice is key, as opportunities to practice increased their confidence to perform skills. Boys specifically highlighted Make it fun whereas girls suggested Establishing importance. Non-binary adolescents stated both equally. Athletes valued Practice is key, as they stressed the importance of food for sport performance.

**Discussion:** Improving adolescents' buy in into school food literacy programs may help them adopt protective eating behaviours. By emphasizing the importance of food literacy in fun ways and providing opportunities to practice, the inequality between groups' food literacy may be reduced.

## Randomised controlled trial evaluating an online tool to support use of plain language health information

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**Background:** Health literacy is fundamental for developing health and behaviour change interventions that are equitable and accessible to diverse communities. The Health Literacy Editor was developed to support uptake of health literacy practices by providing objective real-time feedback on written health information. This study evaluated the Editor's effectiveness in supporting application of health literacy guidelines to written text compared to usual processes.

**Methods:** Australian Health information developers were randomised to revise health texts (grade reading score 14.0, 600 words) using either the Editor (intervention group) or their usual processes (control group). Primary outcome was grade reading score (Simple Measure of Gobbledygook). Secondary outcomes were use of complex language and passive voice, and expert ratings of the texts based on items from the Patient Education Materials Assessment Tool. Intention-to-treat (ITT) and per-protocol (PP) regression models were analysed.

**Findings:** 180 participants were randomised (mean age 40.7 years (SD=11.5); 13.3% male (n=24); 85.0% female (n=153)), and 81.7% (n=147) submitted revised texts. ITT analysis showed that participants in the intervention group (n=85) significantly reduced grade reading score (M=9.8, 95% CI: 9.4–10.3) compared to those in the control group (n=95, M=12.5, 95% CI: 12.0–12.9; p<0.001). Magnitude of effects were larger for PP than for ITT analysis (d's=1.6 and 0.2, respectively), with similar patterns observed for secondary outcomes (p values <0.001).

**Discussion:** The Editor effectively supports health information providers to apply health literacy guidelines to written health information. This in turn can support development of more equitable and accessible health and behaviour change interventions.

## **HIV cure engagement among key populations: a Netherlands-based inductive exploration with the Health Belief Model**

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**Background:** The prospect of an HIV cure is gaining prominence. Engaging key populations groups at most risk becomes essential as community engagement is linked with improved health and health behavior outcomes. This study aimed to explore the engagement with HIV cure of HIV-negative men who have sex with men (MSM) and partners of people with HIV in the Netherlands as groups not living with HIV who are most affected by a potential HIV cure.

**Methods:** Semi-structured interviews were conducted and thematically analyzed. The identified themes were organized with the Health Belief Model (HBM). We recruited 19 MSM not in romantic relationship with a person with HIV and 16 partners.

**Findings:** Participants who were engaged with HIV cure did so by accessing information, participating in research, and offering support to others. In line with the HBM, we found that participants' engagement was influenced by perceived severity, susceptibility, benefits, and concerns regarding HIV cure. Despite concerns about new infections and treatment intensity, participants were motivated to engage with HIV cure information. This was especially the case for participants who perceived HIV to be more severe and the potential benefit of a cure to decrease HIV burden. However, their engagement tended to be passive due to a low perceived susceptibility.

**Discussion:** Overall, the perceived importance of HIV cure development was high, while personal relevance remained low. Considering the concentrated HIV epidemic among MSM, enhancing community engagement in HIV cure research and tailoring communication strategies to increase personal relevance for these groups is recommended.

## **Improving up-take of pulmonary rehabilitation for patients with COPD using a lay health worker service**

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**Background:** Chronic obstructive pulmonary disease (COPD) is a debilitating lung disease more common in low socioeconomic status groups. Pulmonary rehabilitation (PR) is the most effective treatment for COPD; however, its impact is limited by low uptake and completion. IMPROVE is a UK multicentred cluster randomised trial employing a “train-the-trainer” model to recruit PR-experienced lay health workers (LHW) with COPD to enhance PR receipt. This study aimed to explore clinicians’ experiences of receiving training and setting up a LHW service.

**Methods:** Training PR teams and LHWs was informed by the COM-B model of behaviour change and incorporated teaching communication skills and behaviour change techniques (BCTs). BCTs were adapted for LHWs and training was refined in discussion with patient advisors. A qualitative study using remote semi-structured interviews was conducted with PR staff at IMPROVE trial pilot sites. Reflexive thematic analysis was completed on verbatim transcripts.

**Findings:** Six PR staff at three sites were interviewed. Four themes were identified: connection between people who share similar experiences; positive responses to training received; barriers and facilitators to setting up a LHW service; motivations for and difficulties with participation. The findings were used to refine PR staff training for the main trial.

**Discussion:** The train-the-trainer model successfully facilitated the recruitment and management of volunteer LHW. LHWs with shared personal experience and less pressure on their time than clinicians could be an important resource to help manage long-term conditions. This approach could facilitate improved access to effective treatment and therefore has the potential to improve health inequalities.

## **Contribution of Health Psychology to SO-RISP : a multidisciplinary network for Population Health Intervention Research**

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Context. Population Health Intervention Research (PHIR), defined as the use of scientific methods to generate knowledge about public health interventions, is a complex, emerging field in France. It is necessary to innovate in its approaches and methods, and to support researchers involved in the primary prevention of cancers, as a large part of cancers are linked to preventable factors, mainly behaviors. Method. Supported by two grants, 4 French research teams (University of Bordeaux & Inserm, University Paul-Valéry Montpellier 3, University Paul Sabatier - Toulouse & University Jean Monnet – Saint-Etienne) and an operator (Montpellier Cancer Institute) are proposing to combine their respective disciplinary and methodological skills within a network called « SO-RISP ». Current status and expected results. The contribution and inputs of models and methods of Health Psychology appear salient in the 4 operational lines of SO-RISP work: 1) methodological and conceptual development for PHIR; 2) tools and support and 3) training for researchers; 4) knowledge transfer. In particular, these contributions to RISP challenges are illustrated in designing, implementing and evaluating theory-based and evidence-based interventions. Based on co-constructed interventions, the aim is to target key constructs, and selecting appropriate intervention techniques to improve health-promoting behaviors. This pragmatic approach also addresses epistemological questions raised by the link between research and action, as updated by PHIR. Moreover, the consideration of intervention context is also guaranteed by a systemic approach, integrating the broader environment with the intra and inter-individual factors, as promoted by socio-ecological perspective, in the light of social health inequalities.

## Self-management of inflammatory bowel disease patients: the role of autonomy support in health goal striving

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**Background:** Adapting to inflammatory bowel disease (IBD) necessitates sustained lifestyle changes and goal-setting for promoting health behaviors. In this study we explored the role of healthcare professionals' autonomy support in self-concordance and self-efficacy related to health-related personal goals.

**Methods:** This study, conducted at the IBD Center of the Internal Medicine Clinic in Szeged, Hungary, involved 377 adult IBD patients (61.6% with Crohn's disease, 34.0% with ulcerative colitis). We assessed the characteristics of the health goals: autonomy and directive support from healthcare professionals, self-concordance, self-efficacy, and positive and negative emotions.

**Findings:** Autonomy support positively predicted self-concordance ( $\beta = 0.22$ ,  $p = 0.001$ ) and self-efficacy ( $\beta = 0.13$ ,  $p = 0.05$ ), while directive support negatively predicted self-efficacy ( $\beta = -0.10$ ,  $p = 0.05$ ). Further analysis revealed that these effects were significant primarily during relapse, with autonomy support ( $\beta = 0.48$ ,  $p = 0.002$ ) and directive support ( $\beta = -0.47$ ,  $p = 0.002$ ) predicting self-concordance. Conversely, during remission, self-efficacy ( $\beta = -0.12$ ,  $p = 0.04$ ) and self-concordance ( $\beta = -0.28$ ,  $p < 0.001$ ) predicted negative emotions.

**Discussion:** The findings underscore the critical role of healthcare professionals' autonomy support in enhancing health-related self-concordance, particularly during relapse. Goal-related self-concordance and self-efficacy contribute to maintaining positive resources for self-management, especially during disease remission. The interaction observed between disease activity and goal-related emotions highlights the necessity for additional research. These results offer valuable insights for developing psychoeducation programs that emphasize the autonomy of healthcare professionals in supporting disease self-management among IBD patients.



## **Inflammatory Bowel Disease patients' health goals - the role of dyadic coping and affective experiences**

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Background: Living with inflammatory bowel disease (IBD) comes with a set of everyday challenges, necessitating constant self-regulation and health-management. One way to deal with these challenges is to set health-related goals, which was barely examined before in IBD patients especially in the context of romantic relationships. In this study we investigated how goal-related dyadic coping (i.e., coping with stress with help of the partner) and affective experiences can contribute to the progress of reaching one's health goal. Methods: A cross-sectional questionnaire study was conducted with 216 gastrointestinal patients recruited from the Internal Medicine Department of the University of Szeged during routine check-ups (N = 216; Nwomen = 124, Nmen = 92). Participants listed their health-related strivings and assessed them based on dyadic coping experiences, positive and negative emotions, goal attainment and effort. We conducted a path analysis to examine the hypothesized relationships among the variables. Findings: The model had a good fit ( $\chi^2(8, N = 216) = 11.97, p = 0.15, RMSEA = 0.04, CFI = 0.99, SRMR = 0.04$ ). Positive dyadic coping significantly predicted positive affects, which predicted goal attainment and effort. Negative dyadic coping predicted negative affects, subsequently diminishing effort. Discussion: Positive and negative relational and individual experiences can contribute to goal attainment and help or hinder patients putting more effort in pursuing their goals. The results can be applied in health psychology practice to develop interventions for IBD-patients and their partners. This way, they can improve their health-related goal outcomes through better coping and enhanced resilience.

## **The experience of social support in IBD patients' life space: an experience mapping qualitative study**

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**Background:** Our qualitative, exploratory research investigates the subjective health experiences of people living with inflammatory bowel disease (IBD), using environmental and relational self-regulation and mental well-being as theoretical context. We aimed to understand the processes embedded in the persons' sociophysical environment that facilitate or hinder coping with everyday stress and the role of progressive disease symptoms in emotion regulation and health goal attainment. **Methods:** In the research interviews with IBD patients (n=31, 16 female, 15 male), we used the experience mapping method. Emotionally important experiences, such as security, insecurity, togetherness, and withdrawal, were marked on the map of the individual's life space (e.g. home, workplace, and gym). The subsequent interview elicited stories about these places and experiences that shaped individuals' well-being and explored them in relation to health goals. **Findings:** Through a Grounded Theory qualitative analysis of the interview transcripts, we explored patterns of IBD patients' place-related self-regulatory and relational experiences. Social and individual processes under the main themes 'The value and the burden of shared bodily experiences' and 'Interactions with the life-space shape the experience of the illness' describe and explain how IBD patients construct experiences of social support in their life-space. **Discussion:** Exploring these social-emotional and environmental self-regulatory processes and experiences can provide information for healthcare professionals and contribute to tailoring health-psychological interventions to the person and their social and physical environment.

## **Rare diseases (ASMD): study of the determinants of therapeutic adherence, acceptance and shared medical decision**

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**Background :** The discovery of a chronic disease is a difficult moment, which often places the patient in a state of shock, and even more so when it is a rare disease.

In rare diseases such as ASMD (Niemann-Pick), a significant proportion of patients refuse to begin treatment after diagnosis. There are no studies on the obstacles and levers to adherence concerning these specific patient populations.

**Method :** This will involve administering questionnaires (measuring adherence, acceptance of the disease, quality of life and the doctor-patient relationship) to around a hundred ASMD patients, as well as interviews with a ten patients, to transcribe them and analyze all of these results.

**Expected results :** We hypothesize that the relationship with doctors is a powerful lever for patient compliance. Good acceptance of the disease would also make it possible to follow treatments more rigorously. On the other hand, denial of the disease, poor patient information or poor representation of treatments will have a negative impact on therapeutic compliance.

**Current stage of work :** We are sending the questionnaire to the patients and starting the interviews.

**Discussion :** The expected advantages of this study are to be able to identify the main obstacles and levers of therapeutic adherence and acceptance of patients suffering from this disease. Indeed, it is through better knowledge of these obstacles and levers that it will be possible to put in place more appropriate and more effective support.

## **Emotional regulation and executive functions in healthy adults**

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**Background:** Emotional regulation is an individual's ability to identify, understand and accept their emotional experiences, to control impulsive behavior and to flexibly change their emotional responses.

**Method:** Our study aimed to determine whether there are differences between two emotion regulation processes with regard to sociodemographic variables and whether there are correlations between them and executive functions in healthy adults. The Emotional Regulation Questionnaire (ERQ) and the Behavior Rating Inventory of Executive Function - Adult Version (BRIEF-A) were administered on a community sample comprising 176 participants aged 18-70 years (mean age 26.07 years, SD 9.81; 68.8% female).

**Findings:** Our results showed that older participants scored higher on the CR subscale compared to younger participants. No statistically significant correlation between the ERQ subscales and education was obtained. Women attained higher CR scores than men. Five dimensions of the BRIEF-A (Shifting, Initiating, Working Memory, Planning, Organization of Materials) and total score showed statistically significant correlations with the CR. ES subscale showed a statistically significant correlation only with the Planning dimension.

**Discussion:** Our study found that improved emotion management skills were associated with higher executive functioning. Part of the explanation certainly lies in the fact that emotional development relies on cognitive abilities, including executive function, which is largely influenced by the maturation of the frontal lobe, which enables the voluntary, effortful control of behavior.

## Identifying central cognitive complaints among dialysis patients and developing a short screener using network analysis

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**Background:** Subjective cognitive complaints are common in dialysis patients and can affect multiple aspects of well-being. This study aimed to use network analysis to identify core cognitive symptoms in this population and develop a short self-reported screener based on these central complaints to facilitate cognitive screening in dialysis settings.

**Methods:** A total of 268 haemodialysis patients completed a 33-item measure of cognitive complaints (Patient's Assessment of Own Functioning Inventory [PAOFI]) and a global cognition test (Montreal Cognitive Assessment [MoCA]). Network analysis was performed to estimate the network structure of cognitive complaints assessed by PAOFI. Receiver operating characteristic curve analysis was conducted to determine the optimal short form of PAOFI. Finally, a multiple linear regression model examined whether the optimal PAOFI short form could predict patients' performance on MoCA.

**Findings:** Network analysis identified five central cognitive complaints in dialysis patients: problem-solving difficulty, difficulty following instructions, forget how to do tasks, difficulty being understood, and forget people known years ago. These core items were combined into a PAOFI short form, which showed good reliability and validity, as well as satisfactory sensitivity (63.9%) and specificity (89.5%) in identifying clinically significant cognitive complaints. The optimal cut-off point of the PAOFI short form was able to predict patients' performance on MoCA even after controlling for sociodemographic and clinical confounders.

**Discussion:** The core cognitive symptoms in dialysis patients may be potential treatment targets. The PAOFI short form can be used as an initial screening tool to identify patients with increased risk of cognitive impairments.

## **Snack smart: Unlocking the power of if-then planning in food perception**

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The growing field of self-regulation in health and illness provides a rich context for exploring innovative strategies to combat eating disorders and obesity. The current study will investigate if-then planning, an essential component of self-regulation theory, to improve visual identification of food stimuli. If-then planning facilitates the translation of intentions into action, which is a critical process for those individuals trying to comply with dietary recommendations or fight against over-eating tendencies.

Using a 2x2 mixed-design ANOVA, this study compares if-then planning with goal intentions in 80 native German speakers, focusing on their efficiency in identifying pictorial and textual food stimuli through reaction times and error rates. Our hypotheses suggest that if-then planning improves food recognition and varies by stimulus type, providing insights into cognitive strategies for dietary management.

Currently, the study is in the data collection phase. This investigation is particularly relevant to individuals with eating disorders or obesity. By illuminating the cognitive mechanisms underpinning if-then planning, the study aims to contribute to developing targeted intervention strategies. These strategies could facilitate the individuals to regulate their eating behaviors better, ultimately supporting managing eating disorders and preventing obesity.

The findings promise to expand our understanding of self-regulation within the domain of eating behaviors, offering practical applications for enhancing dietary self-regulation through cognitive planning techniques. By integrating self-regulation theory with empirical research on food perception, this study paves the way for innovative interventions in health psychology, aiming to improve the lives of those affected by eating disorders and obesity.

## **Influence of disease representation on fatigue perception in a french population of MS patients**

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**Context :** Multiple sclerosis (MS) is an incurable, chronic and unpredictable disease of the central nervous system. Fatigue is a common symptom of MS that is purported to cause significant distress and have detrimental effects on daily functioning, social and occupational obligations, and overall well-being. The aim of this study is to deepen our understanding of the relationship between perceptions of MS disease and perceived fatigue in a French population of MS patients. The self-regulation model proposed by Leventhal, which postulates that patients with chronic illnesses construct a multidimensional representation of their illness in order to make sense of it, provides us with a theoretical basis for understanding perceived fatigue in MS patients.

**Method :** In a cross-sectional study, 181 French patients with a definite diagnosis of MS completed validated questionnaires that measured perceived fatigue (MFIS), included several sociodemographic and medical variables, an assessment of emotion regulation (CERQ) and as well as symptomatic assessments depression and anxiety (HADS).

**Résultats :** Leventhal's model was confirmed in our sample and was able to explain 37.9% of the variation in perceived fatigue levels. The representation of MS has direct effects on perceived fatigue levels and indirect effects via maladaptive emotional regulation strategies. Anxiety and depression also have a direct influence on perceived fatigue levels.

**Conclusion :** Confirmation of Leventhal's model provides a theoretical framework for understanding perceived fatigue in a French population suffering from MS. Based on present findings, psychological intervention may primarily target illness perceptions to address fatigue.

## **Adaptation and validation of a Spanish modified version of the “Goal Pursuit Questionnaire”**

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**Background:** Physical activity and exercise are two evidence-based practice for chronic pain. However, the preference for pain avoidance goals can compete with the preference for being physically active. Our aim was to adapt to Spanish population the ‘Goal Pursuit Questionnaire’(GPQ) to assess competing goals with regard to performing physical activity and exercise (GPQ-PA).

**Methods:** A cross-sectional study was conducted with 582 women with fibromyalgia. In the GPQ-PA we considered physical activity and exercise as achievement goals competing with pain-avoidance goals in five physical activity and exercise tasks. Participants answered each question using a 6-point Likert scale (1= strongly disagree, 6= strongly agree). Higher scores indicate stronger preferences for pain avoidance relative to maintain the activity. In addition, participants filled out the GPQ-pain and catastrophizing scales and provided information on pain intensity, distress and fibromyalgia overall impact.

**Findings:** The principal component analysis showed that one component (all five items loading above .78) explained 76.0 of the total variance. The GPQ-PA internal consistency was  $\alpha = .92$ . The total score was significant related to GPQ-Pain ( $r=.62$ ) and Catastrophizing ( $r=.12$ ) ( $p$  values  $\leq .01$ ). No significant relationships were found with pain intensity, distress and fibromyalgia overall impact.

**Discussion:** The scale showed adequate structural and criteria validity. However, more studies are needed to explore its relationships with objective physical activity measures to improve its usefulness. Supported by grant PSI2016-79566-C2-1-R, Spain.



## **Forward focus and trauma focus in Poles helping Ukrainians: a latent transition analysis**

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**Background:** In 2022 Poles massively have become involved in helping Ukrainians with potential high indirect trauma exposure. Processing potentially traumatic events through the perceived ability to focus on processing the trauma (trauma focus) and focusing on moving beyond the trauma (future focus) are manifestations of an adaptive response.

The study was designed to reveal profiles of coping through forward focus and trauma focus, and to look for covariates and outcomes of these changes.

**Methods:** Three-wave-study included participants declaring different types of support (N=395; 56.7% of women; mean age=43.06; SD=13.57). They completed measures of trauma (TF) and forward focus (FF; the Perceived Ability to Cope With Trauma), positive and negative affect (12-item scale), compassion fatigue (secondary traumatic stress and compassion satisfaction; ProQOL). Latent transition analysis (LTA) with covariates (sociodemographic characteristics, characteristics related to helping) and distal outcomes (well-being, compassion fatigue).

**Findings:** LTA suggested a three-class model across the three time-points, characterized by low (42%), medium (49%) and high TF&FF (7%). Transition probabilities indicated dynamic changes over time, particularly for the 'low' and 'high' statuses. Further analysis will be conducted to identify relationships between profiles and psychological adaptability.

**Conclusions:** The medium TF&FF class was the largest latent status and the most stable of statuses over time. Further analysis will be conducted to identify profile transitions and links between profiles and psychological adaptability.

## **Understanding the echoes of trauma: a qualitative exploration of midwives' experiences following witnessed traumatic childbirth**

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<sup>1</sup>Vytautas Magnus University, Lithuania

**Introduction.** Birth trauma can have profound effects not only on the mother but also on those who witness it, impacting their emotional and psychological well-being. This study aimed to understand midwives' experiences after witnessing a traumatic childbirth.

**Methods.** The study involved 8 midwives who have witnessed traumatic births. A phenomenological study design was used for this study. The data was collected using semi-structured interviews, interpretative phenomenological analysis was used for data analysis.

**Results.** Four main meta- themes were identified: 1) Human connection: the essential role and health impact; 2) Navigating the emotional turmoil: responses to traumatic births; 3) The ripple effect: traumatic births through midwives' eyes; 4) From witnessing to wisdom: acceptance and integration of traumatic birth experiences.

**Discussion.** This study highlights the necessity of strong interpersonal relationships to mitigate the adverse effects of traumatic experiences both for mothers and midwives. The exploration of emotional response reveals the intricate emotional challenges faced by midwives, emphasizing their effort to balance empathy with professional duties. Lastly, the journey from witnessing to wisdom captures the transformative process of integrating traumatic experiences, underscoring the importance of acceptance and resilience in personal and professional growth. These results emphasize the importance of implementing supportive strategies to nurture the emotional and psychological health of midwives, thereby safeguarding their ability to offer compassionate care to mothers.

## **Breaking bread, building bonds: Identifying psychological mechanisms that foster social relationships in joint meals**

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**Background:** First research suggests that eating together can improve social relationships. Yet, little is known about the why and how. Building on the theoretical framework of how social networks impact health (Berkman et al., 2000), the current study examines mechanisms explaining when commensality fosters relationships.

**Methods:** Within-dyad design with 25 dyads (peers, relatives, or romantic couples) eating in the video laboratory under two conditions: In the commensality condition, each dyad eats together at the same table. In the non-social condition, participants will not interact with their dyad partner. Participants report on the quality of their relationship before and after the meal. Combining data from video recordings and self-reports, we will examine the psychological mechanisms of commensality, coding verbal (e.g., share of speech) and non-verbal (e.g., smile) cues via video recordings, perceived relationship quality via self-report. We will test whether relationship quality differs between the two conditions and which mechanisms best predict relationship quality after experiencing commensality using mixed models.

**Expected results:** We hypothesize that commensality fosters positive improvements in acute indicators of relationship quality. We further assume that positive social interactions (e.g., share of speech, smile) predict higher relationship quality after common meals.

**Current stage of work:** Early stage: conceptual work and study design.

**Discussion:** Better understanding the psychological nature of commensality is central to develop effective interventions to improve relationship quality or reduce feelings of loneliness. Moreover, the proposed mixed methods design is promising to obtain high quality data in social eating contexts.

## Received interpersonal emotion regulation promotes mental health by attenuating the effects of expressive suppression

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**Background:** Expressive suppression, defined as the deliberate inhibition of emotional expressive behaviour in emotion-eliciting situations, is associated with lower well-being. However, studies on factors that may moderate its association with mental health are limited. Therefore, we aimed to investigate the moderating role of intrinsic interpersonal emotion regulation, such as cognitive support or physical presence provided by others, in a recalled personal situation involving a negative affective state (e.g.: when the participant was sad or in a low mood).

**Methods:** In an online study, expressive suppression (Emotion Regulation Questionnaire – Gross & John, 2003), interpersonal emotion regulation (Interpersonal Regulation Interaction Scale – Swerdlow & Johnson, 2020), and well-being (Mental Health Continuum – Short Form (Keyes, 2002) were assessed. Data from 554 participants (mean age 34.3 years; 77.6% female) were included in the analysis.

**Results:** Results confirmed the hypotheses, indicating that received cognitive support ( $b=.027$ ,  $SE=.008$ ,  $p<.01$ ) and physical presence ( $b=.035$ ,  $SE=.016$ ,  $p<.05$ ) moderated the relationship between expressive suppression and psychological well-being, even after controlling for age and gender. When cognitive support and physical presence were high, expressive suppression was no longer associated with lower well-being.

**Discussion:** Received interpersonal emotion regulation may promote mental health by attenuating the effects of maladaptive intrapersonal emotion regulation strategies such as expressive suppression. The provision of interpersonal emotion regulation in a negative affective state may be promoting for the receiver. In future research it is advised to measure intra- and interpersonal emotion regulation together to better understand their relation to and their effect on mental health.

## Effects of a dyadic pre-post intervention N-of-1 study on active commuting – work-in-progress

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**Background:** Active commuting (i.e., walking, cycling, public transport to and from work) can promote both individual health as well as environmental outcomes. To date, effective ways to facilitate active commuting are under-researched, and the mechanisms of maintenance are not well understood. Prior research has demonstrated that social support can foster physical activity, but social support interventions have produced mixed results. The present study examined effects of a dyadic intervention to increase active commuting and promote underlying mechanisms of action (e.g., planning, autonomy support).

**Methods:** Nine dyads (non-romantic dyads, 56% women) participated in a 60-weekday dyadic pre-post intervention N-of-1 study within the Healthy, Active and Sustainable Commuting Intervention (HASCI) project. After two weeks of baseline assessments, each dyad received an online intervention, followed by a booster session five weeks later. For 12 weeks, participants completed short questionnaires three times a day via a smartphone app. Participants wore an accelerometer (GENEActiv) on their wrist to assess their physical activity throughout the study period. Piecewise linear models will be fit.

**Expected results:** We expect to see an increase in physical activity during times of commuting following the intervention, and in its proposed mechanisms of action within the dyad members.

**Current stage of work:** Data collection is finished. We are currently validating commuting phases of accelerometer data with self-reported commuting reports. The poster will show intervention effects and visual analyses for selected participants.

**Discussion:** Our findings will inform future interventions aiming to promote active commuting.

## **Experience with a mindfulness-based intervention for caregivers in Alzheimer's disease: An interpretative phenomenological analysis**

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**Context:** To alleviate caregivers' distress, numerous strategies have been devised. Recently, web-based mindfulness interventions have offered an accessible and cost-effective support system, resulting in beneficial effects for caregivers. However, little is known about the caregivers' experiences with a web-based mindfulness intervention. The study's aim was, therefore, to explore the experiences of a web-based mindfulness program in caregivers of people with Alzheimer's disease or a related disease.

**Method:** For eight weeks, participants were invited to practice mindfulness with a daily activity delivered online. At the end of the program, 15 participants with a mean age of 62.4 years (SD=10.74) participated in a semistructured individual interview. Data was analyzed with Interpretative Phenomenological Analysis.

**Results:** Two axes illustrated the participants' experiences of the program. Heterogeneous uses of mindfulness activities were identified, according to previous caregivers' experiences and actual needs. Radical changes then became apparent, from a new ability to feel physical and psychic relaxation to a capacity to let go, spending less energy on things that were beyond one's control to change. This also resulted to a better control of one's reactions in contexts of caregiving.

**Discussion:** The findings are promising and provide insights into the processes activated by a mindfulness-based intervention. It supports further development of web-based mindfulness programs for caregivers of people with Alzheimer's disease, combined with face-to-face interventions.

## **Role of attitudes toward receiving support on caregivers' psychological well-being: preliminary findings**

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### **Background:**

In recent years, clinicians have increased their efforts to support informal caregivers (iCGs). This study investigates the association between iCGs' attitudes toward receiving this support and their psychological well-being.

### **Methods:**

213 iCGs of dementia patients completed an anonymous survey on their psychological well-being and care needs. Anxiety and depression were assessed with the Patient Health Questionnaire-4 and caregiver burden with the Zarit Burden Interview. An ad-hoc scale, consisting of a list of information services and psychological supports, enabled the classification of care needs into three categories: "met", "unmet but needed", and "unmet and unnecessary". Based on these categories, we created three cumulative scores to quantify iCGs' attitudes toward receiving support and to investigate, via partial correlations, the relationship between needs and well-being.

### **Findings:**

The mean score of caregiver burden, anxiety symptoms and depressive symptoms was  $35.8 \pm 17.82$ ,  $2.79 \pm 1.91$ , and  $2.00 \pm 1.81$ , respectively. On average, iCGs report needs as met (20.6%), required (68.0%), and unnecessary (11.4%). iCGs perceiving higher levels of unmet needs had higher levels of burden ( $r=0.263$ ,  $p<0.001$ ), anxiety ( $r=0.263$ ,  $p<0.001$ ) and depressive ( $r=0.263$ ,  $p<0.001$ ) symptoms. iCGs not interested in support had lower levels of burden ( $r=-0.277$ ,  $p<0.001$ ), anxiety ( $r=-0.197$ ,  $p<0.001$ ) and depression ( $r=-0.162$ ,  $p<0.001$ ). Despite iCG that received support showed lower levels of psychological distress, the association were not significant ( $p>0.05$ ).

### **Discussion:**

The attitude to receive support is associated with psychological well-being. Further studies should deepen these findings by exploring features of caregivers who reported not needing support, considering their lower psychological distress.

## **The Ripple Effects of Dementia Care: Family Functioning, Caregiver Burden, and Burnout**

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**Background:** Caregiving is a complex stressful occupation, with a significant impact for the informal caregivers (IC). Several stress-process models propose a framework that considers that this impact depends on primary and secondary stressors, but also on the IC appraisal of the situation. Considering these models, this work aimed to verify: 1) whether being, or not, an IC influenced the relationship between family functioning and burnout (study 1); 2) the association between neuropsychiatric symptoms of the person living with dementia and IC burnout and whether the IC burden and perceived family functioning had a mediating role in explaining such relationship (study 2).

**Methods:** Two cross-sectional studies were conducted. The first one compared IC (n=78) and non-informal caregivers (n=84) regarding family functioning and its relation with burnout. The second study included the IC (n=78) and the person living with dementia they cared for (n=78). Both studies used the CBI-Copenhagen Burnout Inventory and the McMaster Family Assessment Device. Study 2 used also the Neuropsychiatric Inventory and the Zarit Burden Interview.

**Findings:** Study 1 found an association between poorer family function and high levels of burnout in IC. Study 2 demonstrated that burden, but not family functioning, mediated the relationship between the neuropsychiatric symptoms of the person living with dementia and the level of burnout of their IC.

**Discussion:** Taken together, the findings offer a significant contribution to the growing knowledge about the relationship between stressors associated with informal caregiving, such as neuropsychiatric symptoms and its outcomes, like burnout.



## **When friendship suddenly becomes dangerous – effects of life goals on prevention adherence during COVID-19**

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**Background:** Restrictions on contact and activity during COVID-19 may have conflicted with many people's ideas about how to live a fulfilling life. It seems reasonable to expect a negative effect of such conflicts between social rules and individual wishes on adherence to prevention. To scrutinize this issue, we used the established model of six agency- and communion-oriented life goals. Among these, affiliation and variation could be expected to be particularly threatened by the COVID-19 restrictions. This raises the question whether the intensity of restrictions moderated the relationship between the importance of these two life goals and non-adherence to prevention.

**Methods:** Longitudinal data from three measurements during COVID-19 (June 2020 – July 2022) was analysed. The sample consisted of former unemployed persons (N = 451 (T1) – 410 (T3)).

**Findings:** Multilevel analyses demonstrated for importance of the life goals affiliation ( $p < .05$ ) and variation ( $p < .01$ ) a significant decreasing effect on adherence to COVID-19 measures. No significant effects were found for other goals (power, achievement, altruism, intimacy). Interaction effects with the severity of the restrictions resulted for affiliation ( $p = .001$ ) and variation ( $p < .01$ ). As expected, for low and medium but not for high levels of COVID-19 restrictions, the effect of goal importance on non-adherence was stronger. Unexpectedly, another similar interaction was shown for power ( $p < .01$ ).

**Discussion:** The findings are important for the identification of groups who are likely to experience difficulties in the adherence to prevention measures in the event of a future pandemic.

# **Synergizing psychological services with interdisciplinary care for anxiety disorders: A critical review of systems-based models**

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## **Background:**

Care fragmentation resulting in disorganized care across multiple healthcare providers has adverse effects on patients with anxiety disorders. A systems-based approach to treating anxiety disorders advocates for the integration of the necessary disciplines with the use of structured processes to deliver a system, working from needs to requirements and from design to delivery. We aim to critically review the current state of care for patients with anxiety disorders by existing psychological services utilizing interdisciplinary, systems-based models.

## **Methods:**

Databases including PubMed, PsycINFO and Google Scholar were search. Results were then tabulated and critically analyzed. A narrative synthesis of the results was then conducted.

## **Findings:**

Various iterations of systems-based models were found. A significant number of models showed that collaborative care models were superior to care as usual for anxiety disorders where panic disorders specifically showed a larger effect size in some studies. Settings varied with regards to the level of care, from early intervention programs to the primary care setting from different socio-economic environments with a range of psychotherapies being delivered. Methods of delivery were increasingly innovative and ranged from face-to-face to online delivery modalities. This approach appeared to benefit patients with comorbid conditions such as alcohol use disorders.

## **Discussion:**

The heterogeneity in such models may be attributed to cultural and contextual factors coupled with the multifaceted nature of anxiety disorders. Calibration of goals and the alignment of treatment strategies by psychologists with the relevant stakeholders are required to achieve the best outcomes.

## **Correlates from the socio-ecological environment for active mobility behaviors in rural adults aged 75+**

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**Background:** For improving mental and physical health of older people, active mobility behaviors, such as walking, cycling and public transport use, used for various activities of daily life can be beneficial. Next to individual determinants, factors from the social or built context (e.g., social support or infrastructure) can influence active mobility behaviors. This study aims to investigate associations between such factors and active mobility in a sample of older adults.

**Method:** Data from the baseline week of a randomized controlled trial will be used for secondary analyses. The sample includes older adults aged 75+ (N = 209), living in a rural area (Havelland) in Germany. The proposed predictor variables from the built and social environment were measured using a baseline questionnaire. Mobility behaviors (walking/cycling, public transport use, car use) used for daily activities were reported in an end-of-day diary across 7 days. Multiple regression analysis using the frequency of respective modes of transport as separate outcomes will be performed. Covariates include sociodemographic, health- and mobility limitations-related variables.

**Expected results:** We expect significant associations of facilitators from the social and built environment with outcomes reflecting active mobility or the extent of mobility in general.

**Current stage of work:** Data are currently prepared for statistical analyses.

**Discussion:** This study could contribute to further understanding barriers and facilitators of active mobility behaviors performed by older adults. Future intervention research could target coping strategies that support older people to engage in active forms of mobility, when facing barriers in daily life.

## **“Empower Peers 4 Careers”: a health promotion intervention in the transition from school to work**

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Adolescence is a vulnerable phase in terms of mental health. The presented project uses the Positive Peer Culture (PPC) method to strengthen young people's resources. The young people support each other in group discussions (on topics such as career choices). The discussions follow a set pattern and are accompanied by adult facilitators. The project's questions concern the implementation of the approach in schools as well as the effects of the intervention on social-emotional competencies and school integration as important factors influencing mental health.

The design corresponds to a quasi-experimental control group design. The intervention group consists of 229 adolescents who underwent the intervention for 1.5 years and were surveyed before and after the intervention. The control group consists of 179 adolescents. Standardized measurement instruments are used (e.g., the questionnaire on resources in childhood and adolescence FRKJ 8-16 by Lohaus & Nussbeck, 2016). The data is analyzed using descriptive and inferential statistical methods (correlation and regression analyses). Regarding the implementation of the PPC groups in schools, data from 17 participating facilitators will be collected online and analyzed descriptively.

Preliminary data analysis shows that the implementation of the intervention was largely rated as successful by the facilitators and that the intervention is associated with a significant positive effect on the perceived school integration. In summer 2024, the final data collection will be completed. Until the end of 2024, a practical PPC-guide will be developed for school professionals so that they can conduct the PPC groups autonomously and thus improve adolescents' mental health.

## **Work in Progress: Identifying and exploring the perceived usefulness of the “11 for Health” programme**

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**BACKGROUND:** “11 for Health” is an 11 week school-based football health promotion programme aimed at children aged 8-14 years. While the programme was not developed with a focus on behavioural science, incorporating behaviour change theory can enhance the effectiveness of interventions.

**OBJECTIVE:** Using behavioural science to make the “11 for Health” stronger by mapping the behaviour change techniques (BCTs) in the manual and examine whether teachers and students found them effective and useful.

**METHODS:**

**Study 1** Using the behaviour change technique ontology to map target behaviours and BCTs implicitly included in the “11 for Health” programme.

**Study 2** To determine, retrospectively through interviews, which BCTs participants and teachers found useful or challenging in the maintenance phase. 10 students and 6 teachers will be interviewed, and the findings will be analysed using reflexive thematic analysis.

**EXPECTED RESULTS:** Four target behaviours were identified: physical activity, healthier nutrition, avoiding unhealthy substances, and hygiene. The higher and lower level BCTs will be identified. The interviews have not been completed at this stage.

**DISCUSSION:** BCTs absent but identified as being conducive to long term behaviour change in prior reviews within comparable populations, will be considered for inclusion to enhance the manual's efficacy in fostering long-term behavior change. Studies exploring use of BCTs long-term is lacking in the literature and therefore valuable insights from teachers and students will be incorporated to refine the manual and enhance its acceptability and effectiveness as well as make an important theoretical contribution to the behavioural science literature.

## **Epidaure Market: Evaluating the effectiveness and transferability of school-based intervention to improve food choices**

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Context: At least 40% of cancers are linked to environmental or behavioral factors, and dietary behavior appears to be a major lever. Epidaure Market focuses on promoting a balanced and responsible diet (i.e., a sustainable diet) among 5th and 4th graders during the crucial period of adolescence, when these behaviors are often far from recommended. Method: implemented in 72 classes in secondary schools in the Montpellier and Dijon academies, the intervention includes teaching sessions and a virtual supermarket game, integrated into the school curriculum and delivered by science teachers. Effectiveness is tested in a cluster randomized controlled trial. The study also includes a transferability assessment based on a qualitative study involving pupils, teachers and parents, and completed using the FIC model and ASTAIRE grid. Expected results include a positive influence on the motivations behind food choices to move towards a sustainable diet. Secondary expectations involve changes in variables such as self-efficacy and perceived social norms, as well as an increase in knowledge about healthy eating. We also expect the qualitative approach to provide information on the roll-out process in new territories. Current status: the data collection phase is ongoing. Discussion: the study aims not only to demonstrate the effectiveness of Epidaure Market, but also to identify the optimal conditions for its nationwide implementation in France's middle schools. Ultimately, the initiative aims to help reduce the incidence of cancer by promoting healthier eating habits among adolescents.

## **"it becomes overwhelming": A mixed-methods investigation of food insecurity and food relief in Western Australia**

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Rates of food insecurity have increased globally in recent years. Unique environmental, social and economic factors have affected this increase in Western Australia, including a cost of living crisis and alleged price gouging by major supermarkets. Food pantries have become a popular solution to food security in Australia, and have experienced record demand in recent years.

A survey and semi-structured interviews were used in this study to explore the lived experiences of individuals relying on a large food pantry in a major metropolitan area. This research explored demographic profiles of users, patterns of service utilization, satisfaction levels, the intersection of food insecurity and financial well-being, and the stigma that can be associated with seeking assistance from food relief services. This presentation provides timely insights into the landscape of food insecurity within Western Australia, offering valuable perspectives for addressing this pressing public health concern.

## Latent Factor Structure of Sense of Coherence Scale (SOC-29) in Japanese Population

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### Background:

Sense of coherence (SOC) is a core concept in salutogenesis proposed by Antonovsky that consists of three components: comprehensibility, manageability, and meaningfulness. Researchers disagree on the factor structure of the SOC-29 scale. A facet approach which was used to develop the SOC-29 scale is often cited as a hypothesized reason for the discrepancies in previous research. However no empirical study has not directly tested this hypothesis. In the present study, we constructed the hierarchical factor models in which one of the other facets, time of the stimuli (past, present, and future), was integrated, in addition to the single-factor, two-factor, second-order two-factor, three-factor, and second-order three-factor models from previous studies, and compared their goodness of fit.

### Methods:

Multiple survey datasets including the SOC-29 scale were merged to obtain data for 2568 participants. Participants included general adults, university students, and nursing school students, with a mean age of 28.07 years.

### Findings:

Comparison of the goodness of fit of the confirmatory factor analysis for each model revealed a better fit in the hierarchical two- or three-factor model with the facet of time of stimuli entered.

### Discussion:

Discrepancies in previous research for the factor structure of the SOC-29 scale were suggested to be more likely derived from being developed by the faceted approach rather than from a flaw in the scale; the SOC-29 remains a useful tool for measuring the SOC in health promotion settings or health psychology.



## **The impact of trauma on women's suicidal behaviors: the role of cultural beliefs**

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Intimate partner violence (IPV) against women is associated with a wide-ranging of negative effects on mental health, including suicidal behaviors. IPV rates vary across countries, suggesting that cultural beliefs about the legitimacy of IPV may play a role in IPV and its effects. The primary purpose of the present study was to assess relations among IPV, childhood trauma, beliefs about the legitimacy of IPV, psychopathological symptoms, and suicidal behaviors among Portuguese women, focusing on the predictors of suicidal behavior, cross-sectionally assessed in 141 women (61 victims of IPV and 80 non victims). Women reporting IPV reported more child physical, emotional, and sexual abuse, more beliefs that legitimize IPV, psychopathological symptoms and suicidal behaviors than did women not reporting such abuse. Suicidal behaviors were significantly correlated with IPV, child physical, emotional, and sexual abuse, and with psychopathological symptoms as well. However, suicidal behavior did not reveal any significant correlations with beliefs about the legitimacy of IPV. Hierarchical linear regression showed that having lower education level, having suffered more psychological aggression in adulthood, reporting a history of child physical and emotional abuse, having greater legitimacy beliefs about IPV and psychopathological symptoms were the most important predictors of suicidal behaviors in this sample. Findings suggest the need to intervene in order to prevent or treat effects of IPV in terms of psychological morbidity, namely in the processes associated with previous or cumulative trauma, in order to generate more adaptive responses and prevent suicidal behaviors, as well as in modifying the legitimizing beliefs.

## **Women with HIV: Predictors of adherence to treatment among stigma, distress and perception of illness**

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**Background.** Infection with HIV is a chronic condition and adherence to treatment is a decisive factor in therapeutic response. In the case of women with HIV, adherence can be strongly hindered due to prejudice and silencing resulting from a society marked by sexism, which complicates the exercise of female autonomy over their own bodies and their self-care regarding HIV. The aim was to identify predictors of adherence to antiretroviral treatment regarding distress, illness perception, and stigma in women with HIV in the Federal District, Brazil. **Method.** It is a cross-sectional, quantitative study with online data collection, involving 108 HIV-positive women receiving care in public health services. Sociodemographic and medical-clinical questionnaires were applied, besides instruments validated to Portuguese for measuring the variables of the study. **Findings.** The average age was 45 years, 62.1% self-identified as brown and black, the majority with income below two minimum wages, 83.3% had undetectable viral load. In preliminary Spearman coefficient analysis, there were significant, negative, and weak correlations between adherence, distress, stigma, and illness perception ( $p \leq .05$ ). In regression analysis (forward method), distress ( $\beta = -.31$ ;  $p \leq .01$ ) was the variable that most strongly impacted adherence levels, followed by illness perception ( $\beta = -.27$ ;  $p \leq .05$ ), both explained 25.7% of the variance. **Discussion.** The presence of distress and the threatening perception of seropositivity predict poorer adherence levels, according to the results of this study. The research contributed to understanding the challenges and barriers faced by women living with HIV and emphasized the urgency of developing psychological intervention strategies that consider gender specificities.

## **Assisted Reproductive Technologies (ART) with gamete donation:an exploration of the linguistic features of women's narratives**

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What are the specific emotional, cognitive and process features characterizing the narratives of women undergoing ART treatment with gamete donation? Gamete donation is usually patients' last resort, arriving after years of trying to conceive and unsuccessful treatments.

Many studies report the complexity of feelings involved in gamete donation. A national survey was proposed to 195 Italian ART centres and patient associations by the Italian ART Register (IARTR) with the Department of Dynamic and Clinical Psychology and Health Studies (Sapienza University).

An online questionnaire was created ad hoc for the survey consisting of 25 closed-ended and 2 open-ended questions. Sixty-eight women undergoing ART with gamete donation and 225 women undergoing ART with own couples' gametes completed the questionnaire. The written texts were explored by the Linguistic Inquiry and Word Count programme (LIWC) to provide an efficient method for studying the various emotional, cognitive, structural components characterizing the narratives collected. Since the linguistic measures did not follow a normal distribution, differences were statistically evaluated with the Mann-Whitney U non-parametric tests for independent samples and several differences between two groups of women emerged. For example, women who underwent ART with gamete donation used less words, less second-person plural pronouns and more words symbolically referring to "death". The analysis of the language provided useful elements for the design psychological interventions focused on women's emotional needs, especially for treatment with gamete donation. Physicians and psychologists should be aware of intense and conflicting emotional experiences that the ART treatment with gamete donation may activate.

## **An exploration of the subjective lived experiences of pregnant survivors of cyber intimate partner violence**

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Cyber abuse which is a form of intimate partner violence, entails harassing, threatening, monitoring, humiliating or verbally abusing one's partner through the use of technology. Intimate partner violence (IPV) generally escalates during pregnancy with potentially dire consequences for the mother-infant dyad. Cyber IPV is a very under researched and new area.

The aim of the project was to explore the subjective lived experiences of pregnant women who experienced cyber IPV and to this end, a qualitative approach was employed. Six semi-structured interviews were conducted with the special interest group - pregnant South African women - experiencing cyber IPV with interpretive phenomenological analysis (IPA) bringing to the fore the key findings of the data. All ethical principles were strictly adhered to.

Emotional, psychological wellbeing and physical health during pregnancy were affected. Stress, fear, anxiety, lowered self-worth, lack of attachment to the pregnancy and bonding with the baby encompassed significant themes. Incessant vaginal bleeding, lowered heartbeat rate and slowed development for the foetus was associated with stress during the pregnancy. Resorting to negative coping mechanisms like, using illicit drugs and alcohol become a common occurrence - further affecting the physical health of the participant and the baby.

Psychological and physical health of the mother and unborn child bear the burden arising from the change of social engagement by intimate partners through cyber IPV. The opportunity to explore how eHealth and mHealth may evolve to assist with attaining the sustainable goal 3: Good Health and Well-being becomes an avenue for future research.

## Self-stigma and identity resolution as predictors of life satisfaction in women with infertility

Jelena Opsenica Kostić<sup>1,2</sup>, Milica Mitrović<sup>2,3</sup>, Nikola Ćirović<sup>2,3</sup>, Miljana Spasić Šnele<sup>2,3</sup>, Ivana Janković<sup>2,3</sup>, Mila Guberinić<sup>2,3</sup>

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**Background:** Women commonly perceive infertility as one of the most distressing experiences in their lives. Despite the nearly equal prevalence of infertility between men and women, women are often the visible patients undergoing infertility treatments and conception attempts. Existing research indicates that infertility can lead to self-stigmatization and undermine a woman's sense of identity. This study aims to explore the predictive capacity of self-stigmatization and identity resolution indexes on life satisfaction among women facing infertility.

**Methods:** The study included 197 women with infertility (Mean age = 37.73, SD = 5.13), with over half of the participants (55.8%) experiencing difficulties conceiving for more than 3 years. The research utilized the following instruments: the self-stigmatization subscale from the Female Infertility Stigma Instrument (ISI-F), Identity Stage Resolution Index (ISRI), and the Satisfaction with Life Scale (SWLS). Regression analysis was conducted with SWLS as the criterion.

**Findings:** Significant predictors of life satisfaction in women with infertility were self-stigmatization and societal identity. The model ( $F = 42.72$ ,  $p = .000$ ) accounted for 40 percent of the variance in SWLS. The sense of adult identity did not emerge as a significant predictor.

**Discussion:** The research results underscore the profound importance of how women facing infertility perceive themselves in relation to others and their societal context for their life satisfaction. Practical implications focus on preventing stigmatization and self-stigmatization to preserve life satisfaction among women facing infertility.

## **Acculturation – acculturative stress profiles and associations with mental health in women of Turkish origin**

Laura Scholaske<sup>1</sup>

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**Background.** Acculturation and acculturative stress contribute to mental health disparities in immigrants and their descendants. This association is understudied in women of Turkish origin in Germany, a group that shows elevated risks for depression, anxiety, and psychosomatic symptoms. The present study uses a person-centered approach to identify profiles of acculturation and acculturative stress and test associations between profiles and well-being.

**Methods.** 602 women that were born and resident in Germany with one or two parents born in Turkey/Türkiye participated in an online survey (18-28 years of age,  $M = 22.7$ ,  $SD = 2.7$ ).

**Findings.** A preliminary latent profile analysis identified four distinct profiles of acculturation and acculturative stress: 1) higher orientation towards heritage than towards German culture, low acculturative pressures (59.6%), 2) equal orientation towards German culture and high orientation towards heritage culture, low acculturative pressures (9.5%), 3) higher orientation towards heritage than towards German culture, high pressure to acculturate and low pressure against acculturation (21.4%), and 4) medium orientation towards German culture and high orientation towards heritage culture, high acculturative stresses (9.5%). Profiles 3 and 4 were associated with significantly higher general stress experiences, lower life satisfaction, and poorer subjective mental and physical health status compared to Profiles 1 and 2.

**Discussion.** Turkish-origin women with high acculturative stress experiences may be at risk for mental health impairment. Person-centered approaches are useful techniques for identification for subgroups at risk and can be extended to other health-related variables.

## What predicts people's willingness to intervene in situations of Intimate Partner Violence against Women?

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Promoting helping behaviors among the community is considered an effective strategy to combat Intimate partner violence against women (IPVAW), a serious health issue. The aim of this study was to explore the predictive capacity of relevant variables in the scientific literature with regard to people's intentions to perform different helping behaviors in an IPVAW case. We performed a cross-sectional study. In total, 755 Spanish people participated, 595 women (78.8%) and 160 men (21.2%) with an average age of 32.90 years. Participants had to study an IPVAW vignette and answer to questionnaires. Stepwise Multiple Regression models were used to identify predictors. A common significant predictor of all helping behaviors was perceiving bystanders responsible for acting in the case of women (from  $\beta = +.294$  to from  $\beta = +.372$ ) and men (from  $\beta = +.200$  to  $\beta = +.408$ ). In less measure, the perceived severity of the situation was a predictor of 2 helping behaviors form women (from  $\beta = .103$  to  $\beta = .194$ ) and men ( $\beta = .213$  to  $\beta = .223$ ). Common significant predictors of some passive behaviors were: perceive victims' responsibility for women (from  $\beta = .371$ ) and men (from  $\beta = -.180$  to  $\beta = +.367$ ). The results suggest that of all the variables, social media campaigns should focus on boosting citizens' personal responsibility in intervening in IPVAW context. Another predictor to target is perceived severity since for a person to perceive personal responsibility to act, he/she previously needs to perceive the situation as severe.

## **Empowering Sustainable Recovery: A Remote Support Toolkit for Eating Disorders**

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**Background:** This research project addresses the increasing demand, and need, for effective remote healthcare for eating disorders. Developed throughout a 3-year research programme (RHED-C: Remote Healthcare for Eating Disorders throughout COVID-19), we introduce a comprehensive co-designed toolkit of resources for service providers, service users, friends and family, and policy makers.

**Methods:** Co-created with healthcare providers and individuals with lived experience of eating disorders, the toolkit is based on a foundation of in-depth interviews, focus groups and workshops. Stakeholders were involved at every stage of the process from initial conception, identification of user requirements and content creation, through to the visual design and functionality of the final toolkit, including the incorporation of approaches to maximise the toolkit as a sustainable option.

**Findings:** Our online toolkit provides a collection of downloadable and printable resources to help service providers better support service users in getting the best from remote care, including guidance on setting up remote platforms, preparing for the call, contingency plans for poor internet connection, and suggestions for self-care at home post therapy session. The toolkit also provides guidance for friends and family and is an aid for policymakers in considering good practice approaches for remote care.

**Discussion:** In this presentation, we discuss the development process, emphasising the toolkits adaptability to diverse user needs and the incorporation of sustainable practices in its design. We discuss the application of the toolkit, which can integrate with a range of existing services, to provide effective, sustainable remote healthcare and support for eating disorders.



## **Developing a digital lifestyle intervention for pregnant women using the Behaviour Change Wheel**

Hanne Spelt<sup>1</sup>, Jon Haywood<sup>2</sup>, Dimple Bhadani<sup>3</sup>, Renee Otte<sup>1</sup>, Yue Wu<sup>4</sup>, Lucie Duracher<sup>1</sup>

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**Background:** Excessive Gestational Weight Gain elevates risks of pregnancy complications like Gestational Diabetes Mellitus (40%) and unplanned C-sections (56%), especially for economically disadvantaged women who encounter obstacles in adopting healthy behaviours. This study tests the potential of a digital intervention to positively impact health behaviours, ultimately aiming to prevent complications.

**Methods:** Using the behaviour change wheel and transtheoretical model, we developed a digital intervention for pregnant women focusing on physical activity and nutrition. Literature reviews identified capability, opportunity, and motivation barriers to engaging in health behaviours and informed selection of Behaviour Change Techniques. Using an exploratory sequential design, we will test the intervention with 20 US-based pregnant women in a 4-week trial. The qualitative arm will include multiple semi-structured interviews and experience reports at fixed points (video, text). The quantitative arm will encompass digital engagement (retention and BCT engagement) and self-reported impact (behaviors, weight, motivation, capability).

**Expected results:** We anticipate users to feel empowered to develop and sustain healthy habits through consistent engagement over the 4 weeks, expecting greatest impact on users lacking established healthy behaviours with more positive perception and digital engagement. While not all users may initially demonstrate readiness for lifestyle improvements, we aim to facilitate their progression toward readiness over time.

**Current stage of work:** Experimental set-up.

**Discussion:** Participants will be compensated for participation limiting feasibility of drawing conclusions on overall digital engagement. However, we can analyse user perceptions based on feature usage and evaluate impacts on motivation and behaviours. Retention challenges may arise in real-world scenarios.

## Digital Personalised Dietary Advice targeting low-SEP consumers

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**Background:** This project addresses the dietary challenges of Dutch low socioeconomic position (SEP) consumers, aiming to combat unhealthy consumption patterns contributing to health issues. The objective is to optimize the current Personalised Dietary Advice (PDA) web services by incorporating novel insights and potentially establishing a conceptual framework connecting sustainable food choices with tailored, healthier dietary recommendations for this specific population.

**Method:** The methodology includes optimizing, infrastructure adaptations, design analyses, and testing of combined digital PDA services and understanding health and sustainability perceptions among low SEP consumers. A planned feasibility pilot will assess the acceptability of algorithm-generated food alternatives for low SEP consumers through focus group interviews.

**Preliminary and expected results:** The optimization of digital PDA services in this project underwent two iterations, focusing on refining the algorithm to generate more relevant food product alternatives. Significant improvements were noted by dietitians, and areas for further refinement were identified, including specific food subcategories for advice and new characteristics for food products. The algorithm is anticipated to be consumer-ready after another iteration, ensuring suitable food product alternatives.

**The current stage of work:** Currently, the project is in the preliminary stage of preparing for the pilot in low-SEP consumers through focus group interviews, with subsequent steps involving preparation, execution, and thematic analysis of collected data.

**Discussion:** The study's contribution lies in tailoring dietary advice to low SEP consumers, improving alternatives' acceptance, and providing a unique set of digital services that holds significant potential for future interventions.

## **Effects of technology-based physical activity interventions for women after bariatric surgery: preliminary findings of RCT**

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**Background:** Technology for physical activity (PA) promotion in bariatric surgery (BS) patients has evidence of efficacy. However, the long-term effectiveness of mobile apps and videoconferencing, which use different behavior change strategies, has not been tested. Furthermore, the mechanisms explaining these effects are unknown. This study aimed to (a) determine the effects of two technology-based PA programs (app and videoconferencing) after BS compared to standard care, and (b) evaluate the contribution of motivational mechanisms to explain these effects on PA and health indicators.

**Methods:** Fifty-three post-BS female patients (mean age=31.2±6.3 yrs) were assigned to one of three groups: (a) videoconferencing PA program (n=17), (b) mobile app PA program (n=17), or (c) recommendations for PA (n=19). PA programs lasted 12 weeks. PA level, motivation toward PA, and health indicators were measured at baseline, 12 and 24 weeks. A mixed model approach was used to analyze the change in outcomes over time for each group, the differences between groups, and the contribution of motivational mechanisms.

**Findings:** Twenty participants were measured at each time point (videoconferencing n=5, mobile app n=8, control group n=7). Results showed no significant effect of time within each group, no differences between groups, nor a contribution of motivational mechanisms. Further analysis of the results on an individual basis will be presented.

**Discussion:** The technology-based PA interventions did not demonstrate efficacy in improving PA. Participant dropout was significant, suggesting that technology-based PA interventions are not a panacea for this population and that randomized controlled trials with adequate sample sizes are needed.

## **Navigating the Development of an Adaptive Digital Lifestyle Intervention for Patients: A Rapid Realist Review**

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With the current technological advancements in healthcare, patients are undergoing a new wave of support in managing their condition. Adaptive digital health interventions offer real-time support, using decision rules that translate continuous information about a patient's state and context into personalized lifestyle recommendations. Despite the innovative appeal, there remains a gap in understanding the development and contextual underpinnings of adaptive interventions. Through a rapid realist review, we aim to answer the question of how, why, for whom, and under what circumstances adaptive interventions are effectively developed for patients with metabolic syndrome. The evidence will contribute to the development framework of the intervention. The methodology followed a combination of stakeholder consultations with healthcare practitioners and a systematic review. The first round of stakeholder consultations helped identify the scope and initial programme theories for classification, namely: (1) intervention components and (2) implementation factors. The systematic review was performed in Scopus, PsycINFO and PubMed. Empirical articles were included when meeting one of the criteria: automation, (digital) personalization and a time-varying or geofencing factor. The second round of stakeholder consultations will inform and consolidate the final programme theories and development framework. Data will be extracted and synthesized iteratively, while identifying the causal links between the contexts, mechanisms and outcomes. Results will follow the reporting standards of the Realist and Meta-narrative Evidence Synthesis: Evolving Standards. As part of a larger project, a realist review can help identify the contextual and theoretical grounding relevant for intervention development, contributing to an enhanced understanding of adaptive interventions. [DOI](#)

## **Motivation and confidence for consuming fruits and vegetables following a 12-week lifestyle intervention (ACCELERATION)**

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**Background:** Noncommunicable diseases (NCDs) are the leading cause of death worldwide and are mainly caused by lifestyle factors like low quality dietary habits (e.g., low fruit and vegetable [F&V] consumption). The 12-week ACCELERATION program targeted health behaviour changes, including diet. This study evaluated if the program influenced individuals' motivation and confidence to increase F&V consumption.

**Methods:** A total of 208 individuals at risk of developing NCDs that completed all 3 time points (pre- and post-intervention, and 6-months post-intervention) were included from four Canadian sites. Motivation and confidence to increase F&V consumption were assessed on 0-10 scales (not at all to extremely).

**Findings:** Linear mixed models found significant changes in confidence ( $F=6.11$ ,  $p<0.01$ ), but not motivation ( $F=1.25$ ,  $p=0.29$ ), to increase F&V consumption across time. Confidence increased by 0.70 points from time pre- to post-intervention ( $p = 0.02$ ), but decreased by 0.83 points from time post-intervention to 6-month post-intervention ( $p<.01$ ), reaching a comparable level to baseline ( $p=.87$ ).

**Discussion:** Findings suggest that the program had a negligible impact on motivation for eating F&V, but did significantly improve confidence in eating F&V in the short-, but not medium-term. These findings will inform future iterations of the ACCELERATION program to reduce NCD development in at-risk populations. For example, given the success of the program to change confidence in the short-term, adding a booster session may be a promising strategy to explore.

## Reducing stigma towards people with psoriasis in the general population: a video vignette study

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**Background:** Stigmatization is a common and disabling experience in chronic skin conditions. Yet, evidence-based interventions and insight into contributing factors remains scarce.

The primary study objective was to examine the effect of educational information about psoriasis and descriptions of disease impact on levels of public stigma towards psoriasis.

**Methods:** Adult participants from the general population (interim analyses based on 90% of intended sample size of n=375) watched short videos of a young woman with either healthy skin (T0) or visible symptoms of psoriasis (T1), after which participants were randomized to either a disease education (T2A) or disease education combined with disease impact (T2B) video. Participants' desire to socially avoid the woman were assessed with a social distance scale after each video, and compared across conditions. Correlation coefficients were calculated between social distance scores, empathy, and behavioral immune system (BIS) markers.

**Findings:** Social distance scores were higher when the skin condition was visible versus invisible ( $T1 > T0$ ,  $p=.005$ ). Both video T2A (education) and T2B (education&impact) resulted in significantly lowered desire for social distance compared to T1 ( $p<.001$ ), with no significant differences between T0, T2A, and T2B. Social distance scores showed small negative correlations with empathy, and small positive correlations with markers of BIS sensitivity.

**Discussion:** Short videos containing disease education and descriptions of the impact of psoriasis may aid in reducing public stigma towards psoriasis. Disease avoidance mechanisms and lower empathy levels seem to contribute to public stigma towards psoriasis, warranting a further exploration of underlying mechanisms in future research.

## **Trichotillomania and skin-picking disorder: Phenomenology and behavioral patterns in the daily life of affected individuals**

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**Background:** Trichotillomania (TTM) and skin-picking disorder (SPD) are under-recognized mental disorders characterized by body-focused repetitive behaviors (BFRBs) resulting in physical damage and psychosocial impairment. It is assumed that TTM and SPD are similar in many respects, but there is still a lack of research on the phenomenology of these disorders. Therefore, our aim was the comprehensive investigation of the phenomenology and behavioral patterns in TTM and SPD using multiple assessment methods.

**Methods:** 118 individuals (TTM: N=61; SPD: N=57; age: M=29.3, SD=7.12; 93% female) participated in telephone interviews and a 10-day ecological momentary assessment (EMA) protocol.

**Findings:** In the EMA, participants with SPD reported on average 2.57 (SD=1.12) episodes per day, which is slightly more compared to TTM (M=2.00, SD=1.21). In both groups, most episodes were around 10/20 minutes long and of rather mild intensity. In 45% of all SPD episodes and 48% of all TTM episodes, the behavior started without awareness. For both conditions, episodes were distributed relatively evenly throughout the day. In the interviews, around 63% in both samples reported covering behavior. Avoidance due to the conditions was indicated by 44% (TTM) and 81% (SPD) respectively. The majority reported no or little control over the urge (TTM:69%, SPD:60%) or the behavior (TTM:71%, SPD:84%).

**Discussion:** The results suggest that SPD and TTM symptoms and impairment are highly present in daily life with important similarities between the two disorders. Overall, the findings substantially enhance our understanding of BFRBs and may impact future research and clinical practice on TTM and SPD.

# **An online self-compassion dermatology intervention: investigation of affect, perfectionism and shame**

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## **Background**

People with skin conditions experience distress, yet there are limited interventions available to address this burden. This study tested if an online self-compassion intervention can increase self-compassion and regulate positive and negative affect. The intervention also investigated the role of perfectionism and skin shame as potential intervention barriers.

## **Method**

A total of 112 participants (mean age = 30.18, SD = 9.04, 72.6% female) with a skin condition participated in an online experimental intervention. Participants completed baseline measures of dispositional shame, perfectionism, self-compassion, and positive and negative affect, before being asked to recall and write about a negative event linked with their condition. Participants were then randomly assigned to one of two conditions, either recall and write about the same event self-compassionately, or alternatively recall and write neutrally. State measures of self-compassion, positive affect, and negative affect were completed pre- and post-intervention.

## **Findings**

Analyses confirmed that those assigned to the self-compassion exercise showed greater improvement in self-compassion ( $F = 4.349$ ,  $p = 0.039$ ) and positive affect ( $F = 15.370$ ,  $p < 0.001$ ) relative to the control condition. There was no improvement in negative affect ( $F = 3.480$ ,  $p = 0.065$ ). In addition, effects of the self-compassion intervention did not differ by skin shame, nor perfectionism.

## **Discussion**

The study provides further evidence that techniques targeting the development of self-compassion have the potential to improve emotional well-being in people living with skin conditions. This findings add weight to the call for the need to develop accessible self-compassion interventions for this underserved population.



## **Do patients with chronic itch profit from psychological interventions? Preliminary results of a meta-analysis**

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**Background:** The biopsychosocial model of chronic itch points out bidirectional relationships between itch and psychological factors. Psychological interventions have itch reducing effects in patients with chronic skin diseases. However, there are no recent meta-analyses investigating effects of psychological interventions (e.g. cognitive behavioral therapy or patient education programs with psychological content) on itch/scratching and scratch marks (excoriations) in various itchy conditions. Thus, the aim of this study was to meta-analytically merge the effects of existing RCTs on this topic.

**Methods:** A systematic literature search according to the PROSPERO protocol was conducted (including studies until May 2021). In order to be included in the meta-analysis, a quantification of self-reported itch, scratching or excoriations was necessary. A random effects model was used to aggregate the results. Data were extracted by two independent persons. Risk of bias (RoB) assessment was done using the Cochrane RoB 2 tool.

**Findings:** 11 of the 14 trials included patients with atopic dermatitis. Small to moderate posttreatment (PT) and follow-up (FU) effects were observed on itch intensity (PT:  $k=8$ ,  $g=-0.35$  [-0.65; -0.06]; FU:  $k=4$ ,  $g=-0.5$  [-0.98; -0.01]) and excoriations rated by health care professionals (PT:  $k=5$ ,  $g=-0.30$  [-0.51; -0.09]; FU:  $k=6$ ,  $g=-0.29$  [-0.44; -0.14]). Effects on itch frequency ( $k=2$  for both time points) and self-rated excoriations (PT:  $k=2$ ) were not significant.

**Discussion:** This meta-analysis shows that psychological interventions are beneficial in the treatment of chronic itch. With further analyses, effects on anxiety, depression and health-related quality of life and the severity of the underlying disease will be investigated.

## **Couple and daily-level associations of self-regulation capacity with intra- and interpersonal well-being in romantic relationships**

Tomasz Moschko<sup>1</sup>, Lilly Buhr<sup>2</sup>, Gertraud (Turu) Stadler<sup>2</sup>, Pia Schober<sup>1</sup>, Caterina Gawrilow<sup>1</sup>

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Self-regulation is a key determinant of individual success, health, and well-being. Recently, researchers also considered the role of self-regulation in social relationships. Adapting a framework of transactive goal dynamics between two close relationship partners, we aimed at understanding how average levels and differences in partners' self-regulation capacities are related to their intra- and interindividual well-being in everyday life. We followed previous accounts hypothesizing that well-being in couples is highest whenever both partners exhibit either (1) totaling high (higher partner averages), (2) complementing (greater partner differences), or (3) similar (smaller partner differences) self-regulation capacity levels. To evaluate these hypotheses, 53 mixed-gender couples (mean age = 24.29 years) participated in a daily diary study across 21 consecutive days. Up to three times a day, both partners individually reported on their self-regulation capacity, intraindividual well-being (i.e., positive/negative affect, life satisfaction), and interindividual well-being (i.e., closeness, overall relationship quality). Multilevel dyadic score modeling mostly revealed evidence in favor of a totality account: High partner averages (but not differences) in self-regulation capacity were related to more positive affect between and within couples, less negative affect and higher overall relationship quality between couples, and more life satisfaction within couples. However, similarity (but not totality) in self-regulation capacity was related to more closeness on the within-couple level. Together, our findings underlie the importance of taking a dyadic perspective when studying self-regulation in couples, and indicate the need to consider how self-regulation relates to different relationship processes across time.

## **Interpersonal emotion regulation as a resource for daily affective wellbeing in young and old couples**

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Emotion regulation has been conceptualized as a basic process underlying resilience, health, and wellbeing. The field has been more and more acknowledging that emotional regulation also draws from social resources across the life-span. Emotion regulation might thus be one relevant pathway explaining the associations between social relationships and health. This study aims at investigating different emotion regulation strategies in interaction and their association with wellbeing and investigate age differences between older and younger couples.

Within a dyadic ambulatory assessment framework, N=62 younger couples (aged between 18 and 30) and 54 older couples (aged between 60 and 87) were beeped 3 times a day over 3 weeks to report momentary affective wellbeing, intra- and interpersonal emotion regulation strategies and situational aspects. Furthermore, physical presence was sensed.

Dyadic Multilevel-Analyses do not show age differences regarding reported use of daily co-reappraisal or ruminative co-brooding. Humor and responsive touch seem to be more prevalent in younger couples. In general, there are actor and partner effects of interpersonal regulation strategies on daily fluctuations of momentary affective wellbeing. Partner effects of male regulation attempts on female partner seem to be attenuated in older women.

Interpersonal emotion regulation strategies show differentiated effects on affective wellbeing in daily life. Age differences were subtle and might be confounded with longer relationship duration in the older couple sample. In general the association between adaptive emotion regulation and relational processes was supported which encourages further to apply a socio-interpersonal perspective when promoting health and resilience.

## **Social support and well-being in breast cancer survivors on adjuvant endocrine therapy**

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**Background.** Adjuvant endocrine therapy (AET) is a crucial treatment for hormone receptor-positive breast cancer survivors (BCS). However, AET comes with side effects that can negatively impact well-being, potentially leading to non-adherence. Social support has shown to play a vital role in various health outcomes. Research suggests social support may be a crucial factor in improving well-being of BCS. This study aims to investigate a) daily associations between social support and well-being, b) the primary sources of support, and c) what personal characteristics determine the receipt of support.

**Methods.** This intensive-longitudinal study observed 215 women in AET. Women completed daily surveys for ten days (n=2080). Instrumental and emotional support and affect were measured quantitatively. Specific sources and types of support were measured qualitatively. We used multilevel modeling to investigate whether receiving support had varying effects on well-being.

**Findings.** Higher levels of negative affect across the study were associated with receiving greater emotional support, but not instrumental support. No within-person associations were found between support and negative affect. Days with more emotional support (but not instrumental support) were linked to higher positive affect. The primary sources of emotional support were romantic partners, whereas instrumental support was most often provided by co-workers.

**Discussion.** Social support can be a powerful resource aiding in emotion regulation. Our findings underscore the complex nature of support and the need to broaden the investigation of support providers in future research. Further analysis of qualitative data will provide richer insights into women's support experiences.

## **Social Support as a Resource in Health Behavior Interventions**

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Health behavior interventions increasingly consider the social environment of an individual for the initiation and maintenance of positive change. Thereby, a great deal of these interventions focuses on romantic couples and their dyadic interactions during the intervention period. This implies that people without a romantic partner might be excluded from the participation in these interventions. However, people maintain a wide variety of social contacts next to romantic relationships, as for example friends and family members, which might just as much take a helpful role for health behavior change, yet differ extensively in their modalities. The present study, therefore, examines the social support structures identified by adults in a general population sample. A total of 767 adults (mean age 46.68 years, 62.46% male, 37.54% female) participated in an online survey on social support in physical activity. Surprisingly, 300 of the participants (39.11%) indicated not to have any person in their social environment who might support them in their attempts to increase physical activity. Of the remaining, most participants indicated a romantic partner (56,14%), a friend (20,7%), or another family member (14,39%) as their preferred resource for social support in physical activity. We will present a closer investigation of these supporting relationships, discuss what the results imply for planning future health behavior interventions and collect ideas how to best integrate the diversity of social support structures that people have in structured intervention studies.

# Mental health literacy in Spanish adolescents

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## Background

Mental health literacy (MHL) is especially important for young people given the increase in mental health problems in this population. This research aims to study the different dimensions of MHL: knowledge, help-seeking skills, and stigma among Spanish adolescents.

## Methods

An exploratory study was conducted by stratified random sampling in Spanish adolescents (N = 1000), aged 12-16 years. Data collection took place in October and November 2023 using CAWI methodology. The MHLq-E questionnaire was used to assess the different dimensions of literacy. Descriptive and multivariate analysis of variance (MANOVA) were performed.

## Findings

Some aspects draw attention such as the low confidence in teachers in case of having a problem, stigmatizing attitudes towards people of low economic status and low recognition of symptoms. Also knowledge of severe mental health problems could be improved. Contact with previous mental health problems was the key variable for stigma and knowledge of symptomatology, along with age. As well as gender and educational level of the family in relation to professional help-seeking skills.

## Conclusion

Interventions to improve adolescent MHL are necessary to increase awareness and better management of mental health problems.

## **Stigma towards childhood mental health problems: Exploring effects of internalizing/externalizing behaviors, diagnostic labels, and gender**

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Mental health-related stigma has significant consequences for those struggling with mental health issues, such as internalizing stigma or deterring from help seeking, especially for children. Parents, who often make decisions regarding seeking help for their children, face dual stigmatization - towards their children and themselves due to stigma by association or perceived responsibility. Research on stigma typically focuses on adults with mental disorders, with fewer studies on children. As children are usually surrounded by (influential) adults, knowing more about how adults interpret behaviors and form impressions about children who are struggling with mental health issues is crucial. This study aims to experimentally explore the potential impact of three aspects in how adults perceive children displaying behaviors consistent with symptoms of mental health problems. Approximately 200 (young) adults will read vignettes about 8-year-old children's behaviors, manipulated to reflect: (1) externalizing or internalizing problems (e.g., oppositional defiant, depressive), (2) varying gender (i.e., girl or boy), and (3) presence of a diagnostic label or trauma-related explanation. Participants will then share their views on the child's attributes (e.g., friendly), causal attribution (e.g., controllability), social distance preference (e.g., on public transport), and expected acceptance by peers (via sociometric estimates). Data collection is underway. We anticipate that externalizing problems will be more stigmatizing than internalizing and will explore other effects related to gender and diagnostic label. The findings may reveal specific patterns of stigmatization and offer insights to mental health providers on the beliefs and expectations children with mental health issues, and their parents, often encounter.

## Mental Health Stigma Reduction: Unveiling the Impact of an Arts-Based Intervention with Youth

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Delays in mental health treatment persist due to stigma and lack of awareness, hindering help-seeking, especially among youth with mental health problems who frequently face trajectories of disadvantage. The invisibility of mental health issues underscores the urgent need for stigma reduction and increased literacy. This study presents the empirical validation of an arts-based and psychoeducational program aimed at reducing mental health stigma. 125 youths ( $M = 13.70$ ;  $SD = 2.06$ ) participated in the program, consisting of four complete days of artistic and expressive activities (i.e. theater, visual arts, music and cinema) regarding topics of inclusion, diversity and mental health. Four growth curve models examined the attitudinal outcomes over time (pre-program, post-program, and follow-up): Mental Health Knowledge Scale (MAKS), Social Distance Scale (SDS), Intergroup Anxiety Scale (IAS), and stigma, using the Attribution Questionnaire (AQ), with Age, and previous psychological programs as fixed covariates and random intercepts for participants. Knowledge regarding mental health issues improved over time ( $b = 1.23$ ,  $SE = 0.39$ ,  $t(205.91) = 3.17$ ,  $p = .002$ ), while social distance intentions ( $b = -0.07$ ,  $SE = 0.03$ ,  $t(207.80) = -2.27$ ,  $p < .001$ ), intergroup anxiety ( $b = -1.019$ ,  $SE = 0.39$ ,  $t(210.41) = -2.64$ ,  $p = .009$ ), and stigma ( $b = -0.479$ ,  $SE = 0.05$ ,  $t(214.38) = -9.31$ ,  $p < .001$ ) decreased over time. Overall, arts-based interventions offer a promising avenue for fostering positive change, particularly among youths, reducing social barriers to seeking help and increased access to mental health resources.



## **Art-Emotion: promoting social and emotional skills in young people through art**

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The Aventura Artemoção project in Cascais, promoted by Aventura Social - Associação and funded by Cascais Municipal Council, targets 2nd and 3rd cycle students and educational teams. Implemented at the Cascais School Group, it covers 20 classes, their teachers, and operational assistants. This psycho-pedagogical training initiative aims to equip educational teams with tools to enhance students' psychosocial and emotional development, emphasizing the importance of socio-emotional learning. The project fosters close cooperation within the school context to adapt existing tools to students' current needs, aiming to develop essential personal and professional skills.

# The effect of gender and social context on pain

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## Background

Sex and gender differences in pain are well reported. Whilst explanations for this variation involved individual, interpersonal, and societal factors, less is known beyond the level of the individual. The aim of this talk will be to present recent theoretical and empirical work that explores how the experience of pain is shaped by the gendered social context in which it occurs.

## Methods

A series of new theoretical models, reviews, and experimental work will highlight the role of social context on men and women's pain. Experimental work includes three separate studies (n=144, n=87, n=135) that explore whether adult pain expression detection using choice reaction time tasks is affected by varying both the gender (expressor and observer) and background (social vs. nonsocial) social context.

## Findings

Despite good theoretical reasons and reporting guidelines, the gender context of pain is not routinely explored. Using ANOVA, our experimental work shows that both background social context and gender differentially affect the way in which people's pain is recognized and responded to. Interestingly, these influences seem to occur independently.

## Discussion

Pain is shaped by the wider social context in which it occurs. A sex and gender approach to pain enables ways to explore this, as well as help provide a better understanding as to the reasons why there is variation in men and women's pain.

# Navigating Stigma and Illness Models in Fibromyalgia: A Qualitative Study

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## Background

Stigmatization is a common experience among individuals coping with chronic pain, in general, and fibromyalgia, in particular. In healthcare contexts, patient stigmatization may partially be rooted in perceived discrepancies between the illness model endorsed by the healthcare provider/system versus the patient. This study aimed to examine how individuals with fibromyalgia construct and negotiate an illness (and treatment) model relating to their pain condition in a dialectic with the healthcare system.

## Methods

Individual semi-structured interviews were conducted with 15 cis women with fibromyalgia, which were analyzed using reflexive thematic analysis.

## Findings

The analysis produced two themes, each including two subthemes. The first theme encompassed the difficulty of developing a comprehensive illness and treatment model due to the biomedical healthcare system; the second theme described the importance of patients (re)gaining ownership and agency over their pain management, by constructing their own illness and treatment model.

## Discussion

The findings highlight that the healthcare system is still primarily biomedically oriented. Most women get stuck in the healthcare web not being provided with a clear illness and treatment model. These dynamics are inherently stigmatizing, as individuals with fibromyalgia perceive themselves as distinct from other patients, and believe that their needs are inadequately addressed. Consequently, some women gained ownership of this process by developing their personal illness and treatment model (self-empowerment). Conversely, a few women felt powerless and paralyzed. Notably, these women had a lower socioeconomic status. Clinically, patients require ongoing healthcare support from specialists who assist them exploring and accessing various treatment modalities.

## **Patient-centered coaching to promote racial equity and shared decision-making in chronic pain care**

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### **Background:**

Minoritized patients receive fewer pain medications, non-pharmacologic treatments, and specialty referrals than White patients, thus leading to poorer pain outcomes. Empowering minoritized patients to be more active and confident in their pain care may help address these disparities.

### **Methods:**

We developed two patient-centered interventions (GET PrEPD and EQUIPD) to promote shared decision-making for Black patients with chronic pain. GET PrEPD includes 4 videoconference sessions with a coach + online skills practice with Virtual Providers; it was tested in a pilot clinical trial of 16 Black adults with chronic pain. EQUIPD includes 4 videoconference coaching sessions centered on a Decision Aid for nonpharmacological treatments; it was tested in a pilot RCT of 30 Black adults with comorbid chronic pain and depression, and is currently being refined for testing in a fully-powered RCT.

### **Findings:**

GET PrEPD demonstrated good feasibility and acceptability, and produced pre-post improvements in patient activation ( $d=.51$ ), communication self-efficacy ( $d=.28$ ), and pain interference ( $d=.67$ ). EQUIPD demonstrated good feasibility and acceptability (94% of participants attended at least 3 of 4 sessions); clinical outcomes are pending.

### **Discussion:**

Coaching can empower Black patients to be more active and effective partners with their pain care providers. However, these patient-focused interventions are not sufficient. To achieve pain equity, interventions must also address providers and systems.

## **How much is enough? The role of self-monitoring frequency in increasing fruit and vegetable intake**

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**Background:** Self-monitoring has been identified as an effective behaviour change technique. Self-monitoring of foods and drinks consumed is linked to reduced energy intake and weight loss. Yet, adherence to daily dietary self-monitoring is typically low. Studies indicate that daily self-monitoring may not be necessary to achieve clinically significant outcomes; instead, self-monitoring on approximately two thirds of days was deemed sufficient. The present study will experimentally test this assumption in order to provide further evidence on the role of self-monitoring frequency in promoting fruit and vegetable intake and weight loss.

**Methods:** Participants will use a smartphone app to self-monitor fruit and vegetable intake. They will be randomly assigned to one of three self-monitoring frequency conditions: 18, 24, or 30 days of self-monitoring across the 30-day study period. Data collection will take place from February to April 2024. Based on sample size calculations, 42 participants (14 per condition) will be recruited.

**Findings:** Mixed ANOVAs (within-subjects factor: time [pre vs. post], between-subjects factor: condition) will be used to test whether changes in fruit and vegetable intake as well as body weight differ across the three conditions.

**Discussion:** By providing experimental evidence for the effects of self-monitoring frequency on diet and weight loss, this study will contribute to the development of less burdensome, yet effective digital interventions.

## **Interdependencies of vegetarian food choices: assessing the role of motivation and contextual factors**

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**Background:** Dietary patterns consist of sequential choices dependent on one another, through either balancing or consistency. However, it is unclear whether such interdependencies are present with vegetarian food choices and what factors moderate such interdependencies. We expect interdependencies of (non-)vegetarian choices (H1). Building on goal progress theory, we hypothesize stronger vegetarian motivations to increase vegetarian choice consistency (H2). Additionally, contextual factors are predicted to affect vegetarian interdependencies. Specifically, balancing might be increased by saliently labeling vegetarian choices or increasing initial vegetarian availability because such factors can enhance perceived initial goal progress (H3,H4).

**Methods:** Two online experiments assess sequential meal choices in two contexts. In Experiment 1 (N=251, within-subject design), we measure food choices in a three-course meal scenario, analyzed via logistic regression. In Experiment 2 (N=500, between- and within-subject design), four food choices for a dinner meal box are measured, addressing Experiment 1's limitations. Participants are randomly assigned to one of three conditions: Availability (increased proportion of vegetarian meals for the first choice), Salient Labeling (vegetarian meals are labeled as 'healthy and sustainable'), and Control. Regressions are used for analysis, taking vegetarian choice as both predictor and outcome, moderated by motivation and the intervention kind present.

**Results:** Experiment 1's preliminary findings didn't support the hypotheses on vegetarian choice interdependencies and motivation-driven consistency, possibly due to design limitations, though exploratory analysis indicated potential interaction effects. Experiment 2 data collection begins March.

**Discussion:** Findings have implications for food environments, as their specific attributes could generate consistency or balancing effects in vegetarian choices.

## **Unlocking Food Safety: Message-Based Strategies to Promote Safe Behaviours in Young Adults**

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This study addresses the important issue of how to promote safe behaviours with food at home. We tested the effectiveness of a message-based communication strategy among young adults aged 18-35 years. Using a repeated measures design, the study manipulated two factors in the message-based intervention phase, namely gain- vs loss-framed prefactual (i.e., "If... then") content and positively vs negatively framed procedural (i.e., how-to-do suggestions) content. A power analysis showed that an effect of  $f^2 = 0.15$  with a power of 90% and an alpha of 0.05 could be detected in a sample of 520 participants. After ethical approval, we recruited a sample of 588 participants (332 females), who first answered a questionnaire on food safety habits, attitudes, awareness of consequences, and self-efficacy. They were then randomly assigned to one of the four experimental conditions or to a control condition and answered a follow-up questionnaire after the intervention. Results revealed a positive and significant effect of the intervention on self-reported behaviours. In addition, the intervention influenced participants' awareness and self-efficacy, while no effects on attitudes were observed. Overall, message framing had no differential effect on behaviour change, but moderation analysis showed that framing effectiveness depended on the psychological characteristics of the readers. These results provide valuable insight into the effectiveness of food safety interventions for young adults in the home environment. Future research should explore the subtleties of message framing and consider additional factors that could improve the success of interventions to promote safe food practises at home.

## **Unravelling mechanisms underlying Dutch secondary-school based food and nutrition programmes: determinants, BCTs and pedagogical approaches**

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**Background:** Secondary schools are identified as promising places to stimulate healthy and sustainable diets among adolescents. However, little research explored the mechanisms underlying current school-based food and nutrition programmes. Therefore, this study aims to identify behavioural determinants targeted by such programmes in the Netherlands, and the behaviour change techniques (BCTs) incorporated in these programmes. Insight in currently used determinants and BCTs may show gaps, which can inform the development of future programmes.

**Methods:** Fifteen online semi-structured interviews were conducted between November 2021 and January 2022 with representatives of included programmes, supplemented by a document analysis of scientific and grey literature (e.g., evaluation reports). Transcripts and literature were analysed deductively, using the terminology of Carey et al. (2018) and the BCT Taxonomy v1 (Michie et al., 2013), followed by an inductive coding phase.

**Findings:** Determinants knowledge (n=13), skills (n=12), and awareness (n=7) were identified most, as well as BCTs knowledge transfer (n=8), natural consequences (n=7) and goals and planning (n=5). Additionally, pedagogical factors were identified that did not fit the coding scheme, but were indicated as important for successful delivery, such as using activating teaching methods and connecting to adolescents' lived experiences.

**Discussion:** Our results indicate that current programmes highly focus on individual factors and that there is room for programmes to also target factors in other socioecological layers (e.g., physical environment, social influences) for a more comprehensive approach. Our results further indicate the importance of considering how programmes are presented to the target group, e.g., by using activating learning methods.



## **Social identity moderates the effect of social norms on food choices in an online setting**

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<sup>1</sup>Flinders University, Australia

**Background:** What people eat may be influenced by what others choose to eat, so-called social norms. This study investigated whether an individual's identification with those others (i.e., social identity) strengthens the effect of such social norms on food choices in an online setting.

**Methods:** In a 2 x 2 experimental design, 179 undergraduate women (18-32 years; MBMI=24.42 kg/m<sup>2</sup>) viewed a Facebook post in which a student from either the same or a rival university (in-group/out-group) described a recent order for a healthy or unhealthy meal (social norm) at a new campus café. Participants were then shown an online menu for said café, displaying a selection of healthy and unhealthy items, and asked to choose one main, one side and one dessert.

**Findings:** Participants who saw the healthy social norm message made more healthy food choices (particularly from the dessert section) than those who saw the unhealthy message. This was particularly the case when the message was posted by a student from the participant's own university.

**Discussion:** The findings point to an important role for social identity in the effect of social norms on food choices in online environments. At a practical level, they could help inform the development of identity-based social media campaigns designed to promote healthier eating.

## Understanding psychological predictors of successful health behaviour change in the dietary domain

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**Background:** Understanding behavioural readiness is critical for determining whether people have capacity to successfully change their health behaviours. Thus, the overall aim was to determine the key psychological drivers of successful engagement with a health behaviour intervention. These two studies focused on different health behaviours, namely, a simple increase behaviour change message (i.e., drinking more water) and a more complicated decrease behaviour change message (i.e., eating fewer sweet treats).

**Methods:** Both studies used a single-arm pre-post design. Participants first completed an online questionnaire assessing several key psychological and experiential drivers of behaviours to predict early success and engagement. Eligible participants commenced a 4-week health behaviour intervention, i.e., to consume 8/10 glasses of water (Study 1) or to eat fewer sweet treats (Study 2) during which time they also completed a brief survey to assess mood and dietary intake on their smartphone twice per day.

**Results:** The linear model predicting amount of change in water intake was not a good fit, failing to reach significance overall and explaining only 3.6% of the variance in change in water consumption. The only significant predictor was change in habit strength ( $p=.019$ ). Similarly, the model predicting the amount of change in sweet treats failed to reach significance overall with an adjusted total variance explained of 5%. The only borderline predictor ( $p=.053$ ) was change in self-rated habit strength.

**Conclusions:** Change in habit strength was the strongest predictor of overall improvement. Overall, the results indicate that simple challenges can help to improve dietary behaviours and psychological outcomes.

## **Individual differences in habit formation: Exploring the barriers and facilitators to medication adherence**

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**Background:** Medication non-adherence statistics are problematic, contributing to negative impacts at individual and societal levels. While habitual behaviours are crucial for maintaining overall well-being, the effectiveness of behaviour change, and habit formation varies across individuals and behaviours. As such, the aim of the study was to explore individual differences in the barriers and facilitators to habitual medication adherence.

**Methods:** Online recruitment yielded a diverse global sample (N = 766, 44.1% aged 25-34; 56% female). Through Qualtrics, participants were screened and assessed for behaviour automaticity using the SRBAI, followed by open-ended questions on their barriers and facilitators of behaviour habituation. Inductive summative content analysis was used to identify various factors described as influential to habit formation.

**Findings:** Results found moderate automaticity of medication adherence, with substantial variation across individuals (SRBAI: M = 14.4, SD = 7.1). Sixteen codes were identified (6 sub-codes) for facilitators, with Reward, Co-occurring behaviours, and Accessibility being the most common. Routine disruption, Perceived Need/Benefit, and Accessibility were the most common barriers to behaviour habituation amongst 19 codes (7 sub-codes).

**Discussion:** The findings align with past habit formation literature, reinforcing the importance of reward, environmental cues, and consistency in maintaining habitual adherence. It is recommended that future behaviour change interventions prioritise intrapersonal accountability and emphasise the long-term reward, to encourage proactive behaviour. Additionally, incorporating coping planning strategies for situations where environmental cues are absent. The findings may contribute to tailoring behaviour change interventions to improve medication adherence outcomes.

## External eating trajectories following metabolic and bariatric surgery: Associations with 5-year weight loss outcomes

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**Background:** The current study aimed to identify trajectories of external eating (ExE: i.e., eating in response to external food-related cues) in patients undergoing metabolic and bariatric surgery (MBS) and examine their prospective association with 5-year weight loss outcomes.

**Methods:** Participants (n=546, 78.2% females; Mage = 43.9 years; MBMI=48.5 kg/m<sup>2</sup>) undergoing a primary MBS completed the Dutch Eating Behaviours Questionnaire (DEBQ) and anthropometric assessments 6-months pre-surgery, 6- and 12-months and 5-years post-surgery. We employed a Latent Class Growth Analysis to identify trajectories of ExE across 5-years, and multiple linear regression analyses to determine whether they predict %Excess Weight Loss (%EWL).

**Findings:** We identified three trajectories of ExE behaviours: 1) initially average ExE scores at baseline (ExE<sub>baseline</sub>=2.68) that decreased gradually until 12-months (ExE<sub>12m</sub>=2.07) and then increased at 5-years (36.3% of the sample; ExE<sub>5-y</sub>=2.71); 2) initially high ExE scores at baseline (ExE<sub>baseline</sub>=3.42) that decreased gradually until 12-months (ExE<sub>12m</sub>=2.45) and then remained stable up to 5-years (58.2%; ExE<sub>5-y</sub>=2.57); and 3) the highest initial ExE scores at baseline (ExE<sub>baseline</sub>=3.57) that reached a peak at 6-months (ExE<sub>6m</sub>=3.65) and gradually decreased by 5-years (5.5%; ExE<sub>5-y</sub>=3.00). Trajectory 1 was statistically significantly associated with greater %EWL at 5-years post-BS (B=34.51, p=0.01).

**Discussion:** The majority of participants experienced a decrease in ExE during the first postoperative year; however, our results suggest that endorsing lower ExE across all time points may be more important for increased weight loss, at least up to 5-years post-surgery. These findings highlight the critical need for psychological monitoring and support.

## **A qualitative study exploring the barriers and facilitators of the SARS-Cov2 Immunity & Reinfection Evaluation study**

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**Background:** The SARS-CoV-2 Immunity and Reinfection Evaluation (SIREN) Study is a prospective multicentre cohort study established to evaluate the immune response to SARS-CoV-2 following infection and vaccination in UK healthcare workers. SIREN is a decentralised study involving 135 NHS organisations across the UK and is reliant on its sites for study success. The aim of this research is to explore barriers and facilitators experienced by SIREN sites to set up and run the study, and implications of this for future research within NHS systems.

**Methods:** Four focus groups (n=18) and three one-to-one semi-structured interviews (n=3) were conducted via MS Teams with SIREN teams. An interview guide explored experiences of setting up SIREN at local sites, participant recruitment and retention, and running the study. Interviews were analysed using Thematic Analysis.

**Results:** Four themes were identified: 1) Physical barriers to setting up the study, 2) Organisational support facilitated access to resources, 3) UKHSA communication improved over time from being perceived as pressurising and directive to more collaborative and equal, and 4) Taking part in SIREN increased research visibility.

**Discussion:** Providing SIREN sites with the flexibility to develop models of practice that considered the local context worked well. More centralised support was required at the study set-up stage such as providing templates that can be adapted locally and provision for peer support. Participation in SIREN has strengthened the research infrastructure of local sites and promoted more collaborative research processes which should be maintained to address future challenges at pace within NHS systems.

## Characterisation of network properties and complex vaccination behaviours

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**Background:** The social contagion theory suggests that health behaviors can be contagious from one individual to another. The present study aims to analyze the process of diffusion of vaccine hesitancy through the computational analysis of different simulated scenarios.

**Methods:** A computational simulation model study using data collected from a pilot online survey with university students in Cyprus and using social network analysis to elucidate the impact of social structure, particularly the interconnections and positioning of social agents.

**Findings:** The results show that the centrality of the person spreading vaccine hesitancy is even more relevant than the level of hesitancy that vaccines may generate among the population, indicating that even low levels of hesitancy (less than 10%) can easily spread if certain opinion leaders favor the spread of vaccine hesitancy. To test this result, each of the simulation models were run 1000 times to verify our preliminary findings. The results of these simulations would confirm the relevance of centrality in the propagation of vaccine hesitancy, as opposed to the peripheral and random positioning of the (mis)information spreaders.

**Discussion:** The present findings underscore the utmost importance of the social structure, specifically the connections and positions of social agents, in the dissemination of ideas that can potentially undermine disease control and prevention in our societies. The concept of social contagion and how it can inform health psychology models will be discussed.

## The Impact of Gender Role Expectations on Pain Experience: An Experimental Study

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Research suggested that women are at a greater risk of experiencing clinical and experimentally induced pain. The difference has been attributed to some biological and psychological factors. Of the psychological explanations, the impact of gender-role stereotypes have been under debate. Traditionally, women are expected to be fragile, weak, and helpless, while men are expected to be brave, bold, and strong. Research examining the impact of gender-roles in pain experience have shown that both men and women put an effort to adapt to gender-roles in experimentally induced pain. The purpose of the present study was to investigate whether gender-role expectations would affect the pain reports of the participants in a cold-pressure task. There were three groups in the experiment: the first group was informed only about the procedure, the second group was given a gender-role congruent expectation of pain, and the third group was prompted with a gender-role incongruent expectation before performing the task. By controlling the impacts of state anxiety and self-efficacy, MANCOVA analysis (Nwomen=76, Nmen=78) showed that when gender-role congruent expectations were given, men's pain threshold was significantly greater than women (Mdif=12.49, SE=4.07,  $p<.05$ ). Moreover, pain intensity reported by women in the gender-role congruent group was significantly higher than men's in the gender-role incongruent group (Mdif=1.49, SE=.47,  $p<.05$ ). Our findings revealed that gender-role expectations in the experimental setting affected pain reporting; hence, they may also play a role in pain reporting in clinical settings, which has significant implications for both genders to benefit from healthcare services.

## Vaccination behavior is not homogenous: Role of irrationality and mistrust in the healthcare system

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**Background.** Refusing or postponing vaccination is an individual decision that can have serious consequences for personal and public health. These behaviors can be rooted in irrational beliefs that contradict scientific principles or cognitive biases (errors in judgment and decision-making), or result from mistrust in the healthcare system. We tested the predictiveness of these factors to two categories of vaccination behaviors: self-vaccinating against COVID-19 and postponing/refusing to vaccinate one's child according to the official immunization schedule.

**Methods.** In a community sample of Serbian adults (N = 582; 249 reported having children), we measured irrational beliefs (conspiracy beliefs, magical health beliefs, superstitiousness), cognitive biases (illusory correlation, omission bias, naturalness bias), trust in the healthcare system and professionals, health, socioeconomic status, age, gender, and education.

**Findings.** While 22% of the sample was not COVID-19 vaccinated, 2% of parents refused, and 15% postponed vaccinating their children. Expectedly, COVID-19 vaccination was predicted by older age ( $\beta = .19$ ), poorer health status ( $\beta = -.10$ ), lower conspiracy ( $\beta = -.14$ ) and magical health beliefs ( $\beta = -.20$ ), lower naturalness bias ( $\beta = -.18$ ), and higher trust in the healthcare system  $\beta = .15$ ; and professionals ( $\beta = .14$ ) (all  $ps < .01$ ). However, postponing/refusing vaccinating children was not predicted by an irrational mindset or system mistrust. Younger participants rejected vaccinating their children more often ( $\beta = -.25$ ,  $p < .001$ ).

**Discussion.** Results suggest that vaccination behavior is heterogeneous and has different roots, implying different intervention strategies are needed to address the different types of vaccine hesitancy.



## **Assuming the role of informal caregiver of stroke survivors: experiences on adaptation and learning**

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**Background:** Worldwide, stroke is one of the main causes of disability, placing millions of people under informal care. These caregivers have to adapt abruptly to new physical and psychological demands, often accompanied by a lack of information, training, and professional support. This study aims to understand the adaptation and learning processes of informal caregivers of stroke survivors after assuming this role.

**Methods:** Under the CARESS project, semi-structured interviews were carried out with 37 informal caregivers, recruited in one of the 12 Stroke Units of the Regional Health Administration of Northern Portugal, 18 to 24 months after the stroke (November 2019 and August 2021). A thematic analysis was carried out using Nvivo 12. To ensure the rigor and quality of the analysis triangulation strategies were applied.

**Findings:** The impact that care had on the lives of participants, namely its consequences and demands, triggered adaptations, and consequent learning that were mediated by dynamic structural, family, social, and psychological enablers and barriers. Five themes emerged describing the changes in informal caregivers' lives and their learning processes: 1) disruption and impact: the informal care as a formative context; 2) enablers and barriers to the adaptation and learning; 3) the centrality of practice and experience; 4) experiential learning as a driver for change; 5) learning needs.

**Discussion:** This study highlights the importance of health education and psychological support after stroke. Research, policies, and practices must recognize and enhance the experiential knowledge of caregivers, providing resources and proximity networks that support their adaptation and learning processes.

## Is the disclosure of Alzheimer's Disease an acute stress event for informal caregivers?

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**Background:** The diagnosis disclosure of Alzheimer's Disease (AD) is a crucial moment for informal caregivers (iCGs). The study analysed the association between disclosure-related posttraumatic stress symptoms (PTSS) and psychological well-being.

**Methods:** 58 iCGs (mean age=55.09; female=81%) of mild-to-moderate AD patients completed: i) Zarit Burden Interview (ZBI), ii) State-Trait Anxiety Inventory (STAI-Y1-2), iii) Beck Depression Inventory-II (BDI-II), iv) Short Sense of Competence Questionnaire (SSCQ), v) Revised Scale of Caregiving Self-efficacy (RSCSE), and vi) Impact of Events Scale (IES), recalling the AD disclosure. Using the a IES cut-off of 26, iCGs were classified as having i) subclinical (iCGs-sub) or ii) moderate-severe (iCGs-sev) PTSS. Mann-Whitney U tests were used to compare subclinical vs. mild-severe PTSS groups on the above scales. Partial Spearman correlations were used to test the association between scales, controlling for the duration of caregiving role (mean years=3).

**Findings:** The diagnosis disclosure represented an acute stress event for 47% iCGs-sev (n=27). Compared to iCGs-sub (n=31), iCGs-sev reported higher score of ZBI (t(56)=-3.211, p=0.002), STAI-Y1 (t(56)=-2.322, p=0.024), STAI-Y2 (t(56)=-2.589, p=0.012), and BDI-II (t(56)=-2.690, p=0.009). A lower ability to control intrusive thoughts (IES-intrusion subscale) correlates with a higher burden (r=-0.372, p<0.005) and increased depressive symptoms (r=0.355, p=0.008).

**Discussion:** These preliminary findings confirmed that disclosing an AD diagnosis is a stressful experience for iCGs, potentially increasing their vulnerability to emotional distress.

Future research should expand on these findings and develop effective communication strategies to mitigate the negative effects of the moment of disclosure.

## **Look on the bright side: The relation between family values, positive and negative care experiences**

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**Background & Objectives:** Family-centered values are important for care provision, however, their association with care burden is not well understood. We aimed to analyze whether positive aspects of caregiving are of relevance for this association, in terms of mediating the effect of familism on burden among informal caregivers of older adults in Germany.

**Method:** Data from the ATTIC (Attitudes Towards Informal Caregivers) project were used, which questioned informal (unpaid) long-term caregivers for older adults (60+ years) based on a quota-sample from Germany with an Online survey (December 2023). This study focused on informal caregivers of older relatives (n=277). The main measurements included valid and reliable instruments of familism, burden and positive aspects of care. Causal mediation analysis (linear OLS regression), allowing for exposure-mediator interaction, was conducted and robust standard errors were calculated.

**Results:** Preliminary findings showed a significant negative indirect effect of familism through positive aspects of care on burden and a significant positive direct effect between familism and burden. The total effect and the moderation between familism and positive aspects of care were not significant.

**Conclusion:** Sociocultural family-centered values seem to worsen burden but also to reduce it through positive appraisal and experiences of caregiving, and this did not depend on the strength of the familism values. The findings thus provide insight into the mechanisms underlying the stress appraisal of the informal care situation and emphasize the role of positive aspects of care.

## Unravelling the Pathways Between Purpose in Life and Depression Among Hemodialysis Caregivers

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Symptoms of depression are frequently reported by family caregivers of people with kidney failure. Research based on a more humanistic-existential perspective has evidenced that purpose in life helps to promote psychosocial adjustment to the caregiving process; nonetheless, little is still known about how this psychological resource influences the negative outcomes of providing care to a family member receiving a life-sustaining treatment such as hemodialysis. This study explored the role of adaptive coping (e.g., positive reframing, acceptance, planning), maladaptive coping (e.g., denial, behavioral disengagement, self-blame), and social support dimensions (positive social interactions, and affectionate, emotional/informational, and tangible/instrumental support) on the relationship between purpose in life and depression in hemodialysis caregivers. A cross-sectional study was conducted with 173 family caregivers ( $M=55.9\pm 15.6y$ ) using a set of self-reported measures. A mediation analysis was computed with JASP software (version 0.18.1.0), accounting for different covariates (e.g., age, gender, kinship with the cared-for person). Results showed a significant (negative) direct effect of purpose in life on depression ( $b=-0.158$ ;  $z=-2.20$ ,  $p=0.027$ , 95% Bootstrap CI=[-0.325;-0.003]); analyzing indirect effects, findings exposed that this path was statistically mediated by adaptive coping ( $b=-0.133$ ;  $z=-3.66$ ,  $p<0.001$ , 95% Bootstrap CI=[-0.226;-0.076]), tangible/instrumental support ( $b=-0.12$ ;  $z=-3.29$ ,  $p<0.001$ , 95% Bootstrap CI=[-0.207;-0.005]), and emotional/informational support ( $b=-0.10$ ;  $z=-1.99$ ,  $p=0.045$ , 95% Bootstrap CI=[-0.247;-0.012]). This investigation expands knowledge about the modifiable internal resources through which purpose in life can help promote psychosocial adjustment to the hemodialysis caregiving process. Studies are needed to better understand how this positive psychological variable can be integrated into health psychology interventions in nephology centers.

## **HERITAGE of behaviour change: bridging the past to the future**

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**Purpose:** The health psychology and behaviour change research possess a rich historical background, while also showing potential to improve. Drawing insights from the past and contemplating both past and present experiences can guide future developments in the field. Crises such as the COVID-19 pandemic and climate change have highlighted the importance of reflecting on past experiences and lessons learned. This reflection aids in adapting to the demands of timing and context, making necessary improvements, and shaping future directions. Additionally, aligning with the principles of the Open Science movement, it is crucial to critically examine current and past researcher behaviours to elevate scientific practices and amplify their impact. The discussions in this roundtable will focus on the evolution of the health behaviour change field, methodologies and research approaches (i.e., models, interventions and methodologies), reflections, lessons learned, as well as emerging trends and future directions.

**Objectives:** This roundtable aims to: 1) present and reflect on the findings from the HERITAGE of behaviour change project, which captures a historical analysis of the behaviour change field through expert narratives; 2) gather input from early-to-mid-career researchers on their experiences and ambitions for the field; and 3) capture a comprehensive view of the current landscape and opinions regarding future directions in health behaviour change research to provide suggestions for future research agendas. The outcomes of this roundtable discussion are intended to be summarized into a reflection paper for potential publication in the European Health Psychologist.

**Rationale:** The rationale for discussing this issue at EHPS 2024 lies in the unique opportunity it presents to bridge generational perspectives within the health behaviour change domain. By exploring both past and future perspectives, this session promotes a comprehensive understanding of the field, fostering collaboration and knowledge exchange.

## **Health professionals' experiences with integrated mental health care for people with congenital heart disease**

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**Background.** Internationally, there is increasing focus on the high mental healthcare needs of individuals with congenital heart disease (CHD). We investigated health professionals' views and experiences of integrated mental health services.

**Methods.** We interviewed healthcare professionals from five CHD centers in the United States, Australia, and Switzerland, each with each distinct models of mental health care integration and unique ecosystems. Following informed consent, we recorded, transcribed, and analyzed the in-person or virtual interviews thematically using MAXQDA software. The Consolidated Framework for Implementation Research guided interpretation.

**Findings.** Forty-six health professionals representing medicine, nursing, psychology, allied health, and healthcare administration participated (response rate: 58%; 72% women; mean professional experience: 15.5±8.0 years, mean interview duration: 47.9±18.8 minutes).

Five key themes were relevant: (1) High need and demand for mental health care among patients with CHD and their families; (2) Barriers (e.g. stigma, socioeconomic disadvantages) for individuals, and (3) for the integration in CHD centers (e.g. limited workforce capacity, financial constraints, and very limited referral options for outpatient care); (4) Strategies to promote integration (e.g. embedding mental healthcare professionals within cardiac care teams, interdisciplinary teamwork, regular communication); and (5) Facilitators to improve access (e.g. proximity, multiple patient entry points; screening as routine care; skills-based training for staff). A wish to increase visibility of family voices, and more awareness for mental health in CHD in the community was expressed.

**Discussion.** Our findings highlight the need for innovative ways to accelerate equity in access to mental health care for individuals with CHD across the lifespan.

## **The end of assisted reproductive technologies treatment: a qualitative study on healthcare professionals**

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**Background:** The end of treatment is one of the most complex phases of the ART process. In the ART setting, there is no clearly defined biological endpoint; the end of ART treatment occurs when the probabilities of success are so low that it is in the couple's best interest to stop any further attempt. The absence of a defined endpoint leads to great variability in clinical actions and a lack of professional alignment. This contribution aims to explore healthcare professionals' (HP) perspectives on the end of ART treatment and its clinical and communicative management.

**Methods:** A grounded theory approach was applied. Data were collected through four focus group interviews with physicians, biologists, and psychologists working in public and private Italian ART centers. Focus group interviews were audiotaped and transcribed verbatim. The textual analysis software T-LAB was used to identify key topics.

**Findings:** A total of 25 HPs were involved in the focus groups. The findings illustrate the attributes and components of the end of the ART treatment. Seven areas emerged: 1) patients' clinical conditions and probabilities of treatment success; 2) normative and ethical issues; 3) end of homologous and third-party treatment; 4) couples' affective and emotional experiences; 5) HPs' experience, inner life, and attitudes; 6) drop-out and doctor shopping; and 7) communication strategies and difficulties.

**Discussion:** The results illustrate the perspective and attitudes of HPs towards the end of ART treatment and describe the complex process leading to this clinical decision and its communicative management.

# Can continuous heart rate variability monitoring detect patterns of stress and recovery in medical doctors

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## Background

Burnout is a rising concern among medical doctors. Heart rate variability (HRV), a non-invasive measure of autonomic nervous system activity, reflects physiological states of sympathetic (stress) and parasympathetic (recovery) activity. While HRV is known to provide insight into momentary stress responses, its utility over extended periods remains unclear.

## Methods

A systematic review was conducted (PROSPERO: CRD42023413282) with a comprehensive search of databases and grey literature sources coupled with hand citation searching. Primary studies were eligible where they reported at least one recognised HRV parameter combined with at least one contextual or psychological assessment, and assessed over a period lasting 24 hours or more including time spent in the workplace.

Two reviewers assessed abstracts and full texts against inclusion criteria, a third reviewer resolved disagreements. Extracted data included study population, methodological factors including HRV device, HRV parameters reported, length of HRV measurement and contextual and psychological measures used.

Methodological quality was assessed using the JBI risk of bias assessment for case reports(1) and STARD(HRV)(2).

## Results

After removing duplicates, abstract and full text reviews, 11 studies met the inclusion criteria. Meta-analysis was carried out for 5 heart rate variability parameters. There was a statistically significant change in HRV detected between stress and recovery groups with 3 of these parameters. Two showed no statistical significance.

## Conclusion

Continuous heart rate variability monitoring combined with contextual measures proves useful in tracking stress and recovery patterns. However, further high-quality studies are required, particularly to understand the association between HRV and subjective measures of stress.



## The potential role of being a near-peer school health educator in medical education

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**Background:** Although a significant proportion of deaths are attributable to lifestyle risk factors in Europe, provision of lifestyle counseling by doctors is often hindered by inadequate skills and commitment, as well as their own unfavorable health behaviors. Our aim was to explore a potential way to overcome these barriers by improving medical education: specifically by inviting medical students to be near-peer school health educators. We examined educators of the Balassagyarmat Health Education Program (BEP) to capture the experiences found useful for medical practice, changes in commitment to health education and health behaviors.

**Methods:** We conducted semi-structured interviews with nine medical student near-peer educators who had participated in BEP and had mastered all program topics. Qualitative content analysis was employed to analyze the data. We derived deductive codes from the interview guide, created more refined child codes inductively, then generated a qualitative summary of these.

**Findings:** Past near-peer educators reported development in patient education, motivation, and building partnership with patients as useful for medical practice. Their commitment to health education increased: following the program, they voluntarily and effectively led health education in their communities and patient groups. Participants also noted positive changes in their health behaviors, including more mindful alcohol consumption and dietary habits along with increased physical activity.

**Discussion:** School-based health education has proven potential in fostering medical communication skills, strengthening commitment to health education, and promoting positive changes in health behavior among near-peer educators. Consequently, we advocate that consideration be given to integrating such programs into medical education curricula.

## Implementation determinants for point-of-care procalcitonin guided antibiotic prescription in Swiss primary care

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### Background:

Point-of-care procalcitonin (POC-PCT) is an antibiotic stewardship intervention effectively reducing inappropriate prescriptions of antibiotics, e.g., in lower respiratory tract infections. Implementation determinants are factors that influence intervention implementation. For ImpPro, a project striving to implement POC-PCT via quality circles, we aimed to identify key implementation determinants of POC-PCT in Swiss primary care.

### Methods:

A three-step methodology was applied to identify and prioritize determinants. First, semi-structured interviews with multidisciplinary stakeholders (n=34) (e.g., clinicians, representants of professional societies and patient representatives) were conducted and coded deductively using the updated consolidated framework for implementation research (CFIR). Single determinants were then identified and grouped through inductive thematic analysis. Second, an online survey among experts (n=10) assessed the importance and changeability of each determinant. Third, during an expert focus group (n=11), determinants were excluded if considered unchangeable or irrelevant to implementation. Then, key determinant groups were prioritized by dot-voting.

### Results:

In total, 87 determinants were identified. Ten determinants were considered unchangeable within the project's timeframe, and 16 irrelevant. The remaining 61 determinants belonged to the following groups: 1) general practitioners' knowledge and awareness about, and 2) motivation to implement POC-PCT, 3) quality circles' motivation to endorse POC-PCT, 4) professional societies' awareness about, 5) motivation to endorse, and 6) actual endorsement (e.g., guidelines) of POC-PCT, and 7) the (perceived) scientific evidence behind POC-PCT.

### Conclusion:

Key determinants belonged to the individual (micro) level or the outer (macro) setting. Strategies for POC-PCT implementation will be tailored accordingly.

## **Vicarious Post-Traumatic Growth in health care professionals working in illness settings: systematic review**

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**Introduction:** Over the past two decades, scientific research has systematically investigated the profound positive changes that can result from facing traumatic or highly challenging events, calling this process Posttraumatic growth. Professionals working in health care and illness settings are repeatedly exposed to highly distressing experience, but a limited amount of research in this population has focused on the positive changes resulting from exposure to secondary traumatic stress, i.e., Vicarious Post-Traumatic Growth (VPTG). This paper aims to systematically review studies on VPTG in professionals working in illness settings.

**Methods:** PubMed, ScienceDirect, Scopus and WebOfScience databases were searched to identify the research studies focusing on the Vicarious Post-traumatic growth in healthcare professionals reported in the title, in the abstract and in the keywords the words 'Vicarious posttraumatic growth' OR 'Secondary trauma and posttraumatic growth' OR 'Secondary posttraumatic growth'.

**Findings:** Of the 1712 titles screened, we identified 17 research articles that met the inclusion criteria, including 13 quantitative, 2 qualitative, 1 mixed-method and 1 intervention study. All quantitative research investigated VPTG through the Post-traumatic growth Inventory, but the screened studies differed regarding participant characteristics, the nature of disease, other measurement instruments and data analysis. Several studies have investigated the relationship between secondary traumatic stress and VPTG, finding mixed results.

**Discussion:** Expansion of research on VPTG in the health care workers is needed to contribute to interventions aimed at promoting well-being and reducing levels of secondary traumatic stress in clinicians. The results of this review can provide practical recommendations and directions for future research.

## Resilience Boost: Longitudinal Pilot Study of a Medical Student Near-Peer Mentoring Program

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**Background:** Medical students encounter significant challenges and stressors, predisposing them to mental health issues. Near-peer mentoring programs offer the potential to bolster resilience among students. This pilot study aims to evaluate the effectiveness of such a program.

**Methods:** A longitudinal study was conducted among participants of the Semmelweis Mentoring program, alongside non-participating medical students from the same grades. Self-reported online questionnaire data was collected from 133 medical students (94 mentors and mentees, and 39 non-participants) before the semester began in 2022 and five months later, post-exam period. Resilience (CD-RISC) and depression (DASS-21) were assessed as outcomes and compared between groups using repeated measures ANOVA.

**Findings:** Participants demonstrated a significant increase in resilience compared to non-participants ( $F(1, 129) = 5.578, p = 0.020$ ), with a significant interaction effect between participation and time ( $F(1, 129) = 4.915, p = 0.028$ ), while the main effect of time was insignificant ( $F(1, 129) = 0.038, p = 0.846$ ). Regarding changes in depression scores, no significant difference was found between participants and non-participants ( $F(1, 29) = 1.004, p = 0.318$ ), though the main effect of time ( $F(1, 129) = 4.725, p = 0.032$ ) and the interaction effect between participation and time ( $F(1, 129) = 4.018, p = 0.047$ ) were significant.

**Discussion:** This pilot study suggests that a near-peer mentoring program can enhance resilience and maintain mental health of participants. Given the demands medical students face during their studies and in their future careers, mentoring programs offer valuable support during their formative years.

## Examining how self-report measures capture engagement with digital health

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**Background:** Engagement is necessary for digital health behaviour change interventions' impact. Despite this, its evaluation in digital health literature is often limited to system use data, which cannot capture a full understanding of how and why users engage with an intervention. We aim to unpack how self-report measures capture affective, cognitive, and behavioural engagement with digital health, what is still missing, and how measurement can be improved.

**Methods:** Self-report measures used to evaluate digital health engagement were extracted from five recent reviews and assessed against eligibility criteria. Measures were included if they were theoretically-based, developed specifically for digital health, and aimed to capture affective, cognitive, and behavioural components of engagement. Items of included scales were compared to examine how they captured the different aspects of engagement.

**Findings:** Two recently-developed measures met the inclusion criteria (the Digital Behaviour Change Intervention Engagement Scale and the TWente Engagement with Ehealth Technologies Scale). Despite having similar theoretical-bases and being relatively strongly correlated, there were substantial differences in how the included items were framed.

**Discussion:** The analysis raised interesting considerations about how engagement with digital health should be conceptualised and measured. We argue that, despite the theoretical and empirical evidence of integration between affective, cognitive, and behavioural components, there is value in intentionally examining each component in digital health evaluations. We provide recommendations for how and when each measure could support digital health evaluations and how future measure development could address remaining gaps in our ability to examine the full picture of engagement.

## **A co-constructed survey on how to better support patients undergoing metabolic and bariatric surgery**

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**Background:** The aim of this survey, co-constructed with patient-investigators, is to gather opinions of patients undergoing metabolic and bariatric surgery (MBS) on current behavioural interventions offered and interventions that should be provided as part of the bariatric care process, as well as to generate a list of potential intervention components.

**Methods:** We are recruiting 300 patients from the largest MBS clinic in Canada. The survey includes 5-point scale and open-ended questions. Quantitative data will be aggregated to identify the most to least favoured intervention components and intervention modalities. We will also conduct cluster analysis to identify groups of responses and specify the characteristics of respondents in each cluster. Open-ended question responses will be analysed using thematic analysis.

**Expected results:** This survey aims to gather information about existing shortcomings in bariatric care and patients' preferences regarding additional interventions to be developed, as well as elicit patient-driven suggestions for improvement. The cluster analysis will also allow us to formulate hypotheses for personalised treatment options.

**Current stage of work:** Recruitment for this survey is ongoing (n=105; expected completion July 2024). Most participants are female (82.5%) and the mean age is 46.0 (±10.8) years. Initial results suggest that improving services is particularly necessary for the postoperative period, with 77% (compared to 71% for the preoperative period) of respondents indicating that it is important or extremely important.

**Discussion:** Results will contribute to a larger research program developed within the IBTN framework aimed at developing adjunct behavioural interventions to MBS that are responsive to patients' needs.

# Do psychometrics ‘matter’? Mixed methods study of applying advanced psychometrics in depression treatment trials

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## Background:

Multiple sophisticated theories and techniques are used to evaluate psychometric scales. Psychometricians contend that such approaches improve assessment by reducing error, yet these techniques can provide conflicting results and there is limited evidence that applying these approaches actually make statistically or clinically important differences to outcomes. We aimed to determine whether applying psychometric analyses would demonstrate important differences in treatment effects and explored the implications of these findings with stakeholders.

## Methods:

We obtained individual participant data from 24 antidepressant treatment trials from Vivli.org (n=10,141). Pooled item-level depression data was analysed using confirmatory factor analysis, item response theory and network analysis. Differences in trial effect sizes at 8 (range 4-12) weeks, comparing psychometrically-informed model scores to original summed depression scores, from two different depression measures, were analysed in multilevel models. Findings were presented to 21 stakeholders (psychometricians, statisticians, clinicians and senior psychology/psychiatry academics) during individual interviews to ascertain their views on the implications of the results, with reflexive thematic analysis used to interpret findings.

## Findings:

We obtained different psychometric models of depression; several items performed poorly in both measures and were eliminated. Original treatment effects, using summed scores, were small. No psychometrically-informed models yielded changes in trial effect sizes, even when total numbers of items used were radically reduced. Main themes from interviews concerned legacy issues informing bad practice, educational needs and critical reflections on current predominant latent variable approaches.

## Discussion:

Applying sophisticated psychometric modelling did not appear to matter in antidepressant treatment trials. However, this may be due to the original small effects in included studies. Implications for health psychologists will be discussed, including the need to prioritise theory over psychometric analysis, potential reduction in respondent burden through adoption of briefer scales, educational needs and an increased critical perspective when selecting measures.

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## Older adults' compliance with mobile ecological momentary assessments in health behavior research: future recommendations

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**Background:** Ecological Momentary Assessment (EMA) is increasingly used to gather intensive, longitudinal data on health behavior. However, a significant concern is the potential for low and non-random compliance with (mobile) EMA protocols, especially in older adults. This study aimed to thoroughly examine older adults' compliance with mobile EMA protocols in health behavior studies.

**Methods:** Four intensive longitudinal observational studies employing mobile EMA were conducted, involving 278 community-dwelling older adults in Flanders. EMA questionnaires were triggered by a smartphone application during specific time slots or events. Participant characteristics, including demographics, BMI, and smartphone ownership, were collected via self-report. Data on prompt times and participant responses were extracted from the EMA applications. Descriptive statistics were computed, and logistic mixed models were run.

**Findings:** EMA compliance averaged 75.45%, varying from 65.18% to 83.13% across studies. Compliance differed among subgroups and throughout the day. Age and pre-retirement blue-collar occupation predicted lower compliance (OR=0.96, 95%CI=0.94, 0.99, and OR=0.71, 95%CI=0.48, 1.04, respectively), while marital/cohabiting status and smartphone ownership predicted higher compliance (OR=1.76, 95%CI=1.18, 2.63, and OR=4.41, 95%CI=2.21, 8.79, respectively). Compliance was lower in the evening than in the morning (OR=0.77, 95%CI=0.66, 0.91), indicating non-random patterns that could impact study validity.

**Discussion:** Non-compliance in our dataset is not entirely random, influenced by specific subgroups and temporal patterns, potentially biasing study outcomes. Tailored approaches considering individual characteristics and temporal patterns, along with statistical techniques, such as multiple imputation and inverse probability weighting, are recommended to improve the validity of EMA results in future health behavior research.



## **Living with Parental Multiple Sclerosis: Adolescent's emotional experiences, coping and clinical recommendations**

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Evidence suggests that parental illness affects the whole family, including children. Within South Africa (SA) little is known about the impact of parental Multiple Sclerosis (MS) on the adolescent child. There are few SA studies published on MS, however those have focused on patient or caregiver experiences, and not on the subjective experiences of the adolescent child with an ill parent. This research forms part of a larger study exploring the experiences of South African adolescents who have a parent diagnosed with MS, using a multi-method approach.

The broader qualitative study utilized semi-structured interviews and a follow up photo elicitation interview with 10 adolescent participants aged 12-25. This was followed by an individual semi-structured interview with the diagnosed parents. Participants were recruited via purposive sampling from an online SA Facebook group for individuals diagnosed with MS. Participants were included based on a list of inclusion and exclusion criteria and verbal data was analyzed using thematic analysis.

This presentation will offer findings from the adolescent semi-structured interviews, with specific focus on the emotional experiences of worry and isolation related to having an ill parent, which dominated the narrative. Ways of coping will be explored, and clinical recommendations will be provided as a basis from which health professionals can assess the support and intervention needs of these adolescents.

The study is in line with global efforts toward early intervention and health promotion amongst vulnerable and at-risk groups. It further aims to contribute to the body of knowledge on MS within South Africa.

## **"The way you see me": how partners affect breast cancer patients' body image and flexibility**

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**Background:** There is a great deal of research on the effects of breast cancer on patients' quality-of-life, but less on how the partners' health and beliefs impact the women's feelings of worth. We explored how partners' psychological measures affect patients' body image (BI) and flexibility towards illness.

**Methods:** This is a cross-sectional study with a relational perspective (ethical\_approval\_prot.N.94-21). Forty Italian couples were recruited through a snowball sampling. Breast cancer patients who had already undergone surgery and were in a stable relationship with a romantic partner who was interested in participating were included.

Participants completed psychometric tests via CAWI about anxiety, depression, distress (HADS); flexibility as the ability to process and move beyond the trauma (PACT); and patients' BI (BIS for women's auto-perception and an ad-hoc questionnaire for partners' etero-perception).

An exploratory factor analysis (EFA) using the main axis factorization extraction method revealed the latent construct(s) underlying the ad-hoc questionnaire. Finally, two distinct multiple linear regression models were run.

**Findings:** The EFA showed a strong mono-factorial structure ("partners' evaluation of patients' BI",  $\alpha=0.953$ ) with 67.60% explained variance.

The first regression model (Adj.R2=0.524) demonstrated that patients' BI was positively impacted by this new extracted factor ( $\beta=0.680$ ), partners' distress ( $\beta=0.302$ ), and partners' depression ( $\beta=0.294$ ). The second model (Adj.R2=0.467) highlighted a significant relationship between partners' flexibility ( $\beta=0.409$ ), partners' disrupted emotionality (depression  $\beta=-0.481$ , anxiety  $\beta=-0.508$ ) and patients' flexibility.

**Discussion:** These findings add to the existing debate about the dyadic process of adapting to cancer-related challenges. Future clinical research should emphasize the investigation of its implications.

## Measuring treatment burden in individuals living with and beyond cancer: a scoping review

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**Background:** Treatment burden – the workload of managing long-term health conditions and the associated negative impact on wellbeing – is important for those living with and beyond cancer. Patient-reported measures of treatment burden have been developed, but there is currently no cancer-specific measure, and treatment burden is still relatively understudied in cancer. This scoping review aims to explore existing treatment burden measures used in long-term conditions, examine their application in cancer, and describe treatment burden in individuals living with and beyond cancer.

**Methods:** Database searches (Medline, CINAHL, Web of Science, Embase, and PsycINFO) were conducted to identify studies describing the use, development, or validation of patient-reported measures of treatment burden in long-term conditions including cancer.

**Expected results:** Studies will be narratively summarised, and psychometric properties across measures will be compared. Additionally, treatment burden in cancer will be described and quantified, including the prevalence and potential predictors in this population.

**Current stage of work:** The protocol is pre-registered here <https://doi.org/10.17605/OSF.IO/MWG2C>. Database searches yielded 4886 titles and abstracts, resulting in 265 full texts which are undergoing screening. Data extraction and synthesis will be conducted in March-July 2024.

**Discussion:** The review will summarise current knowledge around the measurement and quantification of treatment burden in general and in cancer in particular. The review will be used to determine whether a cancer specific measure of treatment burden is needed and, if so, whether new items need to be developed or can be drawn and adapted from existing measures with good psychometric properties.

## **Partners' influences on women's experiences of living with and managing GDM: A Qualitative Evidence Synthesis**

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**Background:** Living with and managing gestational diabetes (GDM) can be a significant burden for women. Previous research suggests that family support, particularly from spouses or partners, can significantly influence the experience of GDM. This Qualitative Evidence Synthesis aims to provide a better understanding of the influence of partners on women's experiences of living with and managing GDM.

**Methods:** A comprehensive search of electronic databases, including MEDLINE, EMBASE, PsychINFO, CINAHL, and Cochrane, will be conducted to identify qualitative studies on this topic. Additional grey literature will be sourced from ProQuest. Key analytical themes will be identified using Thomas and Harden's (2008) thematic synthesis approach.

**Expected results:** We anticipate achieving a comprehensive understanding of the multifaceted nature of women's experiences of their partners' influence on living with and managing GDM. This synthesis will shed light on both positive and negative aspects of partner support.

**Current stage of work:** A protocol has been developed and submitted for preregistration on PROSPERO. Preliminary searches have been conducted. By September, our aim is to complete data analysis and have preliminary findings to report.

**Discussion:** This review will contribute to a deeper understanding of women's experiences with GDM and the influence of partners. Identified gaps will inform future primary data collection, enhancing our understanding of how partners can better support women living with GDM. It's important to note that individuals experiencing pregnancy may not always have a partner, and findings could extend to include other sources of social support, especially from family members.

## Early life adversities, core beliefs and psychological distress among chronic skin disease patients

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**Background:** Early maladaptive schemas (EMSs) are core beliefs that develop during childhood or adolescence as a result of unmet emotional needs or traumatic experiences. Studies suggest that EMSs might play a mediating role in the link between childhood adversities and the development of later psychopathological symptoms. Among individuals grappling with chronic skin diseases numerous studies have confirmed a high level of psychiatric disorders as well as perceived psychological distress, underscoring the presence of maladaptive schemas. The aim of the current cross-sectional study is to investigate the relationship between childhood traumatic experiences, maladaptive cognitions, levels of psychological distress, and skin-related quality of life. We hypothesized that patients with chronic skin diseases would demonstrate increased frequencies of childhood traumatization, stronger endorsement of EMSs, and higher levels of psychological distress.

**Methods:** A sample of 251 adults (chronic skin disease: n=54, chronic disease control: n=99, normal control: n=95) completed validated, self-administered questionnaires (CTQ-SF, YSQ-S3, DASS-21, and DLQI).

**Findings:** Our preliminary findings reveal differences between dermatology patients and control groups concerning EMSs. Dermatology patients differed from the chronic control group in one EMS, namely Insufficient Self-Control, and from the normal control group in three EMSs: Enmeshment, Insufficient Self-Control, and Emotional Inhibition. Clinical sampling is ongoing to corroborate our results.

**Discussion:** Our results may aid the psychological management of patients with chronic skin diseases by gaining deeper understanding of characteristic schema profiles of these patient groups. The identified maladaptive schemas could be the subject of later psychological interventions.

## **Exploring parental experience in type 1 diabetes in children and adolescents - a qualitative study**

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Type 1 diabetes is one of the most prevalent endocrine diseases among children worldwide, with an incidence steadily increasing on a global scale. The diagnosis of diabetes significantly impacts family functioning and the psychological well-being of the parent, due to the challenges posed by disease management that extend beyond basic caregiving and parenting responsibilities. This qualitative research study aims to explore the lived experience of parents with children affected by type 1 diabetes, focusing on the daily management of the disease and the psychological and emotional challenges associated with it. The questionnaire will be administered online and completed by parents of children and adolescents with type 1 diabetes recruited within the "Italian Youth Diabetics Association" Following a qualitative observational research design, participants will be presented with the narrative task, "We ask you to pause for a moment and, if you wish, narrate what it means to you to be a parent of a child/adolescent with Type 1 Diabetes and your experience." The collected narratives will be analyzed using a deductive thematic analysis, as described by Braun & Clarke (2007), aimed at extracting thematic cores emerging from parents' testimonies. The results of this research will contribute to a deeper understanding of the impact of type 1 diabetes on family life. They will also provide important information for the development of targeted support interventions aimed at improving the quality of life for parents and children affected by this condition.

Current stage of the study: The administration of the questionnaire is currently ongoing.

## **Preventing falls together: Effects of a group-based exercise program on social and physical well-being**

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**Background.** Against the background of demographic changes, falls prevention programs are becoming an increasingly important offer to maintain independence in old age. However, the evaluation of implemented programs has not been a research priority. In the present study, a post hoc evaluation of the falls prevention program “Staying safe and active in old age” was conducted.

**Methods.** The evaluation of the multifactorial program included a longitudinal design with two measurement points, 6 months apart (n = 125). Outcome measures were: Loneliness (De Jong Gierveld short scales for emotional and social loneliness), social identification with the training group, self-reported number of falls, fear of falling, objectively measured gait speed, coordination, self-reported leg strength, balance, habitual execution of the exercises, quality of life, activities of daily living, and mobility. Linear mixed models were set up for each outcome measure.

**Findings.** Social identification with the group predicted attendance, but only for participants living alone. The program showed decreases in loneliness (effect size = -0.33), benefits on fear of falling, balance, coordination, and habitual execution, maintenance of number of falls, gait speed, coordination (dual task), activities of daily living and quality of life, while leg strength and mobility decreased at T2 (effects sizes between -0.14 and 1.73).

**Discussion.** Falls prevention is more than repeated exercises to increase or maintain physical function. As an ongoing group-based format, the implementation of falls prevention programs has the potential to promote the social well-being of older adults as well.

## **Loneliness among young adults with cancer: A blueprint for intervention**

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**Background:** Young adults (YA) diagnosed with cancer are at increased risk of social isolation and loneliness. Their unique social and emotional needs put them at greater risk than older patients, yet there are few interventions designed for this population. This talk examines social isolation and loneliness among YA with cancer within developmental context with the aim of identifying elements needed for intervention.

**Method:** Interview data from two qualitative studies of young adults (aged 18-39) with cancer: 53 YAs diagnosed with blood cancers and 35 YAs with mixed cancers. Data were coded and analyzed using thematic analysis combined with an abductive approach. Codes were informed by the developmental context of emerging adulthood.

**Findings:** Although they reported strong support from friends and family, YAs still felt isolated because of feeling “different” and “not normal.” Emotional disclosure was difficult – both telling people of their cancer and processing emotions with others – especially in the early months after diagnosis. Participants sometimes reported social constraints – perceptions that even close others didn’t want to continually hear their concerns and complaints, which prevented participants from gaining much needed support. Loneliness also was shaped a lot by a lack of sexual intimacy, which was a result of the physical changes wrought by the illness and treatment that made them feel undesirable.

**Discussion:** Young adults with cancer experience a high degree of loneliness and social isolation from peers. The correlates of this loneliness inform future interventions targeting loneliness in this growing, yet vulnerable, adult cancer survivor population.



# **Comfort and Connection: A qualitative study exploring young adults' experiences using music for loneliness regulation**

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## **Background:**

Loneliness is distressing and harmful to health, and young people are particularly at-risk. Music listening has a range of effects that could address loneliness, however our understanding is limited. This study aims to explore young adults' perceptions of the impact of music on loneliness.

## **Methods:**

Younger adults (18-25 years) with experience of loneliness were recruited. Semi-structured music-enhanced interviews were carried out between February and March 2022. Participants were 11 young adults (4 cisgender women, 1 transgender woman, 1 transgender man; 18-22 years). Data was analysed using reflexive thematic analysis.

## **Findings:**

Two themes and four sub-themes were identified. Younger adults find comfort in music when feeling lonely (Theme 1). They feel understood and get a sense of belonging from relating to music and particularly lyrics (Theme 1.1). Music serves as a comforting presence, acting as a companion in solitude (Theme 1.2). Music creates connections (Theme 2), young adults find a connection to their past and personal history (Theme 2.1). Specific songs act as temporal bridges, evoking memories with emotional significance. Music allows listeners to connect with and release feelings of loneliness and the emotions that accompany it (Theme 2.2).

## **Discussion:**

The results of this study contribute to an emerging body of research on music-based loneliness regulation. Among young adults, music listening is perceived as having a positive impact on loneliness by providing comfort and enhanced self-connection. Findings have implications for how music listening might be leveraged as an accessible, low-resource tool for addressing loneliness among younger adults.

## **Bridging the gap: Addressing loneliness through a blended group intervention for international college students**

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**Background:** Loneliness is a prevalent issue among international college students, often exacerbated by cultural and linguistic barriers. This pilot study aims to assess the feasibility, acceptability and impact of a blended intervention on international students' loneliness and well-being.

**Methods:** A sample of 49 international students from the University of Padua (Italy) participated in the study and filled in a survey to assess participants' satisfaction and changes in their interactions, loneliness and wellbeing. A mixed-method analysis was conducted following the RCT methodology to compare an 8-week blended intervention (comprising group activities and online self-help materials) with two other active conditions (only self-help and peer-to-peer interventions) and a control condition at two-times evaluation.

**Findings:** Repeated ANOVA showed that interventions involving in-person group activities (blended and peer-to-peer interventions) had significant advantages over self-help interventions in terms of satisfaction, interaction improvement, and higher number of relationships. Participants perceived self-help materials as more relevant, satisfactory, and functional within the blended group compared to the self-help group. No significant differences were found between groups on the standardized measures of anxiety, depression, satisfaction with life, loneliness and social support. The thematic analysis of the transcripts of the group sessions identified four themes (international students' experience, challenges, coping strategies and well-being), suggesting that in-person group activities provided the direct experience of new social connections.

**Discussion:** Findings highlighted the importance of translating insights from self-help materials into active and direct social experiences, to reduce loneliness through the emergence of new perspectives and shared meaning making.

## **Integrating temporal dynamics into health psychology theory and intervention development: An interactive discussion**

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**Purpose:** This interactive roundtable aims to facilitate discussions and future collaborative work on how to improve health psychology theory and intervention development by including temporal and dynamic aspects.

### **Objectives:**

reflect on existing theoretical and conceptual assumptions about time and dynamic processes in health psychology theory

present current empirical research examining temporal, dynamic processes

reflect on the potential of improved theories for prediction, understanding, and intervention development

identify which temporal/dynamic constructs, relations, and processes could be re-defined or specified based on existing assumptions or empirical evidence

identify temporal/dynamic processes crucial to advancing current theories

intended practical outcomes: 1) summarize results in a commentary highlighting crucial points and next steps; 2) identify action points and leads for interested participants to work on in smaller groups

### **Rationale:**

Incorporating temporal dynamics into health psychology theories not only allows capturing the complex and changing nature of health-related behaviors and their determinants but improves our understanding of the underlying causal processes. It ensures that theories remain relevant across various behaviors, contexts, and periods of time, improving their applicability, explanatory and predictive power, and in short, their overall usefulness. While these reasons for strengthening our theorizing about temporal and dynamic aspects have been emphasized repeatedly in the recent past, only very few advancements have been made since. As bringing about change with regard to such a central topic requires concerted efforts, we intend to bring together interested researchers to build on existing theoretical conceptualizations and recent empirical groundwork collaboratively. Specifically, we aim to first introduce ideas on how to integrate time into theory building (Urte Scholz), highlight recent empirical examples from observational (Iris Maes, Christopher M Jones, Matthias B Aulbach, Dario Baretta), and an intervention study (Jennifer Inauen). Secondly, we will interactively discuss potential avenues for the improvement of current and future theories. Here, we will focus on identifying existing (implicit) assumptions, dynamic constructs and relations as well as (underspecified) underlying processes. Thirdly, we aim to then facilitate and support future collaborative work by 1) summarizing and publishing our results in the form of a commentary with all interested participants, and 2) identifying action points and leads for interested participants to work on in smaller groups.

## Sources, experiences, and support needs for perinatal stress and anxiety

Eibhlin Looney<sup>1</sup>, Catherine Houghton<sup>2</sup>, Sarah Redsell<sup>3</sup>, Karen Matvienko-Sikar<sup>1</sup>

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**Background:** Experiencing perinatal stress and anxiety from conception up to 2 years postpartum can have adverse outcomes for women and infants. The aim of this study was to examine women's perceived sources and experiences of perinatal stress, as well as their attitudes, experiences and preferences for perinatal stress and anxiety supports and services.

**Methods:** An mixed-methods cross-sectional online survey. Participants were pregnant women (n= 214) or mothers of children  $\leq 2$  years old (n= 486). Participants completed closed-ended questionnaires on sociodemographic, birth and child-related factors, and on stress, anxiety, resilience, and perceived support. In addition, participants provided responses to open-ended questions about women's experiences of stress and anxiety, as well as about supports available for stress and anxiety during pregnancy and/or postpartum. Quantitative data were analysed descriptively and using correlations. Qualitative data were analysed using thematic analysis.

**Findings:** Quantitative data indicated relationships between perinatal stress and anxiety and women's resilience, perceived social support, experiencing a high-risk pregnancy or pregnancy complications, and having a previous mental health disorder diagnosis (all  $p < 0.001$ ). Themes developed in qualitative analyses were: 'social support'; 'perceived responsibilities'; 'care for maternal health and wellbeing'; 'selfcare'; and 'access to support and information'.

**Discussion:** Stress and anxiety during pregnancy and postpartum is impacted by diverse factors related to the individual, interpersonal relationships, and perinatal health and mental health outcomes, services, and supports. Developing and implementing appropriate and acceptable interventions, in addition to improvements to service provision across the perinatal period, is essential to provide better perinatal care for women.

## **The body experience during pregnancy, childbirth, and breastfeeding, and their associations with mother-infant bonding**

Yael Benyamini<sup>1</sup>, Gal Dror<sup>1</sup>, Nitzan Avigail Kidra<sup>1</sup>

<sup>1</sup>Tel Aviv University, Israel

**Background:** The transition to parenthood involves intense somatic experiences yet little quantitative research has focused on the psychological bodily experience along the perinatal period and their relationship to mother-infant bonding. We aimed to examine the associations between the women's subjective bodily experiences during pregnancy, childbirth, and breastfeeding to mother-infant Bonding about nine months after birth.

**Methods:** Pregnant women (N = 876) recruited online filled in questionnaires during pregnancy (T1), at two months postpartum (T2), and about 9 months postpartum (T3). The questionnaires assessed the body experience during pregnancy (T1); confidence in the body's ability to give birth (T1, T3), mode of birth (ranging from cesarean section to home birth), breastfeeding (T2, T3), maternal feelings during breastfeeding, and mother-infant bonding.

**Findings:** Mode of birth and breastfeeding were unrelated to bonding. Positive bodily experiences during pregnancy, prenatal confidence in the body's ability to give birth, improvement in confidence following birth, and positive maternal feelings during breastfeeding were significantly related to bonding and explained 17% of the variance in bonding at 9m postpartum. Maternal feelings during breastfeeding mediated the effect of bodily experiences during pregnancy on bonding.

**Discussion:** Subjective, but not objective experiences (mode of delivery, breastfeeding), were related to mother-infant bonding. Societal and medical views of women's bodies often focus on women as objects, responsible for safely bearing and raising a healthy infant, thus failing to acknowledge the role of their subjective bodily experiences. Psychological support in coping with unfavorable experiences may prevent impaired mother-infant bonding, which could have long-term adverse effects.

## **A Critical Analysis of Baby Sleep Advice**

Abigail Locke<sup>1</sup>

<sup>1</sup>Keele University, United Kingdom

**Background:** How we parent can be affected by a wider range of social and cultural influences, including societal expectations of 'good mothering' practices. As such, being a new parent requires navigating through a number of decisions, many related to sleeping practices, including whether to co-sleep and whether to room with the baby. Much of the advice around sleep and parenting practices is communicated formally from professionals and health agencies in the form of published health advice. This paper sets out to examine

how constructions of desired parenting practices and 'informed choice' and 'risk management' are working throughout health advice on baby sleeping.

**Methods:** Using a critical discursive psychological analysis, the paper examines the ways in which advice around baby sleeping is constructed. Working from a critical health psychological perspective and informed by parenting culture studies, this paper performs an examination of the grey literature around baby sleep, sleeping practices and advice to new parents.

**Findings:** The analysis demonstrated how health advice to new parents around baby sleep was positioned. There was some discussion of safe baby sleeping as well as a consideration of the ways in which both parents and infants are positioned in these constructions. It was found that neoliberal discourses of 'informed decision making', 'informed choice' and 'risk management' permeated throughout much of the health advice on baby sleeping.

**Discussion:** The paper finishes with a discussion of how discourses around baby sleeping practices work alongside contemporary parenting ideologies and maintaining a 'good' mothering identity.

**Keyword:** Parenting,sleep,critical discursive psychology

## **Crossover effects of depression symptoms and sedentary behavior in mother-child dyads: A longitudinal study**

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**Background:** Theoretical models and existing research suggest a reciprocal relationship between sedentary behavior (SB) and depression symptoms, primarily focusing on within-individual associations. This study seeks to extend existing knowledge by investigating crossover effects within mother-child dyads. Understanding how SB and depression symptoms may transfer from one family member to another may provide insights into the complex interplay of familial influences on health behavior and mental health.

**Methods:** Secondary data from an intervention trial (#NCT02713438), including 176 mother-child dyads were analyzed using cross-lagged path models. Children aged 9-15 years and mothers/female legal guardian aged 29-66 years participated. Depression symptoms were assessed using the Patient Health Questionnaire-9, and SB time was measured with GT3X-BT accelerometers at three time points: Time 1 (baseline), Time 2 (8-month follow-up), and Time 3 (14-month follow-up). All participants received a complex SB education after T1.

**Findings:** Multiple significant within-individual time-lagged effects emerged. Child depression symptoms at T1 predicted increased child SB at T2. However, more depression symptoms at T2 among children predicted less child SB at T3. Furthermore, mother SB at T2 predicted fewer depression symptoms at T3 among mothers. A significant crossover indirect effect revealed that higher child depression symptoms at T1 predicted increased child SB at T2, which in turn was associated with higher depression symptoms in mothers at T3.

**Discussion:** The crossover effect of child SB on maternal mental health underscores the importance of family-centric approaches.

## Racial disparities in interpersonal pain perception: the role of attention

Dimitri Van Ryckeghem<sup>1,2</sup>

<sup>1</sup>Maastricht University, Netherlands;<sup>2</sup>Ghent University, Belgium

**Background.** Research demonstrates racial disparities in health care. However, the mechanisms underlying these health disparities are not well understood. Current study investigated differences in Black and White observer attentional processing (i.e., attentional engagement and disengagement) of pain expressed by Black and White people to further investigate underlying mechanisms of persistent racial disparities in professional pain treatment.

**Method.** Black (N = 37) and White (N = 41) observers performed a Visual Search Task showing digitally created black or white faces displaying moderate or high pain whereby participants were asked to find a target stimulus, either located on a pain-related or a non-pain related avatar face. The resulting reaction time data was used to calculate engagement and disengagement indices. Additionally, participants completed questionnaires measuring empathy, race-related pain experience beliefs, and racial threat stereotypes.

**Results.** Results indicated that pain-related stimuli generally drew participants' attention. White participants' disengagement from Black avatars' pain was significantly facilitated as compared to disengagement from pain in White avatars. Furthermore, an indication was found for enhanced attentional engagement towards Black pain faces in White observers. No effects for pain experience beliefs, threat beliefs, threat ratings, or empathy scores were found.

**Discussion.** Current findings provide further understanding of how racialized disparities could be partially explained by observers' attentional processing of others' pain. In doing so, it does provide guidance for future research and intervention initiatives to reduce racialized inequities in pain care.



## **Understanding experiences of gender diverse youth with pain: A critical step towards inclusive pain care**

Lauren Harrison<sup>1</sup>

<sup>1</sup>Stanford University School of Medicine, United States

Data show 75% of gender diverse youth report persistent discrimination and marginalization based on their gender identity. It is well documented that persistent experience of discrimination and stressors (i.e., toxic stress) contributes to poorer health outcomes, with recent work suggesting chronic pain may develop from toxic stress. Persistent exposure to toxic stressors gender diverse youth experience places them at increased risk for chronic pain—these youth remain significantly underrepresented in chronic pain research. This study aims to address this major gap by examining the experiences gender youth who live with chronic pain.

Quantitative data from youth presenting to a tertiary pain clinic were collected (including best practices for assessing gender identity; pain variables; social experiences, psychosocial functioning). Interviews with gender diverse youth (N = 20) explored their pain journey; youth's sexual orientation and gender identity, and the intersectionality of these identities and pain; and perspectives on what is needed in pain care.

Several important themes emerged related to the intersection of chronic pain and gender identity, including marginalization and discrimination leads to increased pain, lack of consideration of gender affirming actions (e.g., binding) in the context of pain care, gendered expectations in response to pain presentation, and lack of consideration of gender identity impacts pain care.

These data further our understanding of the experiences of gender diverse youth who live with chronic pain and represents a critical first step in providing equitable and inclusive chronic pain care for gender diverse youth.

## **Social support: A unique safety signal in pain-related fear and avoidance learning?**

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<sup>1</sup>Maastricht University, Netherlands;<sup>2</sup>KU Leuven, Belgium

**Background:** Recent research in the field of anxiety disorders suggests that social support figures may be a “unique” safety signals, which can inhibit fear acquisition and promote extinction learning. It is however unclear, whether social support can buffer against fear acquisition in the context of pain, and whether it can also inhibit avoidance learning. Additionally, we wanted to investigate whether social threat facilitates avoidance learning.

**Methods:** Using a robotic arm avoidance paradigm, healthy participants (n= 72) were instructed to move a ball to a target location, via one of three movement trajectories varying in pain probability and effort (in terms of distance and resistance) (T1= no effort/100% pain; moderate effort/50% pain; strong effort/0% pain). Participants could learn to avoid pain by performing more effortful arm movements. Participants were randomly assigned to one of three groups: the Social Support Group, the Social Safety Group, or the Social Threat Group. Social context was respectively manipulated by showing a picture of their supportive figure, a smiling stranger, or an angry stranger. We measured pain-expectancy, pain-related fear ratings and the maximal deviation from T1 as avoidance measure.

**Findings:** We hypothesized that (1) the Social Threat Group will avoid the most, and the Social Safety Group will avoid more than the Social Support Group, and (2) differential acquisition of pain-related fear and pain-expectancy will follow the same pattern, i.e., Social Threat > Social Safety > Social Support. Hypotheses will be tested using repeated measures ANOVAs.

**Discussion:** Clinical implications of these findings will be discussed

## **Profiles of romantic partners' responses to pain- and well-behaviors and chronic musculoskeletal pain adjustment**

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**Background:** Significant others' responses to pain and well-behaviors may help or hinder chronic pain (CP) adjustment. Most research has investigated the independent effects of specific types of supportive/ negative responses on CP adjustment, hence, ignoring their interdependence and combined effects. To bridge this gap, this study investigated: (1) profiles of romantic partners' supportive/negative responses to pain and well-behaviors; (2) profile associations with CP outcomes, and (3) whether such associations are accounted for relevant cognitive and affective processes.

**Methods:** This cross-sectional study included 117 adults with chronic musculoskeletal pain, involved in a romantic relationship. Participants filled out self-report measures of received social support for functional autonomy and dependence (ISSADI-PAIN), facilitative and negative responses to well- and pain-behaviors (SRI), CP severity and disability (BPI), stress/anxiety and depression (HADS), pain-related self-efficacy (PSEQ), worrying (PCS), expressive suppression (ERQ) and relationship satisfaction (RAS). A hierarchical cluster analysis was followed by mediation analyses.

**Findings:** Two profiles (P) were identified: P1 showed a differentiated pattern of high support for functional autonomy, moderate support for functional dependence and low negative responses (69% participants). P2 showed an undifferentiated pattern of low supportive responses and low to moderate negative responses to pain and well-behaviors (31% participants). Participants in P2 were less satisfied with their relationship and reported: (1) more expressive suppression, which accounted for higher depression; and (2) less pain-related self-efficacy, which accounted for higher pain severity, disability, depression, stress/anxiety.

**Conclusions:** Findings stress the relevance of psychosocial profiling to tailor interventions to the specific psychosocial needs of individuals with CP.

## Provider perspectives on the psychosocial impacts of lung cancer screening

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### Background

Many countries are implementing lung cancer screening (LCS) following landmark trials demonstrating the clinical effectiveness of screening for reducing lung cancer mortality. Psychosocial outcomes are a key consideration for LCS programs, ranging from harm to individuals to downstream impacts on screening participation. This project aimed to investigate provider perspectives on the psychosocial outcomes associated with LCS.

### Methods

Semi-structured interviews were conducted with (1) health professionals involved in delivering or designing LCS (including physicians, nurses, trial assistants/coordinators, and researchers), and (2) general practitioners not previously involved in LCS (as they often facilitate entry into screening). Participants were recruited internationally to include experiences across programs, jurisdictions, and policy landscapes. Data was analysed thematically.

### Findings

Twenty-seven participants were interviewed. Most (n=20) were those with experience in providing LCS. Participants were from Australia (n=10), Canada (n=3), England (n=11), Ireland (n=2) and New Zealand (n=1), with representation across six established trials/programs.

Key themes generated included: (a) anxiety and stress; (b) fatalism; (c) stigma; (d) social aspects; and (e) issues unique to the LCS-eligible population (e.g., socioeconomic pressures). Each theme was associated with psychosocial barriers to engagement or adherence (e.g., fear of cancer, wanting to avoid judgement), and key recommendations for service design.

### Discussion

Unique aspects of LCS increase risk of psychosocial harm and present barriers to engagement – particularly lung cancer fatalism and smoking stigma. Services providing LCS should consider ways to address these issues along the LCS pathway, including participant navigation, risk assessment, results communication, logistics and timing, and integration of smoking cessation.

## **Bowel cancer screening pathway in Ireland: How to improve patient colonoscopy experience?**

Alice Le Bonniec<sup>1</sup>, Caroline Walsh<sup>1</sup>, Seán Ryan<sup>1</sup>, Alan Smith<sup>1</sup>

<sup>1</sup>National Screening Service, Health Service Executive, Ireland

**Background:** In Ireland, people aged 59 to 69 are invited to participate in the bowel cancer screening programme. The screening pathway includes a home stool test and then a colonoscopy if occult blood is detected. The objective of this study was to identify improvement opportunities of the bowel screening programme pathway.

**Methods:** A real time patient-reported experience survey was used to collect feedback on the bowel cancer screening pathway (from receipt of the invitation letter, using the home stool test and completion of a colonoscopy). Participants were invited to complete the survey by text-message. One open-ended question allowed feedback on how the overall bowel screening experience could be improved. A thematic analysis was conducted on a sample of 200 responses given to this question.

**Findings:** Two main areas of improvements were identified: (1) Improving the colonoscopy preparation, in terms of the bowel preparation, the information given in advance of the procedure, and the waiting time to get a colonoscopy appointment; (2) Improving the experience of the colonoscopy procedure and follow-up, patients reporting discomfort, the lack of consideration of pain, the stress induced by long waiting time on the day of the procedure, and the lack of explanation of the results after the procedure.

**Discussion:** The capture of patient experience in real time has the potential to become a critical component of healthcare by identifying quality improvement opportunities. The results can be used to improve patients experience and to find ways of encouraging the eligible population to complete the screening tests.

## **Shared decision-making models in cancer care: Systematic review and formal representation**

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**Background:** Shared decision-making (SDM) plays an important role in patient-centered cancer care, facilitating informed treatment decisions that align with patients' preferences and values. Several theoretical models and constructs have recently been proposed for different decisions in oncology. We aim to assess the state of the art on theory development on this topic, and provide recommendations to practitioners on theory selection and development.

**Methods:** This systematic review aims to synthesize the literature on SDM models in oncology. A search was conducted using keywords relating to theoretical models, cancer, and SDM. Searches in PubMed, Embase, Web of Science, PsycINFO, CINAHL, and Cochrane yielded 4,336 unique entries, of which 123 were deemed eligible for full-text screening. Articles are deemed includable if they: (1) discuss at least two constructs relating to cancer care at any stage, (2) describe models developed for or used in oncology, (3) provide definitions of constructs and their interrelationships, and (4) consider model development among their objectives.

**Expected results:** A narrative synthesis will present key SDM-related constructs, their definitions and operationalizations, and the causal, semantic and structural relationships hypothesized among them. Data permitting, a comparison of models across different decision types will be made to identify potential variations in the SDM process along the care trajectory.

**Current stage of work:** Full text screening of articles is currently underway.

**Discussion:** Theory development in this interdisciplinary area will benefit from formal representation, which can provide insights into future steps necessary for testing and applying SDM models in clinical practice.

PROSPERO Registration: CRD42024495277

## **Advice after urgent suspected cancer referral when cancer is not found: survey of patients' preferences**

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**Background:** No standardised approach exists to provide advice after urgent suspected cancer (USC) referral when cancer is not found. This study aimed to assess preferences and acceptability of receiving advice after USC referral related to: 1) managing ongoing symptoms, 2) responding to early symptoms of other cancers, 3) cancer screening, 4) reducing the risk of future cancer.

**Methods:** 2,541 patients from two UK NHS Trusts were mailed a survey 1-3 months after having no cancer found following urgent suspected gastrointestinal or head/neck cancer referral. Participants were asked about: willingness to receive advice; prospective acceptability; preferences related to mode, timing and who should provide advice; and previous advice receipt.

**Findings:** 406 patients responded (16.0%) with 397 in the final analyses. Few participants had previously received advice, yet most were willing to. Willingness varied by type of advice: fewer were willing to receive advice about early symptoms of other cancers (88.9%) than advice related to ongoing symptoms (94.3%). Acceptability was relatively high for all advice types. Reducing the risk of future cancer advice was more acceptable. Acceptability was lower in those from ethnic minority groups, and with lower levels of education. Most participants preferred to receive advice from a doctor; with results or soon after; either face to face or via the telephone.

**Discussion:** There is a potential unmet need for advice after USC referral when no cancer is found. Equitable intervention design should focus on increasing acceptability for people from ethnic minority groups and those with lower levels of education.

## **Move to Improve: Co-designing a hospital-based physical activity program for children with chronic health conditions**

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Physical activity (PA) is shown to have benefits for physical and mental health in children with chronic health conditions (CHCs). However, it can be very difficult for children living with CHCs to engage in PA. Move to Improve is an ongoing hospital-based research project that aims to provide evidence on how to best incorporate PA into routine clinical care for children with CHCs. Semi-structured interviews were conducted with 34 participants (parents and children) across four CHCs (Type 1 Diabetes, Cancer, Burns, Cerebral Palsy) to understand their experiences with PA and explore barriers and facilitators to PA participation for children with CHCs. Interviews were audio recorded, transcribed verbatim, and thematically analysed to identify key themes. Four key themes were identified – 'fostering psychological safety', 'empowering families towards physical activity', 'supporting goal achievement', and 'providing tailored physical activity support'. These themes highlighted that, when engaging in PA, it is important for families to feel a sense of community and agency within a specific PA context. Incorporating appropriate goal setting strategies may be helpful in navigating challenges to partaking in PA. Families also highlighted a need for a tailored approach within clinical settings, focused on providing specific advice to cater to each child's/family's unique physical activity goals, needs, and concerns. The findings contribute to an understanding of how PA can be incorporated into routine clinical care for children with CHCs in a manner that can foster physical and mental health benefits and is acceptable, feasible, and sustainable in the long run.



## **Optimising general practitioners' obesity-related clinical practices: from insight to intervention**

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### **Introduction**

Obesity poses a significant challenge to general practitioners (GPs), who reportedly feel insufficiently equipped to manage it. Understanding the key factors shaping GPs' current clinical practices is crucial for improving obesity management. This study utilized the Theoretical Domains Framework (TDF) and the Behaviour Change Wheel (BCW) to identify and target the instrumental goals and contextual influences shaping GPs current obesity-related clinical practices. We aimed to gain novel insights into their perspectives and pinpoint specific determinants to target for future interventions promoting best practices in obesity care.

### **Methods**

Semi-structured interviews were conducted with ten GPs. Data were analysed using abductive thematic analysis underpinned by the theoretical domains framework. Findings were mapped onto the BCW and the behaviour change taxonomy (BCT) to identify potential intervention strategies to drive best practice in obesity care.

### **Findings**

The findings highlight the need for interventions to target multiple influences on current clinical practices including, knowledge, skills, environmental context and resources.

### **Discussion**

The combined TDF and the BCW approach offers a comprehensive framework to evaluate factors influencing GPs' obesity-related practices to theoretically inform future intervention development. Future interventions should focus on targeting key determinants of behaviour by leveraging intervention functions such as education, training, environmental restructuring and enablement. To encourage the adoption and implementation of future interventions, it is essential that they are co-developed with general practitioners to ensure that they are suitable to support GPs' in delivering quality care to patients with obesity.

## **Design preferences for diabetes audit and feedback in general practice: a qualitative study**

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**Background:** Audit and feedback (A&F) is a popular and effective strategy used to optimise the delivery of diabetes care. There is increasing interest in how to design A&F to maximise its effects. End-users are considered central to this design process. Our aim is to understand general practice staffs' experiences of diabetes A&F in Ireland and elicit preferences for enhanced feedback delivery.

**Methods:** A qualitative descriptive study is being conducted in practices enrolled in the Diabetes in General Practice (DiGP) initiative (n=86 practices). The initiative provides education, peer support and diabetes audit and feedback to enrolled practices. Doctors, nurses and practice managers were purposefully sampled based on length of involvement in DiGP and the deprivation index of their area. Semi-structured interviews are being conducted. A directed qualitative content analysis will be conducted using the Clinical Performance Feedback Intervention Theory for the design, implementation and evaluation of feedback in healthcare settings.

**Expected results:** To date, eight interviews have been conducted with six doctors and three nurses. Study findings will offer insights into practice staffs' perspectives on the current diabetes A&F processes and preferences for the design and delivery of A&F.

**Current stage of work:** Data collection and analysis are underway.

**Discussion:** Study findings will be used to optimise A&F delivery within DiGP through co-design workshops. The findings will also further our understanding of preferences for A&F in primary care and inform the design of future A&F interventions to ensure feasibility, acceptability and sustainability in practice.

## Using Artificial Intelligence across the research ecosystem, from gap-finding to application of study findings

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### Background:

The research ecosystem involves identifying research topics, planning studies on those topics, reporting and synthesising evidence from those studies, building models and theories, and developing interventions that can in turn form the topics for study. All of these activities can be enhanced using Artificial Intelligence and Machine Learning (AI/ML). This presentation will examine ways in which AI/ML has been used in the behavioural science ecosystem, evaluate how successful this has been, and make proposals for how it can be used more effectively.

### Methods:

A systematic review was conducted of the use of AI and ML in behavioural and social sciences, and an evaluation undertaken of the successes and limitations of these technologies.

### Findings:

AI/ML has involved: 1) ontologies as a basis for structuring evidence and theories, 2) natural language processing for automated extraction of information from documents, 3) generative AI for obtaining impressionistic summaries of research evidence, 4) ML for study finding and evidence gap mapping, and 5) ML for quantitative prediction on outcomes in novel intervention scenarios. AI/ML has led to substantial enhancements in many of these research activities but there are considerable risks in overreliance on AI/ML, and unduly credulous acceptance of its outputs.

### Discussion:

The prospect of a massively enhanced research ecosystem through AI/ML is on the horizon but it requires a deep understanding of what AI/ML approaches are appropriate for what tasks, widespread buy-in from key stakeholders, robust procedures to detect and address biases, and human-in-the-loop functionality for creative and critical thinking.

## **Development and evaluation of the COntextualised and Personalised Physical activity and Exercise Recommendations (COPPER) Ontology**

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Providing personalized recommendations for action- and coping plans can decrease user-burden and increase plan quality in planning-based physical activity interventions. Existing approaches usually rely on untransparent algorithms, or provide one-size-fits-all solutions. Ontology-based decision support is a promising avenue, as it allows for a more transparent and controlled way to personalize recommendations.

Ontology specification was carried out using literature research, requirement analysis using use case scenario's, and decision-tree workshops. Conceptualisation combined input from existing conceptualisations, end-users, domain experts and data sets to create lists of concepts, labels, definitions, properties and relationships. Logic rules were created during ontology formalization, and the entire ontology was translated into Web Ontology Language using Protégé. Structural consistency and logic reasoning were evaluated. The process was evaluated using the OBO Principles. Resulting recommendations were evaluated using use cases and competency questions.

The resulting ontology consists of an upper-level ontology, and subontologies for profile, planning, activity, context, barrier, and coping strategy. Development followed OBO ontology design principles. The ontology was logically and structurally consistent, and resulting recommendations answered to the competency questions.

The resulting ontology is the first physical activity ontology that (1) uses OBO design principles, including being openly available, (2) includes profile and context information and (3) also maps knowledge regarding coping planning. It can be used as the base of decision-support systems for action and coping planning regarding physical activity in primary prevention in Western-European adults, and is easily adaptable to other target groups. Challenges and opportunities of ontologies in health promotion are discussed.

## Specifying and integrating behaviour change theories

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**Background:** Theories are helpful ways of summarising what we know and accumulating knowledge about a topic. However, in health psychology and behaviour change research more generally, there are a plethora of theories, many overlapping and most underspecified. This makes their use problematic for efficiently advancing health psychology, and for non-psychologists to use in their work. Ontologies provide a 'common language' which enables the possibility of comparing and synthesising theories, using computer science.

**Methods:** 87 theories of behaviour change have been represented in precise, ontological terms, with every construct and relationship in the theory mapped to unique identifiers. This enables researchers, and computers, to identify which constructs refer to the same or different things and how different theories intersect around the same construct. Using this 'ontological behavioural modelling system', we are developing a method using machine learning to group related theories together and identify common, repeated themes across them.

**Findings:** Our method will reveal overlaps among theories of behaviour change and provide an interactive online knowledge map of the domain, combining the 87 original theories in a way that can be explored through their common constructs.

**Discussion:** The integration of theories on a particular topic reveals the key entities and relationships that occur across theories of behaviour change, across different topics, countries and epochs. A few, integrated theories will enable greater focus for generating testable hypotheses that can advance both empirical knowledge and theoretical understanding in health psychology.

## **Developing an ontology of mental health to support evidence synthesis across living systematic reviews**

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**Background:** Research about mental health often progresses slowly, with researchers working in silos and using inconsistent language to report their findings. Therefore, the Global Alliance for Living Evidence on aNxiety, depressiOn and pSychosis (GALENOS) Project aims to generate more efficient and up-to-date knowledge through a series of living systematic reviews about anxiety, depression and psychosis. An ontology (representational framework) of mental health can support evidence synthesis across different reviews. We aimed to develop a Global Mental Health Ontology (GMHO) with clearly labelled and defined entities to synthesise evidence about mental health.

**Method:** The GMHO's initial version has been developed by defining the ontology's scope and identifying entities by drawing on GALENOS Project's first three systematic reviews. Based on the reviews' search terms and extraction sheets, we searched for and reused entities from existing ontologies or developed new entities. Entities were hierarchically structured and refined based on the systematic review teams' feedback.

**Results:** The GMHO's scope includes human mental health interventions, their delivery, settings and target populations, mechanisms, outcomes and research methods. Based on 136 search terms and 180 categories in reviews' extraction sheets, the initial ontology had 331 entities organised onto five levels. Examples of entities include 'depression diagnosis', 'psychosis experience' and 'psychiatric facility'.

**Discussion:** The GMHO provides a formal way of representing entities within the mental health domain, which can facilitate more precise communication and evidence synthesis in the GALENOS Project and beyond. The ontology will be refined through the next iteration of GALENOS Project reviews and stakeholder feedback.

## **Silent tsunami or slow-boiling lobster? Metaphor use in public health risk communication about antimicrobial resistance**

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Effective risk communication is paramount to addressing the global threat of antimicrobial resistance (AMR). A key prerequisite to successful communication is the use of appropriate language. Metaphors can be effective for framing communication and making abstract topics accessible to lay populations, but little is known about the use of metaphors in the context of AMR. This presentation aims to review the use of metaphors in public discourse about AMR.

Findings will be presented from a (1) systematic literature review of AMR metaphor use in academic and grey literature including media coverage and (2) interviews with members of the general public regarding their perceptions of existing metaphors. Both the review and qualitative research are work in progress; an initial scoping search and pilot interviews have been conducted. The presentation will quantify previous metaphor use pertaining to antibiotics and AMR and discuss public perceptions of their respective effectiveness.

Preliminary results suggest that metaphor use in AMR risk messages has been inconsistent and haphazard. At least 15 different metaphors have previously been used; most pertain to warfare (e.g. 'arms race against microbes'), natural catastrophes (e.g. 'silent tsunami') and apocalyptic scenarios (e.g. 'post-antibiotic apocalypse'). No existing metaphors have been scientifically evaluated and interview findings suggest that lay people perceive these metaphors to be confusing and fatalistic.

The talk will conclude by discussing implications for health psychology research, including the need for scientific metaphor evaluations and potential approaches towards developing new, effective metaphors that could shape public AMR discourse and promote a sustainable antibiotic future.

# Should We Stop Referring to the Pandemic of Antimicrobial Resistance as Silent?

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**Background:** Referring to the ongoing antimicrobial resistance crisis as a “silent” pandemic has gained popularity, but there are mixed views on whether such a phrase should be used in public health communication. Some researchers have argued that using the term “silent pandemic” may lower the perceived threat and hinder mobilisation efforts to tackle the problem. I investigated the impact of the phrase “silent pandemic” on perceived threat levels and mobilisation intentions.

**Methods:** In three experiments (N = 1,677), participants from the UK's general adult population were randomly allocated to either a “pandemic” or “silent pandemic” condition where the different terms were embedded in statements (Experiment 1) or brief information materials (Experiment 2 & 3). The term “silent pandemic” was also presented with a brief description of its intended meaning (Experiment 3). The participants expressed their perception of the threat and their mobilisation intentions.

**Findings:** In Experiments 1 and 2, referring to the pandemic as silent did not significantly affect the perceived threat (Cohen's  $d = -0.06$ ; Cohen's  $d = 0.08$ , respectively) or mobilisation intentions (Cohen's  $d = -0.07$ ; Cohen's  $d = 0.11$ , respectively). However, in Experiment 3, the term “silent pandemic” decreased the perceived threat and mobilisation intentions (Cohen's  $d = 0.27$ ; Cohen's  $d = 0.35$ , respectively).

**Discussion:** Describing the pandemic as “silent” yielded no measurable effects on perceived threat and mobilisation intentions but it showed depreciating effects when accompanied by its intended meaning. Taken together, it is advisable to avoid the term.



## Are point-of-care tests the answer to antibiotics over-prescribing?

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**Background:** Point-of-Care tests (POCTs) are often presented as the solution to antibiotics overprescribing. C-Reactive Protein (CRP) is a POCT used widely in Europe but not in the UK. We conducted an experiment to investigate Norway-UK differences in the use and impact of CRP on prescribing.

**Methods:** 100 GPs from each country participated in an online experiment, where they responded to 4 vignettes of patients with infectious or inflammatory conditions. Per GP, we randomly assigned the CRP value to be high in two vignettes and low in the other two. GPs could request information from a pool of 5-8 items, including CRP. Each time new information was revealed, GPs indicated whether antibiotics and/or hospitalisation were needed (7-point Likert scales). When ready, they selected a management option from a list.

**Findings:** Norwegian GPs requested CRP more often than UK GPs (78% vs. 28%, OR=19.88 [10.61, 37.26]) and earlier (M=3rd vs. 4th,  $b=-0.89$  [-1.30, -0.48]). High CRP values increased the odds of prescribing (OR=1.72 [1.05, 2.83]), unless hospitalisation was deemed necessary, but low CRP values did not reduce prescribing odds. Perceived need for antibiotics at the start of a vignette predicted both perceived need for antibiotics at the end ( $b=0.88$  [0.83, 0.94]) and prescribing decisions (OR=2.67 [2.23, 3.21]).

**Discussion:** Despite differences in CRP requests between the two countries, we detected no differences in prescribing decisions. A high CRP increased prescribing odds, whereas a low CRP was not reassuring enough to reduce them. Thus, POCTs may not be the answer to over-prescribing of antimicrobials.

## Using a decision aid to facilitate prudent antibiotic use after a delayed prescription

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**Background:** The global health challenge of antimicrobial resistance is driven by, among other things, the overprescription of antibiotics in primary care. Delayed antibiotic prescriptions allowing to monitor symptom progression have been proposed as a possible intervention. However, the effectiveness of this strategy is compromised by many patients who take antibiotics immediately upon receiving a delayed prescription.

**Methods:** We tested whether a decision aid leaflet developed by the World Health Organization facilitates reduced antibiotic use when facing a viral infection in a delayed prescription task with behavior-contingent incentives. We conducted a preregistered online experiment involving 663 adult participants from the United Kingdom. Participants were randomly assigned to one of five experimental conditions: leaflet vs. leaflet with value integration vs. leaflet with active monitoring vs. leaflet with value integration and active monitoring vs. control condition with no decision aid.

**Findings:** Our results revealed that all four treatment conditions significantly decreased antibiotic use in comparison to the control condition,  $F(1,661) = 10.43$ ,  $p = .001$ . Additionally, receiving a decision aid was associated with less decisional conflict,  $F(1,661) = 12.47$ ,  $p < .001$ , and improved clarity regarding the values underlying the decision process,  $F(1,661) = 7.55$ ,  $p = .006$ .

**Discussion:** These findings highlight the potential of decision aids to improve the prudent use of antibiotics: Decision aids can contribute to a more informed and responsible approach to antibiotic use by providing relevant information and tools.

## Motivational interviewing and behaviour change techniques in veterinary medicine

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**Introduction:** Farm advisors provide advice and support to farmers, to help them change their on-farm behaviours, including antimicrobial use (AMU). Despite their role as change agents, little formal behaviour change training exists within advisory curricula. This study aims to take a novel approach and adapt a behaviour change programme delivered to health practitioners to the advisory setting and evaluate its efficacy.

**Methods:** A mixed-methods case study was conducted. The programme was adapted from the 'MAP of Health Behaviour Change Learning Programme' (MAP) developed by NHS Education for Scotland. Eight advisors completed the programme delivered by health psychologists, which involved an online module and in-person workshop about the principles of motivational interviewing and behaviour change techniques. Quantitative questionnaire data, including perceived knowledge and confidence, was descriptively analysed. Qualitative data including surveys, logs and focus group/interview data was thematically analysed.

**Findings:** Descriptive analysis found advisors scored highly in perceived knowledge (mean: 5.5) and confidence (mean: 5.5) post-training (measured on 6-point Likert scale). Thematic analysis determined three themes: valuable activities, takeaways, and programme evolution. Advisors valued open discussions and role-playing activities. A key takeaway was how to structure conversations about change; firstly, identifying a person's stage of change, then providing tailored support. Further training on building motivation was deemed beneficial.

**Discussion:** MAP was shown to be an effective training programme with applications in agriculture. This study offers insights for those involved in advisory education, on ways of enhancing the skills of advisors to support farmers to change their on-farm behaviours, including AMU behaviours.

## **Student experiences of health psychology in the US (STEP-US): A mixed methods study**

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### **Background:**

In 2018, a survey completed by EHPS national delegates highlighted variability in training, and a lack of a clear definition of health psychology across represented countries. The Student Experiences of health Psychology in the US (STEP-US) study builds on this work by exploring health psychology training in the US. The STEP-US study aims to explore understanding of health psychology, training and career supports, and diversity within US Health Psychology doctoral training programmes through a mixed methods study.

### **Methods:**

The STEP-US project combines an online survey of current US health psychology doctoral students with qualitative interviews with key informants who have played a key role in the development of health psychology training in the US.

Descriptive statistics from the surveys describe both programme characteristics and demographics of doctoral students. Interviews have been recorded and transcribed with identifying information removed and will be analysed using thematic analysis. The themes will be combined with the programme characteristics and student demographics to provide an overview of US health psychology training from the perspectives of both established health psychologists and current students.

### **Expected results:**

Forty two doctoral students from 11 universities completed the online survey, and four interviews were conducted with key informants.

### **Current stage of work:**

Data collection is complete and analysis is on-going.

### **Discussion:**

STEP-US project findings will contribute to the discussion of developing international training standards for health psychology and suggest recommendations to support students from a diversity of backgrounds in training as health psychologists.

## **Hope and dynamics in couples faced with their child's cancer: a dyadic phenomenological interpretative analysis**

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**Background.** The onset of childhood cancer leads to changes in the functioning of the parental couple. The interactions and interdependencies between partners affect their individual and dyadic adjustment. In particular, hope enables parents to cope with difficulties and alleviates their distress. The aim of this study is to understand how both partners experience their relationship dynamics and hope within the couple.

**Method.** This is a qualitative study of 7 couples with a child with cancer in remission, in which each parent is interviewed separately. The semi-structured interviews were subjected to interpretative phenomenological analysis.

**Results.** Three themes revealed the experience of couples faced with their child's cancer. "Captain and Mate" explores the gendered and hierarchical division of roles as a crew fighting the threat of cancer. "The Emotional Compass" shows how emotions guide each partner in meeting their own and their partner's needs for emotional expression. "Hope, between lighthouse and trap in the face of uncertainty" reflects the complexity and variety of ways in which hope and forms of hope are expressed, perceived as a resource, often precious, sometimes to be avoided, and transferred from one parent to the other.

**Discussion.** These findings highlight the need to pay particular attention to the interaction of emotional needs and the dynamics of hope within parental dyads in order to optimise the care of couples faced with their child's cancer.

## Parental profiles of fear of hypoglycemia and their associations of digital health technology use

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While caring for type 1 diabetes, parents face unique stress factors that cause anxiety-like symptoms. We examine whether parents who show more positive technology attitude and use modern devices (CGM, insulin pump) score lower levels of these anxiety-like symptoms. 403 parents of children with type 1 diabetes aged 5-14 years were included in the study, mean age of respondents was 41.5 years (SD=5.7), mean age of children with diabetes was 9.73 years (SD=2.71). We used the following measures: Fear of hypoglycemia (HFS-P), Diabetes Distress (P-PAID-C), Diabetes-Specific Attitudes about Technology Use (DSAT). We created parental profiles of fear of hypoglycemia using LPA. Five groups emerged from the analysis (AIC: 2771; BIC: 2906; Entropy: 0.84;  $p < .01$ ): inactives, worriers, balanced, confident, over-insurers. There were significant differences between some of the groups considering the age of child living with diabetes ( $F(4) = 2.94, p = .023$ ), child independency in diabetes management ( $F(4) = 2.5, p = .045$ ), diabetes distress ( $F(4) = 17.2, p \leq .001$ ), and self-efficacy ( $F(4) = 3.54, p = .009$ ). There were no significant differences between groups considering the method of insulin insertion ( $\chi^2(4) = 3.42, p = .169$ ), blood glucose monitoring ( $\chi^2(8) = 13.5, p = .49$ ). The role of attitudes towards diabetes technology is not significant for the extent of fear of hypoglycemia experienced by parents. Emotion regulation and creating a sense of control seems to be more important for the reduction of the anxiety-like symptoms related to T1D management than technology uptake and positive technology attitudes.

## **Caring for unsettled babies: qualitative studies exploring UK parent and primary care nurse perspectives**

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**Background:** Parents commonly report unsettled baby behaviours (e.g., excessive crying, vomiting), and often find this distressing. Baby behaviours can be mislabelled as milk allergy or reflux, which can lead to feeding changes (early breastfeeding cessation, dietary exclusion), and inappropriate specialist formula milk/reflux medications, linked to tooth decay/obesity and significant cost.

We aimed to explore: (1) experiences of help-seeking for unsettled babies amongst parents; (2) experiences of supporting families amongst health visiting teams, who support children aged 0-5 in the UK.

**Methods:** Two semi-structured remote qualitative interview studies. Participants were parents of unsettled babies, or Health Visitors (HVs)/community health nurses (CHNs). Both studies recruited via social media and HV teams, and purposively sampled diverse characteristics. Interviews were recorded/transcribed. Data were handled in NVivo and analysed with reflexive thematic analysis.

**Findings:** Four themes were developed from 25 parent interviews: 'the need for answers' for uncertainties and emotional distress; 'importance of health professionals' and 'health professional support', including perceptions of sub-optimal access/communication and mixed advice; 'foundations to help-seeking' highlighted roles of peer and online support.

Four preliminary themes developed from 17 HV and 3 CHN interviews: 'building a picture' involved assessing symptoms, perceptions of 4th trimester behaviour, uncertainties about underlying causes; 'treatment pathways' described HV roles of reassurance/signposting, and liaising with prescribers; 'HV service delivery' described negative impacts of capacity/funding, support/training and relationships with GPs, and 'perceptions of parents' sense-making'.

**Discussion:** More support/access to reliable information is needed for parents and HVs to create shared understanding. Development of self-management/informational resources could facilitate this.

## Long-term effects of discrimination on adolescent well-being and health behaviors

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**Background:** Social differences in health behaviors contribute to health inequalities. This study investigates the long-term effects of discrimination on adolescent well-being and the mediating role of protective and risky health behaviors, addressing a significant gap in current research primarily focusing on risk behaviors.

**Methods:** Utilizing data from 7,609 adolescents in the CILS4EU study, a multinational panel over three years, this research employed structural equation modeling to explore the prospective relationships between discrimination, well-being, and health behaviors. The average age at the first measurement was 15 years.

**Findings:** Preliminary findings revealed significant associations between discrimination and decreased protective health behaviors, namely physical activity, eating behavior, sleep ( $\beta$ s = -.05 to -.03,  $p$ s < .003), and increased risky health behaviors, namely substance consumption, one year later ( $\beta$  = .02,  $p$  = .004), and decreased well-being two years later ( $\beta$  = -.05,  $p$  < .001). Physical activity (indirect effect:  $\beta$  = -.001,  $p$  = .040) and eating behavior (indirect effect:  $\beta$  = -.002,  $p$  = .008) mediated the relationship between discrimination and well-being, while no mediating effects were found for sleep and substance consumption ( $p$ s > .657).

**Discussion:** The findings underscore the need to consider health behaviors when examining how discrimination impacts well-being. The adverse impact of discrimination on health behaviors during adolescence, a critical period for establishing lifelong health habits, is particularly concerning. The modifiable nature of health behaviors presents vital avenues for targeted intervention and prevention strategies, which can significantly contribute to reducing health inequalities long-term.



## **Institutional verbal violence and ethnic discrimination in an immigrant sample in Germany**

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**Background:** Immigrants are exposed to a variety of stressors and therefore experience a higher risk of developing adverse health outcomes. However, the role of potentially protective factors is scarcely researched. The present study addresses the question how discrimination and institutional verbal violence (IVV) are associated with chronic stress in an immigrant sample in Germany. The moderating effects of self-compassion and citizenship status are highlighted.

**Methods:** Participants (n = 232; 69.4 % female) completed an online survey, which included demographics, questionnaires on discrimination, chronic stress, self-compassion and a self-developed questionnaire on IVV. Only participants with migration history were included. Citizenship status was categorised into temporary and permanent residence status, and German/European Union citizenship status.

**Results:** Regression analyses showed that perceived discrimination and IVV were highly associated with chronic stress ( $F(2,229) = 11.49$ ;  $p < .001$ ;  $\Delta R^2 = .08$ ). Further, self-compassion buffered the connection between discrimination and stress ( $F(3,216) = 4.39$ ,  $p < .04$ ;  $\Delta R^2 = .01$ ). Moderation analyses revealed significant simple effects between IVV, ethnic discrimination and chronic stress for the temporary (IVV:  $b = 0.52$ ,  $SE = .24$ ,  $p = .033$ ; discrimination:  $b = 1.19$ ,  $SE = .59$ ,  $p = .047$ ) and the permanent residency group (IVV:  $b = 0.42$ ,  $SE = .15$ ,  $p = .006$ ; discrimination:  $b = 1.18$ ,  $SE = .42$ ,  $p = .005$ ).

**Findings:** These findings underscore the importance of considering not only psychological but also societal factors, as they may be differentially associated with immigrants' stress perceptions and should be taken into account in future interventions.

## **Are women with heart failure left behind? Gender disparities in left ventricular assist device therapy**

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**Background:** About 40% of patients with advanced heart failure are women. Yet data suggest that women are underrepresented in treatments, such as heart transplants and left ventricular assist devices (LVADs). This analysis aims to examine gender disparity in LVAD implant process in Europe and the US.

**Methods:** Patient data from the European Registry for Patients with Mechanical Circulatory Support (EUROMACS, n=2,395) and the Interagency Registry for Mechanically Assisted Circulatory Support (INTERMACS, n=20,123) were analyzed, comparing pre-implant characteristics between women and men. Furthermore, event-specific Cox proportional hazard models were run to evaluate the role of gender differences in pre-implant psychosocial risk to rehospitalizations post-implant in INTERMACS. Psychosocial risk (yes vs no) included, e.g., substance abuse and severe depression.

**Findings:** Not only were women underrepresented in both registries (EUROMACS: 16,8%; INTERMACS: 21.3%), they also had more incomplete medical and psychosocial risk data when compared to their male counterparts in EUROMACS. Regarding post LVAD complications, more women required rehospitalizations than men (72.1% vs 68.9%,  $p < .002$ ). There was also some evidence that preimplant psychosocial risk was associated with increased rehospitalizations in women, but not in men [HRadj 1.15, 95% CI (1.02-1.29) vs HRadj 1.03, 95% CI (0.97-1.10), interaction  $p = .02$ ], controlled for age and medical characteristics.

**Discussion:** These findings suggest a disadvantage for women in LVAD access and assessment of their medical and psychosocial characteristics. Women's increased risk for post-LVAD rehospitalization, especially for those with elevated psychosocial risk, underscores the need to reevaluate healthcare practices, possibly considering gender-specific prevention and intervention strategies in advanced HF.

## Quantitative methods to understand disadvantage in health research – Breast cancer screening attendance in Germany

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**Background:** Organized breast cancer screening (BCS) programs are effective measures among women aged 50-69 for preventing the fifth cause of death in Germany. However, in 2021, 11% self-reported having never attended BCS. To date, it is unclear which sociodemographic factors and potential interactions are associated with never-attendance.

**Methods:** Women aged 50-69 (N=3,644) were drawn from the German 2020 European Health interview Survey. Applying an intersectional lens and sociodemographic variables (PROGRESS-Plus framework), we identified intersectional groups using cross-categorical regression analysis, decision trees followed by cross-categorical regression analysis, and predictive ensemble algorithms.

**Findings:** Using cross-categorical regression, we found that low-income women born in Germany had 2.09 higher odds ( $p=0.030$ ) of never attending BCS than high-income women not born in Germany. A Conditional Inference Tree (CIT) (68.15% sensitivity) identified 7 relevant intersectional groups characterized by unique combinations of family status, perceived social support, household income, experienced physical limitation, and region, with the highest odds of 4.80 ( $p<0.001$ ) of not attending BCS. Finally, Conditional Random Forest (CRF) identified the most predictive variables for BCS attendance (ordered): region, perceived social support, educational level, degree of urbanization, family status, and experienced physical limitation.

**Discussion:** Using explorative methods to model intersectional intersections in health care disparities, allows the identification of subgroups of women at higher risk of never attending BCS. This approach suggests the potential for diverse psychosocial factors influencing these groups, offering valuable insights for developing targeted cancer prevention interventions.

## Human-centered design, stigmatized health attitudes, and health ownership

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**Background:** Despite the evidence-based health interventions, we face a growing health disparity. For some these interventions work well, increasing their self-management and health. Whereas for other groups, typically those with a low SEP, it does not. This results in lagging behind in health and self-management, and makes them susceptible for stigmatization by themselves, by healthier groups, and by healthcare providers.

**Methods:** In a series of human-centered design projects, involving participatory action research and research-through-design methods, we studied why evidence-based interventions do not work for everyone.

**Findings:** A major cause is a difference in health attitude, influencing a person's stigmatization risks and the relationship towards healthcare, towards own health, as well as uptake of interventions. We found that storytelling design in interventions can serve as a means to break stigmatization.

**Discussion:** In a follow-up project we link both health attitudes and stigmatization effects to health ownership. It seems that the individual experience of health ownership is decreased by market-driven care systems that turn health into an objective product. As a consequence, the self-responsibility of individuals towards their health can decrease, making people vulnerable for self-stigmatization. We will discuss how and to what extent health ownership can be increased and if this may lead to a decreased stigmatization and an increased positive attitude towards healthcare and self-management.

## Measuring the relationship between stress and health behavior daily life: A systematic review

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**Background:** Stress has been linked to adverse health outcomes via multiple pathways including health behavior. Increasingly, the stress-health behavior relationship is investigated using ecological momentary assessment. However, it is uncertain how and on what timescale to measure stress and health behavior to reliably find this relationship. We aim to create an overview of the methods investigating stress and health behavior in daily life and to synthesize the findings.

**Methods:** In this systematic review we included studies investigating stress and health behavior (eating behavior, physical activity, smoking, alcohol use) in daily life. The search strategy consisted of three main concepts: 1) stress, 2) health behaviors, and 3) study design (e.g., ambulatory assessment). Three databases were searched (PsycINFO, PubMed, Web of Science) in May 2023. This identified 2023 unique studies that were screened by three independent reviewers. The review was preregistered on PROSPERO.

**Results:** 260 peer-reviewed articles met the inclusion criteria. There was considerable variability in the stress measures, with 245 studies employing self-report measures, 28 physiological stress measures, and 1 other method. Regarding health behaviors, 87 studies investigated the relationship with eating behavior, 92 with physical activity, 61 with smoking, and 81 with alcohol use. The synthesis of these findings is in progress.

**Discussion:** There is large heterogeneity in how stress and health behavior have been operationalized in existing research on the impact of stress on health behaviors. Recommendations will be derived to inform future studies aiming to further investigate this association in daily life.

## Loneliness, health and wellbeing: Investigating the role of sleep and stress

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**Background:** Loneliness is an important yet neglected social determinant of mental and physical health. One of the key mechanisms linking loneliness to negative health outcomes is sleep disturbance. However, the precise mechanisms linking loneliness to sleep disturbance are unclear. Using a 7-day daily diary design, the current study aimed to investigate the effects of loneliness on daily sleep outcomes, perceived stress, daily hassles and uplifts and whether the effects of loneliness on sleep outcomes were mediated through these stress-related variables (and vice versa).

**Methods:** Participants (N=182) completed the UCLA Loneliness Scale before a 7-day online diary twice per day. Measures of daily stress, hassles and uplifts were completed before bed and sleep outcomes the following day.

**Findings:** Multi-level modelling (based on 2,359 observations) found that higher levels of loneliness were associated with poorer sleep quality, greater pre-sleep arousal, morning tiredness, less total hours slept, and higher levels of daily perceived stress and hassles and lower number of daily uplifts. Loneliness was found also to have bidirectional, indirect effects on sleep quality, pre-sleep arousal and morning tiredness through prior-day daily stress and hassles.

**Discussion:** The current findings suggest that interventions aimed at mitigating the effects of loneliness should also incorporate components that target modifiable risk factors such as sleep and stress, as well as approaches that enhance social connectedness.

## Temporal associations between nurses' health behaviours, stress and fatigue: the NurseLIFE study

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**Background:** Nurses report difficulties in maintaining a healthy body weight. Working patterns, stress and fatigue may contribute to these difficulties. The NurseLIFE study aimed to identify when and where nurses most frequently engage in behaviours associated with weight gain and to test whether temporal patterns in these behaviours are associated with stress and fatigue.

**Methods:** Nurses (n=634) retrospectively reported stress, fatigue, consumption of high fat/sugar (HFS) foods, snacking and sedentary behaviour during different periods of the previous working week (day shifts, night shifts, after work, days off). Data were descriptively summarised and multilevel logistic regression was used in a subset of n=184 nurses to assess within and between person associations between stress, fatigue and health behaviours.

**Findings:** Consumption of HFS foods and snacking were most common during night shifts and were positively associated with both within (fat/sugar OR=1.425, p = .019; snacking OR=1.889, p < .001) and between (fat/sugar OR=2.611, p < .001; snacking OR=2.254, p < .001) person increases in stress. Only the within-person effect of stress on snacking remained significant after fatigue was added to the models. Sedentary behaviour was most common after finishing shifts and during days after night shifts and was associated with significant within (OR=2.033, p < .001) and between (OR=3.062, p = .001) person increases in fatigue but not stress (p>.05)

**Discussion:** Engagement in behaviours associated with weight gain varies markedly over different periods of the working week and appears to be more strongly associated with changes in fatigue than stress.

## Affective reactivity to everyday stressors: testing health behaviour moderation hypotheses

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**Background:** Exaggerated stress reactivity is associated with poorer future health outcomes. Various theories suggest some health behaviours may reduce affective reactivity (AR); however, little is known about this in everyday life within short timespans. The current study aims to explore whether AR is buffered by recent health behaviour.

**Methods:** Using existing data from two ecological momentary assessment studies (Study1:  $n=75$ ,  $k=16$  assessments; Study2:  $n=76$ ,  $k=24$ ) multilevel models were used to examine self-reported health behaviours (Study1: physical activity, fruit and veg intake; Study2: physical activity, sleep) as moderators of AR. AR was operationalised as the fixed effect regression slope reflecting real-time distress as a function of recent (1-2 hours) within-person stressor exposure variability.

**Results:** AR was evident in both studies (Study1:  $\gamma = 0.389$ ,  $p < .001$ ; Study2:  $\gamma = 0.470$ ,  $p < .001$ ) with significant effect variance between people (Study1:  $\sigma^2 = 0.041$ ,  $p = .008$ ; Study2:  $\sigma^2 = 0.064$ ,  $p < .001$ ). No statistically significant within- or between-person effects of recent fruit and veg intake, nor physical activity, were evident. On days with 7-9 hrs sleep, AR was substantially reduced ( $\gamma = -0.142$ ,  $p = .020$ ).

**Discussion:** AR is robustly observed in everyday life after recent stressor exposure, with significant variation between individuals. Whilst sleeping 7-9 hrs seems to reduce AR the following day, replication in a larger sample is over longer periods with more-objective assessment is needed. Other health behaviours may still be relevant for AR over different time periods and samples, so further investigation is warranted.



## Intermittent fasting as a potential stressor: A randomised controlled trial

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**Background:** Intermittent fasting (IF) is considered beneficial for physical health. Yet, some evidence indicates that fasting may act as a stressor on the individual, impairing cognitive performance and mood, and thereby limiting its feasibility in daily life. Yet no longer term studies on IF have been done to test this.

**Methods:** Therefore, we randomized fasting-naïve volunteers to either ten days of IF or waitlist control (after four baseline days). Herein we analysed 62 completers ( $M(\text{age}) = 24.75$ ,  $M(\text{BMI}) = 22.99$ ). Participants performed the Sustained Attention to Response Task through their web-browser six times during this period for an objective measure of cognitive performance; reported their mood, hunger, sleep-quality and concentration daily through their smartphone. We modelled their error rate and subjective measures as a function of time and group-assignment with Bayesian multi-level Poisson and Normal regressions, respectively.

**Findings:** We did not observe evidence for lower cognitive performance in the IF group ( $\text{BF} = 1412.15$  favouring model without group-factor). Fasting participants made one more error on average ( $M(\text{error}) = 14.59$ ). However, subjectively, IF participants reported slightly lower concentration ( $\text{BF} = 6.87$  favouring model with group-factor; coefficient IF-group =  $-0.87$ ,  $\text{SE} = 3.76$ ) and more negative affect ( $\text{BF} = 16.92$ ; coefficient IF-group =  $2.11$ ,  $\text{SE} = 3.05$ ) throughout the intervention.

**Discussion:** Cognitive performance was not altered by IF. Yet, IF may come with subjective burden to first-time adopters in the form of lower mood and reduced subjective concentration. This should be considered when recommending IF as a lifestyle for improving physical health.

## **Psychosocial characteristics of consumers and their alternative protein choices intake: a meta-review**

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<sup>1</sup>SWPS University, Poland

**Background:** This meta-review aims to synthesize empirical evidence for the individual-level factors (such as capabilities, perceived opportunities, and motivation) and sociodemographic factors (age, gender, education, and income) and their interaction with individuals' choices regarding alternative protein foods (APF). The COM-B model was applied to guide the synthesis of the evidence. A broad definition of individuals' dietary choices was used, including intentions to consume or purchase, acceptability of APF, and APF intake.

**Methods:** A preregistered meta-review (PROSPERO, no. CRD42023388694) was conducted, involving a systematic search across 13 databases of peer-reviewed journals, resulting in 28 systematic, scoping or pragmatic reviews being included. Risk of bias was assessed using the ROBIS tool.

**Results:** Strong support for associations were found between plant-based APF choices and factors such as: cooking skills, exposure to APF, perceived health benefits, environmental concerns, animal welfare/empathy towards animals, younger age, and higher education. For insect-based APF, strong support for associations were found for such factors as: knowledge about APF, exposure to APF, positive social and cultural norms, low distrust in technology, perceived health and environmental benefits, adventurousness, curiosity, male gender, and younger age.

**Conclusions:** This study highlights significant associations among individual-level determinants supported by research concerning choices of plant-based and insect-based APF. A pattern of associations was distinct, depending on whether the proteins were plant-based or insect-based. The findings may guide policymakers, implementers, and researchers, when making plans for the development or implementation of programs promoting APF intake.

## **Would priming be more effective for individuals with poorer executive function when choosing sustainable food?**

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Sustainable diets have been consistently linked to both human and planetary health. Goal priming is considered as an effective intervention that facilitates behavior change by giving people minimal cues to trigger mental associations of the target behaviour and desirable goals. This approach is particularly relevant to eating behaviours which are often influenced by the more immediate gratification. Since people with poor executive function (EF) may have more difficulty in maintaining their attention to distant goals, we hypothesize that goal priming can be more effective for people with poorer EF.

A randomized controlled trial was implemented to evaluate the effects of three priming interventions: health-benefit priming (HP), environment-benefit priming (EP) and combined-benefit priming (CoP), versus a control condition, on young adults' sustainable food choice. The study first measured participants' EF, including inhibitory control, mental flexibility, affective decision making, and delay discounting. Then they were randomized allocated to their respective priming or control condition, followed by completing an online shopping simulation task.

Compared with the control, CoP significantly increased participants' sustainable food choices. Notably, the effects of CoP was significantly greater for individuals who favored immediate rewards over long-term benefits more indicated by their steeper delay discounting rates.

Priming intervention is particularly beneficial for individuals with poorer EF, potentially due to their need for greater environmental support in shifting their attention from the immediate food-related gratification to the long-term goals of health and environmental sustainability. Future interventions should be tailored to assist those with diminished EF for promoting healthy and sustainable diets.

## **Ignorance or Negligence? The Role of Nutritional and Environmental Considerations in Food Choice**

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Diabetes and climate change are two major public health concerns where food choice plays an important role. However, few studies evaluate the impact of both nutritional and environmental considerations on consumption decisions. Leveraging data from the National Health and Nutrition Examination Survey (NHANES), Study 1 (N = 10,830) examines foods most commonly consumed by Americans. Results indicate that Americans consume greater quantities of foods that are nutritionally and environmentally harmful (M = 171.8, SE = 19.69) than nutritionally and environmentally beneficial (M = 79.05, SE = 14.11),  $p < .001$ . In Study 2a (N = 117) and Study 2b (N = 219), we assess people's accuracy in rating 167 and 54 food items, respectively, on nutritional and environmental impacts, and explore how these beliefs influence consumption intentions. Nutritionally and environmentally harmful foods yielded lower accuracy ratings (M = 0.17 and M = 0.03, SEs = 0.01) than nutritious and low-environmental impact foods (M = 0.32 and M = 0.08, SE = 0.01 and SE = 0.03, respectively),  $p = 0.03$  and  $p < 0.001$ , respectively. Multilevel modeling revealed that nutritional beliefs ( $b = 1.70$  and  $b = 1.17$ ,  $ps < .001$ ) had a stronger influence on consumption intentions than environmental beliefs ( $b = 0.53$  and  $b = 0.48$ ,  $ps < .001$ ). These findings suggest that people hold inaccurate views about foods' nutritional and environmental impact (implicating ignorance), and under-weight environmental impact in food choice (implicating negligence). Implications for interventions to promote healthy and sustainable food choice are discussed.

## Can environmental traffic light warning labels reduce meat meal selection? A randomised experimental study

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**Background:** An important area for tackling climate change and health improvement is reducing population meat consumption. Traffic light labelling has successfully been implemented to reduce the consumption of unhealthy foods and sugary drinks. The present research extends this work to meat selection.

**Methods:** We tested 1,300 adult UK meat consumers (with quotas for age and gender to approximate a nationally representative sample). Participants were randomised into one of four experimental groups: (1) a red traffic light label with the text 'High Climate Impact' displayed on meat meal options only; (2) a green traffic light label with the text 'Low Climate Impact' displayed on vegetarian and vegan meal options only; (3) red/orange/green (ROG) traffic light labels displayed on relevant meals; and (4) control (no label present). Participants made meal selections within their randomised group across 20 meal trials. A beta-regression was performed to ascertain the change in primary outcome (proportion of meat meals selected across the 20 trials) across the different groups.

**Findings:** The red-only label and ROG labels significantly reduced the proportion of meat meals selected compared to the unlabelled control group, by 9.2% ( $p=.004$ ) and 9.8% ( $p=.004$ ) respectively. The green-only label did not differ from control ( $p=.893$ ).

**Discussion:** Negatively framed traffic light labels seem to be effective at discouraging meat selection. The labels appeared to be moderately acceptable to meat eaters, who did not think the labels impacted the appeal of the products. These encouraging findings require replication in real-life settings.

## How do co-present nutrition and ecolabels impact food valuation? Evidence from a representative online study

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A common strategy to promote healthy and sustainable food choices is through the use of front-of-pack labeling (FOPL). Previous research has shown that color-coded and thus more salient FOPLs are more effective than numerical labels in promoting healthy food choices, which has likely contributed to an increased preference for such labels in highlighting different food attributes. While promising, it is not clear whether the effects of salient FOPLs generalize to common contexts where multiple FOPLs are co-present, such as the likely case of nutrition and ecolabels. To shed light on this question, we conducted a representative study online (N = 996) where we asked participants to rate real food items in terms of perceived healthiness, sustainability, liking, wanting, and willingness to purchase. All food items were presented with two FOPLs— one nutrition (Nutri-Score) and one ecolabel (Eco-Score). The study employed a 2 x 2 between subject design with two factors of interest Nutri-Score (positive, negative) and Eco-Score (positive, negative). Our findings revealed that while foods with two positive FOPLs were rated as healthier and significantly more sustainable (pTukey < 0.05), they were liked significantly less than foods with two negative FOPLs (t = 3.61, pTukey = 0.002, Cohen's d = 0.32). These results highlight likely limitations of co-present FOPLs as a strategy to promote healthy and sustainable food choices. We aim to follow up these results using more controlled experiments and thus further the understanding of the mechanisms underlying the effects of multiple FOPLs on food choices.

## **Framing effect on infant feeding attitudes and intentions: Role of self-efficacy, emotions, and information acceptance**

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**Background.** The direction of the framing effect should vary according to the health behavior considered: whereas loss-framed messages would be more effective in promoting detection behavior, gain-framed messages would be more effective in promoting prevention behavior. To fill a gap in breastfeeding promotion literature, we ran a pre-registered experimental study aimed at testing the framing effect on both breastfeeding and formula-feeding attitudes and intentions, the mediating role of emotions and information acceptance, and the moderating role of self-efficacy and perceived behavioral control (PBC).

**Methods.** Pregnant women (N = 282) were randomly assigned to three conditions, either reading messages about the benefits of breastfeeding (gain frame condition), about the risks of not breastfeeding (loss frame condition) or about animals (control condition). After the manipulation check, emotions, information acceptance, and both exclusive breastfeeding and formula-feeding attitudes and intentions were assessed.

**Findings.** As expected, results showed two specular conditional indirect effects on breastfeeding and formula-feeding intentions: loss-framed messages induced negative emotions and thus lowered information acceptance, which in turn differentially affected (respectively worsened and improved) breastfeeding and formula-feeding attitudes and thus breastfeeding and formula-feeding intentions. On the other hand, gain-framed messages induced positive emotions and thus promoted information acceptance, which in turn differentially affected (respectively improved and worsened) breastfeeding and formula-feeding attitudes and thus breastfeeding and formula-feeding intentions. High levels of breastfeeding self-efficacy and PBC attenuated the negative effects of loss-framed messages and fostered the positive effects of gain-framed messages.

**Discussion.** Effective breastfeeding promotion should be framed in terms of benefits.

## **Food aid to food justice: The case for strategies that de-atomise and de-stigmatise older recipients**

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### **Background:**

Many older people live in poverty; they may be isolated and either unable or reluctant to access food support services in the community. This research sought to understand policy makers, service providers, and older adults' sense making of food poverty and the factors affecting older adults' decision-making regarding accessing support. The research was informed by a social psychological understanding of processes of social inclusion and exclusion and the role of authorities in shaping the experience of disadvantaged and stigmatised communities.

**Methods:** We conducted semi-structured interviews and focus groups with policy makers and service providers (n=21) and older adults (n=31). Our research partners, a Council in the Southwest of England and an alliance of community organisations working with older adults, assisted recruitment within a mix of urban and rural communities. We conducted an inductive, reflective thematic analysis of the data; this was informed by a critical realist approach.

**Findings:** Our analysis highlights the links between social isolation, loneliness, and food insecurity among older adults. We identified three themes which spoke to processes of social exclusion associated with transitions (e.g., ill-health, bereavement); the reification of independence and thriftiness for a generation who had experienced war; and the role of power dynamics in shaping perceptions and (meta)perceptions of older adults' experience.

**Discussion:** Our research emphasizes the imperative of de-atomising and de-stigmatising the experience of food insecurity. We recommend initiatives that foster connections within communities through food, while challenging policies and discourses that shame poverty and dependence and champion resilience and sacrifice.



## **Enhancing school-based nutrition-education programmes for special needs education – insights from a qualitative study**

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Schools provide an ideal setting for educating children about healthy and sustainable nutrition, including the 5% of children in the Netherlands who receive special needs education due to a disability, psychological and/or behavioural challenges. Currently, there is a scarcity of nutrition-education programmes available for these pupils. This study aimed to identify necessary adjustments to existing school-based nutrition-education programmes to better suit primary and secondary special needs education.

In this qualitative study, 18 semi-structured interviews with teachers and other professionals were conducted between November 2022 and January 2023. The data analysis was carried out with the software program Atlas.ti. A six-phase analysis process as per Braun and Clarke was followed, including transcribing, coding and summarizing the interviews by theme.

The results of this study show that, similar to regular education, special needs education schools increasingly pay attention to healthy and sustainable nutrition. To optimize nutrition-education programmes for special needs education, it is important to adapt both the format and content of the lessons. A visual and active approach, simple lay-out and a fixed structure of the lessons seem to be the key to success. The capabilities of the children together with the usefulness of the lessons in daily practice are the starting points when developing the lessons.

Taking into account that primary and secondary special needs education has an enormous diversity in pupils, it seems possible to adapt and develop nutrition-education programmes to better suit special needs education.

## Understanding the impact of social policies on health: a realist synthesis

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### Background:

The aim was to unravel the complex relationship between social policies (focusing on social assistance and debt policies) and health by creating deeper understanding about underlying mechanisms generating health outcomes and important contexts triggering these mechanisms through a realist synthesis.

### Methods:

Realist synthesis is a theory-driven review approach assuming outcomes are generated by the interaction between contexts and mechanisms. We searched four databases and held 18 stakeholder consultations with citizens, social policy officers and professionals. 36 articles were selected, appraised for relevance and rigor, and coded for relevant contexts, mechanisms and outcomes. Findings were combined with stakeholder perspectives resulting in three program theories.

### Results:

If social policies include obligations, restrictions or sanctions, its recipients, especially those with lower resources (e.g. single parents or people with a disability), experience negative health effects, because of loss of autonomy, negative psycho-emotional effects, and higher chances of finding indecent work. Furthermore, if people with financial and underlying problems receive timely and active financial help, including help for underlying problems, they experience positive health effects, because the administrative burden is reduced. Lastly, if social policies offer fitting financial, social and cultural resources, recipients experience mostly positive health effects, because they are able to meet their basic and psychosocial needs and social standards and there is a positive psycho-emotional impact, unless they are unable or less stimulated to find decent work.

### Discussion:

This study provides a new perspective for health psychology, theorizing how social policies influence (mental) health within their context.

## **Policy makers' perspectives on alcohol public health interventions to reduce health inequalities: a qualitative study**

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### **Background:**

Lower socioeconomic position (SEP) populations experience substantial alcohol-related health inequalities, yet alcohol public health interventions often have limited acceptability and effectiveness in these populations. Policy makers often have roles in influencing the development, implementation, and evaluation of public health interventions, yet their perspectives in this area are under-explored. This study aimed to explore policy makers' perspectives on alcohol public health interventions to reduce inequalities in lower SEP populations.

### **Methods:**

Semi-structured interviews are being conducted with a purposive sample of public health policy makers. Reflexive thematic analysis will generate themes. Ethical approval was obtained from the University of Bath research ethics committee (3494-3441).

### **Expected results:**

Theme one - Drivers of alcohol-related inequalities, including sub-themes of social norms of alcohol use, root causes of alcohol use, and wider determinants of alcohol use. Theme two - Systemic factors driving interventions, including sub-themes of use and availability of data, a distinct conceptualisation of health, and limited organisational capacity for prevention. Theme three - Holistic community health approach, with sub-themes of a holistic conceptualisation of health, community-based early prevention, meeting local communities' needs, and acknowledging the wider social context.

### **Current stage of work:**

Fourteen interviews have been conducted, data collection is ongoing, and analysis will be completed by July 2024.

### **Discussion:**

Several factors considered to contribute to alcohol-related inequalities can be targeted within public health interventions to reduce alcohol-related inequalities. A holistic community health intervention approach should be explored as a potential strategy to contribute to the reduction of alcohol-related inequalities.

# The mechanisms underpinning the digital health divide: A Scoping Review of interventions for weight-related behaviours

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## Background

Digital health interventions for promoting weight-related behaviours are less effective for those in disadvantaged populations. Therefore, there is a risk that the digital health revolution may exacerbate rather than narrow existing health inequalities. Despite this, little is known about the psychosocial mechanisms that underpin the gap in efficacy of those interventions.

## Methods

This scoping review mapped the peer-reviewed literature which has explored the psychosocial mechanisms that underpin the digital health divide. The search strategy followed the PRISMA extension for scoping reviews. All papers were screened by two independent reviewers against inclusion criteria, which included a study of efficacy by a given metric of socioeconomic status. The COM-B framework and Mechanisms of Action taxonomy were used to organise and interpret the extracted data.

## Findings

A total of 17,504 papers were screened following which 21 studies published since 2014 met the inclusion criteria, including 6 RCTs, 5 pre-post studies, 3 systematic reviews, 3 qualitative studies and a cross-sectional, pilot and feasibility study. Reviews mostly focussed on socioeconomic disadvantage (n=10) or ethnicity (n=9). Mechanisms that can narrow the divide were personalisation and cultural tailoring, multi-staged approaches, and improving skills (e.g. food preparation). Those in lower SES groups may be less comfortable with self-quantification requirements of digital health.

## Discussion

Overall, psychosocial mechanisms were inconsistently conceptualised, described and measured. Qualitative studies are a valuable contribution to understanding mechanisms, and their limited number represents a gap. Research on the digital divide remains dominated by descriptive studies and a shift towards explanatory research is needed.

## **Patients' perspective on cancer care in Eastern Europe: experiencing disparities in the healthcare system**

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**Background:** Despite the advancements in oncological medicine and research, cancer remains the second leading cause of death in Europe, with eastern European countries, such as Slovakia and Croatia, showing the highest mortality rates and disparities in access to appropriate and comprehensive cancer care. Therefore, the primary aim of the current study is to investigate cancer patients' perspectives and experiences to understand the underlying reasons for cancer disparities.

**Methods:** Croatian cancer patients (n=15) and Slovak cancer patients (n=11) were recruited through social media platforms, patients' organisations, and hospital websites and offered the participation in online focus group discussions on perceived disparities, barriers or malfunctioning during and after their cancer journey. Video and audio recordings of the interviews were analysed using Thematic analysis.

**Findings:** Five themes emerged from both Croatian and Slovak focus groups highlighting encountered barriers and perceived disparities, as well as suggestions or unmet needs. Most of the themes are common to both groups, such as the corruption in the healthcare system and the taboos regarding cancer and psycho-oncological support. However, some themes are specific to each group, for instance, Slovak cancer patients remarked the fact that they do not mind travelling to get treatment as long as they can be treated in the west of Slovakia, while Croatian patients highlighted the need for more information after the illness.

**Discussion:** Urgent intervention is needed in addressing disparities. Present results could inform dedicated guidelines or better resource allocation strategies to reduce disparities in cancer care and promote inclusive healthcare.

## Treatment adherence and perceived information provision in Roma and non-Roma patients with coronary artery disease

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### Background:

Information provision is one of the important aspects of cardiovascular care. Providing information that is congruent with patients' needs may result in informed decision-making and can have positive effects on treatment adherence, improved health outcomes, and quality of life. The aim of this study was to analyse the association between treatment adherence and perceived information provision in Roma and non-Roma patients with coronary artery disease (CAD).

### Methods:

The sample consisted of 878 CAD patients (mean age 57.8±7.6 years; 40% women, 14% Roma ethnic minority group). Treatment adherence and perceived information provision were measured using the Health Services Interview (HSI). Sociodemographic and clinical data were collected during a structured interview, a cardiological examination, and from medical records. Multiple regression analyses were performed to analyse the data.

### Findings:

Roma patients perceived physician-provided information more negatively and had worse treatment adherence compared to non-Roma patients. In both groups, perceived inadequate information provision was associated with treatment non-adherence (Roma  $\beta=-0.33$ ,  $p<0.05$ ; non-Roma  $\beta=-0.16$ ,  $p<0.05$ ), with a substantially higher proportion of total explained variance in the Roma population (36%) compared to the non-Roma population (6%).

### Discussion:

Lower treatment adherence is associated with perceived negative information provision, particularly among the Roma population. Possible underlying mechanisms include perceptual (in)accuracy, negativity bias, and self-serving bias. To improve health outcomes, healthcare practitioners should be trained in culturally sensitive communication. They should avoid communication styles and messages evoking negative connotations, in particular when communicating with patients from ethnic minority or disadvantaged groups. [Grant support: APVV-22-0587]

## Using behaviour change theory to understand the sharing of genetic health information within families

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**Background:** Genetic testing can have implications for individuals as well as their relatives. Clinicians will frequently encourage patients to share relevant information with at-risk relatives. Often the importance of sharing information is understood, particularly for preventable and treatable diseases. Yet despite this, relatives often do not receive such information in a timely fashion. **Aim:** to explore publics' views regarding the sharing of genetic health information within families.

**Methods:** An open questionnaire titled 'Genetics and health in our everyday lives' was developed in collaboration with The Mass Observation Project; a social research project documenting life in Britain. In 2022, 147 members of the Mass Observation panel of writers (n=450) responded to the questionnaire, which included a fictional scenario about M who had not informed her sister of an inherited risk of developing breast cancer. Responses were analysed deductively using the COM-B model of behaviour change as the theoretical framework.

**Findings:** The most cited barrier was 'Physical Opportunity'. Respondents discussed principles such as consent and confidentiality relating to roles and responsibilities within and outside the healthcare system and environmental context and resources. The most cited facilitator was 'Reflective Motivation'. Respondents identified the potential health consequences for M's sister, with consequences discussed in relation to moral values (beliefs about consequences).

**Discussion:** Publics' views are discussed in relation to previous data from patients and health professionals regarding communication of genetic risk information. The development of a digital behaviour change intervention to make it more likely that individuals share their genetic health information is also discussed.

## **How do women experience and understand a change in their clinically-derived breast cancer risk estimates?**

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**Background:** Breast cancer risk prediction models are routinely used in clinical settings to inform eligible women of their risk and treatment options. These models have become more precise with the introduction of breast density and a polygenic risk score, potentially causing alterations to previously communicated risks and preventative management. This study is the first to explore, across any disease type, how changes in risk are experienced and understood.

**Methods:** Semi-structured telephone interviews were conducted with twenty-two women notified of a change to their breast cancer risk via a UK family history clinic. Eleven experienced an increased and eleven a decreased risk. Data were analysed using reflexive thematic analysis.

**Findings:** Four themes were generated: (i) possibility of change never considered, illustrating women's beliefs that their risks would remain unaltered due to their family history, (ii) a trusted source influences adapted risk appraisals, highlighting women's personal connections with the service positively effecting risk appraisals, (iii) perceived value of new risk information, where women contemplated the usefulness of knowing their breast density and polygenic risk scores, with a 'gist' understanding being sufficient, (iv) heart versus head, where the implications of an updated risk estimate were processed, with some experiencing emotional conflict over ineligibility for annual screening.

**Discussion:** Women reacted positively to their updated risk estimates and trusted the information provided, even when changes to preventative management were advised. Risk appraisals are notoriously resistant to change, however providing 'gist' information together with more in-depth content should assist women in forming more accurate risk appraisals.



## **A new measure for informed decision making in cancer screening**

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<sup>1</sup>Amsterdam UMC, VU University, Netherlands

**Background:** Facilitating informed decision making (IDM) by individuals is important in population cancer screening. For making informed decisions, individuals need to understand relevant information about benefits and harms of cancer screening, and evaluate these against their values. Currently, a valid measure of IDM is lacking. Based on a newly developed IDM definition, this study aimed to develop and validate a new IDM scale with 2 subscales: (1) IDM process; (2) IDM conditions.

**Methods:** Based on theoretical frameworks and existing questionnaires, we constructed a pool of items, and evaluated these with cognitive interviews (N=10) and a survey (N=210) among the target group. Using these data, we reduced the item pool to 65 items, resulting in a new IDM scale. We validated this scale with data from a second survey (N=275) among the target group who also filled in existing questionnaires such as the Decisional Conflict Scale and the Multi-Dimensional Measure of Informed Choice (MMIC). We tested reliability of the scale using a third survey (N=119), and validated a short version of the Amsterdam IDM scale of 16 items using data from the second and third survey. Pearson correlations were analysed.

**Results:** Correlations of the Amsterdam IDM scale with existing questionnaires were as expected moderate (DCS: process  $r=-.611$ ; conditions  $r=-.488, p<.001$ ) or low (MMIC:  $r=.248, p<.001$ ). Test-retest reliability was  $r=.787, p<.001$ . The correlation between the short and long version was high:  $r=.785, p<.001$ .

**Discussion:** The Amsterdam IDM scale is a valid, reliable and practical scale to measure IDM in cancer screening.

## **Alcohol screening with minority ethnic service users within community mental health services: An intersectional lens**

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**Background:** It is recommended that alcohol should be screened for within community mental health (CMH) services in England, however, disclosing alcohol use may be stigmatised among specific minority ethnic groups. This study applied the intersectional theory to explore; i) rates of screening for alcohol within CMH services across ethnic groups, and ii) experiences of assessing and/or discussing alcohol use among service providers, CMH staff, and ethnic minority service users.

**Methods:** Patient records (n=2,603), online survey (n=16), semi-structured interviews and focus groups (n=29) within three CMH services in England were used to address the study aims. Data were triangulated and analysed using inductive and deductive framework analysis.

**Findings:** Three themes were developed. Among minority ethnic service users, a lack of recognition of alcohol problems and fears of the implications of disclosing alcohol use were key barriers for disclosing alcohol use. Among staff and service providers, protecting the therapeutic relationship was a key barrier and was underpinned by the funding and scope of CMH services. There were limited available alcohol services of which none were tailored for minority ethnic service users. Among minority ethnic service users, there was a preference for mutual support groups and being seen by staff with lived experience of alcohol problems.

**Discussion:** There is limited implementation of formal alcohol screening within some CMH services which is underpinned maintaining therapeutic relationships with minority ethnic service users and the funding and scope of CMH services. There is a need for a better understanding of intersectional issues related to alcohol disclosures when supporting minority ethnic service users within CMH services.

## Personalizing digital health interventions: sharing and advancing best practices

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### Purpose:

This roundtable will bring together experts and practitioners to delve into the current practices, challenges, and advancements in the development and evaluation of personalized digital health interventions.

### Objectives:

- To foster a collaborative environment that encourages the exchange of ideas, insights, and strategies for moving the field forward.
- To provide a platform for participants to identify common challenges, share successful strategies for overcoming them, and collectively brainstorm on innovative solutions and research directions.

### Rationale:

Personalized digital health interventions have gained prominence within health psychology due to their potential to tailor healthcare strategies to individual needs, preferences, and contexts. However, developing such interventions presents a unique set of exciting opportunities and challenges, ranging from selecting appropriate theoretical foundations to employing rigorous evaluation methodologies.

One critical aspect is the integration of personalization into the underlying theory and causal modeling of the intervention. This prompts questions about when and why to opt for individualized causal models that take into account specific characteristics and contexts for each individual in a dataset versus generic or averaged causal models that focus on estimating causal relationships at a group level. Additionally, questions arise regarding the optimal use of computational modeling and warm start approaches, where you move progressively from a generic model to a more individualized model, to optimize personalized digital health interventions.

Another important consideration is user engagement. Because the incorporation of dynamic tailoring requires continuous data collection, it often requires ongoing user input and engagement. Various elements such as conversational agents/chatbots, peer/clinician support, or gamification can make the intervention more interesting and useful for the user. However, determining the right strategy for user engagement poses a significant challenge.

The development of personalized digital health interventions takes place at the intersection of multiple disciplines, including technology, health psychology, and data science. Stakeholder involvement and collaboration are crucial to the success of personalized digital health interventions. However, deciding on the appropriate stakeholders and establishing engagement with them warrants further exploration.

By fostering collaboration and knowledge exchange around the crucial themes of theoretical modeling, user engagement strategies, and stakeholder involvement, this roundtable aims to contribute to the ongoing evolution of this field toward improving the effectiveness and impact of personalized digital health interventions.

## **Feasibility and pilot study: Associations between dietary intake, mental health, and inflammation in Australian adolescents**

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### Background:

Inflammation is a precursor to chronic disease, literature in adults suggest poor nutrition and mental health correlate with inflammatory markers (i.e. hs-CRP). Less is known whether adolescents are experiencing the same biological implications. This study aimed to assess associations between dietary intake, mental health and hs-CRP and the feasibility of conducting bio sample collection in adolescents at a school setting.

### Methods:

This pilot study (N=20) recruited adolescents (mAge=14.4years) from a larger RCT (Health4Life), participants completed a self-report survey and food frequency questionnaire to assess dietary intake and mental health. Hs-CRP was collected via dried blood spot (DBS). Generalized linear regression models were used to assess associations.

### Findings:

It is feasible to conduct bio sample studies within adolescents at a school setting, however many procedural factors need to be considered. N=20 was 90% less than planned due to barriers in conducting bio sample collection and pandemic impacts, and no significant results were found. Directionality of non-significant associations aligned with the literature and associations between mental health and hs-CRP were approaching significance (P=0.07). Correlation matrix and sample size calculations predict this study would have power to detect significant correlations at N=38.

### Discussion:

Promising emerging research indicates that adolescents aren't immune to the detrimental inflammatory impacts of poor diet and mental health, being of concern considering the long-term effects of chronic inflammation. Future research should consider incorporating cost effective/less intrusive ways to retrieve biomarkers (i.e. DBS) from adolescents in preventative health, and researchers/clinicians should disseminate feasibility learnings to help future trials succeed.

## **The Impact of Social Support and Traditionalism on Help-Seeking Behavior: a Cross-Cultural Comparison**

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**Background.** This cross-cultural study investigates the sociocultural factors that influence individuals' intentions to seek help for their mental wellbeing. With an ever-growing concern for mental health, it has become essential to gather quantitative data on how people belonging to and coming from different cultural backgrounds seek assistance for their psychological health. As past research uncovered, culture acts as a filter that changes how we interpret and perceive the outer world as well as our inner one. **Methods.** The study involved 304 university students from central Europe (Italy, Switzerland, Germany and Austria) and South Korea, aged 19-35. This quantitative research entailed collecting primary data via an online survey, composed of both validated scales and questions developed specifically for this research. **Results.** As expected, the analysis revealed cross-cultural variations in help-seeking intentions: South Korean participants showed a greater intention toward considering therapy compared to Europeans. Additionally, traditionalism and past experiences have been detected as significant predictors of the investigated behavior. The study also thoroughly explored differences in how social support is perceived in these two cultures and how it impacts help-seeking. **Conclusions.** This research provides valuable insights into the intricate interplay of cultural, social, and personal factors that influence help-seeking intentions which in turn shape how people from different cultures act on their mental health difficulties. Conclusively, the findings highlight the need for culture-specific models for mental health help-seeking.

## **Stigma as a barrier to accessing support among female migrants in Southeast England: Qualitative study**

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Mebrak Ghebreweldi<sup>3</sup>, Tacye Turner<sup>3</sup>, Carrie Llewellyn<sup>5</sup>

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**Background:** While awareness of mental health stigma is increasing, a nuanced understanding of the specific mechanisms by which it impacts female migrants' access to support remains elusive. This study, drawing upon the Health Stigma and Discrimination Framework, aims to address this gap by identifying and analysing the unique stigma experiences of female migrants. By doing so, it seeks to illuminate the factors influencing their willingness to seek and receive mental health support.

**Methods:** A qualitative approach was employed, involving interviews with 18 female migrants over 18 years old in Southeast England. A community advisory board consisting of 5 female migrants and bilingual advocates informed all stages of the study process from ethical procedures to the interpretation of findings. Thematic analysis was used to identify prevalent stigma patterns that may fuel a reluctance to seek mental health support.

**Findings:** Participants reported widespread discrimination and ostracisation, both in society and by health professionals. Participants highlighted stigmatising attitudes that they experienced as female migrants. Challenges included prejudice from interpreters which in turn exacerbated the reluctance of female migrants to discuss mental health concerns. A critical finding was the pervasive fear of child removal, significantly hindering the pursuit of mental health support.

**Discussion:** The study underscores the profound effect of stigma on access to mental health support for female migrants. Findings highlight the need for targeted interventions to reshape societal attitudes, dismantle structural barriers, and alleviate individual concerns. Health psychology research is uniquely placed to inform inclusive and supportive services for female migrants.

## **Association of childhood and adult socioeconomic status with adult social relationships: A causal mediation analysis**

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Growing up in a family of low socioeconomic status (SES) may have a negative impact on the development and maintenance of social relationships throughout the lifespan. In this prospective cohort study, we explored associations of childhood SES with social relationships in adulthood, and to which extent these associations can be explained by SES in adulthood. We used data from 1,685 people participating in the longitudinal Young Finns Study (baseline 1980, participants aged 3-18 years). Childhood SES was assessed through parental income and educational attainment in 1980, and participants' own adult SES through income and educational attainment in 2007. The outcomes were three indicators of social relationships measured in 2018: 1) loneliness, 2) perceived social support and 3) frequency of social contact. Different SES indicators were analyzed separately using regression models and causal mediation analysis via marginal structural models and direct counterfactual estimation. In causal mediation analyses, low parental income was associated with higher loneliness, lower perceived social support, and less frequent social contact in adulthood while adjusting for parental and own educational attainment. These associations were partially mediated by participants' own income in adulthood (proportion mediated: loneliness: 18%, perceived social support: 22%, and frequency of social contact: 11%). Conversely, parental educational attainment was not associated with any of the social relationships indicators in adulthood. These results emphasize the importance of the potentially long-lasting effects of poor family financial conditions during childhood on the development and maintenance of social relationships throughout the lifespan.

## **Involvement of older adults in the UK in decision-making about care transitions: A narrative review**

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The global population is ageing rapidly, emphasising the need to understand the decision-making processes of older adults regarding their potential care transitions. Ageing research has focused on healthcare, with less information on living situation choices of older adults. This review explored older adults' experiences with their involvement in decision-making processes related to transitioning into care facilities in the United Kingdom. From a systematic search of articles, nine were reviewed using narrative analysis. Four themes were created: Involvement in decision-making, The necessity of moving, Early planning, and Preferred information. These themes highlighted the issue of inadequate involvement of older adults in decision-making, often resulting in negative consequences like regret and difficulty settling into new care settings. The necessity of moving arose from sudden events or increased support needs. Some older adults acknowledged the necessity due to declining health or to spare family burden, while relatives grappled emotionally, postponing the choice. Early planning was found to be beneficial practically and emotionally, facilitating smoother transitions. However, participants would rarely plan and discuss such matters early. Older adults' preferred information focused on personal experiences and trusted sources rather than publicly available information. The findings show the need for greater inclusion of older adults in decisions related to their care and the importance of early planning and providing preferred types and formats of information to aid decisions. Future research should focus on a better understanding of older adults' preferences for successful involvement in care decisions, with support and guidance for others involved in the decisions.



## **Job demands-resources, sedentary lifestyle, and physical activity: exploring their relationship with burnout?**

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**Background:** In the field of occupational health psychology and health, workplace conditions have a direct influence on the health of employees (e.g. Aronnsen et al., 2017; Seidler et al., 2014). At the same time, physical activity can have a favorable effect on work-related health factors like burnout (e.g. Lachance et al., 2022; Wolff et al., 2021), while sedentariness seems to have detrimental impact on worker's health (e.g. Fialho et al., 2019). However, the interplay between job demands and resources and physical activity has often been overlooked. This study aims to unravel how the sedentary nature of contemporary work environments—coupled with taxing job demands—converges with physical activity to influence prevalence and severity of emotional exhaustion among workers.

**Methods:** Utilizing hierarchical multiple regression analyses, we evaluated the impact of these variables among 112 employees. Job demands, emotional exhaustion, and physical activity levels were assessed using validated instruments ("DISC Questionnaire" (van de Ven et al., 2008), MBI-GS (Bakker et al., 2002), IPAQ (Hagströmer et al., 2006)).

**Findings:** Job demands significantly predict emotional exhaustion ( $R^2 = .19$ ,  $p < .01$ ), with job resources explaining additional variance ( $\Delta R^2 = .09$ ,  $p < .05$ ) when included in the model. Physical activity and sedentariness further contributed to the model ( $\Delta R^2 = .14$ ,  $p < .01$ ).

**Discussion:** The findings elucidate the effects of sedentariness on emotional exhaustion beyond the influence of emotional job demands, highlighting physical activity as a potential buffer against burnout associated with high job demands.

## Students' emotional experiences with climate change and how universities can help

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**Background:** A large majority of young people in the UK experience anxiety and negative emotions about climate change. Here, we investigated how university students in particular experience climate-change-related psychological wellbeing.

**Methods:** In a pre-registered online study, we investigate students' (N = 869, at large UK university) climate anxiety, climate-change-related emotions, thoughts, and views about their university's role in climate change. Results were explored in R, including data visualisations and correlational analyses. We applied quantitative content analysis to investigate open-text responses.

**Findings:** Participants experienced moderate climate anxiety across situations (M = 5.00 on 0 to 10 continuous scale). Participants reported high average levels of negative emotions, which were linked to climate anxiety intensity, including sadness ( $r = .59, p < .01$ ), helplessness ( $r = .50, p < .01$ ), and powerlessness ( $r = .48, p < .01$ ). On average, participants experienced high levels of negative thoughts, such as "The future is frightening" ( $r = .55, p < .01$ ) and "Humanity is doomed" ( $r = .45, p < .01$ ), which likewise correlated with anxiety intensity. Generally, students had low to moderate faith in their university's climate actions. Almost 70% of participants favoured more climate change content to be included in teaching. Finally, 43% were in favour of the university providing climate-change-related mental health support for students.

**Discussion:** Climate change seriously affects many university students' psychological wellbeing. This has implications for how universities recognise and respond to the link between universities' climate action and protecting students' psychological wellbeing.

## **Optimising digital cardiac rehabilitation (OsCaR): the preparation phase of the Multiphase Optimization Strategy**

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**Background:** Digital cardiac rehabilitation (CR) offers a promising alternative to traditional centre-based CR, yet its components and mechanisms of change are not well-defined. The Multiphase Optimization Strategy (MOST) provides a framework that allows the effects of individual components of complex interventions to be studied. This research aimed to develop a conceptual model of digital CR and investigate the feasibility of conducting an optimisation trial.

**Methods:** The conceptual model was developed based on: (1) a systematic review of the behaviour change techniques within digital CR, (2) a qualitative study of patients' perceptions of digital CR mechanisms, and (3) a review of international guidelines. Findings were synthesised using the COM-B model and Theoretical Domains Framework. Feasibility will be assessed in a mixed-methods study of a 2x2x2 (23) factorial trial design. Patients (n = 16) attending CR in a community setting will be randomised to three intervention components: (1) goal setting and self-monitoring; (2) education; and (3) motivational feedback messaging. The primary outcomes will be related to feasibility and acceptability.

**Results:** The conceptual model outlines the causal process through which digital CR can enhance patient outcomes. It specifies intervention components (e.g., education), targeted outcomes (e.g., physical activity), and theorised mediating variables (e.g., knowledge). The feasibility study findings will allow the study design and procedures to be refined.

**Discussion:** This research demonstrates the formative research that can be conducted during the preparation phase of MOST. The findings from this study will inform the design of a fully powered optimisation trial of digital CR.

## **Applying the Multiphase Optimization Strategy (MOST) for optimizing cognitive behavioral therapy for insomnia (CBTI)**

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**BACKGROUND:** Insomnia is a widespread public health challenge with considerable costs for the individual and society. The recommended first-line treatment is cognitive behavioral therapy for insomnia (CBTI), which usually consists of two or more of the following components: sleep restriction therapy, stimulus-control therapy, relaxation training, cognitive therapy, and sleep hygiene education. While previous research testifies to the efficacy of the combined components of CBTI, the relative contribution of each component has yet to be determined. The aim was, therefore, to apply MOST to evaluate the relative efficacy of the five components of Hvil®, a digital, smartphone-based program for delivering CBTI.

**METHODS:** In an ongoing study, we have recruited potentially eligible participants through a digital newsletter and screened them for insomnia. Employing a fractional (half) factorial design, we aim to recruit a total of 860 individuals scoring 10 or above on the Insomnia Severity Index and randomize them to one of 16 experimental conditions representing various combinations of the five components. Expecting a 25% drop-out, we aim to collect complete data from a minimum of 640 participants, enabling the detection of a small effect (Cohen's  $d=0.25$ ) with a statistical power of 88%.

**EXPECTED RESULTS:** We expect to have completed the data collection by August 2024 and will then analyze the data using Mixed Linear Models (MLMs) based on the intent-to-treat sample, comparing aggregated groups of  $N=2 \times 320$ .

**DISCUSSION:** Our results will contribute to the optimization of CBTI by identifying the most efficacious as well as possible redundant components.

## **Improving questionnaire response with SMS messages using a Sequential Multiple Assignment Randomised Trial (SMART) design**

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**Background:** Embedding studies within a trial (SWATs) is a robust approach for evaluating interventions to support retention within clinical trials. We designed a SWAT using a highly efficient experimental design to evaluate the impact of theory-informed short message service (SMS) pre-notifications and SMS reminders on retention rates.

**Methods:** We embedded a SWAT using a sequential multiple assignment randomised trial (SMART) design in the WeSureCan pilot trial (planned n=88, three follow-up time points) and the ROSETA optimisation trial (planned n=512, three follow-up time points). SMS pre-notifications and SMS reminders were co-developed to include the behaviour change technique (BCT) 'Beliefs about Consequences' in relation to not returning a study questionnaire.

Participants recruited to the host trials are randomised to SMS pre-notification or no pre-notification at the start of follow-up using block randomisation stratified by the host trial allocation. After six days, non-responders are further randomised to receive a standard SMS reminder or non-standard SMS reminder using simple randomisation without stratification. At each subsequent follow-up participants retain their allocation to pre-/no pre-notification and are re-randomised to receive a standard/non-standard reminder. The primary endpoint is response rate at one month post follow-up.

**Findings:** Analyses will be conducted and reported for each host trial and repeated to combine data from the trials. Results are expected in 2026.

**Discussion:** Our SWAT utilises an innovative SMART design to enhance our understanding of the effectiveness of SMS pre-notifications and BCT-based reminder messages in the context of clinical trials using online data capture for patient-reported questionnaires.

## **Adapting, optimizing and testing the Parenting for Lifelong Health Program: Results from all three phases**

Heather Foran<sup>1</sup>, Nina Heinrichs<sup>2</sup>, Jamie Lachman<sup>3</sup>, Adriana Baban<sup>4</sup>, Xiangming Fang<sup>5</sup>, Frances Gardner<sup>3</sup>, Judy Hutchings<sup>6</sup>, Janina Mueller<sup>7</sup>, Franziska Waller<sup>1</sup>, Diana Taut<sup>8</sup>, Cathy Ward<sup>9</sup>

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**Background:** Harsh parenting and child maltreatment are not only linked with increased risk for childhood mental health disorders, they are also linked with risky health behaviors and chronic diseases during adulthood. The RISE study evaluated the Parenting for Lifelong Health (PLH) program in the three European countries in a low resource context with the aim to prevent risk factors for poor children health outcomes.

**Methods:** All three phases of the Multiphase Optimization Strategy (MOST) were applied (Phase 1 pre-post pilot feasibility study, N = 140; Phase 2 factorial trial with 8 conditions and pre, post and 6-month follow-up, N = 835; Phase 4 randomized controlled trial with pre, post and 12-month follow-up, N = 823).

**Findings:** In Phase 1, the intervention was adapted successfully. In Phase 2, based on an a priori decision process, the five session, low engagement booster, and the on demand supervision condition met the criteria for cost-effectiveness on the primary outcome child aggressive behavior and was selected as the optimized intervention package. In Phase 3, the results demonstrated changes from baseline to post favoring the PLH group for the primary outcomes, stability in effects from post-follow-up, but few statistically significant differences between conditions when directly comparing change from baseline to follow-up.

**Discussion:** The PLH program was shown to be culturally adaptable in multiple languages and countries, and feasible to implement with nearly 1800 families across the RISE project in a cost-effective way. Results are relevant for prevention of negative health outcomes for children.

## **How Quality of Motivation for Adhering to Public Health Measures Interplays with the COVID-19 Epidemiology**

Joachim Waterschoot<sup>1</sup>, Sofie Morbée<sup>1</sup>, Vincent Yzerbyt<sup>2</sup>, Omer Van den Bergh<sup>3</sup>, Olivier Klein<sup>4</sup>, Olivier Luminet<sup>2</sup>, Mathias Schmitz<sup>2</sup>, Pascaline Van Oost<sup>2</sup>, Maarten Vansteenkiste<sup>1</sup>

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**Objective.** To manage the COVID-19 pandemic, governments imposed invasive behavioral measures to limit the spread of the virus. As adherence to these measures varied according to people's type of motivation, this presentation focuses on two studies conducted in the context of a long-term national research project called the 'Motivation Barometer'. Here we discuss the role of the epidemiology of COVID-19 and how it influenced, firstly, people's perception of risk (Study 1) and, secondly, people's motivation to adhere to the measures (Study 2), and even more so, how this further impacted on the epidemiology itself over time.

**Methods.** The data were collected during the Belgian COVID-19 crisis, spanning 24 months (March 2020 - 2022; n1 = 241,275; n2 = 183,766).

**Results.** In terms of people's risk perception, the perceived severity was more important than the perceived likelihood of being infected, until the emergence of Omicron. Perceived severity was most strongly related to autonomous motivation, both at the level of individuals and at the level of days. The results of Study 2 in turn demonstrate that infection and hospitalization rates led to higher autonomous motivation on the same day, which in turn was related to a decrease in infection and hospitalization 43 and 50 days later.

**Conclusion.** The Motivation Barometer allowed us to reveal unseen dynamics during the COVID-19 crisis between people's motivated behaviors and the epidemiology of the crisis itself.

## **Behavioural adaptation to health threats and authorities' recommendations in mathematical modelling: the example of mpox**

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**Background:** Mpox outbreaks were reported in 2022 in several countries, affecting primarily men who have sex with men (MSM). The outbreaks had a relatively short duration, possibly due to adaptations in sexual behaviour of MSM according to risk perception and/or due to increased awareness. In this study, we will assess whether the mpox outbreak could have been more or less severe, according to the level of behavioural adaptations of MSM.

**Methods:** We developed a mathematical transmission model and accounted for behavioural adaptations in response to the outbreak: a reduction in the number of casual partners; a reduction in the effective infectious period due to earlier recognising mpox symptoms and refraining from sexual contacts.

**Expected results:** From the model, we will calculate the reduction in the number of mpox cases with different levels of the behavioural adaptations.

**Current stage of work:** The mathematical model has been developed. The computer code will be updated to include different levels and types of behavioural adaptations.

**Discussion:** The findings of this study can contribute to a better understanding of the role of behaviour in the transmission of infectious diseases and can be used to inform public health decisions in designing measures for future outbreaks. Results showing that a reduction in the infectious period and in the number of partners could lead to considerably less new infections, would imply that during future outbreaks, health practitioners could concentrate on recommendations to decrease contacts and focus on raising awareness that could help individuals to early recognise infection.



## **Unravelling the multidimensional interplay between individual and social determinants of vaccination behaviour**

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Vaccine uptake is a multifaceted behavioral phenomenon influenced by various socio-demographic, psychological, health-related, economic, and environmental factors. Despite the potential threat of public vaccine hesitancy to the longstanding progress in preventing diseases, there have been limited efforts to integrate vaccination behavior into the modeling frameworks that inform policy decisions. Traditional models often assume a constant demand for vaccines, treating it as an external factor in the system. The ongoing project (IMMUNE) aims to revolutionize epidemiological modeling by treating vaccination decisions as endogenous variables, dynamically changing based on various determinants.

To achieve this goal, we collect nationally representative data from Italy, France, Germany, Hungary, Spain, and the UK, using the Capability, Opportunity, and Motivation Behavior Model (COM-B) framework. This model broadens the definition of behavior beyond cognitive processes, offering detailed guidance on untangling the relationship between behavioral outcomes and their determinants. An online questionnaire has been developed to assess participants' socio-demographic, health, and economic characteristics, along with their psychological and physical ability to receive vaccinations, personal motivation for vaccination, and information on social and environmental factors influencing their vaccination decisions.

This survey enables us to gather nuanced and context-specific empirical data on vaccination behavior. The insights gained from this study will be a vital contribution to designing novel computational models for infection transmission, providing a deeper understanding of the role played by vaccination behavior in the spread of infectious diseases.

## **Developing and validating a framework for collecting and integrating behavioural data in transmission models**

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### **Background:**

Infectious disease transmission is highly dependent on (preventive) behaviour of individuals. Policy advice is often based on mathematical transmission models providing predictions of the impact of new policies on disease transmission. However, behavioural data is often insufficiently incorporated in such models. We aim to develop a framework for collecting real-life data on the effect of future policy changes on behaviour associated with disease transmission, suitable for transmission models.

### **Methods:**

To study heterogeneity in (psychosocial determinants of) behaviour, we will collect real-life data using online questionnaires. Data will be collected prior to (e.g., intentions), during and after (i.e., validation) two policy changes in the Netherlands: chlamydia testing policy and rotavirus vaccination implementation. Findings are then used in infectious disease transmission models.

### **Expected results:**

Subgroups may be identified based on psychosocial determinants and the intention-behaviour gap (i.e., quantified by comparing intentions at T1 to behaviour at T2) in the case studies. These characteristics and changes over time may be incorporated into transmission models, in addition to the traditional infection parameters. This could provide a more realistic prediction of transmission dynamics and the impact of policy changes.

### **Current stage of work:**

Questionnaires have been developed, cognitively tested and piloted together with modelers. Data collection is ongoing. We expect to present preliminary results during the conference.

### **Discussion:**

The individual case studies as well as the final framework may be used to better understand and predict behaviour that is relevant for disease transmission, and to identify subgroups that may need more attention in interventions.

## Trajectories of Relationship Satisfaction and Their Implications for Long-Term Well-Being

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**Background:** The adverse effects of low relationship satisfaction on various life domains are well-documented; however, less is known about the beneficial outcomes of relationship satisfaction in long-term couples.

**Methods:** We applied dyadic Latent Class Growth analysis to explore trajectories of relationship satisfaction in a sample of N = 299 mixed-gender couples over 10 years. Relationship satisfaction was assessed annually using the Couples Satisfaction Index (CSI; Funk & Rogge, 2007). After 10 years, differences in positive outcomes— affect (measured by the Multidimensional Mood Questionnaire; MDBF; Steyer et al., 1994), mental health (measured by the General Health Questionnaire; GHQ-12; Goldberg, 1992), and life satisfaction (measured by one ad hoc global item)—among trajectory subgroups were examined.

**Results:** Three subgroups of change in relationship satisfaction were identified with either high and relatively stable relationship satisfaction (64% of couples), high but strongly declining relationship satisfaction (19%), or low but increasing relationship satisfaction (17% of couples). Results indicated significant variations in outcomes among couples based on their subgroup membership. Supporting our hypothesis, couples in the subgroup characterized by high initial and relatively stable relationship satisfaction reported the most favorable outcomes: more positive affect, better mental health, and higher life satisfaction. In contrast, subgroups with declining and/or lower relationship satisfaction demonstrated less favorable outcomes.

**Discussion:** These findings underscore the importance of considering the variability in relationship satisfaction trajectories and highlight their implications for individual well-being in the long term.

## **Coping with visual impairment together: relationships between stress communication, dyadic coping, and couples' psychological well-being**

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**Background:** The prevalence of visual impairment (VI) has been increasing worldwide, adversely impacting both patients and their spouses' well-being. Dyadic coping (DC) can be effective in promoting the psychological well-being (PWB) of couples facing VI, but its role remains overlooked. This study analyzed the mediating role of DC (i.e., supportive DC, negative DC, protective buffering, and common DC) on the relationships between stress communication (SC) and PWB among couples facing VI.

**Methods:** Ninety-nine Swiss couples in which one partner is visually impaired completed self-report questionnaires assessing SC and DC (Dyadic Coping Inventory) and PWB (WHO-5). An Actor-Partner Interdependence Mediation Model (APIMeM) was performed.

**Findings:** The APIMeM fitted the data well:  $\chi^2 = 19.81$ ,  $df = 22$ ,  $p = .595$ ; RMSEA = 0.000; SRMR = 0.063; CFI = 1.000. SC was indirectly related to one's own and the other partner's PWB through common DC (actor-actor-actor indirect effect: 95% CI [1.92, 10.99]; partner-actor-actor indirect effect: 95% CI [0.80, 5.96]). The more partners communicate stress, the more they ( $b = 0.36$ ,  $p < .001$ ) and their spouses ( $b = 0.18$ ,  $p < .01$ ) engage in common DC which, consequently, was associated with higher PWB for the partner engaging in common DC ( $b = 11.72$ ,  $p < .01$ ).

**Discussion:** SC and subsequent conjoint forms to deal with visual impairment-related challenges are interlinked within couples and are associated with better PWB. Rehabilitation services should move from a patient- to a couple-oriented approach and target the promotion of mutual self-disclosure and common DC in couples facing VI.

## **Affairs of the heart: Couples coping with cardiac rehabilitation**

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**Background:** Cardiovascular diseases represent a major challenge not only for patients, but also for their partners. The aim of the present research was to investigate how patients' quality of life, upon entering rehabilitation and following discharge, was correlated with their patient activation, the patient's perceived partner support, and the quality of such support. In addition, the role of the relationship between partners and the medical staff will be explored.

**Methods:** A longitudinal dyadic design was adopted in which 60 patient-partner dyads completed a questionnaire, including measures of quality of life, patient activation and partner support, in three occasions (T0= at rehabilitation admission; T1=at discharge; T2=6 months after discharge). Correlational and regression analyses were used to model associations between variables.

**Findings:** Preliminary results showed a positive and significant association between patients' quality of life and patient activation both at the beginning and at the end of rehabilitation. In contrast, overprotective or hostile partner support correlated negatively with patients' well-being. No significant longitudinal associations were found. Data analyses are ongoing.

**Discussion:** This study highlights the need to involve both members of the dyad in the different phases of the rehabilitation process, since ineffective support can be a risk factor for the patient's well-being.

## **Adoptive couples' congruence on mindful parenting: Exploring its implications for dyadic and individual health outcomes**

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**Background:** Adoptive parenthood can be a life stressor for a significant number of couples. The inclusion of both elements of the parental dyad on Mindful Parenting (MP) interventions has been advocated to achieve better health results for these families. However, there is no research exploring the degree to which adoptive couples' congruence on MP can impact both their dyadic and individual outcomes. This was the aim of the present study. **Methods:** In this cross-sectional dyadic study, 123 Portuguese adoptive couples completed self-reported measures on MP (Interpersonal Mindfulness in Parenting Scale), dyadic adjustment (Revised Dyadic Adjustment Scale), coparenting (Parents' Perceptions of the Coparenting Relationship), anxiety and depressive symptoms (Hospital Anxiety and Depression Scale). Two differences' scores on MP were computed: one reflecting the absolute difference between mothers and fathers' scores ( $[0.00,41.00]$ ), another reflecting the direction of this difference (Fathers>Mothers=0). Significance was defined as  $p < .05$ . **Results:** Partners presented similar levels of MP and their scores were significantly correlated with each other ( $r=.246$ ). After controlling for fathers' and mothers' MP, no significant correlations were found between both differences' scores in MP and mothers' perspectives on dyadic or individual outcomes. Fathers' parental stress was higher when the absolute difference in MP was higher ( $r=.214$ ) and fathers' perspectives on coparenting and depressive symptoms were respectively lower ( $r=-.256$ ) and higher ( $r=.240$ ) when the mothers presented higher levels of MP than themselves. **Discussion:** Our results suggest that including both partners on MP post-adoption interventions may be particularly important to promote the health of adoptive fathers.

## **When 1+1 $\neq$ 2: Challenges in the specification and measurement of dyadic mechanisms**

Talea Cornelius<sup>1</sup>, Gertraud Stadler<sup>2</sup>, Lisa Zhang<sup>3</sup>, Nelli Hankonen<sup>4</sup>, Aleksandra Luszczynska<sup>5</sup>

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### Overview :

**Purpose.** Organizational frameworks can facilitate evidence synthesis and theory refinement, but little attention has been paid to the added complexity of specifying dyadic mechanisms of action (MoAs) hypothesized to underlie behavior change. In this roundtable, experts in ontology development and dyadic research will discuss challenges of dyadic MoA specification and implications for dyadic theory and research design.

**Objectives.** (1) Provide an overview of classification systems for understanding individual and socially-based MoAs and associated intervention techniques. (2) Compare and contrast individual v. dyadic MoAs and interventions. (3) Highlight contextual factors (e.g., dyad type) that may further complicate dyadic classification efforts. (4) Engage attendees in a discussion of best practices for MoA specification, measurement, analysis, and intervention design in dyadic research.

**Rationale.** Greater attention to the complexities of dyadic research is necessary to guide efforts to create classification systems for evidence synthesis and behavioural health intervention optimization. Ms. Zhang will open the session by discussing the development of the Human Behaviour Change Project (HBCP) MoA Ontology and decision points regarding the classification of entities as individual or interpersonal. She will poll audience opinion regarding whether exemplar MoAs (e.g., norms, social influences) are individual or dyadic and discuss results. Dr. Hankonen will present research from another angle—motivational interaction—to highlight considerations such as perception in dyadic interaction (e.g., How do agents and targets perceive motivating techniques? How should we conceptualise emergent MoAs in dyadic counselling sessions?) and engage attendees with these questions. Dr. Cornelius will share lessons learned from an effort to code Science Of Behavior Change (SOBC) measures to entities from the HBCP MoA ontology and solicit feedback regarding conscious v. nonconscious MoAs (e.g., emotion contagion). Dr. Luszczynska will discuss challenges and insights referring to dyad type (e.g., patient-partner, parent-child) as a meta-level moderator guiding selection of determinants, mediators, and main contextual factors that should be taken into consideration. She will invite attendees to identify these complexities across dyad types. Dr. Stadler will provide an overview of the choices available in conceptualization, measurement, and analysis in dyadic research for MoAs and outcomes (e.g., whether to focus on the two individuals v. the dyad, use of self v. other report), inviting attendees to match various methodologies with hypotheses in order to shed light on potential discrepancies between theory and research design. The roundtable will conclude with a brainstorming session to address challenges for future efforts in organizational frameworks for dyadic research.

## **Co-creating a digital wellbeing platform with young people who live with type 1 diabetes**

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Julia Smyth<sup>3</sup>, Sinead Hannan<sup>3</sup>

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**Aims:** Adjusting to life after a diagnosis of type 1 diabetes can be challenging due to the complexity and daily demands of self-management, which can negatively impact wellbeing. Currently, no centralised means exists for young people to digitally track, monitor, and access support for psychosocial wellbeing. This project aims to co-create a digital wellbeing platform with young people, with a view to future phased trials. Co-creation facilitates empowerment of young people, necessary for establishing agency for wellbeing when living with T1D.

**Methods:** Semi-structured online Patient and Public Involvement groups were facilitated with six young people and two adults living with type 1 diabetes, two caregivers, and six healthcare professionals. Sessions explored the impact T1D has on psychosocial wellbeing and how to develop a digital wellbeing platform consistent with young people's needs. Sessions were recorded, transcribed, and deductively analysed using content analysis methods to identify themes.

**Results:** Key challenges included: burnout from diabetes management; stigma; and isolation from peers. Preferences for key content design features and topics were discussed, alongside preferred formats and routes of dissemination. Young people felt information about coping at school, exposure to lived experiences and logging and tracking psychosocial wellbeing data would empower them to discuss wellbeing with trusted others including care teams. The platform is currently under development and will be continuously and iteratively co-created with young people.

**Conclusions:** This project highlights known psychosocial challenges experienced by young people living with type 1 diabetes and presents a meaningful approach to co-creating a novel digital wellbeing platform.



## **Healthcare professionals' perspectives on digital tools to support cancer patients and their relatives**

Ambre Ittouchene<sup>1</sup>, Valentyn Fournier<sup>1</sup>, Lisa LAROUSSI-LIBEAULT<sup>1</sup>, Christelle Duprez<sup>1</sup>, Delphine Grynberg<sup>1</sup>, Pascal Antoine<sup>1</sup>, Pauline Justin<sup>1</sup>, Kristopher Lamore<sup>1</sup>

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**Background:** Digital interventions use digital devices (e.g., smartphone, computer) to improve healthcare services. Due to the critical shortage of oncology professionals, developing online digital interventions may complement patient care. Hence, the aim of this qualitative research was to identify the needs of healthcare professionals (HCPs') and identify levers and obstacles to implementing a digital tool to support patients with cancer and their relatives.

**Methods:** Individual interviews were conducted to collect the personal opinions and experiences of HCPs' (n=40). Data were analyzed using a thematic analysis approach.

**Findings:** Preliminary findings revealed four main themes. For HCPs', digital tools to support patients and relatives should (1) provide information about cancer, side effects, or the care pathway; (2) facilitate communication between HCPs' and the open-care network, as well as with patients and their relatives; and (3) overcome obstacles, such as lack of time, social and digital divide, or the multiplicity of existing platforms. However, many benefits (4) of using digital tools have been reported, such as speeding up patient care and improving quality of life. HCPs' are generally supportive of implementing a digital supportive care tool in their practice but highlight the need for human support.

**Discussion:** Findings show the importance of identifying needs to create a transferable tool in HCP is highlighted. To overcome the limitations encountered in clinical practice, an online digital intervention to support patients and relatives could be developed, but it needs to be carefully developed with all stakeholders, including patients, relatives, and HCPs'.

## **Adapting COMPASS; a digital-CBT intervention for people with Multiple Sclerosis (MS) and co-morbid psychological distress**

Emma Jenkinson<sup>1</sup>, Emily Salisbury<sup>1</sup>, Rona Moss-Morris<sup>1</sup>, Simon Brodie<sup>2</sup>, Eli Silber<sup>1, 3</sup>, Joanna Hudson<sup>1</sup>

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### **Introduction**

The value of patient and public involvement (PPI) is widely recognised in intervention development to enhance the relevance, acceptability, and potential efficacy of an intervention for its users. Therefore, we aimed to adapt COMPASS, a digital cognitive behavioural (CBT) programme, to treat psychological distress in long-term conditions, for people with Multiple Sclerosis (MS). We worked with people living with MS to adapt the existing content, to maximise the acceptability of and engagement with COMPASS.

### **Methods**

Fifteen people with MS were recruited to a patient advisory group (PAG). We held a focus group, cofacilitated by our PPI lead (n=9) and individual interviews (n=6), where members were asked to share experiences of living with MS. The conversations were structured around the COMPASS intervention sessions, to identify relevant areas of adaptation. We used an iterative process to adapt the original programme, where members of the PAG group (n=11) and healthcare professionals (n=2) evaluated adapted sections and offered feedback on changes.

### **Results**

The focus group and interviews generated themes including uncertainty, specifically symptoms progressing or going into relapse and what the future may bring, finding the 'new me' following an MS diagnosis, frustration over friends and families lack understanding, especially when symptoms are 'invisible' and the extent to which symptoms and pain can be managed.

### **Conclusion**

We worked alongside our PAG to identify key challenges and needs of the MS population to inform COMPASS adaptations. The intervention is currently being evaluated in a feasibility-implementation study within an NHS neurology clinic.

## **Digital transformation to enhance cancer psychological care: co-creating solutions for clinical processes and therapeutic interventions**

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**Background:** With increasing demand for cancer psychology support and significant pressures on health care systems, research and clinical priorities are to deliver the right psychological support at the right time. The aim of this UK Health Service-funded Digital Fellowship project is to co-design digital solutions and processes to optimise the delivery of personalised cancer psychology care.

**Methods:** the 6-SQUID intervention development framework will be utilised, comprising of needs assessment interviews, clinical observations, a systematic review and intervention development focus groups. Participants (n = 50) will include cancer patients, their friends and family, cancer health care professionals and charities, including psychologists and digital health technology experts from industry and academia.

**Expected results:** the project will identify effective, feasible digital solutions that can be implemented within the health care system to support the delivery of personalised cancer psychological support. Key stakeholders will co-design a prototype.

**Current stage of work:** scoping work to date has highlighted the need for cancer-specific digital apps and wearables to support face-to-face psychology support.

**Discussion:** This fellowship project idea arose following participation in the EHPS 2023 Winter School on Just-in-Time Adaptive interventions.

## **“Viver com Lúpus”: A webapp development to promote adjustment to Systemic Lupus Erythematosus**

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**Background:** Systemic Lupus Erythematosus (SLE) disproportionately affects women, significantly impacting their quality of life. While assisting women in adapting to SLE is crucial, existing apps are of poor quality, primarily offering educational content from unreliable sources and lacking behavior change techniques (BCT). This study aims to describe the development of a theory and evidence-based digital intervention (DI) incorporating BCT to enhance SLE adjustment.

**Methods:** The DI development was based on the Intervention Mapping Protocol and the Person-based Approach. Following a needs assessment involving a systematic review and meta-analysis and interviews with patients and healthcare professionals, two primary objectives for the Webapp were identified: (1) reducing threatening SLE perceptions and (2) regulating physical activity levels.

**Findings:** The outcome is a theory- and evidence-based Webapp comprising two modules, the first based on Common Sense Illness Model and the second based on the Health Action Process Approach, corresponding to the defined objectives. The DI will deliver information via videos and texts, along with activities to assist participants in setting objectives, define action plans, and monitoring progress. It aims to help users recognize their primary symptoms' impact on their quality of life and learn how to pace physical activity to maintain an active and balanced life despite chronic pain and fatigue.

**Discussion:** This innovative Webapp holds promise in enhancing women's adjustment to SLE by offering effective self-management strategies. It marks a significant step towards addressing unmet needs of women with SLE and understanding the efficacy of digital interventions in improving their quality of life.

## **Patient's Role in Telemedicine: from Compliance to Engagement in Scientific Research Perspectives**

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**Background:** Telemedicine services are progressively assuming a central role in health management and healthcare delivery. Due to the peculiarities of technological systems, the patient's role is becoming increasingly relevant in the healthcare system. Despite active patient participation being a long-standing focus in scientific literature, there is still no shared agreement on its definition. This study aims to observe how this concept is studied and to identify differences between the field of psychology and other scientific areas. **Methods:** Employing Bibliometrix software in the R environment, a bibliometric analysis quantitatively assessed scientific outputs productivity using Web of Science (WoS). A Total of 9763 documents were analysed (552 documents from the psychological field; 9211 documents from other scientific areas) published from 1990 to 2023 with the aim of systematically analysing the use of terms related to patient involvement in telemedicine services (e.g., empowerment, activation, engagement, adherence, and compliance). A distinction was made between the psychology field and all other areas in WoS (e.g., economics, medicine, computer science) to compare the usage, frequencies, and evolution of terms over time. **Findings:** The terms used to describe the patient-centered approach are currently heterogeneous in both the psychological and other scientific areas. However, in psychology, the term "engagement" is more commonly used, while in other research areas, "adherence" persists as the predominant construct over time. **Discussion:** Although not yet widely adopted in conventional scientific language, the patient engagement paradigm is emerging in psychological research, emphasizing the importance of the patient's active participation in their healthcare journey.

# **A systematic review of the relationship between compassion for self and compassion for others**

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## **Background:**

Compassion refers to the awareness and intention to relieve suffering with kindness and care, in oneself and others. Researchers and practitioners often intuitively believe that compassion for self and for others are closely interconnected. The purpose of this systematic review is to summarize current evidence on how compassion for self and others relate to each other.

## **Methods:**

A systematic review of published peer-reviewed articles was conducted in six databases including Web of Science, PubMed, PsycINFO, Embase, CINAHL, and Scopus. All articles including “compassion\*” in combination with “self” and “other\*” in either title or abstract were identified. Reference lists of relevant compassion reviews were searched for additional eligible papers.

## **Findings:**

A total of 52 studies met the inclusion criteria. A great variation in the assessment of compassion was observed. Many studies reported a weak to moderately strong positive relationship between self-compassion and compassion for others, with  $r$ s ranging from .12-.65. A few studies found a non-significant or negative correlation between compassion for self and others.

## **Discussion:**

The assumed positive association between self-compassion and compassion for others was supported. Intensive longitudinal and interventional research is needed to clarify the temporal relationships between compassion for self and others in the future.

## **“No pain, no gain” – Relationships between sport, mental health, self-esteem, and body image**

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**Background:** Physical activity has a positive influence on mental health and can improve well-being. This study examined correlations between physical activity and mental health, self-esteem, and body image in adults, controlling for sociability, physical well-being, and gender.

**Methods:** Data were collected using an online questionnaire measuring self-esteem, physical and psychological well-being, and body image. N=883 (women: 66%) participants completed the questionnaire (M=40.79, SD=13.43 years). Complete data analyses will comprise multiple regression, moderation and mediation analyses and group comparison.

**Expected results:** We expect positive correlations between physical activity and self-esteem that will not differ between men and women, that self-esteem will be a significant predictor of psychological well-being, and that self-esteem will mediate between physical activity and psychological well-being. Furthermore, body image is expected to predict self-esteem and psychological well-being and, together with self-esteem, to mediate the relationship between physical activity and psychological well-being. First analyzes reveal that physical activity predicts significant amounts of variance of psychological well-being ( $\beta=.19$ ;  $p < .001$ ), self-esteem ( $\beta=.20$ ;  $p < .001$ ) and body image ( $\beta=.33$ ;  $p < .001$ ).

**Discussion:** The preliminary results confirm the importance of physical activity for mental health. If the final analyses reveal that self-efficacy and body image act as mediators, this will point to implications for health promotion and prevention, such as highlighting the need to promote physical activity among diverse populations in order to improve overall mental health.

## Acceptability of a Soft Skills Intervention in Higher Education: a Qualitative Approach

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**Background:** Soft skills play a vital role in employability, academic success, and mental health of higher education (HE) students. Previous studies have shown that interpersonal and intrapersonal skills can reduce and prevent mental health problems of HE students. This study investigates students' perceptions and experiences regarding the acceptability of an online extracurricular soft skills workshop.

**Methods:** We used a phenomenological qualitative approach to understand participants' experiences during the workshop. Fourteen HE students (11 females, 3 males), primarily in STEM fields, participated in two online focus groups. Focus Group 1, subdivided into two sub-groups (1a and 1b), examined perceived efficacy, while Focus Group 2 addressed broader aspects of acceptability. Semi-structured interviews were conducted, video-recorded, and transcribed verbatim. Thematic analysis was employed for data analysis.

**Findings:** Participants attended a varying number of sessions, ranging from 5 to 8. Through thematic analysis, five distinct themes emerged from the data: 1) All driven by the wish to find a space to grow, 2) Experiencing the feeling of cohesion, connection and safety, 3) Realizing their individual learning achievements, 4) Balancing between individual preferences and the workshop format, and 5) Wish to implement soft skills development in the future.

**Discussion:** Overall, the soft skills intervention was perceived to be acceptable for students, indicating its potential to address their needs for personal growth. Findings suggest the workshop potential in fostering self-awareness and diverse range of soft skills. They underline crucial conditions for supporting soft skills implementation in education and emphasize the importance of tailored interventions.



## **Movement, music and mood: Music contributes to mood benefits from physical activity**

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**Background:** Physical activity has many health benefits, including improved mood. Music can also improve mood. Furthermore, listening to music during physical activity can increase mood during physical activity. However, little research has investigated whether listening to music during physical activity is associated with better mood in general.

**Method:** Using a cross-sectional design, 348 Australians (17-45 years, 274 females) completed an online survey that incorporated measures of physical activity (type and total amount), physical activity enjoyment, music use during physical activity and positive and negative affect over the past week.

**Findings:** Total amount of physical activity was positively associated with physical activity enjoyment and positive affect but was not associated with negative affect. Listening to music during physical activity was not associated with physical activity enjoyment or positive or negative affect. However, a moderation analysis controlling for physical activity enjoyment showed that total amount of physical activity predicted positive affect only with participants who listened to music during more than half of their physical activities (n = 190) compared to those who listened to music during half or less of their physical activities (n = 158).

**Discussion:** Results suggest that listening to music during physical activity may be an important contributor to improve positive affect from physical activity. These findings suggest that including music in one's physical activity practice may provide further psychological health benefits than physical activity alone.

## **Managing medications with a risk of dependence or withdrawal: the challenges for healthcare professionals**

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**Background:** There are concerns over how medicines with a risk of dependence or withdrawal are managed. These medications include benzodiazepines, z-drugs, gabapentinoids, opioids for chronic non-cancer pain and antidepressants. This study aimed to understand the experience of prescribing, managing and deprescribing these medications from the perspective of healthcare professionals.

**Method:** Healthcare professionals (nine GPs, five pharmacists and 1 practice nurse) from five GP practices in South East England took part in individual semi-structured interviews. Data were analysed using Codebook Thematic Analysis.

**Findings:** Three main themes were identified: i) 'Concerned, but no other option than to prescribe'. Medications with the potential for dependence or withdrawal were regarded as risky. Despite concerns, medications were prescribed due to limited alternative treatment options. ii) 'Medication reviews: important but not always practical'. Medication reviews were regarded as important in managing medication-related risks but were not always done due to limited time, meaning patients may be prescribed medication for longer than necessary. iii) 'Deprescription feels risky'. The possibility of rebound effects and withdrawal symptoms, the time needed to support patients and the lack of alternative treatment and support meant that many healthcare professionals were reluctant to deprescribe medication.

**Discussion:** Healthcare professionals need to be supported to improve how these medications are prescribed and managed. Greater provision of non-pharmacological treatment options, more time to work in partnership with patients, and support to successfully deprescribe medication is needed. These needs should be a focus for policy and for improvement and delivery plans to ensure good quality care for patients.

## **The Stigmatization of Prolonged Grief Disorder and Disenfranchised Grief: A Vignette-Based Experimental Study**

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People diagnosed with prolonged grief disorder (PGD) are at risk of increased public stigma but research has yet to examine whether such stigma is shaped by the type of relationship. In an experimental study, we asked participants (N = 306) to read scenarios in which different targets lost their romantic partner, child, and companion animal. Overall, targets diagnosed with PGD (vs. not diagnosed) elicited more negative emotions and negative attributions, and their experience was perceived as less legitimate. Targets who lost their companion animal (vs. romantic partner and child) elicited lower scores in prosociality, anxiety, warmth, and legitimacy whereas higher in sensitiveness. Notably, targets diagnosed with PGD after losing a companion animal elicited more anger, were perceived as less emotionally stable, and their experience was rated as less legitimate. Our findings indicate differences in the way grieving people are perceived, particularly when struggling with PGD after losing a companion animal (i.e., disenfranchised grief). Implications and suggestions for future studies are discussed.

Keywords: grief; public stigma; emotional reactions; attributions; perceived legitimacy

## **Effectiveness of booster sessions to promote physical activity maintenance: A systematic review and meta-analysis**

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**Background.** Utilising booster sessions after the initial intervention is a common strategy used to support participants' motivation for engaging in physical activity (PA). Despite the use of a wide range of theoretical frameworks to inform such a utilisation, research lacks consistent evidence on reporting such theories. This systematic review aims to (1) explore the theories informing the type of boosters used in PA programmes, and (2) assess which boosters are more effective in promoting PA maintenance.

**Methods.** A systematic review is currently conducted following the PRIMSA guidelines. Seven electronic databases were searched in January 2024, using the following concepts: (1) booster; (2) physical activity; and (3) randomised controlled trial (RCT). Studies will be included if they used an RCT design and a booster, after the main intervention to support PA maintenance. Data will be analysed using two different approaches: a systematic synthesis, and a meta-analytical approach assessing booster effectiveness.

**Expected Results.** A systematic synthesis of the frameworks used to inform the use of boosters in PA interventions will be outlined, and comparisons between studies that used behaviour change theoretical frameworks and those that did not employ such frameworks will be reported. Finally, meta-analytic effects will be summarised for the following outcomes: booster frequency, booster type, population, age groups, and context.

**Current Stage of Work.** This systematic review is at the title/abstract screening stage.

**Discussion.** We will discuss the differences in the theory-driven approaches employed to inform the use of boosters and the mechanisms underlying behaviour maintenance in the PA domain.

## The effects of time and physical activity planning on reduction of sedentary behavior

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**Background:** Sedentary behavior (SB), a major contributor to various health-related problems, is a growing global concern. To minimize its negative consequences, more insight into factors aiding SB reduction is needed. The aim of this study was to investigate the effects of physical activity (PA) planning intervention (compared to the control condition [PA and SB education]) on a reduction of SB.

**Methods:** A randomized controlled trial was carried out among 603 participants aged 11-86 years. Those assigned to the intervention condition were asked to form PA plans. SB was measured by accelerometers and evaluated using mixed models approach. The growth curve (with time as the sole predictor) and the effects of planning intervention on SB (after a 1-week and 36-week follow-up) were analyzed.

**Findings:** SB, estimated to be around 502.34 minutes/day at the baseline, showed a linear decline over time,  $t(602.01) = -3.17$ ,  $p = .002$ , by approximately 0.28 minutes with each week. The Time x Planning Condition interaction was non-significant at one week ( $p = .326$ ) and 36-week ( $p = .095$ ) follow-up, neither were the main effects of the planning intervention (all  $ps > .465$ ).

**Discussion:** The findings suggest that raising awareness of SB through education may be enough to induce changes in sedentary activities, thus more effort should be put into promoting active lifestyle and make negative consequences of sedentary behavior common knowledge. Lack of the effect of planning intervention indicates that more substantial assistance (e.g. delivered daily, with multi-techniques) may be needed to limit sedentary time.

## Physical activity plans in individuals with knee osteoarthritis: predictors of plan enactment

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**Background:** Action planning is an effective behavior change technique to facilitate physical activity. Although interventions often require participants to self-generate their action plans, little is known about which factors contribute to successful plan enactment. We aimed to test plan-specific self-efficacy and familiarity with planned behaviors as predictors of plan enactment.

**Methods:** Secondary analyses of the intervention condition of a randomized controlled trial with individuals with knee osteoarthritis were conducted. In a face-to-face computer-assisted intervention session, N = 116 participants (age: M = 65.67, SD = 7.66, 62% women) specified up to five action plans (M = 3.43, SD = 0.90). Plan-specific self-efficacy and familiarity with planned behaviors were assessed for each action plan via self-report during the intervention. Plan enactment was measured via self-report at two weeks following the intervention. Multilevel models with plans nested in participants were fit.

**Findings:** Participants enacted M = 68% (SD = 23%) of their action plans during two weeks following the intervention. Higher levels of plan-specific self-efficacy were associated with higher rates of plan enactment. Action plans were more likely to be enacted if they involved increases in activities the participants were already familiar with as opposed to plans specifying the adoption of new physical activities.

**Discussion:** In individuals with knee osteoarthritis, plan-specific self-efficacy and familiarity with planned behaviors were associated with increased rates of plan enactment. Future planning interventions for similar target groups could emphasise the promotion of familiar behaviors rather than new behaviors and strengthen participants' self-efficacy towards plan enactment.

## Reducing sedentary behavior in parent-child dyads: Impact of three physical activity planning interventions

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**Background:** Effects of parent-child dyad interventions on behavior remain unclear. This randomized controlled trial investigated if, compared to a control condition, three types of physical activity (PA) planning interventions (individual 'I-for-me', dyadic 'we-for-me', and collaborative 'we-for-us') would reduce sedentary behavior (SB) time in parent-child dyads.

**Methods:** The study involved N = 247 dyads comprising parents and their children (aged 9-15 years old). The dyads were randomized into one of the three types of PA planning-intervention arms or the control condition. Mixed-models were applied to analyze data from a preregistered trial (NCT02713438) with the outcome of accelerometer-measured SB time, assessed at 1-week and 36-week follow-ups.

**Findings:** Results indicated a minor reduction in SB time for parents in the 'collaborative' ( $p = .048$ ) and 'individual' ( $p = .042$ ) planning conditions at the 1-week follow-up, with no sustained long-term effects. No significant changes were observed in the SB of children across all intervention types.

**Discussion:** While short-term reductions in parents' sedentary behavior were achieved, these were not sustained long-term. A PA planning intervention delivered to parent-child dyads did not result in substantial reduction of childrens' SB, which may be due to young people's needs of increased independence from their parents. The findings contribute to the understanding of PA planning interventions' efficacy in family settings and highlight the complexity of influencing energy expenditure behaviors within these dynamics.

## Effectiveness of Reinforced Implementation Intentions in Enhancing Physical Activity: A Randomized Controlled Trial

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We investigated the efficacy of reinforced Implementation Intentions (IIs) to foster moderate to vigorous physical activity (MVPA) in a minimally guided mHealth approach using ecological momentary assessment (EMA) in a two-arm randomized controlled trial.

Participants were randomized into an intervention group (IG; N = 49) and a control group (CG; N = 47) and completed a 4-week EMA with daily assessments of self-reported PA. Additionally, we assessed participants' PA level with the International Physical Activity Questionnaire (IPAQ) at pre-EMA, post-EMA, and follow-up (3 months after). Based on these two outcomes, we compared PA level trajectories between the intervention and control group using linear mixed models.

The IG reported more daily MVPA across the 4 weeks of EMA than the CG (IG: M = 28.76 minutes; CG: M = 19.72 minutes;  $R^2 = .08$ ). IPAQ results showed significant increases in weekly PA from pre-treatment to post-treatment and also to follow-up for both groups. However, we found no significant difference in these increases between groups.

The EMA data suggests that II-based coaching can moderately increase MVPA engagement with medium effect size. Although this effect of IIs is not reflected in our IPAQ results, the observed MVPA increases of over 50% from baseline to post-EMA and follow-up suggest the daily MVPA tracking induced in our study might have supported MVPA adoption and maintenance. Therefore, the combination of an II-based coaching with daily MVPA tracking appears to be a viable approach for supporting healthy individuals in their journey towards a more physically active lifestyle.



## **Is habit-based advice effective? Comparing a habit-based intervention to behavioural monitoring alone**

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**Background:** Although habit is seen as a key mechanism for promoting sustainable behaviour change, habit-based advice is predominantly compared to no treatment, rather than against simpler tracking (self-monitoring) support. This study tests whether using a commercially available habit theory-based intervention (Kurzgesagt's Habit Journal) will result in higher levels of behavioural engagement, automaticity, self-control, self-efficacy and intrinsic motivation over 12 weeks, relative to tracking behavioural frequency alone.

**Methods:** Participants were recruited via social media. At baseline 366 participants entered demographic information via the study website. Following 1:1 randomisation, they were posted a habit-based journal or simple behaviour tracker. The journal explained habit theory, and promoted habit development via graded tasks, action planning, self-monitoring and harnessing supportive environments. Participants were emailed weekly questionnaire links to report behavioural frequency, automaticity (2 items), and intrinsic motivation (4 items adapted from the Situational Motivation Scale). Self-efficacy (one item) and self-control (Self Control Scale) were reported at baseline, 6 and 12 weeks. The analysis will compare between-group change over time on these outcomes.

**Expected results:** We expect that those in the journal group will show higher levels of behavioural enactment, automaticity, self-control, self-efficacy and intrinsic motivation over the 12 weeks.

**Current stage of work:** Data have been collected and analysis is ongoing.

**Discussion:** Results will help to identify what makes habit-based advice effective, thereby informing future intervention development and addressing a key research question posed by the EHPS Habit SIG in its recent research agenda (Gardner et al., 2023, Psych & Health).

## **The impact of a brisk walking intervention (APPROACH) on all movement behaviours: A compositional analysis**

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**Background:** Cancer is a global health challenge and physical activity (PA) is a crucial part of cancer rehabilitation. Little is known about how interventions to increase PA impact all movement behaviours across the 24-hour day (i.e., PA, sedentary behaviour [SB] and sleep). The APPROACH pilot study tested the effectiveness of an app-based PA intervention to increase moderate-to-vigorous PA in people living with and beyond cancer (LWBC). This study will use the APPROACH pilot accelerometer data to assess the impact of the intervention on all movement behaviours.

**Methods:** 90 participants diagnosed with breast, prostate, or colorectal cancer who reported not meeting the guidelines for PA were recruited from a single UK hospital site. Participants were randomised to the intervention (n=44) or control (n=46). At baseline and three months (T1) participants continuously wore an activPAL accelerometer for 7 days. Movement behaviours in the intervention and control groups will be compared where each behaviour is considered as a compositional mean on a 24-hour scale.

**Expected results:** We expect that participants in the intervention group will show more active movement profiles (increased PA, reduced SB) overall than those in the control group from baseline to T1.

**Current stage of work:** Data are collected and are being analysed.

**Discussion:** People LWBC display unique movement profiles due to the side-effects of cancer and its treatments. This novel study will provide more insight into the compensatory changes made to adjust for changes in behaviours, thereby informing the design of future interventions for this population.

## How can we assess diversity across countries? Common ground and necessary adaptations

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**Purpose:** Considerable data gaps limit our understanding of heterogeneity and inequality in health and evidence-based delivery of personalized health services. To address these data gaps, there is an urgent need to collect data on gender and other diversity domains in all areas of the health sciences. However, there is currently no agreement how to conduct systematic data collection on gender and diversity in the health sciences. In collaboration with a team of international collaborators in the Diversity Assessment Group, many from the European Health Psychology Society, we have developed a Diversity Minimal Item Set (DiMIS) for 20 countries.

**Objectives:**

- (1) Give an overview of common diversity domains across 20 countries
- (2) Present adaptations for different regions, comparing versions for different European regions and examples from the Americas, Africa, Asia, and Oceania.
- (3) Describe and discuss good practices and lessons learned for the adaptation process, including expert interviews and stakeholder engagement
- (4) Discuss in small groups how to implement diversity assessment in research, health service delivery, organizational development, and policy impact analysis across countries.

**Rationale:** In line with the UN Sustainable Development Goals, the health sciences work towards better health and well-being for all at all ages. To reach these goals, we need to better understand heterogeneity in healthy populations, patients, and health professionals, in order to provide personalized prevention and health care and arrive at more socially and environmentally sustainable practices.

Five members of the Diversity Working Group will present the adaptations developed by their country working groups: Karolina Kolodziejczak will present the ideas for Poland, Thomas Gültzow for the Netherlands, Yael Benyamini for Israel, Simona Quaglia for Italy, and Marina Hinssen for a version for children and adolescents.

## **Evaluating the Effects of a School-Based Smoking Prevention Program: A Gender- and Diversity-Sensitive Approach**

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**Background.** The popularity of electronic cigarettes is increasing, potentially attracting more young people to nicotine use. Gender and diversity-based disparities in tobacco consumption are observed from an early age. Youth at risk can be reached through interventions delivered in school settings. However, program effectiveness has been shown to vary among different target groups. The main objective of this study is to evaluate the effectiveness of a gender-sensitive smoking/vaping prevention program targeting lower-SES schools.

**Methods.** A longitudinal, cluster randomized controlled trial is conducted assessing data from 1,500 adolescents (grades 5 and 6) in 25 elementary schools in Berlin, Germany. The schools are randomly allocated to the intervention or active control group (standard curriculum) in a 1:1 ratio. Outcomes are assessed 3, 6, and 12 months post baseline. General mixed effect regression analyses will be performed to investigate the intervention effects on student's intention to be smoke-free (primary outcome) and susceptibility to smoke/vape and behavior.

**Expected results.** 60% of the schools recruited so far are facing severe socio-structural strain, such as high levels of student socio-economic disadvantage and language barriers. Generally, we expect less privileged students to exhibit higher levels of risk factors and smoking/vaping behavior at baseline. We anticipate differential intervention effectiveness and underlying mechanisms of action by gender, ethnicity, socio-economic- and migration status.

**Current stage of work:** Baseline assessments are ongoing and will be completed by July 2024.

**Discussion.** Our work may inform future intervention studies aimed at understanding and addressing heterogeneity in program development and evaluation.

# Technology-based psychoeducational intervention on loneliness, social isolation, and family relations – A randomized controlled study

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## Background:

Information and communication technologies (ICT), such as instant messenger, offer opportunities to maintain social connectedness. However, the extent to which ICT use acts as a protective factor against loneliness and social isolation, while also supporting intergenerational family relationships, remains unclear.

## Methods:

This study aimed to develop a brief psychoeducational intervention engaging older adults and their families in the use of new ICTs and evaluate its effectiveness on perceived social isolation, loneliness, and related outcomes compared to a control condition in a randomized controlled trial. Additionally, the role of ICTs in fostering family interactions was examined through a dyadic data framework. Participants (N = 32 pairs of younger and older family members) were recruited through various methods, including advertisements in local media, radio, and social networks.

## Findings:

Results from RM-MANOVA showed a significant condition by time effect for younger adults in the intervention group, suggesting increased engagement between family members. Dyadic analyses indicated that younger adults' contact frequency at pre-assessment predict older adults contact frequency at post-assessment. This emphasizes the importance of younger adults' encouragement in fostering intergenerational interactions. Online phone calls emerged as a promising tool for promoting intergenerational communication. Higher user satisfaction was associated with increased ICT use, perceived usefulness, and fewer technology barriers.

## Discussion:

This study offers preliminary findings on the effectiveness of ICT-based interventions in promoting technology adoption, reducing social isolation, and enhancing intergenerational family connectedness. These results support the feasibility of such interventions and warrant further evaluation in larger-scale randomized trials conducted over extended periods.

## **“You’ve just replaced one addiction with another,”: A qualitative view of vapers’ perceptions of dependency**

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**Background:** E-cigarette use has risen exponentially in recent years to become the most popular smoking cessation aid in the UK, endorsed by public health bodies such as the NHS and PHE. Just over half of the UK’s 4.7 million vapers are ex-smokers, of whom 55% are long-term users (vaping > three years). This research explored vapers’ e-cigarette use, perceptions of dependency and intentions to quit.

**Method:** One-to-one interviews were conducted with former smokers (n=41, average time vaping=3.96 years) who stopped smoking through e-cigarette use and vaped exclusively. Data was analysed using thematic analysis.

**Findings:** While vapers felt free of smoking, they were not free of addiction, as they still consumed nicotine and their dependency remained. Perceptions of addiction were mixed – some participants felt more in control of vaping compared to smoking, reporting fewer cravings, but most considered themselves to be more addicted, describing constant ‘grazing’ and ‘dummy’-like usage. Moreover, almost all interviewees started vaping with the intention of eventually stopping, by decreasing the strength of their nicotine liquid; while many had reduced nicotine strength, none of the sample vaped without nicotine and the majority had no plans to quit.

**Discussion:** Vapers’ constant e-cigarette use meant that they rarely experienced cravings, leading to perceptions of greater control and autonomy. However, ‘grazing’ throughout the day also reinforced habitual behaviours, leading some vapers to feel more, rather than less, addicted compared to smoking. This research has implications for understanding the processes underpinning the long-term continuation of vaping even after successful smoking cessation.

## How healthy are non-traditional, distance-learning university students?

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**Background:** The health status of students is an emerging field in health psychology, both at international and national levels. In Germany, results from a recent health insurance survey showed that in general the health status of students diminished since 2017 and exhaustion from stress became a major burden. Students' stress and health status varies depending on specific study conditions, i.e., on-site versus distance-learning. Distance-learning students differ from traditional students in many ways, being often older, having children and studying alongside work. To obtain reliable knowledge about the current stress and health of distance-learning students, a health survey was conducted at Germany's largest state distance-learning university, as a follow-up to a similar survey in 2016.

**Methods:** An invitation to an online health survey was sent out to all students at the university in January 2024. Data was collected until February. Besides demographical data, the following constructs were included in the questionnaire: perceived health status, life satisfaction, health complaints, depression, anxiety, health behavior, social media use, study-related demands and resources, engagement, burnout, perceived stress, coping, self-efficacy, optimism, pessimism, social support and the use and/or need of support from the university.

**Planned analyses:** Correlations between demographic variables and health parameters will be analyzed and compared to the data from 2016.

**Discussion:** The results of the study will provide a detailed, current state of the health situation of non-traditional, distance-learning university students. By comparing data from 2016 and 2024, developmental trajectories of health-related outcomes in this specific group of students can be explored.

## **Children's art, stories, and the realities of water in urban Brazil**

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**Background:** Water's absence or ill quality fundamentally shapes children's lives and has profound consequences on their wellbeing. Lacking safe and sufficient water, children are unable to consume culturally desirable foods, become dehydrated, struggle to meet societal expectations, and experience physical and mental fatigue. Despite this, little has been done to examine how children themselves experience and perceive contexts of inadequate/unsafe water, as prior work has focused on the adult narrative. Therefore, the objective of this research was to explore children's experiences and perceptions of the water they live with.

**Methods:** Visual-ethnographic research was carried out with 24 children, ages 5 – 10, in Belém, Pará, Brazil where inadequate/unsafe water is a daily reality for children residing in low-income and informal neighborhoods. Drawings and semi-structured conversations grounded in Ecocultural Theory were used to elicit children's thoughts on everyday routines and activities that involved water. Drawings and interview transcripts were thematically analyzed using both an inductive and deductive coding scheme.

**Findings:** Thematic analysis revealed that children associated water with family, play, it's importance to their wellbeing, as well as the built and natural environments they enjoy, such as their home and rivers/beaches.

**Discussion:** Despite living in an environment where concerns surrounding water are common, children primarily associated water with positive experiences. This is significant, as it indicates that children do not inherently associate conditions of inadequate/unsafe water with illness and/or distress. This also suggests significant parental buffering and successful household coping strategies.



## **A Novel Treatment Intervention for Youth Presenting with Anxiety: A Pilot Study in Canada**

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As a work-in-progress, this cutting-edge clinical research will present a novel psychotherapy (Externalizing Metaphors Therapy/EMT) for youth presenting with anxiety, worry, and stress. This presentation will address the topic track: Stress, Physiology & Health. Existing treatment interventions for 'mood' are typically longer in duration (10+ sessions) and do not match treatment-seeking behaviors of youth (attending less than 5). Longer-term treatment interventions often result in an increase in resources, longer waitlist times, and high dropout rates for youth seeking mental health counselling services.

The zeitgeist for brief psychotherapy has shifted to focus on producing significant outcomes in a much shorter time. Thus, walk-in clinics have proliferated throughout counselling centres, including Student Wellness & Accessibility, St. Lawrence College, Kingston, Ontario, Canada.

A pilot study is currently in-progress evaluating whether our single session model (EMT) can decrease self-reported anxiety/worry/stress within the student participant population. The current researcher is the sole creator of EMT and has trained 2 counselling staff in the 60–90-minute single session treatment intervention. A single subject design with convenience sampling was determined as the best design for this pilot study. 30 student participants are being selected and will receive the single session EMT model at their college.

Our research team is interested in knowing: (1) If the treatment intervention decreased anxiety, and (2) Which mediators of change were more responsible for the decrease in anxiety based upon student participant feedback. We are also very interested to know if the model was - culturally sensitive - to the 75% international student population at the college (25% domestic students).

The researcher-presenter would like to share the results of this pilot study that therapeutically addresses ANXIETY/WORRY/STRESS as they are common presenting concerns. Please note the EMT model is based upon 10 peer-reviewed publications.

Ethics approval: St. Lawrence College Research Ethics Board

## **Parenting experiences of mothers of autistic adolescents and their perceptions of mental health**

Mariana Costa e Silva<sup>1</sup>, Angeliki Bogosian<sup>2</sup>, Sebastian Gaigg<sup>1</sup>

<sup>1</sup>City, University of London, United Kingdom; <sup>2</sup>City University London, United Kingdom

Autistic traits can impact and change the family dynamics in their household, and it might require further modifications during adolescence. This exploratory qualitative study aimed to investigate the perceptions of parents of autistic adolescents about parenting at this life stage. We interviewed fifteen mothers of autistic adolescents (11 – 19 years old) living in England in a semi-structured format (35 – 90 minutes) and asked about their experiences/perceptions/feelings on parenting their autistic child, differences over time, and expectations. We conducted one pilot interview to improve the interview script (not included). Data was analysed using inductive thematic analysis and managed in NVivo 14. The themes emerging were, first, 'Perceptions about parenting', reporting different mothers' experiences concerning the changes in their idea of child-rearing through three subthemes: 'atypical mothering', 'challenges and joys', and 'relationship with the children'. The second, 'Access to support', refers to the tools influencing mothers' abilities to manage situations, leading to two subthemes, 'perception about external resources' and 'perceptions about internal resources'. The final theme, 'Perceptions about autism', explores autism as a subject instead of an underlying topic, focusing on its expression during adolescence, with the subthemes 'autism across time' and 'my adolescent and autism'. Findings suggest that the perception of both external/internal resources impact each other and the perceptions of parenting and autism, positively or negatively. Similarly, parenting perceptions seem to affect how mothers understand autism's impact on their lives. Furthermore, discernment about mental health, although impacted by all the described factors, also seems to affect parenting perceptions.

## **Insights from adolescents and parents: how to communicate with 10-15-year-olds about eating and body weight**

Florence Sheen<sup>1</sup>, Alison Stanley<sup>1</sup>, Emma Haycraft<sup>1</sup>

<sup>1</sup>Loughborough University, United Kingdom

Adolescence is a key developmental stage with huge potential for change and opportunity for improving and promoting life-long health. However, it is also when certain wellbeing issues, obesity, and eating disorders can develop. These may be exacerbated by adolescents receiving unhelpful messages about (healthy) eating and body weight that are not constructive to health and wellbeing or receiving little supportive information around these topics. As part of a research fellowship, we are exploring how adolescents interpret messages around eating behaviour and body weight, and how we should communicate with adolescents about these topics to be most supportive and inclusive, thereby supporting health and wellbeing in adolescence and into adulthood. Importantly, this research is being conducted with adolescents, for adolescents. We have recruited a public and patient involvement and engagement (PPIE) group of 10-15-year-olds and their parents/carers/guardians from the East Midlands, UK. We explored (via focus group discussions) where adolescents hear or see messages about eating and body weight in their lives. Over a series of sessions, adolescents and parents separately discussed this and created a mind-map of where adolescents may hear this information, highlighted messages that they thought healthcare professionals wanted to communicate to them, and suggested how they would advise other adolescents with questions relating to eating and body weight. Insights from these research activities, and learnings from creating the PPIE group, will be presented. This PPIE group will continue to inform our research investigating how we should talk with adolescents about eating and body weight.

## **Self-regulation and relational processes in the home of parents raising children with chronic health conditions**

Viola Sallay<sup>1</sup>, Petra Simon-Zambori<sup>1</sup>, Zsófia Bana<sup>2</sup>, Tamas Martos<sup>1</sup>

<sup>1</sup>University of Szeged, Hungary; <sup>2</sup>Semmelweis University, Hungary

**Background:** Raising a child with chronic health conditions may have a profound impact on family members' mental health and family dynamics. Our research aims to explore self-regulation and relational regulation processes in the family home of parents raising children with chronic health conditions.

**Methods:** Semi-structured in-depth interviews were conducted with twelve parental couples (N = 24) raising children with chronic health conditions (e.g., Down syndrome, Stickler syndrome, lissencephaly). The Emotional Map of the Home Interview (EMHI) was used to explore intra- and interpersonal self-regulatory processes in the family home from a systemic and environmental psychological perspective. During EMHI, participants draw the layout of their homes and then mark the place of specific emotional experiences. Next, EMHI focuses on stories about home experiences, and the connected family dynamics. Interview transcripts were analysed using Grounded Theory methodology.

**Findings:** The analysis highlighted individual, couple and family self-regulation and coping processes, following the birth of the child with a chronic health condition. The emerging codes describe the variations of interrelated themes of "Losing balance in the relationships and family home" and "Finding balance in search of proximity and distance", such as redefinition of family roles and rearrangement of space use in the family home.

**Discussion:** Experience mapping interviews with the affected parents provide valuable insights into the unspoken dynamics of these families. These findings may contribute to a deeper understanding of how mental health in these families can be supported by prevention or intervention programmes tailored to their needs.

## Qualitative study on predictors of physical activity in inactive parent-child dyads

weldon green<sup>1</sup>, Milla Saarinen<sup>2</sup>, Daniel Phipps<sup>3</sup>, Taru Lintunen<sup>1</sup>, Martin Hagger<sup>4</sup>, Keegan Knittle<sup>3</sup>

<sup>1</sup>University of Jyväskylä, Finland; <sup>2</sup>Norwegian School of Sport Sciences, Norway; <sup>3</sup>University of Jyväskylä, Finland; <sup>4</sup>University of California, Merced, United States

As children transition from early childhood to pre-teen, their physical activity levels tend to drop. Preventing the downward trend into adolescence may be a way to promote healthy PA patterns in adulthood. One facet of this life transition is the growing agency children possess to choose their physical activity, and the loss or growth of joint dyadic activity that the parents and children do together. Additionally, understanding how children influence their parent's PA behavior can lead to interventions that target not just the child's health, but the sedentary parent as well.

Therefore we aimed (1) to elicit parent-child dyad's experiences of dyadic and individual PA, (2) to investigate predictors of PA for the children and their parents, and (3) to ask what skills are needed to change their behavior towards PA. To do this we conducted focus group interviews of 24 sedentary parent-child dyads (n=48) in Finland. Each discussion was sixty minutes, and the recordings were transcribed, translated to English, and analyzed using thematic analysis.

Having fun and enjoying PA, as well as time together, was the main motivator towards leisure time PA. However, mandatory PA, such as walking dogs or commuting, was attributed to cause most of the parent's PA. Parents mentioned the child's agency to choose their own PA to explain a decline in joint-PA. Parents struggled to manage their own and their children's device usage, and requested skills related to prioritizing, and time management.

## **Family Surfing Intervention for Children and Adolescents with Chronic Conditions: Effects on Health and Well-being**

Joanna White<sup>1, 2</sup>, Ian Li<sup>3</sup>, Jacinta Francis<sup>2</sup>, Donna Cross<sup>4</sup>, Catherine Elliott<sup>4</sup>, André Schultz<sup>1</sup>

<sup>1</sup>Perth Children's Hospital, Australia; <sup>2</sup>University of Western Australia, Australia; <sup>3</sup>Curtin University, Australia; <sup>4</sup>Telethon Kids Institute, Australia

**Background:** A recent pilot study on a family-based surfing intervention for patients with cystic fibrosis conducted by the author found positive effects for wellbeing in child patients and reduction in parental stress. This project aims to extend this study and evaluate the impact of a family-based surfing intervention on the health and psychological wellbeing of children and adolescents with chronic health conditions, including cystic fibrosis, burns, arthritis, cerebral palsy, oncological disease, type I diabetes.

**Methods:** A randomised, controlled, parallel, group study. Participants are randomly allocated to the surfing intervention (90 families) or a control group (60 families). This is a work-in-progress submission. The surfing intervention comprises 12 x 1hr surfing lessons administered over an 8-week period. Measures include physical activity and psychological health (Strengths and Difficulties Questionnaire, primary outcome) assessed pre and post intervention, and 12 weeks' follow up.

**Findings:** This is a work-in-progress submission. General linear mixed modelling will be used to quantify and assess the effects of family-based surf therapy on the differences between pre and post measures, and measures at 12-weeks follow-up, on the SDQ and physical activity participation. Other concomitant variables such as socioeconomic status and type of chronic health condition will be considered and assessed as possible confounders of intervention effects.

**Discussion:** We anticipate that participants receiving surf therapy will show positive effects for psychological wellbeing, physical activity, family relationships, and will continue with surfing once the study is complete. This research has clinical implications for treating children and adolescents with chronic conditions.

## Improving youth physical and mental health outcomes with surf therapy: A randomized controlled trial

Lisa Olive<sup>1</sup>, Rohan Telford<sup>1,2</sup>

<sup>1</sup>Deakin University, Australia; <sup>2</sup>Australian National University, Australia

**Background:** Surf therapy has emerged as a growing therapeutic intervention for a range of mental health problems across diverse populations, yet data evaluating such programs are limited. The aim of this randomised controlled trial was to test the effectiveness of a 6-week surf therapy program for reducing symptoms of depression (primary aim), anxiety, emotional problems, peer problems, overall difficulties (secondary aims).

**Methods:** This two-arm parallel RCT, using 1:1 randomisation, compared a 6-week surf therapy program with a waitlist-control group in youth aged 8 to 17yrs (M = 11.28 years, SD = 2.34), help seeking for issues relating to their mental health. Outcomes included anxiety and depression (Revised Anxiety and Depression Scale for Children), emotional symptoms, conduct problems, hyperactivity/inattention, peer relationship problems (Strengths and Difficulties Questionnaire). General linear mixed modelling was used to quantify the effects of the intervention on the differences between pre and post measures of our primary and secondary outcome variables.

**Results:** 130 youth (84% of those eligible) participated in the study. Children receiving the surf therapy intervention had a significantly greater reduction in symptoms of depression (ES = 0.57), emotional problems (ES = 0.79) and overall difficulties (ES = 0.64). While changes in the other measured variables trended in the hypothesized direction, no other significant effects were observed between the two groups.

**Conclusions:** A 6-week mentor supported surf therapy program with youth, aged 8-17 years, help-seeking for a mental health issue was found to be effective for reducing symptoms of depression, emotional problems, and overall difficulties.

## **Living closer the beach is associated with better health and socialemotional development amongst preschool boys**

Phoebe George<sup>1,2</sup>, Hayley Christian<sup>1,2</sup>, Kevin Murray<sup>3</sup>

<sup>1</sup>University of Western Australia, Australia; <sup>2</sup>Telethon Kids Institute, Australia; <sup>3</sup>Univeristy of Western Australia, Australia

**Background:** Natural outdoor environments such as blue spaces have increasingly been seen as key health and wellbeing determinants and have the potential to buffer the effects of socioeconomic disadvantage. However, it is unclear if these effects are seen in young children. We examined if access to blue space is associated with young Australian children's socioemotional development.

**Methods:** Cross-sectional data from 1525 young children (mean age 3.3 years) in the PLAYCE cohort study were used. The Strengths and Difficulties Questionnaire (SDQ) total difficulties score was used as a measure of socioemotional development. Geographic Information Systems were used to identify total percentage of blue space (ocean, riverways and lakes and swamps) for 1600m and 5000m service and buffer areas around children's residences. Distance to the closest beach, patrolled beach and dog beach were also calculated. Multiple linear regression analyses were used to examine the associations between children's total difficulties score and blue space variables, adjusting for covariates.

**Results:** Several small associations were observed amongst young boys' socioemotional development and distance to the closest beach and patrol beach, with boys socioemotional development improving with decreasing distance to the beach even after adjusting for neighbourhood socioeconomic status. No significant associations were found between the amount of neighbourhood blue space within the 1600m service area or 5000m buffer area and preschooler social and emotional development.

**Conclusions:** These findings highlight the potential benefit of living closer to a beach for socioemotional development, particular for young boys.



## **Wave by Wave: A case presentation and program logic**

Ema Shaw Evangelist<sup>1</sup>

<sup>1</sup>Wave by Wave, Portugal

**Background:** While the evidence-base on the effectiveness of surf therapy to improve youth mental health is emerging, to date there is little published evidence outlining program development or potential mechanisms and pathways to positive change. These interventions should be informed by evidence and target protective and risk factors for healthy development. This presentation will present the program logic that informs the Wave by Wave surf therapy program.

**Methods:** Based on the steps of intervention mapping, theory-based methods and strategies were selected that informed the activities of the Wave by Wave intervention and these were applied at the individual, interpersonal and environment level. This process led to a theory and evidence informed surf therapy program adapted to the local Portuguese context.

**Findings:** The Wave by Wave program is a preventive intervention that combines surfing with psychological intervention. The program is based on resilience research, targeting several processes that protect children at risk from a deviant trajectory. The main objectives of the program are to decrease mental health problems and increase physical health and psychosocial wellbeing through the promotion of different protective factors, such as self-esteem, self-regulation, healthy habits (physical activity and less sedentarism), social, and communication skills and positive connections with peers and adults. Program developers identified the relevant theoretical methods underpinning the means to which change in determinants were likely to occur. The practical strategies or delivery methods were then developed, which could put the theoretical methods into practice.

## Overcoming adversity: the severe COVID-19 illness experience

Aissa Suciu<sup>1</sup>, Adriana Baban<sup>1</sup>

<sup>1</sup>Babes-Bolyai University, Romania

**Background:** The coronavirus disease 2019 has placed unparalleled burdens on healthcare systems globally, but also on individual physical and psychological health. It is imperative to comprehend the disease progression and psychological journey of COVID-19 patients, to provide them with effective care. This study aimed to explore the psychological illness experience of severe COVID-19 survivors and to capture their perceptions across the trajectory from the first symptoms, to hospitalization, recovery, and post-discharge adjustment.

**Methods:** Semi-structured interviews were conducted from November 2022 to April 2023, with 30 Romanian former COVID-19 patients. Thematic analysis was conducted to analyze transcribed interviews.

**Findings:** Four major themes were identified: (1) Early Uncertainty; (2) Distress and Desperation; (3) Hope Emerging; (4) Readjustment and Growth. Some participants faced denial or uncertainty early on, misattributing symptoms and delaying seeking care. Hospitalization as a last resort brought anxiety, isolation, and closer confrontations with mortality perception. As symptoms improved, and participants received supportive care from both healthcare professionals and family members, hope and optimism appeared. Despite health improvements and feelings of safety, lingering anxiety persisted. Post-discharge adjustment involved managing lasting effects and selectively resuming activities. For some of the participants reflection afterward prompted greater self-understanding, empathy and connection, and motivation for self-care.

**Discussion:** The findings underscore a nuanced understanding of the psychological and emotional processes underlying individuals' experiences with severe COVID-19. The results have implications for healthcare practitioners, policymakers, and researchers. The need for holistic support and interventions to address the diverse needs of survivors and facilitate their recovery is emphasized.

# **Subjective experience of severe COVID-19 patients during hospitalization – qualitative exploration in Slovakia**

Peter Halama<sup>1</sup>, Jana Tencerová<sup>1</sup>, Branislav Uhrecký<sup>1</sup>

<sup>1</sup>Centre of Social and Psychological Sciences, Slovak Academy of Sciences, Slovakia

## **Background:**

Due to the necessity of hospitalizing a large number of patients, the health care of hospitalized patients during the COVID-19 pandemic focused primarily on successful symptom treatment while the psychological condition of patients during hospitalisation was sidelined, although it could have an important effect on treatment. This study focuses on qualitative analysis of subjective experiences during hospitalization among patients with severe COVID-19 in Slovakia.

## **Methods:**

The participants involved were persons who were hospitalized with a severe COVID-19 disease. A total of 27 Slovak participants (11 men and 16 women, mean age 57.10 years) were interviewed. The interview dealt with a broad range of topics related to their COVID-19 illness, however, for this study, answers to questions concerning the subjective experience during hospitalization were analysed using thematic analysis.

## **Findings:**

The main themes included negative emotions such as stress, anxiety, despair, fatigue, alienation etc. The main sources of negative emotions were isolation, confrontation with the death of co-patients, own illness, unsuccessful treatment, conflicts between medical staff etc. Sources and strategies used by patients to improve their psychological state included elicitation of communications, mutual help with co-patients, gratitude and respect toward medical staff, prayer and use of spiritual resources, inducing hope and optimism, taking comfort from medical staff etc.

## **Discussion:**

The results have implications for medical staff to help them understand the psychological state of COVID-19 patients during hospitalisation and can inform psychological intervention aiming at the improvement of hospital care in these patients.

## **Psychological functioning of severe or critical COVID-19 survivors in Poland - a qualitative study**

Agnieszka Kruczek<sup>1</sup>, Monika Wróblewska<sup>2</sup>

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**Background.** Survivors of severe and critical COVID-19 are at risk of impaired health-related quality of life and persistent physical and psychological problems. Patients recovering from COVID-19, present reduced quality of life with a depression/anxiety symptoms and PTSD. The aim of the presented study is to explore the psychological functioning of severe and critical COVID-19 adult survivors in Poland during hospitalization and in the post-acute period.

**Methods.** The sample of the study consisted of 32 adults (18 males and 14 females) aged 28 – 67 years old (M=50,72). The research is qualitative in nature. The study used a semi-structured interview, which was then transcribed. Thematic analysis was used to analyze the obtained data.

**Findings.** Patients reported that when they were critically ill, they experienced psychosis-like experiences and daydreams. They had difficulty determining whether what was happening around them was reality or a dream.

In terms of psychological functioning, two phenomena can be distinguished among patients. Some patients assessed the disease as highly traumatizing and currently still experience high levels of anxiety, developed symptoms of generalized anxiety, health anxiety or fear of death. The second group of patients reported a change in their own value system. They began to enjoy and be grateful for each day, experiencing greater inner peace.

**Discussion.** The obtained research results will allow for expanding knowledge in the field of long-term psychological impact of COVID-19 among survivors. Public health policies and media are needed to promote greater self-awareness and self-care to prevent later strains on the healthcare system.

## **Social support and long termed consequences of COVID-19: experiences of Croatian severe COVID-19 adult survivors**

Anita Lauri Korajlija<sup>1</sup>, Natasa Jokic-Begic<sup>1</sup>, Tanja Jurin<sup>1</sup>, Matea Sostaric<sup>1</sup>

<sup>1</sup>Faculty of Humanities and Social Sciences, University of Zagreb, Croatia

**Background:** Long COVID, often referred to as post-COVID syndrome, has a significant impact on individuals who experience persistent symptoms after recovering from acute COVID-19. Research indicates that up to 80% of severe COVID-19 patients who were hospitalized experience prolonged physical and psychological symptoms. To date, limited research suggests that social support can be a predictor of improved quality of life and better mental and physical health outcomes among people with post-COVID-19 syndrome.

**Methods:** Our study aimed to explore how social support is linked to physical and psychological aftermath among adult survivors of severe COVID-19 throughout the post-acute period (within one year of hospital discharge). We interviewed 24 adult survivors (14 women and 10 men, age 28-78) through in-depth, semi-structured interviews, which we analyzed thematically.

**Results:** Emotional support from friends, family, and work colleagues has been identified as a crucial factor in coping with the emotional toll of COVID-19. Having a network of individuals who can provide understanding, empathy, and encouragement is associated with improved mental health. Social support has been found to contribute to physical recovery as well. This includes assistance with daily activities and self-care, medical adherence, and instrumental and informational support in the organization of health care after discharge from the hospital.

**Conclusion:** Our findings suggest that social support may influence the trajectory of recovery and the management of persistent symptoms of post-COVID. Understanding patient experiences is essential for developing tailored support strategies, which are vital for addressing post-COVID syndrome and providing psychosocial recovery support.

## **Coping with severe COVID-19 and post COVID-19 condition: mobilizing personal resources**

Anna Alexandrova-Karamanova<sup>1</sup>, Emanuela Paunova-Markova<sup>1</sup>, Velina Hristova<sup>1</sup>, Vanya Slavova<sup>1</sup>

<sup>1</sup>Department of Psychology, Institute for Population and Human Studies, Bulgarian Academy of Sciences, Bulgaria

### **Background:**

Coping resources are personal, social or other resources available to individuals for managing stress and coping with adversity. COVID-19 survivors' psychosocial resources play an important role in coping with both acute disease and post-acute negative sequelae. The aim of the study is to qualitatively explore survivors' experiences of coping with severe COVID-19 and post COVID-19 condition through the mobilization of their personal resources.

### **Methods:**

Thirty-three in-depth semi-structured interviews with Bulgarian severe and critical COVID-19 survivors (18-89 years, 24 severe/9 critical, 16 men/17 women) were conducted post hospital discharge (M=21,2 months post discharge), audio-taped and transcribed verbatim. Data were analyzed through thematic analysis.

### **Findings:**

Personal resources mobilized by survivors during coping with severe acute and post-acute COVID-19 included positive personality characteristics (having a positive attitude, optimism, hope, resilience, gratitude) that facilitated post-traumatic growth; will to live (strong desire to live, to get well, to be able to live a full life); fighting and perseverance (not giving up, overcoming difficulties, having patience during the long recovery); self-control and self-discipline (in emotional regulation, in adherence to medical advice and healthy lifestyle during recovery); having purpose in life (to be able to take care of their minor children/grandchildren, to be able to work, to carry out their planned wedding); and the personality traits of extraversion and agreeableness.

### **Discussion:**

The findings have important implications for supporting coping processes and improving health outcomes of severe COVID-19 (or other severe prolonged disease) patients and survivors, as well as for implementing interventions to facilitate post-traumatic growth.

## **Effects of persuasive messages on compliance with behavioral measures to prevent spreading of respiratory viruses**

Amy van der Heijden<sup>1,2</sup>, Anne Vos<sup>2</sup>, Bas van den Putte<sup>2</sup>, Danielle Timmermans<sup>3</sup>, John de Wit<sup>4</sup>

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**Background:** Evidence on the effects of persuasive messages on compliance with behavioral measures to prevent spreading of respiratory viruses in real-life is scarce. This study tested the effects of persuasive messages on compliance with two behavioral measures: coughing and sneezing into the elbow, and staying at home when ill with respiratory infection symptoms.

**Methods:** A field study with an observational pre-post design was conducted at two universities, a university of applied sciences, and an intermediate vocational education institution in The Netherlands. Data were collected from students and staff (n=1098), via questionnaires before and after exposure to persuasive messages. Messages were designed in three variations: risk information, positive social outcomes, and empathy. Messages were disseminated via educational institutions' newsletters, websites, and apps, and within educational buildings via narrowcasting screens, in elevators, and bulletin boards. Outcome measures included compliance with behavioral measures, intention, attitude, social norms, moral norm, self-efficacy, response-efficacy, and risk perception. Furthermore, data was collected on exposure recall and potentially moderating factors: demographic characteristics, trust in government, prosocial orientation, perceived health status, past behavior, educational institution, and role (student/staff). The study was approved by the Faculty Ethics Review Board of the Faculty of Social and Behavioural Sciences, University of Amsterdam.

**Analysis:** Multivariate Analysis of Variance will test the main effect of exposure frequency to persuasive messages on the outcome measures, and potential interaction effects with behavioral measure type and other potential moderators.

**Current stage of work:** Data collection is complete.

**Discussion:** Findings provide essential insights to enhance pandemic preparedness.

## **Improving pandemic preparedness: comparing persuasive communication strategies to enhance pandemic preventive measures compliance**

Anne Vos<sup>1</sup>, Amy van der Heijden<sup>2</sup>, Bas van den Putte<sup>1</sup>, Danielle Timmermans<sup>3</sup>, John de Wit<sup>4</sup>

<sup>1</sup>University of Amsterdam, Netherlands; <sup>2</sup>Vrije Universiteit Amsterdam, Netherlands; <sup>3</sup>Amsterdam University Medical Centers, Netherlands; <sup>4</sup>Utrecht University, Netherlands

**Background:** This study compared the effectiveness of communication strategies in promoting compliance with COVID-19 preventive measures. It compared the impact of various persuasive techniques on behavioral intentions and determinants among populations with lower adherence rates.

**Methods:** In an online experiment with a between-subjects design, 4,008 participants were randomly exposed to either a low-risk or high-risk pandemic scenario, paired with one behavior (elbow coughing and sneezing, staying home when symptomatic, maintaining 1.5-meter distance, or self-isolating after a positive test). Participants were randomly assigned to one of seven communication strategies or one of two control groups. The strategies included highlighting injunctive norm, moral norm, individual advantages, social advantages, textual risk communication, combined textual and visual risk communication, and empathy. The control groups received a message only emphasizing the behavior or no message. Outcomes were intention to adhere to preventive behaviors and determinants (e.g., attitude, response efficacy, risk perception). Analyses included (M)ANOVAs.

**Findings:** None of the strategies enhanced outcomes over the control message. Compared to no messaging, emphasizing social advantages, textual and visual risk communication, and empathy increased response efficacy. Additionally, emphasizing social advantages increased risk perception. Higher intentions were observed in high-risk scenarios, among women, older individuals, individuals with a pro-social orientation, those more knowledgeable about the virus and preventive behaviors, and with stronger governmental trust. The effectiveness of strategies did not differ according to individual characteristics.

**Discussion:** This highlights the challenges of effectively communicating preventive measures during pandemics. Future research should explore the impact of repeated and tailored communication on compliance.



## **Development and evaluation of a co-produced ACT-based intervention for parents/carers of children with appearance-affecting conditions**

Maia Thornton<sup>1</sup>, Heidi Williamson<sup>1</sup>, Emma Waite<sup>1</sup>, Alex Clarke<sup>1</sup>, Paul White<sup>1</sup>, James Kiff<sup>2</sup>, Toity Deave<sup>1</sup>, Diana Harcourt<sup>1</sup>

<sup>1</sup>University of the West of England, United Kingdom; <sup>2</sup>Outlook service, Southmead hospital, United Kingdom

### **Background:**

Alongside typical parenting challenges, parents/carers of children with appearance-affecting conditions/injuries can experience common psychosocial difficulties regardless of the nature or cause of their child's visible difference. However, evidence-based cross-condition support for these parents/carers is lacking. This presentation reports on the development and evaluation of a novel self-guided ACT-based intervention to meet the specific needs of this group.

### **Methods:**

A co-production approach was employed to gain lived experience perspectives and initial acceptability data for the draft intervention materials. User representatives (n=5) and clinical advisors (n=3) participated in focus group discussions to provide feedback on the draft e-book intervention materials, entitled the 'Parenting Toolkit'. In addition, 22 parents/carers of children with a range of visible differences reviewed the full pilot e-book intervention and responded to an online acceptability survey, including the e-Health Impact Questionnaire (eHIQ).

### **Findings:**

Whilst several changes aimed at increasing the accessibility of the intervention materials were discussed, overall, the feedback suggested that they addressed an unmet support need. Both the content and the format of the intervention were found to be acceptable by parents, with eHIQ scores of > 80.

### **Discussion:**

The Parenting Toolkit intervention provides evidence-based support for parents of children with appearance-affecting conditions. The effectiveness of the Parenting Toolkit is currently being evaluated with approximately 180 parents/carers of children (aged 0-18 years old) with a range of visible differences. The evaluation explores changes in parent/carer psychosocial outcomes (e.g., stress, self-compassion, psychological flexibility, self-compassion) over three time points: pre-intervention, post-intervention and at one month follow-up.

## **Reducing self-stigma in chronic skin disease - Development and pilot-test of the HautKompass online programme**

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**Background:** The visibility of chronic skin disease (CSD) often leads to self-stigma and concerns about body appearance, which can substantially diminish quality of life and psychosocial wellbeing. We developed the online programme HautKompass (SkinCompass) for people with CSD to reduce self-stigma and pilot-tested its feasibility and acceptability.

**Methods:** We initially conducted two systematic literature reviews following PRISMA guidelines that (a) identified predictors and mechanisms of self-stigma in CSD and (b) summarized existing interventions. Based on the results and feedback from patients and healthcare professionals, we developed the online self-guided, self-compassion and Cognitive Behavioural Therapy based programme HautKompass. A pilot-study was conducted among 20 persons with CSD testing the programme's feasibility and acceptance, using the Client Satisfaction Questionnaire (range from 8-32), an acceptability questionnaire (range from 5-20), and study-specific feedback items. Data were analysed descriptively.

**Findings:** In the pilot test, both user satisfaction ( $M = 26.12$ ,  $SD = 6.13$ ) and acceptability ( $M = 17.41$ ,  $SD = 3.12$ ) were high. Users rated the programme as helpful, the psychoeducation and exercise instructions as easy to understand, and the extent of the programme as adequate. Criticism concerned the length of some sessions, the electronic voice used in exercises, and some of the examples being too "general" or "cliché". The programme has been revised accordingly.

**Discussion:** HautKompass is a highly acceptable, accessible programme. Currently, its effectiveness over a six-month period is assessed in an RCT ( $n = 500$ ). HautKompass is expected to reduce self-stigma through improving self-compassion and acceptance in people with different CSD.

## **The rapid adaptation of a behaviour change intervention using existing evidence and behaviour change theory**

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**Background:** The COVID-19 pandemic required rapid adaptation of health services to telehealth models of care. However, methodological challenges can be encountered when adapting behaviour change interventions (BCI) to new contexts. Reporting the contributions of rapid research methods is vital to improving quality.

We outline a method undertaken to adapt an evidence based BCI to support therapists' delivery of an intervention for arm recovery after stroke via telehealth.

**Methods:** We carried out a five-step process that involved i) clearly defining the behaviour to be targeted ii) examination of the applicability of previous evidence to the new context, iii) review of the theory informing the previous BCI, iv) consultation with stakeholders and v) refining the adapted intervention based on feedback.

**Key pieces of evidence** used to support the adaptation process included i) results from the Behaviour Change Wheel process, ii) the intervention components and content of the original BCI, iii) a process evaluation of the original BCI.

**Findings:** Intervention components were either directly implemented to the new context, required a change in delivery mode or were inhibited by feasibility issues. The use of theory in the original BCI supported our decision-making and ability to retrospectively 'fit' an existing resource into the adapted intervention.

**Discussion:** We describe a pragmatic approach to rapidly adapt a BCI to a remote context. The steps taken are clearly documented, with explicit links to the evidence used. With critical reflection, we hope it can be used to support further pragmatic approaches to rapid intervention adaptation in resource-constrained settings.

## **Behavioural mechanisms of a primary care intervention to proactively identify oropharyngeal dysphagia in older adults**

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**Background:** 70% of older adults have swallowing difficulties, oropharyngeal dysphagia (OD), but it is not identified until it has caused harm, e.g., aspiration pneumonia. A behavioural science realist review developed five programme theories (PTs), mapped to domains of the theoretical domains framework (TDF), describing how interventions facilitate primary care healthcare professionals (HCPs) to proactively identify OD: 1) Education and Skills, 2) Memory, attention and decision processes, 3) Environmental context and resources, 4) Social influence and 5) Beliefs about consequences. This focus group study aimed to contextualise these PTs to the UK primary care context.

**Methods:** Three 90-minute focus groups were convened with 19 primary care HCPs (general practitioners, nurses and pharmacists). Analysis was underpinned by the TDF and included; thematic analysis to identify barriers and enablers to proactive OD identification, mapping barriers and enablers to existing PTs and generating new PTs from remaining barriers and enablers. Participant feedback was sought on the findings.

**Findings:** Analysis supported all five PTs from the realist review. Three new PTs were generated, mapped to three TDF domains; changing HCP perceptions that OD is a red flag for cancer (Beliefs about consequences), practical support from a colleague to provide advice (Social/professional role and identity) and providing incentive to proactively manage OD (Reinforcement). Participant feedback supported all three PTs.

**Discussion:** Interventions to facilitate proactive OD identification should be underpinned by the eight PTs. Co-design workshops with HCPs and other stakeholders will develop these PTs into a behaviour change intervention, tailored to the UK primary care context.

## **Laughter intervention to prevent frailty in community-dwelling older adults: a randomized controlled trial**

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**Background:** An increasing number of studies have reported that laughter has several psychological and physiological health benefits. However, there has been little research on the long-term effects of laughter intervention. The aim of this study was to investigate the effects of a laughter yoga program for preventing frailty among community-dwelling older adults in Japan.

**Methods:** A total of 54 participants aged 62-78 were randomly assigned to either an intervention group (n=27) or a control group (n=27). The intervention was a 90-min program including laughter yoga. Eight sessions were carried out for 12 weeks. Measurements were taken at baseline and week 12, including blood pressure, heart rate, physical performance, and depressive symptoms. An intention-to-treat analysis was performed.

**Findings:** There were no significant differences in baseline characteristics between the two groups. The intervention group experienced significant improvements in functional mobility assessed by the Timed Up and Go test ( $p=.03$ ) and resting heart rate ( $p=.01$ ) compared with controls. The mean attendance rate for laughter yoga program was high (92.6%).

**Discussion:** Laughter yoga program was feasible for older adults and had beneficial effects on functional mobility and heart rate. It can be applied as an easy and useful intervention for preventing frailty in older adults.

## **Does attachment style moderate the link between multiple-group memberships and wellbeing?**

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Background: Sustainable mental health care requires effective scalable approaches. Social prescribing [SP] is a method of public health care which leverages the 'social cure', connecting individuals to social or activity focussed groups in their community. It is for those with long term health conditions, who feel isolated, and/or have low mental health or complex needs. However, SP may not be suitable for all, leading to potential inequities. It is hypothesised that attachment style will moderate the positive relationship between multiple group membership and wellbeing observed in previous research. Methods: Two pre-registered cross sectional survey studies (ns=77/150) explore the relationships between individual differences in relating with others (attachment style and psychological splitting), multiple group memberships and mental distress. Expected results: Study 1 showed links between attachment style, splitting and distress, and a marginal moderation of attachment style on the link between multiple group memberships and distress, with higher levels of anxious attachment being linked to a smaller effect. Current stage of work: Study 2 focusses on the moderation effect of attachment exclusively. This study (in data collection phase at the time of writing, n=58), will test further the potential moderating impact of attachment styles. Discussion: The findings to date highlight the importance of attachment styles on mental health, which should be considered in the implementation of social prescribing care pathways. The full findings will inform SP further by providing evidence as to the impact (or not) of attachment style on the benefits of group membership which SP leverages.

## **Not Without My Social Identity: Exploring Its Mediating Role Between Social Capital and Well-Being**

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The study explores the influence of personal network structures on well-being from a social identity perspective. It distinguishes between bonding social capital, which aids in daily coping ('getting by'), and bridging social capital, beneficial for network growth and advancement ('getting ahead'). The research tests the "social cure" hypothesis that social identification mediates the effect of meso-level social relationships (network configurations) on well-being.

Utilizing data from the Swiss Federal Survey of Young Adults (CHX-YASS 2020), the study analyzed responses from 9,999 young adults (14.7% female, 85.0% male) participating in the Swiss Army recruitment process. Network metrics like betweenness centrality and network density were computed using Python's NetworkX package to evaluate bridging and bonding social capital, respectively. Social identification and well-being (depressive symptoms and perceived stress) were measured through relevant scales.

Results indicated that social identity significantly mediates the relationship between social capital and health outcomes (depressive symptoms and stress). Bonding social capital, particularly network density, was found to be a protective factor. However, different components of bridging social capital showed varied impacts on depression and stress. No significant moderation was found for conflict network density in different groups, suggesting the potential influence of Switzerland's conflict-averse culture. Overall, these findings underscore the importance of social identity and personal networks in young adults' health and well-being, highlighting complex direct and indirect social determinants during this crucial life stage.

## **Romantic partners' social support for functional autonomy and dependence in chronic pain**

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chronic pain (CP) adjustment. Research on partners' responses has rarely addressed the extent to which received social support may promote or hinder CP adjustment, depending on the extent to which it promotes functional autonomy or dependence. Therefore, the present study aimed to investigate: (1) the predictive role of pain-related support for functional autonomy/dependence on CP adjustment; (2) the extent to which these effects were mediated by pain-related cognitive mechanisms; and (3) moderated by relationship satisfaction.

Methods: 117 adults with CP (92.3% women) in a romantic relationship completed online self-report questionnaires measuring support for functional autonomy/dependence (ISSADI-PAIN), CP severity/disability (BPI), anxiety/stress and depression (HADS), pain-related self-efficacy (PSEQ), worry (PCS), and relationship satisfaction (RAS). Multiple mediation models and moderated mediation models were conducted.

Findings: Emotional/esteem support for functional autonomy indirectly predicted better CP outcomes by increasing pain-related self-efficacy. Instrumental support directly predicted lower depression. Support for functional dependence showed ambiguous effects; it directly predicted better psychological health, but it indirectly predicted increased pain severity/disability via increased worry. Noteworthy, at lower levels of relationship satisfaction, all types of supportive responses were associated with worse CP adjustment by increasing worry.

Discussion: Results highlight the interplay between different types of support and pain-related cognitive mechanisms in explaining CP adjustment. While support for functional autonomy is linked to positive outcomes, support for functional dependence can have mixed effects, and relationship satisfaction plays a crucial role in how romantic partners' responses influence CP adjustment.



## **Social support, HIV care and stigma: effects on suicidality among young women living with HIV**

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**Background:** Young women living with HIV (YWHIV) are at risk of developing suicidality. Yet little is known about what shapes suicidality among YWHIV in South Africa.

**Methods:** We analysed data from 715 YWHIV who participated in two South African cohort studies, Mzantsi Wakho (2017-2018) and HEY BABY (2018-2019). Standardised questionnaires were used to measure HIV care, HIV-related stigma, mental health issues, social support and suicidality. A moderated mediation analysis was used to investigate (1) the direct and indirect effects of poor HIV care retention and HIV-related stigma on suicidality, (2) the indirect effects as mediated through mental health issues, and (3) the moderating effects of social support on mental health issues, and suicidality, controlling for potential confounders.

**Findings:** Higher HIV-related stigma ( $B = 0.23$ ,  $p < 0.001$ ) and poor HIV care retention ( $B = 0.19$ ,  $p = 0.008$ ) were directly associated with higher suicidality. Any mental health issues were associated with suicidality ( $B = 0.38$ ,  $p < 0.001$ ). Furthermore, both HIV-related stigma and poor HIV care retention were indirectly associated with suicidality via mental health issues. Social support buffered the direct and indirect effects of poor HIV care retention and HIV-related stigma on suicidality.

**Conclusion:** Our findings indicate that poor HIV care retention and HIV-related stigma are risk factors for suicidality. Furthermore, the findings suggest that social support might be a valuable resource for YWHIV to protect their mental health. Programmes that simultaneously address these factors and strengthen social support services may improve mental health and reduce suicidality among YWHIV.

## **Providing Social Support and Health: first results of an RCT on healthy helping conditions**

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**Background:** Recent studies show that helping others can elicit physiological benefits in support providers, but these findings remain descriptive and incoherent due to the lack of an overarching theory. Based on self-determination theory, we propose that support positively affects providers' health under three conditions: if it is freely chosen, builds competence and relatedness. The PROSPECT study aims to define, operationalize and manipulate these conditions for support provision to analyze their effects on psychological and physiological health.

**Methods:** Peer-dyads and romantic dyads were invited to a controlled laboratory experiment. Autonomy, competence and relatedness were manipulated in their support interactions to test immediate effects on physiological, affective and self-evaluative health outcomes (e.g., mood, self-efficacy).

**First results:** First results (N = 32) show no significant difference in mood, anxiety and perceived effectiveness of support before and after the support situation. However, regardless of the condition, subjects feel significantly closer to their dyad partner after the support situation.

**Current stage of work:** Results based on at least 40 dyads will be presented. With its growing sample size, this experiment will be able to differentiate the causal conditions under which providing support is beneficial for the provider from possible confounding variables.

**Discussion:** Unravelling the conditions for healthy and harmful support provision is essential to develop guidelines for healthy support provision in informal and formal contexts (e.g., volunteering, care-giving, professional support) and to suggest solutions for the "visibility dilemma" between recipients' needs for subtle support and providers' need for feedback.

## Using word clouds to examine patients' perceptions of inflammatory arthritis

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**Background:** Understanding patients' illness perceptions is crucial, as they may influence health outcomes. However, existing illness belief measures can be burdensome for patients with chronic diseases. Word clouds may help to understand and illustrate patients' experiences; but there is scarce research in this area. This study explores whether word clouds illustrate illness perceptions and determines commonalities and differences in participants' experiences with rheumatic diseases.

**Methods:** A cross-sectional study was conducted with 323 people with rheumatoid arthritis, ankylosing spondylitis, psoriatic arthritis, or gout in Aotearoa New Zealand. Participants provided two words to describe their experience with inflammatory arthritis and completed the Brief Illness Perception Questionnaire. Word clouds were generated for each disease group, and analysis of variance models was conducted to explore differences in perceptions.

**Findings:** Eleven themes were identified and contributed a percentage of total word occurrence and weighting to the word clouds. Across all diseases, the most common themes were symptom/sensation (35–61%) and affect/emotional experience (16–25%). The prevalence of themes differed for each disease. Social impact was more prevalent for gout, and burden/intrusion was more prominent for ankylosing spondylitis. Functioning was less prevalent in the gout word cloud than in other diseases. There was a moderate overlap between word cloud themes and illness perception domains. Word clouds uniquely identified themes related to burden/intrusion, functioning, opportunity, and the social impact of illness.

**Discussion:** Findings support the use of word clouds as an alternative, low-burden method of examining experiences with inflammatory arthritis. This method should be tested with different patient groups.

## Psychological distress and health behaviours in people living with and beyond cancer: a cross-sectional study

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### Background

Higher levels of psychological distress following a cancer diagnosis are associated with poorer outcomes. Adherence to the World Cancer Research Fund (WCRF) recommendations for health behaviours is associated with improved outcomes among people living with and beyond cancer (LWBC). This study aimed to examine whether psychological distress is associated with meeting WCRF recommendations among people LWBC.

### Methods

Adults living with and beyond breast, prostate and colorectal cancer (N = 1348) completed a cross-sectional survey measuring anxiety/depression (EQ-5D-5L – dichotomised into problems vs. no problems), alcohol consumption and smoking. Physical activity was measured using pedometers and diet was assessed using 24 hour recalls. A composite health behaviour risk index (CHBRI) was calculated by summing the number of WCRF recommendations adhered to (range: 0-9). Linear/logistic regression was used to examine associations between anxiety/depression and CHBRI scores/meeting individual WCRF recommendations. Sociodemographic and clinical variables were adjusted for.

### Findings

The mean CHBRI score was 4.4. Anxiety/depression problems were associated with a lower CHBRI score after multivariable adjustment (B = -0.27, 95% CI: -0.46--0.07). Anxiety/depression problems were also associated with a lower odds of meeting WCRF recommendations for average daily steps (OR = 0.73; 95% CI: 0.55-0.97) and average weekly aerobic steps (OR = 0.78; 95% CI: 0.67-0.92).

### Discussion

Psychological distress is associated with lower adherence to WCRF recommendations among people LWBC, specifically for physical activity. Physical activity may be a mechanism linking psychological distress and poorer outcomes, such as survival, among people LWBC. Future longitudinal work is needed to examine this potential pathway.

## **Illness perceptions, medication beliefs and immunosuppression adherence in young adult kidney transplant recipients**

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**Introduction:** Kidney transplantation is the treatment of choice for patients with End-Stage Kidney Disease (ESKD), regardless of age. Young adult kidney transplant recipients (YKTR) (aged 18-25 years) have the highest rates of graft loss amongst transplant recipients in the UK. Importantly, immunosuppression medication (ISM) non-adherence is a major risk factor for poor patient and graft outcomes. The purpose of this study was to i) investigate associations between non-adherence and potentially modifiable factors, including medication beliefs and illness perceptions and 2) explore differences between YKTR and kidney transplant recipients (KTR) aged >25 years.

**Methods:** Patients attending clinic completed electronic self-report questionnaires including (i) Medication Adherence Report Scale, (ii) Beliefs about Medicines Questionnaire-Specific and (iii) Brief Illness Perception Questionnaire. Analyses (Mann-Whitney U and t-tests) were conducted i) within the YKTR cohort ii) between YKTR and KTR aged >25 years.

**Results:** Of n=35 YKTR, n=24 (68.6%) were classed as non-adherent overall, n=23 (65.7%) unintentionally non-adherent and n=9 (25.7%) intentionally non-adherent. Intentionally non-adherent YKTR reported significantly greater medication concerns,  $t(33)=2.71$ ,  $p=.005$ , lower personal control,  $t(33)=2.252$ ,  $p=.031$  and lower treatment control,  $Z=-2.61$ ,  $p=.009$ , compared with adherent YKTRs. Compared with KTRs aged >25 years, YKTR had significantly lower perceived consequences of the health of their transplant on their life,  $Z=-2.670$ ,  $p=.008$ .

**Conclusions:** Reducing medication concerns, enhancing personal and treatment control, and improving perceptions of consequences may be considered as targets for interventions to support adherence in YKTR. Further research to design and implement tailored interventions is essential, considering the high rates of non-adherence in this population.

## **Why Does Mindfulness Predict Self-Concordant Health Goal Setting? The Roles of Cognitive vs. Affective Self-Regulation**

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**Background:** In line with self-determination theory, research has shown that goal self-concordance (i.e., goal pursuit for autonomous rather than controlled reasons) increases goal attainment as well as wellbeing. Interestingly, people who are more mindfully aware (i.e., notice what's happening when it happens) set more self-concordant goals. The current study sought to address WHY this is the case within the context of health goals. Specifically, it examined the role of affective (i.e., negative affect) and cognitive (i.e., self-reflection and self-insight) self-regulatory processes.

**Methods:** A cross-sectional survey amongst 354 adults captured data on the FFMQ acting with awareness subscale, the PANAS negative affect subscale, and the self-reflection and insight scale. In addition, participants identified two general health goals as well as a specific health goal they would like to achieve over the next 3 months. Each goal was then rated on a self-concordance measure. Descriptive and inferential statistics were used to analyze relationships.

**Results:** Those with stronger mindful awareness held more self-concordant health goals. This relationship was fully mediated through two significant indirect pathways, namely through negative affect and self-insight, but not through self-reflection. Furthermore, negative affect influenced self-concordance both by increasing autonomous and decreasing controlled reasons, whereas self-insight influenced self-concordance only through decreasing controlled reasons.

**Discussion:** These findings help improve our understanding of why some people set more self-concordant health goals than others, highlighting the roles of both affective and cognitive self-regulatory processes. This, in turn, will help inform the development of appropriate interventions aimed at improving self-concordant health goal setting.

## **Socio-economic status modulates the link between vagal tone and caloric intake**

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**Background:** It is often argued that socio-economic status (SES) impacts dietary behaviours, but evidence for differences in actual consumption is surprisingly scant. Using vagal tone as a well-established marker of internal self-regulation, we examined whether low (vs. high) SES can disrupt a fundamental process through which the body regulates its caloric intake.

**Methods:** Ninety-six participants completed this correlational study (80 females; MAge = 20.28). Participants from a diverse socio-economic background (on both objective and subjective measures) were invited to the laboratory to take part in a 'chocolate taste test'. An electrocardiogram (ECG) captured the activity of the heart at rest and during two active coping tasks. Measures of vagal tone were derived from a spectral analysis of the beat-to-beat intervals. Caloric intake was measured through chocolate consumption.

**Findings:** Resting vagal tone modulated the caloric intake of participants with a high SES background [Subjective SES:  $sr = -.26$ ,  $p = .010$ ; Objective SES:  $sr = -.27$ ,  $p = .013$ ], but not of participants with a low SES background [ $ps = .323$  and  $.076$ ], resulting in a significant interaction between resting cardiac vagal tone and SES [ $p_{\text{subjective}} = .015$ ;  $p_{\text{objective}} = .005$ ]. Vagal tone withdrawal (during active coping) did not modulate caloric intake,  $ps \geq .091$ .

**Discussion:** SES can modulate the correspondence between cardiac vagal tone and caloric intake – one of the mechanisms through which the body regulates its energy intake. This finding sheds new light onto how SES may impact health by altering the internal regulation of dietary behaviours.

## **"Oh, you've a sore tummy? Welcome to womanhood." Healthcare-Seeking Experiences of Women with Abdominal Pain**

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**Background:** Women's abdominal pain is often minimised or dismissed in healthcare contexts. This can have a detrimental impact on health-related outcomes and quality of life. The aim of this study was to explore women's experiences of seeking healthcare for abdominal pain in Ireland.

**Methods:** A qualitative design and opportunity sampling approach were employed. Fourteen women living in Ireland with experience of seeking healthcare for abdominal pain took part in one-to-one online semi-structured interviews. Data were analysed using reflexive thematic analysis.

**Findings:** Four themes were constructed: [1] "Just Get on with It" – Normalisation and Invalidation; [2] "Bad Enough"? Costs of (Not) Seeking Help; [3] "Fight Your Case," Fight for Care; and [4] "Out of the Loop" – Systemic Barriers to Care. Perceived invalidation of pain by healthcare professionals was common, as was internalised normalisation of pain. Despite functional interference, participants felt their pain needed to be extremely severe before seeking help. Participants felt the onus was on them to fight for care. Despite their frustrations, participants expressed empathy for healthcare professionals operating in a flawed system.

**Discussion:** Participants described mostly negative experiences of seeking healthcare for abdominal pain, characterised by dismissal of symptoms and internalisation of normative views of women's pain as less worthy of care. There are systemic issues at play within the Irish healthcare system that limit women's ability to access abdominal pain management support. Education and training for healthcare professionals and clear referral pathways for women with abdominal pain may facilitate more equitable healthcare delivery.



## Effect Of Psychosocial Intervention Programmes For Older People For The Promotion Of Your Mental Health

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**Background:** The aim of this study was to compare the effect of selected psychosocial interventions performed in older adults at the Centre for the Promotion of Healthy Ageing on their mental health. The main research question was to determine which of the monitored interventions had the greatest effect on improving the mental health of older people.

**Methods:** An intervention study was conducted. A total of 156 older people with an average age of 71.5 years participated in the study. The following interventions were compared: cognitive behavioral therapy (n=75), music therapy (n=57), and reminiscence therapy (n=24). All interventions were performed regularly for 1 week (60-90 minutes) for a period of 12 weeks. The GDS-15 and GAI scales were used to evaluate mental health. Measurements were made before and after the intervention. The difference between the first and second measurements was evaluated using the Wilcoxon test. The size effect was evaluated using Cohen's d.

**Findings:** All three interventions were found to have a statistically significant improvement ( $p < 0.001$ ) after the intervention in both the anxiety and depression assessments. The greatest effect size in depression was found after CBT (Cohen's  $d = -1.3$ ), reminiscence therapy (Cohen's  $d = -0.9$ ) and music therapy (Cohen's  $d = -0.7$ ). In anxiety, the greatest effect was also found in CBT (Cohen's  $d = -1.2$ ). However, a greater effect was found after music therapy (Cohen's  $d = -0.7$ ) than after reminiscence therapy (Cohen's  $d = -0.5$ ).

**Discussion:** Psychosocial interventions (CBT, music therapy, reminiscence therapy) performed in the elderly in the community led to alleviation of both anxiety and depression. The greatest effect was found in cognitive behavioral therapy.

## The Importance Of Cognitive Rehabilitation For Promoting Cognitive Function And Mental Health In Older People

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**Background:** The objective of the investigation was to determine the effect of cognitive rehabilitation in older people at the Centre for the Promotion of Healthy Ageing on their cognitive function and mental health. The main research question was whether older people would have improved or maintained cognitive function and improved anxiety and depression.

**Methods:** An intervention study was conducted. A total of 130 older people (93% women) living in the community with an average age of 71.5 years participated in the study. Cognitive rehabilitation was performed regularly for 1 week (60 minutes) for 20 weeks. The MOCA test was used to assess cognitive function, to evaluate mental health of the GDS-15 and GAI scales. Measurements were taken before, after the intervention, and then after the third month. Differences between measurements were evaluated using the Wilcoxon test. The size effect was evaluated using the Cohen's *d*.

**Findings:** The average number of points in the MOCA test was found to be 26.5 (min-max: 15-30). Improvements in cognitive function (mean diff: 0.8;  $p < 0.001$ ), anxiety (mean diff: -1.2;  $p < 0.001$ ) and depression (mean diff: -0.6;  $p < 0.001$ ) were found after the intervention. However, the effect of size was low (Cohen's  $d = 0.3-0.4$ ). Three months after the intervention, there was a further improvement compared to the measurements before the intervention in cognitive function (mean diff: 1.0;  $p < 0.001$ ), anxiety (mean diff: -1.6;  $p < 0.001$ ) and depression (mean diff: -0.7;  $p < 0.001$ ).

**Discussion:** Cognitive rehabilitation in older people living in the community had a positive effect on their cognitive function and mental health.

## **A cognitively enriched physical activity program for MCI-patients and their offspring: A comprehensive needs assessment**

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**Background:** Addressing the challenges of healthy aging, particularly in combating dementia, is crucial with the global elderly population expected to double by 2050. Mild Cognitive Impairment (MCI) represents a critical stage in this trajectory where preventive strategies, especially physical activity (PA) interventions with a cognitive component, play a crucial role. Despite the recognized benefits, tailored interventions for this group are scarce. This study aims to bridge this gap by conducting a comprehensive needs assessment among MCI patients and their adult children, laying the basis for a tailored intergenerational cognitively enriched PA program.

**Methods:** A qualitative descriptive research design was used, including a literature review and semi-structured interviews. Ten dyads, consisting of MCI patients (Mage: 69.8 years, range: 60-77 years) and their adult children, participated. Thematic analysis identified key themes, ensuring a comprehensive understanding of the participants' needs.

**Findings:** MCI patients faced challenges across cognitive, physical, and psychosocial domains, hindering PA engagement. Cognitive difficulties included memory impairment and reduced attention, while physical limitations encompassed mobility issues and fatigue. Psychosocially, MCI patients experienced social isolation and mood disturbances. Facilitators such as personalized support and enjoyable exercises were identified. The study also highlighted practical difficulties faced by MCI patients' children, emphasizing the importance of family involvement in promoting PA.

**Discussion:** The study revealed diverse challenges faced by MCI patients, underscoring the importance of targeted interventions in the prevention of dementia. Identified facilitators offer promising intervention pathways. These findings inform the development of tailored, intergenerational PA interventions for healthy aging and dementia prevention.

## Experimental vignette study with older adults from four countries about deprescribing statins

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### WORK IN PROGRESS

**Background:** Deprescribing (withdrawal of inappropriate medications preferably using shared decision-making) is underutilized. Older adults are frequently prescribed statins as a preventive medication to lower the risk of cardiovascular events. Our study investigated how different contexts of medication use influenced an older adults' agreement with a deprescribing recommendation in a hypothetical patient scenario.

**Methods:** We conducted a vignette-based online experiment with online panelists aged  $\geq 65$  years from Australia, the Netherlands, the UK, and the US.

The experimental manipulation involved various scenarios to assess participants' attitudes toward deprescribing simvastatin. Primary outcome was participants' agreement with the statement, "I think that Mrs. EF should follow her GP's recommendation and stop taking the simvastatin," measured on a 6-point Likert scale (1=strongly disagree, 6=strongly agree). Data was analysed using descriptive statistics, independent samples t-tests, and ANOVAs.

**Findings:** Among 4,873 participants (completion rate 90.2%), the mean agreement with deprescribing simvastatin for the hypothetical patient ranged from  $M=4.20$  (scenario: prescribed by a specialist) to  $M=4.72$  (difficulty with lifestyle choices). Compared to the original scenario (GP recommended deprescribing), there was significantly lower agreement for deprescribing simvastatin in the specialist prescriber scenario, husband previously had a stroke scenario, and health promotion images scenario where Mrs EF sees an image about strokes on a waiting room poster). Findings related to uncertainty, risk perceptions, trust and psychosocial variables will be presented at the conference (analysis underway).

**Conclusions:** These results highlight that how a statin was started, and external factors may increase patient concern when engaging in deprescribing conversations.

## **The Influence of Persuasive Messages on Older People's Intention to Engage in Physical Activity**

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Many people over 40 lead a sedentary lifestyle. This study aims to test whether a one-week intervention via a mobile app can effectively improve attitudes (H1a) and intentions (H1b) towards physical activity in middle-aged and older adults. We will test the effects of prefactual (i.e., "if... then") messages framed in terms of gain vs non-loss and emphasising the health vs well-being consequences of engaging in physical activity. We will also investigate whether the effects of the different frames on attitude and intention vary according to perceived self-efficacy in relation to physical activity (RQ1) and age (RQ2). The experiment includes four experimental and one control condition, with two manipulated factors (frame: gain vs. non-loss; outcome: health vs. well-being) and two repeated measures one week apart. A power analysis showed that the required sample size was 1053 participants, which is necessary to detect a small to moderate effect with 90% power and 5% alpha error. Data collection is planned for March 2024. Data analysis will include the assessment of the psychometric properties of the measured constructs and a mixed ANOVA to investigate the influence of message framing on attitude and behavioural intention. In addition, we will answer the research questions with factorial ANOVAs. We expect the effectiveness of messages with different framing to vary according to participants' psychological and demographic characteristics. The results will contribute to health psychology by providing valuable insights into the differential effects of message framing on attitudes and behavioural intentions towards physical activity.

## **Promoting Active Ageing with Psychotherapeutic Playback Theater**

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The relation between theater and catharsis and healing are known, at least, since the time of Aristotle. In the 20th century, models such as Dramatherapy, Psychodrama, or Therapeutic Theater were developed and, in the 70s, Playback Theater emerged, without assumed therapeutic objectives. From the beginning, the “therapeutic issue” was mentioned and discussed, because the (therapeutic?) effects on the participants, both audience and playbackers, were always evident. Considerable amount of research was produced and published on these effects.

In this communication, we will present the benefits for older adults of this intervention modality that matches life review with the expressive techniques inherent to Playback Theatre. Playback Theatre fostering a safe and creative environment with older adults has been identified as an attractive intervention, facilitating the integration of participants' life narratives and promoting social connectedness. These transformative elements have also been associated with positive advancements in active ageing and mental health indicators.

## **Loneliness in older adults: associations with quantity and quality of social relations**

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**Background:** Loneliness is a negative feeling arising from a discrepancy between desired and actual social relations, and is associated with poor health and an increased risk of mortality. This study examines the associations between the quantity and quality of specific relations and loneliness in older adults.

**Methods:** A cross-sectional survey of adults aged +76 years from the Dalarna region of Sweden was carried out as part of the national SWEOLD longitudinal study. Loneliness was measured by the 3-item UCLA loneliness scale. Quantity of relations was measured by the frequency of contact with children, partner, relatives, and friends, while quality of relations was measured by conflicts and closeness with partner, children, a close friend, and social support. Four logistic regression models of loneliness were developed for: relationship quantity; closeness in relations; conflict in relations, and closeness and conflict combined. (analytic N=380).

**Findings:** The models explained 11-18% variance in loneliness, with slightly more variance explained by the quality models. Less frequent loneliness was associated with: more contact with partner and friends; and greater closeness with partner and children, and more social support. Participants with a partner had less frequent loneliness than those without a partner, even if they experienced conflicts in that relationship.

**Discussion:** Quantity and quality of relations, as well as the specific relation, are all associated with loneliness in older adults, with adults lacking a partner particularly at risk of loneliness. The pattern of older adults' relations should be considered in the development of interventions to reduce loneliness.

## Self - rated health, behavioral risk factors and mortality in 42 years follow-up analysis

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**Background.** WHO Kaunas-Rotterdam Intervention Study (KRIS) implemented in the 70's, included a large psychosocial health sub-study embedded in the „Multifactorial prevention of myocardial infarction and stroke” of the Cardiology Institute/Kaunas Medical Institute. Main results were internationally published. This presentation provides follow up analysis of the psychosocial health screening data matched with mortality register for period 1976-2017. The aim is to assess the relationship between subjectively rated health (SRH), alcohol and tobacco use and all-cause/specific mortality after 42 years.

**Methods:** Data from psychosocial interview conducted in 1976 with 4926 males (age 40-59) participating in health screening were used. Scales for SRH, smoking and alcohol consumption were recalculated and matched with the mortality data. Until 2017 there were 3705 deaths. Cause of death were ICD coded, then grouped as trauma (N233), non-communicable diseases/NCDs (N 453), cancer (N 976), heart disease (N 620) and ischaemic heart disease/IHD (1221). Statistical analysis was performed using Cox proportional hazard model and Kaplan survival curves.

**Findings:** SRH predicted ( $p < 0,0001$ ) all-cause mortality, and specific mortality for NCDs and IHD. Two smoking items predicted ( $p < 0,0001$ ) all-cause and specific mortality for all analysed groups. Alcohol consumption predicted all-cause and specific mortality for cancer and IHD.

**Discussion:** The predictive power of SRH for mortality is stronger for NCDs and IHD, but not for trauma, cancer, and heart disease. Initial SRH assessment could be related with underlying symptoms of disease. This data may be helpful for further conceptualization of health, as well as planning health psychology interventions for prevention of illness.



## **Procrastination as a risk factor for poor health in older adults**

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**Background:** Maintaining healthy behaviours throughout life contribute to reducing the risk of non-communicable diseases. However, such behaviours often require effort and discipline to adopt and for procrastinators, may be seen as aversive. This study aimed to examine how procrastination affects health and health behaviours in older adults.

**Method:** We conducted logistic regression analyses using data from the 2020 wave of the United States Health and Retirement Study. Our sample consisted predominantly of adults aged over 50 (n = 1368; mean = 68; range = 30 – 95). From the data we selected nine health outcomes reflecting various aspects of health status and behavior: heart condition, diabetes, cholesterol, blood pressure, fatigue, back pain, headaches, smoking, and alcohol consumption. We also selected six health protective behaviours: prostate exam, mammogram, cholesterol screening, pap smear, flu shot, and dental visit. Participants also completed measures of depressive symptomatology and procrastination.

**Findings:** Our analysis revealed that procrastination was a significant positive predictor of all health outcomes (OR ranging from 1.01 to 1.05), except for having a heart condition. Procrastination was also a significant negative predictor of several health protective behaviors, such as getting a prostate exam, mammogram, cholesterol screening, and visiting the dentist (OR ranging from 0.98 to 0.99).

**Discussion:** The results of this study suggest that procrastination is a risk factor for poor health and health behaviors in older adults. Procrastination may impair the ability or motivation of older adults to engage in preventive or curative health care, leading to worse health outcomes over time.

## **Longitudinal relationships between physical environment perceptions, physical activity, and sedentary behaviours**

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### **Background:**

In line with socio-ecological models, perceptions of the physical environment may predict physical activity (PA). The study investigated how perceived environment indicators operate together, explaining moderate-to-vigorous PA (MVPA) and sedentary behaviour/physical activity proportion (SB/PA). The study accounted for the physical environment at home (e.g., presence of various exercise equipment), the physical environment at work/school (e.g., presence of separate exercise room), non-built environment at home (e.g., presence of events promoting PA in home proximity) and non-built at work/school (e.g., presence of events promoting PA at work/school).

### **Methods:**

593 participants (aged 11-86 years; M = 33.79; SD = 16.78; 65.1% women) provided data twice, spanning 8 months between Time 1 (T1) and Time 2 (T2). Time of MVPA per day, and SB/PA proportion (SB time per hour to light PA time per hour) were measured using accelerometers.

### **Findings:**

Higher values of indicators of built and non-built environment at work/school (T1) predicted higher SB/PA proportion (T2). Also, higher levels of indicators of non-built environment at work/school (T1) predicted less time spent on MVPA (T2). The relationships remained similar after controlling for baseline measurement of SB/PA proportion (T1), baseline MVPA time (T1), and accelerometer wear-time (T1, T2). No effects for the perceptions of physical environment at home and non-built environment at home on MVPA or SB/PA proportion were observed.

### **Discussion:**

Further research is needed investigating mediators, explaining the mechanisms through which perceiving the physical environment at work/school as PA-facilitating not only does not support PA enactment but on the contrary - hampers it.

## **Making mindfulness meditation a healthy habit**

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**Background:** Mindfulness meditation can benefit health and wellbeing, but people often struggle to initiate and maintain a meditation habit. We propose mindfulness meditation can be usefully viewed as a health behaviour, and that this perspective generates insights into how individuals can be supported to develop a healthy habit of mindfulness practice.

We outline a health behavioural model of mindfulness practice, the Sussex Mindfulness MEDitation (SuMMed) model, developed by tailoring existing health behaviour theories to the unique characteristics and challenges of mindfulness meditation; and a programme of work to test this model and its utility for predicting and changing meditation behaviour.

**Methods:** The first stage of our work will test whether our model can predict meditation practice in new users of a mindfulness meditation app (Headspace). In our first dataset, we will conduct longitudinal analysis of data from n=1992 healthcare workers over 12 months.

**Expected results:** Results will indicate whether a health behaviour perspective can help us understand who successfully initiates and maintains mindfulness meditation. Future work will build on this knowledge to develop strategies to promote habit formation and enhance the effectiveness of existing mindfulness interventions.

**Current stage of work:** Data collection is complete for our first study.

**Discussion:** We suggest viewing mindfulness meditation as a health behaviour could enable better understanding of the challenges associated with changing this behaviour, as well as more effective solutions. Our work has theoretical and applied implications; it will offer insights into behaviour change, and suggestions for optimizing the real-world benefits of mindfulness practice.

## **Lay individuals' perspectives of behavioural complexity in health behaviour habits**

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**Background:** Habits are important for encouraging health behaviours in a more automatic, unconscious, and rapid manner. But the characteristics of a behaviour, including its complexity, may have implications for habit development, measurement, and the intervention methods required. However, definitions of behavioural complexity are highly debated in the literature. This study aims to explore lay individuals' perceptions of behavioural complexity to synthesise current definitions.

**Methods:** Australian university students will participate in 30-minute semi-structured interviews discussing their understanding of behavioural complexity. The sample size will be guided by information power. Data will be analysed using unconstrained directed content analysis guided by the proposed definitions of behavioural complexity in the health psychology literature.

**Expected results:** Behavioural complexity is expected to reflect behaviour-specific, individual, and contextual characteristics, as proposed by current definitions in the health psychology literature. Additional characteristics not yet proposed in the literature may also be identified for consideration in an updated and synthesised definition of behavioural complexity.

**Current stage of work:** Data is being collected, with preliminary analyses conducted.

**Discussion:** Findings may contribute to knowledge and progress towards a more comprehensive but unified definition of behavioural complexity. It is hoped that findings may inform the development of future habit-based interventions with the ability to tailor the relevant behaviour change strategies to various health behaviours according to their defined complexity.

## **Social cure approach for health promotion : mediation analysis**

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The social cure approach defends that social identity plays a role in health and wellbeing (Jetten et al., 2014). For example, multiple groups identification is better physical and mental health (Haslam et al., 2009), but also with healthier behaviours (Sani et al., 2015). Better understanding could come from the exploring of mediators of this relationship (Greenaway et al., 2015). The objectives are here to design and test a protocol to study potential mediators.

An online questionnaire was constructed based on French translations and adaptations of English questionnaires measuring multiple group identification, social support, self-esteem, sense of social responsibility, sense of belonging, purpose in life, agency and French versions of questionnaires for health, wellbeing, and health behaviours. From March to May 2023, French-speaking participants (n=175) answered the survey to the model and evaluate translations.

Regression and mediation analyses were performed to calculate effect sizes in order to determine sample size for further testing of the model. Qualitative answers will be used to improve questionnaire if needed. Results show no impact of multiple groups identification on health behaviours, but well mediating effects of the self-esteem and perceived personal control. Mediation effects of social support, meaning of life, sense of belonging are only effective on the relationship between multiple group identification and well-being, but not on perceived health.

Social factors appear to be interesting leads to favour health in a health promotion perspective, even though the impact on health behaviours should be further discussed. Better understanding their influence is important to develop future interventions.

## Online empowerment for health goal pursuit: the role of social support, emotions, and effort

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**Background:** As electronic health information becomes more accessible, understanding factors that may influence the empowering potential of online health resources in people's lives is crucial. This study examines how social support, emotional experiences, and personal effort in pursuing personal health goals relate to feelings of empowerment from online health information.

**Methods:** We used data from a cross-sectional convenience sample of 605 participants (Mean age: 42.9 years; 41.2% male). We assessed online empowerment (endogenous variable) and autonomous/directive support, positive/negative emotions, effort towards health goals (exogenous variables), and socio-demographic factors (age, gender, education) and included them in the analysis via Structural Equation Modeling (SEM).

**Results:** Findings indicate that autonomous support ( $\beta = 0.167$ ) and negative emotions ( $\beta = 0.182$ ) positively predicted online empowerment, while age ( $\beta = -0.109$ ) negatively predicted it. Positive emotions ( $\beta = 0.198$ ) and education ( $\beta = -0.068$ ) could also possibly have a role in forming online empowerment, suggesting a nuanced interplay of factors in digital engagement with health information. The model demonstrated an acceptable fit, validating our conceptual framework.,

**Conclusion:** Achieving digital empowerment in health information-seeking is multifaceted and might be influenced by social support and emotional states. Notably, both supportive environments and the emotional valence of health-related efforts may play pivotal roles. This insight underscores the importance of tailoring online health resources to address diverse needs and emotional dynamics. Future research should explore these relationships further, considering the limitations of convenience sampling and the need for broader generalizability.

## **The aftermath of COVID-19 vaccine conspiracy theories: How to promote vaccination against HPV and MMR?**

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The advent of vaccines is considered a revolutionary medical act – one that a plethora of saved human lives can be attributed to. Over the course of time, however, vaccination started to attract negative narratives and spearheaded various conspiracy theories. The coronavirus pandemic in Slovakia escalated these tendencies further and became a polarizing and controversial phenomenon. While this foundation has been reasonably explored, there is a lack of evidence on how these COVID-19-related conspiracy discourses intervened with the acceptation of other vaccines – against HPV or MMR, for instance. The poster demonstrates a work-in-progress undertaking in which three different methods will be used – a questionnaire, focus groups and the associative network method based on the social representation theory. The outcomes of this research should help us to reveal the meanings associated with other vaccines, while allowing us to improve the focus on efficient interventions toward restoring the trust toward HPV and MMR vaccinations.

## **The new frontier of art: a conscious nourishment project for mind and body**

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Based on the recent publications on studies and scientific analyses (Art on prescription and Slow Art), which highlight art's positive impact on psychological and physiological well-being, this ongoing study investigates the elements of concentration and awareness during a viewer's aesthetic experience that affect the temporal quality of perception, with the aim of exploring the real therapeutic value of art and promoting health in the long term.

This experimental project, which was developed in its theoretical phase in 2023 and will continue in 2024 with data sampling in a well-known museum in Northern Italy, is based on the evaluation of the experience through the administration of two questionnaires in two steps, before and after the visit, to a sample of 500 people, focusing on individuals between 25 and 45 years old, with gender not taken into account. The collected data is then analysed quantitatively and qualitatively and compiled into summary tables.

The anticipated outcomes include an enhanced sense of self-awareness and emotional connection during museum visits, which serve as temporal respites from the pressures of modern life in today's world. It is also expected that the research, following the example of other countries, will be a stimulus for the Italian health sector, promoting the integration of body and mind through the artistic context.

In this way, the gaze of art enters into a dialogue between medicine, psychology, and culture, in harmony with the current permeability of the various disciplines.



## **The role of emotion regulation in healthy food choices and intake among restrained eaters**

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Dieting strategies often fail to combat an ever-increasing rise in obesity, a major public health issue worldwide. This failure in dieting may be due to a failure in emotion regulation, which is essential in maintaining long-term eating goals. Two studies investigated whether a negative mood induction would impact healthy food choices (Study 1) or food intake (Study 2) in restrained eaters, and whether this relationship was moderated by either of the two aspects of emotion regulation: capabilities and strategies. In both studies, women were randomised to either a negative mood or a neutral mood state. In Study 1, the Multiple Food Test was used to record the mean healthiness of food chosen. In Study 2, healthy and unhealthy food intake was measured using a snack food taste test. Results indicated differences between food choices and intake. Specifically, when in a negative mood state, restrained eaters with poorer emotion regulation consumed more unhealthy foods compared to restrained eaters with better emotion regulation (Study 2). In contrast, there was no effect of mood, or emotion regulation on the food choices of restrained eaters (Study 1). These findings indicate differential impacts from negative emotions on eating behaviour outcomes (choices v intake), and demonstrate the role of emotion regulation in maintaining long-term dietary goals.

## **Personality, temperament and work ethic beliefs as conditions of workaholism. Implications for health psychology**

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The research aim was to respond the question of possible relations between personality, temperament traits, components of work ethic and workaholism. The group of 213 employees of Polish organizations were examined. The following measures were used: NEO Five Factor Inventory (NEO-FFI), Emotionality-Activity-Sociability Temperament Survey (EAS-TS), Multidimensional Work Ethic Profile &#40;MWEP&#41; and Dutch Work Addiction Scale (DUWAS). The results show that negative emotionality is associated with workaholism treated as an obsession and compulsion. Negative emotionality and components of work ethic such as: treating work as moral obligation, centrality of work and wasted time are significant predictors of obsession with work, compulsion to work and excessive work. High emotional arousal and Individual's beliefs about work are important predictors of workaholism. The study findings have important practical implications for health psychology and workaholism prevention. Cognitive therapy of workaholism should focus on modifying beliefs about the value of work and aim to build beliefs about the importance of work-home balance

## Work-Life Balance Strategies: A new instrument

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**Introduction:** The current state of the art suggests that employees perceiving Work-Life Balance (WLB) as unsatisfactory may catalyse conflicts between personal and professional realms. Consequently, this conflict adversely affects employee performance and well-being. Some organizations are improving their initiatives to implement measures to foster WLB. This study aimed to devise a scale, informed by existing literature, to facilitate the evaluation and implementation of WLB-promoting measures. **Method:** The current quantitative study was conducted using a non-probabilistic convenience sample. In total, 118 professionally active Portuguese adults participated (Mage=38.9; SDage=11.5; 61.7% women). It is essential to note that this is an exploratory study, primarily due to the limited sample size collected relative to the total number of items in the scale. **Results:** An Exploratory Factor Analysis (EFA) was conducted, revealing that the scale comprises 12 items, categorized into 2 factors: Managing tasks/working hours and Managing personal goals. All items in this scale demonstrate good factor weights ( $\lambda \geq 0.53$ ). The instrument demonstrated excellent/acceptable composite reliability (CRManaging tasks/working hours=.91; CRManaging personal goals=.77). Additionally, the scale exhibited good convergent validity (AVEManaging tasks/working hours=.61), apart from one factor (AVEManaging personal goals =.43). **Discussion:** The present model will require further utilization in future investigation to confirm its validity and reliability. Nevertheless, the strategies incorporated in this tool could potentially foster improved WLB and enhance the well-being of professionally active individuals. Organizational-based studies might benefit from this measure to better address specific strategies valued by their collaborators.

## Sources and intensity of stress in the workplace of physiotherapists

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Physiotherapists are exposed to occupational stress caused by continuous contact with individuals who require their help but in various workplace conditions. The aim of this study was to examine workplace stressors and the intensity of stress experienced by physiotherapists in Croatia. The aim was also to construct scale of specific stressors for physiotherapists' workplace.

120 physiotherapists of different age, educational level (physiotherapist technician, bachelor's degree, master's, or doctoral level), work experience, patients (neurological, musculoskeletal, cardiology, pulmonology, elderly, children) and employment (state sector, private or self-employed), completed modified Questionnaire about stressors in the workplace of hospital health workers with a new group of items about specific physiotherapists' workplace stressor.

The average overall stress level was moderate. 13.1% of participants experienced high stress levels. Inadequate personal income and overload with too many patients in one day were the strongest stressors. The exploratory factor analysis of all items has been conducted, extracting seven factors named: overload of work and non-cooperation of patients, inadequate working and financial conditions, conflicts and public criticism, professional challenges and pressures, hazards at work, failure to separate private and business life and misinforming the patient, and complexity of diagnoses.

ANOVA was conducted to determine the difference in stress based on the work sector and physiotherapists working in the state sector experience significantly higher stress compared to the private sector. No correlation between age and stress level, nor length of service was found.

Interventions to reduce physiotherapists workplace stress, especially in the public sector, and future research guidelines are suggested.

# Exploring Emotional Labor and Empathy: Predictors of Burnout Syndrome Among Brazilian Oncologists

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## BACKGORUND

In Oncology, BS is identified by the highly stressful nature of work activity and the challenges in balancing professional experience, work expectations, and personal satisfaction. Physicians who demonstrate greater job satisfaction and commitment exhibit lower levels of the SB. The aim of study was to identify the frequency and predictive for BS among oncologists.

## METHODS

Cross-sectional online survey. A total of 128 Brazilian oncologists, with an average age of 39.91 years (SD=8.45), the most represented were Southeast (37.5%). Data was collected using 1) Burnout Syndrome Evaluation Questionnaire (CESQT); 2) Emotional Work: a) Experience and Assessment of Work (QEEW), b) Frankfurt Emotion Work Scales (FEWS); 3) Jefferson Empathy Scale - Physician Version. Descriptive analyzes and multiple linear regression analysis was performed by SPSS 22.

## FINDINGS

The oncologists scored higher on SB in Profile 2 (49.2%) than in Profile 1 (12.5%), despite approaching each other in frequency. Emotional Dissonance was the main predictor. Higher scores of Emotional Dissonance and Emotional Demand at work were also predictors, along with lower scores in Empathy (Perspective Taking) of the Indolence. The effect size ranged from moderate ( $R^2 = 0.19$ ) to high ( $R^2 = 0.46$ ).

## DISCUSSION

The effort to regulate negative emotions at work is a source of suffering and psychological strain, resulting in emotional dissonance as a predictor with higher explanatory, unlike other fields. Empathy was preventive factor for SB, reduced emotional distancing and feelings of indifference, and increased personal satisfaction. Mental health interventions are recommended, as well as investments in better working conditions.

## **Factors associated with depression among hospital healthcare workers**

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Research has shown a high prevalence of depression, anxiety, stress, and trauma among healthcare workers (HCWs) during the Covid-19 pandemic. This study aims to identify psychosocial and sociodemographic predictors of depression among HCWs in hospitals during the pandemic. During the COVID-19 pandemic (2020-2021), a cross-sectional online survey was conducted with 384 healthcare workers from southern Brazil. Depression levels and psychosocial aspects were assessed among healthcare workers (HCW). Women, individuals without a partner, and those who perceived a worse organizational climate and functioning, higher pressure at work, stigma, and social devaluation related to HCW had higher depression scores. The study found that 79% of HCW showed clinical levels of depression. The work climate measure explained 24.3% of depression levels. In this article, we examine strategies for addressing mental health risks associated with working in healthcare during pandemics, as well as the potential long-term psychosocial effects of such outbreaks.

## **Behavioral emotion regulation and burnout in Austria and Japan, working in mental health areas**

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**Background:** Burnout is a consequence of prolonged episodes of stress that has been considered a health concern in various emotional labor professions. Avoiding the burnout and maintaining mental health of those who provide mental support is not only beneficial for the service providers, but also for the clients who need help. Emotion regulation is a central aspect for coping with daily stress. The aim of the study examined the relationship between behavioral emotion regulation and burnout among persons working in the psychosocial field.

**Methods:** 453 individuals joined the survey, of which 144 (32 males, 112 females) were from Austria and 309 (61 males 248 females) from Japan. Behavioral emotion regulation (BER: seeking distraction, withdrawal, actively approaching, seeking social support, ignoring) and burnout (MBI: emotional exhaustion, personal accomplishment, depersonalization) were assessed. Regression analyses were applied predicting mental health by BER.

**Findings:** BER subscales were significantly associated with burnout in both the Austrian and Japanese samples as follows: withdrawal predicted emotional exhaustion and depersonalization positively, and personal accomplishment negatively. Seeking distraction and active approaching predicted personal accomplishment positively. The subscale for which cultural differences were found was ignoring, which was positively associated with personal accomplishment only in Austria.

**Discussion:** Results suggest that seeking distraction and active approach might be adaptive coping strategies for mental health professionals in Austria and Japan, while withdrawal might be a maladaptive emotion regulation strategy. Ignoring may also be an adaptive strategy in Austria, however it was not shown to be associated with the burnout subscale in Japan.

## Work environment and burnout in Austrian and Japanese health professionals

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Burnout is associated with professional stress that consistently exceeds our psychological performance. In particular in health professions burnout strikes not only the professionals but also the clients.

The aim of the study was to predict burnout by work environment.

Measurements: MBI (EE-emotional exhaustion, PA-personal accomplishment, DP-depersonalization) and subscales of COPSOQ II (general health perception, sleeping troubles, job satisfaction, work-family conflicts, family-work conflicts, workplace environment, social support from colleagues, social support from supervisors).

The sample consisted of 74 female, 18 male Austrian, age range 18-74 and 61 females, 248 males, Japanese, age range 24-80, working in the psychosocial area.

The prediction of the burnout subscales showed similarities and differences between Japan and Austria. Gender predicted PA in females and DP in males in Austria, in Japan it is not a predictor for any burnout subscale. Age is important for all subjects it predicts positively PA and negatively EE and DP. Work-family conflicts appeared in DP and in EE in both samples, Job satisfaction is positively associated to PA and negatively to EE. In Japan job satisfaction and workplace atmosphere is also negatively related to DP, and sleep troubles predict positively and general health, and social support from supervisor negatively EE.

Our results show that work environment is strongly associated with burnout. Younger mental health providers experience more negative job settings, only in PA older age is a plus. Important issues are job satisfaction and work-family problems, gender is unequally distributed in the samples and shows only in Austria a result.



## **The role of managers' work addiction in the relationship between employees' perfectionism and work addiction**

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**Background.** It was suggested (Andreassen, 2014; Liang & Chu, 2009; Taris & de Jonge, 2024) that a combination of different factors leads to the development of work addiction. Therefore, no single perspective is enough to fully understand this phenomenon. Hence, the aim of this study was to examine the moderating role of perceived work addiction of managers in the relationship between employees' perfectionism and work addiction.

**Methods.** The cross-sectional study was conducted on a convenience sample of 964 workers from Lithuanian organizations. Data were collected by means of online self-administered questionnaires. The Bergen Work Addiction Scale (Andreassen et al., 2012) was used to assess work addiction of employees and perceived work addiction of their immediate managers. To measure perfectionism, we used a short version of the Multidimensional Perfectionism Scale (Hewitt and Flett, 1991) capturing self-oriented and socially prescribed perfectionism.

**Findings.** Although the results did not confirm the assumption about the moderating effect of perceived work addiction of managers on the relationship between employees' self-oriented perfectionism and work addiction, they showed that a positive relationship between employees' socially prescribed perfectionism and work addiction was the strongest when a manager was perceived to be highly addicted to work.

**Discussion.** The current study enriched our understanding of the roots of work addiction by explaining how both dispositional and contextual factors interacted in predicting this phenomenon. Our results showed that the behavior of work-addicted managers is the focal aspect that should be managed to reduce the spread of health-damaging work-related behaviors among employees.

## Engagement in physical activity from the perspective of adolescents: myself as a source

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**Background:** The ecological model of active living provides a useful theoretical framework for research in the determinants of physical activity. Interventions to improve physical activity among adolescents continue to be a public health priority. The aim was to explore factors contributing to engagement in sufficient moderate-to-vigorous physical activity from the perspective of adolescents.

**Methods:** We used qualitative data collected as part of the international Health Behaviour in School-Aged Children study. We obtained data from 14-17 years old adolescents from the first year of Slovak high school. We conducted 11 online, semi-structured individual and group interviews with 24 participants in total (7 boys; mean age=15.17, SD=0.87) in Slovakia. We analysed the data using consensual qualitative research and thematic analysis.

**Findings:** In the statements of adolescents, four main themes were identified regarding factors contributing to engagement or not engagement in physical activity among adolescents. 'Myself as a source' is one of the four main themes and it is represented by subthemes as the importance of adolescents' own efforts, knowledge, physical predispositions and PA experience.

**Discussion:** In addition, our findings suggest that adolescents can be physically active and still sedentary at the same time. Understanding why adolescents are active or inactive in their life could significantly contribute to improved health-promoting interventions. By adequately addressing these relatively new challenges, much can be gained for adolescent health. Last, but not least, the perspective of adolescents on their health in light of qualitative research is even more important than the perspective of adults.

## **Using story completion to understand relationships between identity, social media and adolescent food choices**

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**Background:** Identity formation is a key developmental task during adolescence. Food choices can be part of constructing and expressing identity and social media can facilitate this process. This qualitative story completion study aims to explore how adolescents understand the role of social media in shaping and expressing identity and food choices.

**Methods:** A pilot study was conducted with 20 participants who wrote three stories each. Following this pilot, the main study will recruit 106 participants who will complete two stories each, producing 212 stories. Data collection is underway and 46 participants have been recruited to date. Story stems present a young character navigating a personal dilemma involving dietary choices and social media. Narrative analysis will be used to analyse the stories.

**Findings:** A set of four narratives were extracted from the pilot data: capability, overcoming challenges, inadequacy, and transformation. These narratives reflect participants' understandings of the positives and negatives of social media and the relationships between social media, identity and food choice. Interpretation of these narratives acknowledged that the content of stories likely reflected opinions or events that participants had been exposed to but may not have been depictions of real events or opinions. The same methods will be used to analyse the main study data and it is anticipated that between four and eight narratives will be extracted.

**Discussion:** This work aims to provide foundations for future collaborative work with adolescents to develop and test identity- and social media- based intervention strategies to support adolescents' healthier food choices.

## Parents' role models and parenting styles and their associations with adolescents' toothbrushing performance

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### Background

The present study aimed to assess whether the toothbrushing performance of adolescents relates to that of their parents and whether authoritative parenting might go ahead with a more favourable performance.

### Methods

Adolescents (10-year-olds [n=42], 15-year-olds [n=24]) and their parent responsible for oral hygiene education brushed their teeth best possible under laboratory conditions while being video-recorded. Dental plaque and parenting behaviour were assessed afterwards and calibrated examiners analysed videos regarding tooth contact time, brushing time at surfaces and sextants, brushing movements.

### Results

The analyses show no substantial correlations in the observed behavioural parameters for the 10-year-olds and their parents ( $\rho$ 's $\leq$ 0.24;  $p$ 's $\geq$ 0.065). Among 15-year-olds, there were significant correlations regarding brushing time distribution to inner surfaces and occlusal surfaces ( $\rho$ 's $\geq$ 0.44,  $p$ 's $\leq$ 0.016). Plaque persisted in most of the segments examined at the gingival margin in both parents (70% $\pm$ 15%) and their children (10-year-olds: 82% $\pm$ 15%; 15-year-olds: 73% $\pm$ 17%) with no significant correlations between them (10-year-olds:  $\rho$ 's $\leq$ 0.124;  $p$ 's $\geq$ 0.217; 15-year-olds:  $\rho$ 's $\leq$ 0.263;  $p$ 's $\geq$ 0.107). Only among 15-year-olds was an authoritative parenting style at least tentatively ( $p$ 's $\geq$ 0.061) associated with more favourable toothbrushing behaviour and less plaque ( $p=0.041$ ).

### Conclusion

The study results indicate that both parental and child tooth brushing are deficient but mainly unrelated. Authoritative parenting style may have a favourable effect. However, parents' deficiencies in their own oral hygiene may prevent their parenting style from having a more significant effect. Parents need to be better empowered to act as good teachers and role models for toothbrushing performance. Until then, schools need to play an increased role.

## **Mothers' self-regulatory competencies as a context of self-regulation by adolescents in the autism spectrum**

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**Background:** Sufficient support for adolescents in the autism spectrum is an important therapeutic goal due to adaptation difficulties and the risk of co-occurring emotional disorders in this group as a result. The personal self-regulatory competencies of parents, especially mothers, are an important element of the developmental context and a source of support for young people in the autism spectrum.

**Methods:** The research aimed to determine the relationship between selected mothers' resources and the emotional condition of adolescents in the autism spectrum. The research was of a pilot nature. 36 boys diagnosed with AS, aged 8 to 13 ( $M = 10.88$ ;  $SD = 1.67$ ) and their mothers were examined. The Revised Child Anxiety and Depression Scale (RCADS) and Children's depression inventory 2nd edition™ (CDI 2™) were used to study adolescents, and Flexibility in Coping with Stress Questionnaire (FCQ), Cognitive Flexibility Inventory (CFI), The Mentalization Scale MentS and sociodemographic survey was used for mothers.

**Findings:** Mothers' self-regulatory competencies turned out to be negatively related to the occurrence of psychopathological symptoms in their children. The mother's mentalization ability is a significant predictor of depression symptoms ( $n = 36$ ;  $F(8,27) = 2.43$ ;  $p < 0.05$ ; Std. error of estimation: 3.196;  $R^2 = 0.25$ ) and the mother's cognitive flexibility - a significant predictor of both symptoms of depression and anxiety in adolescents in this group ( $n = 36$ ;  $F(8,27) = 1.400$ ; Std. error of estimation: 22.635;  $R^2 = 0.08$ ).

**Discussion:** Developing self-regulatory competencies in the mother allows to predict their greater emotional balance.

## **Mountain therapy: enhancement of cognitive and relational skills in adolescents with Autism Spectrum Disorders**

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**Background:** Mountain therapy (MT) is an innovative therapeutic-educational technique for treating, rehabilitating and preventing socio-health problems; it promotes relationships with oneself and others and stimulates the re-acquisition of skills and autonomy. MT offers numerous benefits regarding physical health (i.e., cardiovascular system and neuroprotection), mental health and well-being, improving team spirit and social interaction, acute emotion regulation and quality of life. MT activities support executive functions such as planning, foresight, orientation, and spatial navigation skills.

MT was proposed to a group of adolescents with Autism Spectrum Disorders (ASD), together with an intervention aimed at enhancing social skills.

**Methods:** Nine adolescents with ASD (level 1 and 2 with average IQ) were involved (Mage: 16,11; SDage=1,5)

The following tests were administered pre-intervention (T0): Emotional Intelligence Scale (EIS), State-Trait Anxiety Inventory (STAI), Wisconsin Card Sorting Test (WCST), Stroop Test, Tower of London (ToL), and Rey complex figure test.

**Expected results:** The project is still ongoing until June 2024. Starting from the literature, it is expected that MT combined with structured activities to strengthen social skills can improve relational and cognitive skills (i.e., planning, forecasting, flexibility and working memory).

**Current stage of work:** The training started in November 2023 and will end in June 2024. After the training, the same tests (T0) will be administered (T1).

**Discussion:** In the literature, various mountain-related activities (e.g. climbing, trekking) have been studied to improve specific cognitive and relational abilities in ASD. With this intervention, we propose verifying which cognitive and relational skills a structured MT activity can act.

## **What does well-being actually mean for students? Focus group study (Work in progress)**

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Today we hear about the importance of mental health and well-being from many sides. Especially after the pandemic, the discourse around well-being has started to receive increased attention in the scientific environment, but also in society in general. Based on recent research on a sample of students at Comenius University in Bratislava, we can say that the level of well-being and mental health deteriorated after the Covid-19 pandemic. In our work, we investigated what well-being means for students in general, how they perceive it in connection with their studies at university, and how they think it could be improved. We conducted a total of 13 focus groups across all faculties in the UK, the data from which we analysed using thematic analysis. The results suggest that the environment, atmosphere and people at their faculty are important for students' well-being. Based on our results, we will be able to provide universities with a clearer answer to the question of how to help students feel better at school and how to create a healthier and more supportive environment for learning. The results of our work should provide universities with a unique student perspective on the topic of well-being.

## **Physical activity, body mass index and eating disorder symptomatology in Croatian adolescents and young adults**

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**Background:** Physical activity and eating habits are associated with many health outcomes. This study examines the relationship between body mass index (BMI), physical activity and eating disorder symptoms in Croatian adolescents and young adults.

**Methods:** Study 1 included 649 high school students (50.4% boys; mean age: 15.00), while Study 2 included 238 students (13.9% male; mean age: 21.58). In Study 1, data was collected during health check-ups, with body measurements taken by medical staff. Study 2 was conducted online, with participants self-reporting their weight and height. Participants completed questionnaire on leisure activities and the EDE-Q (Fairburn & Beglin, 2008) to assess eating disorder symptoms.

**Findings:** Participants in Study 1 had an average BMI of 22.49 (SD=4.38), while participants in Study 2 had an average BMI of 22.81 (SD=3.86) - a significant difference. Approximately 23% of adolescents and 20% of young adults had excess body weight (BMI over 25). In terms of leisure activities, 56.3% of adolescents and 69.9% of young adults used electronic media daily, while 50.9% of adolescents and 31.5% of young adults exercised at least three times a week. Young adults scored significantly higher than adolescents on all EDE-Q subscales (restraint, eating, shape, and weight concern).

**Discussion:** Although the differences between high school and college students are small, one trend is evident: as young people get older, they become less physically active, their BMI increases, and they exhibit more behaviors associated with eating disorders. Preventive measures should aim to encourage young people to adopt healthier lifestyle habits.



## General social stressors and intrapsychic resources of Polish youth aged 11 to 15 years

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**Background:** The experiences of the global COVID-19 pandemic, and in Poland also the threat resulting from the armed conflict taking place just outside the country's border, are sources of significant stress. Due to the direct and indirect threats to physical and mental health, each of these situations is non-normative and difficult, violating the primary need of a young person, which is to grow up in a predictable and safe environment.

This study aims to assess the resources of Polish youth in difficult social circumstances to identify protective factors important for maintaining youth resilience.

**Methods:** The study involved 945 adolescents aged 11 to 15 ( $M = 13.10$ ;  $SD = 1.11$ ), creating a representative sample of youth from 14 voivodeships in Poland. The study used the Intrapersonal, Interpersonal and Attitudes Towards the World Inventory (KNIIS) as well as own questionnaire.

**Findings:** The characteristics of intrapersonal and interpersonal attitudes and attitudes towards the life are significant predictors of the occurrence of situational stress in the surveyed adolescents.

Based on them, it is possible to predict about 7% of the variation in the severity of stress associated with remote education ( $R=0,27$ ,  $R^2= 0.071$ ;  $R^2_{cor}=0.067$ ,  $F(4,830)=16,063$ ,  $p<0.001$ , Std. error of estimation: 2,63). Attitude towards the world is insignificant factor for the emotional condition of surveyed adolescents.

**Discussion:** The formation of favorable beliefs (interpersonal and intrapersonal) is a significant factor in strengthening the resilience of young people in the face of society-wide stressors.

**Keywords**

pandemic, war in Ukraine, mental state, adolescents

## **The associations between internalising problems and emotional and social competencies in preschool children**

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**Background:** Internalising problems at an early age is a risk factor for later mental health problems. Emotional competences acquired during the first years has been linked with psychological well-being, social and academic adaptation. Identified associations between early emotional/social competencies and internalising problems can help to find ways for prevention of mental health problems. The aim of the study was to evaluate associations between the internalizing problems and emotional/social competencies in children aged 3-6 years.

**Methods:** The study was performed in 2021 in Lithuania, the data of 169 children aged 3-6 years were collected. Internalizing problems were measured using CBCL filled in by parents (Achenbach, Rescorla, 2000) and SDQ filled in by parents and teachers (Goodman 2005). The emotional and social competences were measured using EMK 3-6 filled in by teachers and assessment performed by psychologists (Petermann, Gust 2016).

**Findings:** According to CBCL data 5.4% children can be assigned to the risk group of internalizing problems. According to SDQ measures 10.3% of children can be assigned to the risk group of emotional problems. Higher emotional and social competencies, as emotional awareness, empathy, self-regulation, and social competence were related with lower internalizing problems scores. Better competencies of social behaviour of the child were related with lower internalizing problems scores.

**Discussion:** Results suggest that training and improvement of emotional and social competences could be used in preventive programs and research of the effectiveness of such programs is needed.

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## Effects and Challenges of Theater Viewing for Children with Illnesses and Disabilities

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**Background:** Children with illnesses and disabilities often face daunting challenges, including health and psychological issues such as the need to foster resilience and positive thinking. Theater viewing emerges as a potent intervention, offering these children diverse experiences through portraying characters' actions and emotions. This study aims to elucidate the multifaceted impacts and prevailing challenges associated with theater viewing for this demographic.

**Methods:** A qualitative survey targeted members of theater companies who have performed for children with illnesses and disabilities, receiving 35 responses. Participants provided open-ended feedback on the "Challenges of Theater Viewing" and its "Effects," which we categorized through content analysis. The Iwate Medical University Ethics Review Committee approved this study.

**Findings:** Analysis revealed that the primary challenges in theater viewing encompassed "Expansion of Theater Viewing Opportunities," "Developing Accessible Theater Environments," "Budget Allocation," "Establishing Collaborative Networks," and "Embracing Diversity." Conversely, the effects highlighted were diverse, ranging from "Enhanced Emotional Expression among Children" and "Elevated Effort and Aspiration within Theater Groups," "Perceived Impact on Children" and "Increased Joy among Theater Members."

**Discussion:** Theater viewing for children with illnesses and disabilities presents opportunities and obstacles. While significant challenges exist in broadening access and improving the viewing environment, theater groups observe profound benefits, including positive emotional and expressive responses from the children.

## **Evaluating two positive body image media micro-interventions among children aged 4-6 years old (study protocol)**

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**Background:** This study describes the development of two positive body image media micro-interventions (a 15-minute episode and a music video) for evaluation in a fully powered RCT, among 4–6-year-olds. Intervention development and evaluation to promote the health of whole populations is the fourth phase of the behavioural epidemiology framework.

**Methods:** We aim to recruit 440 children aged 4-6, to be randomised into one of four conditions: 15-minute intervention, 15-minute control, 3-minute music video intervention, or music video control. Children and a parent will attend a media screening session where children will complete measures of positive body image and anti-fat bias before (T1), immediately after (T2) and at one-week post-intervention (T3) with a moderator through play-based interview. The primary outcome will be the change in body appreciation with secondary outcomes including change in body functionality appreciation and anti-fat bias. Exploratory analyses will determine any effect of gender (girls vs boys), year group (reception vs year 1) or dosage.

**Expected results:** We anticipate children in both intervention groups to report improvements in body appreciation, body functionality appreciation and decreased anti-fat attitudes, relative to the controls. We anticipate the 15-minute intervention will be more effective than the music video due to greater exposure to messaging.

**Current stage of work:** Ethical approval has been granted. Recruitment and data collection is on-going.

**Discussion:** If proven effective in bolstering children's positive body image and reducing anti-fat bias, the interventions will be widely disseminated on YouTube to children across the globe, reaching a whole population at scale.

## **Adverse childhood experiences and eating behaviors. The role of stress, anxiety and depression**

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The study investigates the relationship between adverse childhood experiences (ACEs), psychological aspects and eating behaviors. A sample of 722 people (M=38, SD=9,94) completed The ACE International Questionnaire (ACE-IQ), The Depression, Anxiety and Stress Scale (DASS-9), the Teruel Orthorexia Scale (TOS), Binge Eating Disorder Screener (BEDS), the Dutch Eating Behavior Questionnaire (DEBQ), The Multidimensional Body-Self Relations Questionnaire (MBSRQ) and The Satisfaction With Life Scale (SWLS).

Results show physical neglect correlates positively with orthorexia nervosa (ON) ( $r=0.162$ ;  $p<0.001$ ), overweight preoccupation (OP) ( $r=0.111$ ;  $p<0.05$ ) and negatively with appearance evaluation ( $r=-0.105$ ;  $p<0.05$ ) and satisfaction with life (SL) ( $r=-0.148$ ;  $p<0.001$ ). Witnessing domestic violence correlates positively with ON ( $r=0.101$ ;  $p<0.05$ ), emotional eating ( $r=0.108$ ;  $p<0.05$ ), restricted eating (RE) ( $r=0.104$ ;  $p<0.05$ ), binge eating (BE) ( $r=0.101$ ;  $p<0.05$ ), OP ( $r=0.172$ ;  $p<0.001$ ) and negatively with SL ( $r=-0.141$ ;  $p<0.001$ ). Emotional abuse correlates positively with BE ( $r=0.106$ ;  $p<0.05$ ), OP ( $r=0.151$ ;  $p<0.001$ ) and negatively with SL ( $r=-0.133$ ;  $p<0.001$ ). Sexual abuse correlates positively with OR ( $r=0.126$ ;  $p<0.001$ ), OP ( $r=0.103$ ;  $p<0.001$ ) and bullying correlates positively with unhealthy eating ( $r=0.129$ ;  $p<0.001$ ), OP ( $r=0.119$ ;  $p<0.001$ ) and negatively with SL ( $r=-0.143$ ;  $p<0.001$ ). Regression analysis revealed that DASS significantly mediated the relationship between ACEs and ON, (B = 0.110,  $p=0.001$ ), BE (B=0.134,  $p=0.001$ ), OP (B=0.101,  $p=0.001$ ), and SL (B=-0.157,  $p=0.001$ ).

Findings suggest that the indirect effect of DASS symptoms are important in understanding the relationship between ACEs and eating behaviors. Screenings and interventions targeting DASS may be beneficial in reducing the effects of ACEs on unhealthy eating behaviors in adulthood.

## **Preliminary survey for development of a game for children to suppress impulsivity to media use**

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**【Background】** Media use is rapidly increasing among children, and various problems with impulsivity have occurred with this increase. The purpose of this study is to carry out a preliminary survey for the development of an innovative card-game based on the “Implementation-intentions” and the “Stop-Relax-Think” strategies to strengthen emotional regulation ability in media use for children.

**【Methods】** A preliminary survey was conducted via two procedures to clarify children’s current media use, their attitudes toward various issues, and possible coping strategies to control their emotion toward impulsivity with media use. For Study 1, 26 elementary school children who have enthusiastically used media such as games, Social Networking Services, and the internet such as games, Social Networking Services, and the internet on a daily basis, were interviewed via online conference. Following which, Study 2 was conducted in the form of an open-ended questionnaire corresponding to the “Motivational Phase” of the Health Action Process Approach, with 295 elementary school children.

**【Findings】** The results of Study 1 and 2 revealed that the types of media which were frequently used were different among boys and girls, and the desire to use increased with their school year. The data obtained from these studies was classified based on the idea of “three-term contingencies of reinforcement”: 1) antecedents, 2) actions, and 3) consequences.

**【Discussion】** In this study, we were able to clarify three elements to develop a card-game to strengthen suppression of impulsivity to media use among children. We would develop this card-game following the survey, and further investigate its effects in the future.

## **Social dynamics and infant nutrition: the influence of social circles on parental feeding decisions**

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Food, the essential link that binds children to their parents from birth, also generates social and family concerns, creating anxiety and tension within couples. Parenthood is a major upheaval involving profound reflection and significant changes in the life trajectories, influencing numerous psycho-social factors: social representations, beliefs, and membership of social groups.

The HEREDITY study examined the social and psychosocial factors influencing parents' decisions about infant feeding.

Semi-structured interviews were conducted with 32 parents of children under 6 living in France and registered with the NutriNet-Santé web cohort between October-November 2023. The interviews explored several themes relating to children's diets: social representations, children's eating behavior, information searches, food beliefs, attitudes, parental emotions, subjective norms, the influence of social networks, and dietary decisions made by parents. A thematic analysis was then carried out.

The sample comprised 10 men and 22 women, with an average age of 37. The analysis revealed the importance of social circles in influencing parental decisions, marked by a generational break with grandparents, affiliation with new peer groups, and caution towards early childhood and medical professionals.

This omnipresence of social circles, with their multitude of advice and the social pressure they exert, creates tension and growing uncertainty among parents. As part of a changing social context, food is subject to social dynamics that force new parents to rethink their life trajectories in favor of social groups reflecting shared values, beliefs, and interests. This reality raises the need to rethink the impact of social dynamics on parents' food choices.

## **Family in the Face of Childhood Epilepsy: A Parental Perspective – A Qualitative Study**

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Childhood epilepsy significantly impacts not only the affected child but also the entire family dynamics, including family life and relationships. This study examines parental perspectives of the disease to comprehend their experiences and identify prevalent issues. The presented results are part of wider research on experiences of epilepsy in children.

The research was conducted using the DIPEX qualitative method (standardized for the Czech Republic). The sample consisted of 36 parents of children with epilepsy from the Czech Republic (16 males, 20 females). The children had various types of epilepsy and epileptic seizures.

The perception of epilepsy by parents depended on specific manifestations, comorbidities, and consequences of the condition in their child. Parents reported financial, work-related, leisure, and travel disruptions. The disease affected the functioning of the family in various ways. Some parents described the strain it placed on their relationship. They described both unity and division within the family, along with anxiety and fear related to the condition, or feelings of shame. Sometimes, the diagnosis of epilepsy led to a decision not to have more children so that parents could fully focus on the sick child. Healthy siblings served as motivation for the parents and support for the sick child; however, they occasionally experienced fear, worries, or a sense of helplessness.

The research offers valuable insights into the experiences and challenges encountered by families of children with epilepsy. It contributes to understanding the families' needs and emphasizes the necessity of active information sharing and open communication.



## Physical health-related quality of life in pediatric acute lymphoblastic leukemia

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**Background:** Acute lymphoblastic leukemia (ALL), the most common childhood cancer, achieves a 90% remission rate due to the intense and lengthy treatments, impacting the child's physical health-related quality of life (HRQoL). This study explores the relationship between parental and child's sociodemographic variables, child's clinical variables, parental psychological/family variables, and the child's physical HRQoL (sleep, appetite, and motor functioning), during initial treatment.

**Methods:** Approximately a month post-diagnosis, 42 parents of children with ALL completed several instruments, including measures of psychological morbidity, traumatic stress, coping strategies, and their child's HRQoL. Spearman's correlations and Mann-Whitney U tests were performed.

**Findings:** Children's age was positively associated with sleep quality and motor functioning. Undergoing type-A induction therapy was associated with better motor functioning while prior hospitalizations, living in a small household, having no siblings, and lower levels of parental psychological morbidity and traumatic stress symptoms were associated with better sleep quality. Fewer days since diagnosis and higher levels of parental coping were associated with fewer appetite problems. Children over two years old revealed better sleep quality and motor functioning compared to younger children. Children on type-A induction therapy revealed better motor functioning compared to those on type-B or type-A+C induction therapy.

**Discussion:** This study underscores the multifaceted factors of physical problems in children with ALL. These preliminary findings emphasize the need for family-centered care. Interventions should be tailored considering also the age of the child and the type of induction therapy, in early treatment stages, to enhance overall pediatric healthcare and physical HRQoL.

## **Awareness and prevalence of Open Science behaviours among health psychology researchers: A registered report**

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**Background:** There has been growing interest in Open Science among the health psychology research community in recent years. However, there is still uncertainty regarding the extent to which health psychology researchers are aware of and using Open Science behaviours. This work in progress study will address the following research questions: How aware of Open Science behaviours are health psychology researchers, and how frequently are they being used? (RQ1); Are there differences in awareness and use of Open Science behaviours according to career stage and research method background? (RQ2); How can the use of Open Science behaviours be encouraged and supported among health psychology researchers? (RQ3).

**Methods:** A cross-sectional survey will be used. Individuals who conduct health psychology research or adjacent as a main activity and have obtained a bachelor's degree in a relevant area will be eligible. Descriptive statistics will be examined to address RQ1, multiple regression will be conducted to address RQ2, and thematic analysis will be used to address RQ3.

**Expected results:** It is expected that there will be variation in the level of awareness and use of Open Science behaviours such as prospective registration, data sharing, open access publishing, and research co-production.

**Current stage of work:** Ethical approval is being sought, and a Stage 1 registered report is being prepared.

**Discussion:** Understanding awareness and use of Open Science behaviours will inform the delivery of appropriate training and resources and identify disparities in engagement with Open Science among the research community to ensure those supports can be tailored.

## **Youth-centred participatory action research meets systems thinking: co-creating a systems map together with children**

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Format oral abstract: Work in progress

### **Background**

Participatory action research and systems thinking are promising approaches for tackling complex problems and both are increasingly being used in developing public health interventions, also in combination. A first step in understanding the complexity of the problem is to build a system map visualizing how individual components are interconnected. We aim to co-create a feasible and child-friendly protocol for building a systems map together with children.

### **Methods**

An action team including 6-8 child co-researchers aged 9-12 years and two adult facilitators will participate in 8-10 participatory sessions. Applying principles of participatory action research, the team will focus on developing a child-friendly protocol for building a systems map. The process will include continuous evaluation. All sessions will be recorded, transcribed and analyzed using thematic content analysis.

### **Expected results**

The participatory process will result in a practical protocol for building a systems map together with children.

### **Current stage of work**

Participatory sessions are planned for April/May, and results will be available by June 2024.

### **Discussion**

To optimally involve children in research, feasible and child-friendly research protocols are urgently needed. Such protocols will increase the chances of a more holistic understanding of the mechanisms underlying children's behavior and thereby interventions that are more likely to change the relevant system.

## **The Birds and the Bees: Using machine learning to analyze school-based sexual education discourse**

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<sup>1</sup>Utrecht University, Netherlands; <sup>2</sup>University of Aberdeen, United Kingdom

**Background:** Sexuality is crucial for the healthy development of children and youth. Nevertheless, the Dutch national week of school-based sexual education, known as Lentekriebels [spring fever], faced controversy last year. This study aims to contribute to enhancing support for sexual education by analyzing online and media discourse.

**Methods:** We analyze both the public and media discourse in response to Lentekriebels. For this, we build a text dataset that consists of two parts. Firstly, we focus on individuals' responses, which we collect through web scraping of relevant social media posts, forums, comment sections of newspaper articles and stakeholder organizations' platforms. The second part of the corpus consists of Dutch media newspaper articles from 2005 until 2023 portraying sexual education. Then, using machine learning techniques such as topic modeling, sentiment analysis and trend analysis, we will uncover prevalent themes, sentiments, and the evolution over time of the discourse.

**Expected results:** Through machine learning approach, anticipated outcomes include the identification of key themes and sentiments surrounding online discourse. By tracking evolving trends, we also expect to offer insights into media portrayal dynamics of the last 20 years.

**Current stage of work:** We are currently in the data-collecting phase.

**Discussion:** This methodological approach offers innovative perspectives to the field of health psychology, particularly in analyzing large textual datasets. More practical, insights from these findings can inform interventions aimed at enhancing the acceptability of (school-based) sexual education among parents and carers. Fostering improved sexual health outcomes for children and young people.

## The Nature Exposure Scale: Preliminary Psychometric Properties, Reliability, and Validity Evidence from Italy

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**Background:** Exposure to nature encompasses physical and/or sensory contact with natural environments and has been consistently linked to psychophysical health benefits. The 4-item Nature Exposure Scale (NES) represents a valuable instrument for assessing the levels of exposure to natural settings levels across different life domains. This study aims to investigate the psychometric properties of an Italian version of the NES, by examining its reliability, convergent, and criterion validity.

**Methods:** A total of 1327 (NEFA=657; %F=68.3; Mage=30.40; SDage=12.88; NCFA=670; %F=67.3; Mage=30.77; SDage=13.39) Italian individuals were recruited. Exploratory Factor Analyses (EFA) and Confirmatory Factor Analysis (CFA) were employed to investigate the structure of the scale. Internal consistency was examined using Cronbach-alpha ( $\alpha$ ). The convergent and criterion validity of the NES were tested through Pearson's correlations with the Connectedness to Nature Scale (CNS) and the Satisfaction With Life Scale (SWLS), respectively.

**Results:** The EFA revealed a unidimensional structure, confirmed by the CFA that showed excellent model fit (CFI=.94; TLI=.99; SRMS=.04; RMSEA=.00). Internal consistency was good ( $\alpha$ =.72). The cumulative variance accounted for was 54.4%. Correlations showed strong convergent validity with the CNS ( $r$ =.56,  $p$ <.001) and good criterion validity with the SWLS ( $r$ =.22,  $p$ <.001).

**Discussion:** The NES demonstrated strong psychometric properties, suggesting that it is a reliable and valid measure for evaluating exposure to nature and its impact on mental well-being. The findings support the importance of nature exposure in promoting positive health outcomes in the Italian context. Further research may enhance understanding of the relation between nature exposure and mental health in clinical populations.

## The Substance Use Disorder Implicit Association Test (SUD-IAT): Development and Validation Studies

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**Background:** Drug use and overdose deaths, particularly those involving opioids and stimulants, continue to rise in the U.S. and other nations worldwide. However, only 11% of people who need treatment for substance misuse receive it. This is due, in part, to stigma and implicit biases imposed by society and providers of health care and recovery services. Developing robust tools to measure attitudes towards people with SUD could improve our ability to identify hidden biases and address them.

**Methods:** We developed the SUD Implicit Association Test (SUD-IAT) in collaboration with Project Implicit® to index associations between people with SUD and valence (good vs. bad). Using an online survey, we evaluated the SUD-IAT in 111 residential drug treatment center providers and 347 undergraduate students. Demographic and self-reported measures were completed to examine explicit attitudes and stigma towards people with SUD.

**Findings:** We found that the SUD-IAT had good internal reliability (split-half correlation, D-score from first and second half of IAT trials,  $r=0.68$ ). Our studies revealed an association between negatively-valenced words and people with SUD participants, suggesting an implicit preference for people without SUD (Providers:  $M=0.62 \pm 0.42$ ,  $p<0.01$ ,  $d=1.47$ ; Undergraduates:  $M=0.24 \pm 0.39$ ,  $p<0.01$ ,  $d=0.63$ ). The SUD-IAT correlated positively with age ( $r=0.42$ ,  $p<0.01$ ) and some explicit measures.

**Discussion:** The SUD-IAT showed good internal consistency and construct validity suggesting the SUD-IAT could serve as a measure of attitudes towards people with SUD to help identify and develop targeted educational and other interventional programs to improve well-being and reduce disparities in people with SUD.

## The alchemy of qualitative sampling

Kristýna Anna Černíková<sup>1</sup>

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The importance of qualitative research in enriching scientific conclusions is increasingly recognized. Nevertheless, qualitative researchers often face criticism due to perceived deficiencies in methodological background and vague justifications for their methods. Moreover, engaging in qualitative research is frequently viewed as a substantial, long-term commitment with uncertain outcomes.

This presentation delves into the contentious and often confusing aspects of qualitative sampling, emphasizing the complexity involved in selecting appropriate sample sizes and navigating the path to data saturation. The exploration extends to specific parameters influencing saturation, encompassing the study goal, nature of the research, sampling strategy, type of data, and other factors. The lack of clear guidelines in this landscape compounds the challenges faced by qualitative researchers, hindering proposal approval and publication efforts.

By shedding light on these complexities, this presentation seeks to contribute to a better understanding of qualitative research dynamics. It advocates for appreciation of the qualitative research process, recognizing it as a vital contributor to scientific knowledge despite the inherent hurdles. Ultimately, it aims to foster a more transparent and supportive environment for qualitative researchers, addressing criticisms, and navigating the terrain of this indispensable scientific endeavour.

## **Implementation process of the SHAPE questionnaire for Portugal - Data from a national representative sample**

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**Background:** World Health Organization (WHO) created a survey on behaviors related to sexual and reproductive health – the Sexual Health Assessment of Practices and Experiences (SHAPE) questionnaire - which was previously qualitatively tested in different countries and was recently implemented in Portugal. Our objective is to present the adaptation and implementation process of the SHAPE for Portugal, the first country in the world to do this with a nationally representative sample.

**Methods:** A total of 2010 questionnaires were completed and validated: 1426 were via an online survey (CAWI), and 584 were by telephone interview (CATI). The sample is made up of 52 percent women, 47.9 percent men, and 0.1 percent chose not to answer (Mage: 49,6; Range: 18-95). Previously, the questionnaire went through a process of translation and back-translation and a pilot study with 40 people.

**Findings:** We obtained participants from all regions of Portugal. Among those who responded to the online survey, the response rate was 79.5%, and among those who responded by phone was 12.4%. The completion rate was high (84,5%), and for the ones who completed the % of non-valid responses was very low (0 to 5%). The survey took on average less than 30 minutes to complete.

**Discussion:** The implementation of SHAPE in a population-based sample using online and telephone methods was feasible and relatively affordable, culminating in the provision of a robust instrument, validated for Portugal but used globally, in the assessment of psychosocial and behavioral issues of sexual and reproductive health.



## **The role of coping strategies in reducing climate anxiety and promoting pro-environmental behavior**

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Climate change, the most pervasive threat to the natural environment and humanity, has profound negative effects on mental health, especially for youth experiencing high levels of climate anxiety and worry. The established anxiety-addressing interventions are lacking, as decreasing anxiety may also lead to decreasing pro-environmental behavior. The aim of the study is to evaluate coping strategies-based interventions, i.e., expressive writing to decrease rumination (an important aspect of anxiety) and behavior planning to enhance pro-environmental behavior.

In online intervention study, 204 young individuals with at least occasional experiences of climate anxiety or worry are block-randomized into one of three groups: two intervention groups (intervention of expressive writing; intervention of expressive writing and behavior planning; both lasting three days, 15 minutes each day, and a booster session a week later) and waitlist control group. Main outcomes, i.e., behavioral engagement, climate change worry, and anxiety, are assessed before, immediately after, and one week after the intervention. Currently, one-third of the planned sample was involved in the experiment.

It is expected that behavior planning and expressive writing will have beneficial effects on pro-environmental behavior, climate change anxiety, and worry, while expressive writing alone will have beneficial effects only on the latter two.

As evidence on interventions for climate change anxiety and worry is scarce, such studies may aid theoretical and practical therapeutic developments. Interventions explored might prove to be beneficial to the outcomes of interest and provide a potentially affordable and accessible option for addressing the adverse effects of climate change on mental health.

# **Emotions in the face of climate change: their impact on mental health and pro-environmental behaviors**

Marie Andela<sup>1</sup>

<sup>1</sup>Université de Franche-Comté, France

**Background:** Climate change presents a complex challenge, requiring a comprehensive understanding of its psychological impacts and strategies to promote pro-environmental behaviors. Although behavioral science tools like social norms and cognitive determinants have been applied to address these issues, emotions as catalysts for behavior change have received comparatively less attention (Williamson & Thulin, 2022). However, recent integration of emotions into this field highlights their potential significance in shaping human decision-making and attitudes toward environmental concerns. This study thus explores the intricacies of this research domain by examining the relationships between emotions in response to climate change and pro-environmental behaviors, as well as their connection to anxiety and depression.

**Methods:** A diverse sample of 1019 individuals participated by completing a survey. Anxiety and depression were measured using the HAD, while pro-environmental behaviors were assessed through the scale developed by Simpson et al., (2021). Emotions were assessed using a comprehensive eight-emotion scale that was specifically designed for this study: anger, sadness, fear, disgust/shame, helplessness, guilt, and indifference.

**Findings:** Regression analyses highlighted hope, sadness, and anger as primary predictors of pro-environmental behaviors. Concerning mental health, fear, sadness, and reduced hope emerged as primary predictors of heightened anxiety, while reduced hope, guilt, and shame played pivotal roles in depression. Hope assumes a unique significance in its dual capacity to catalyze pro-environmental behaviors and safeguard mental well-being.

**Discussion:** Offering valuable insights into the intricate links among emotions, pro-environmental behaviors, and mental health outcomes facilitates discussing comprehensive strategies for addressing the challenges of climate change.

## Feasibility of online screening for excessive daytime sleepiness

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**Backgrounds:** Excessive daytime sleepiness (EDS) can result in poor quality of life. We developed an online screening for EDS with a dissemination strategy. The aim of this study was to evaluate the feasibility of EDS screening supported by mass and social media campaign.

**Methods:** Online screening targeted young and middle-aged adults using media campaign divided into multiple strategies since January till December 2023. Beginning with local/national TV news reportages and social media campaign using flyers and posters; continued by press release (generating tens of online articles); and podcast promotion. Respondents were asked to leave their e-mail addresses if they wanted to receive screening evaluation. Feasibility of this campaign was measured by monthly sample increase, overall response rate and evaluation requests.

**Findings:** Out of 2 390 people who opened a link or scanned QR code 568 respondents answered online screening (response rate 23.8%). A majority (76.9%) left their e-mail addresses to receive evaluation. The biggest increase in sample size (42.2% respondents) was visible after press release and podcast promotion. Second was triggered with social media campaign. TV news reportages had only a slight impact on sample increase. Without regular promotion the sample didn't increase or increased only by a few respondents.

**Discussion:** Multiple mass and social media campaign strategies seem feasible as online screening dissemination strategy. It is supported by the visible monthly sample increase together with response rate and more than three quarters of respondents leaving their e-mail addresses to receive evaluation.

## Examining the timing-related association of smoking and depression in the German National Cohort (NAKO)

Carolin Marie Callies<sup>1, 2</sup>, Maja Völker<sup>3</sup>, Nako Investigators<sup>4</sup>, Jutta Mata<sup>1</sup>, Marcella Rietschel<sup>3</sup>, Fabian Streit<sup>3</sup>

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**Background:** Smoking and depression contribute to the development of non-communicable diseases and to global mortality. Yet, it is little understood how both are related over time and whether one predicts the others. This study examines the synchronicity of smoking (behavior) and depression.

**Methods:** The present analysis is based on the Baseline Assessment of the German National Cohort (NAKO), the largest prospective population-based cohort study in Germany. A total of 205,415 participants aged 19-74 were randomly recruited in 18 study centers across Germany. Lifetime and current depression were assessed via self-reported physician's diagnosis and treatment of depression, the M.I.N.I. International Neuropsychiatric Interview, and the Patient Health Questionnaire (PHQ-9). Smoking was evaluated by questions about smoking status and smoking behavior. Binary logistic regression models will be used to examine hypotheses on binary, and linear regression models for continuous dependent variables.

**Expected results:** Expected findings comprise positive associations between smoking status and lifetime (H1) and current depression (H2), alongside a positive correlation between smoking severity and depression severity (H3). Additionally, the age at onset of depression and smoking (H4) and the timepoint of smoking cessation and of the last depressive episode (H5) are expected to correlate positively. Furthermore, smoking abstinence duration is anticipated to negatively associate with depressive symptoms (H6).

**Current stage of work:** Preparation of data for analysis.

**Discussion:** The findings could offer valuable insights into the synchronicity of smoking and depression based on a large population-based cohort. The findings may provide guidance for the development of effective prevention and treatment strategies.

## Factors associated with trauma symptoms: a study on oncologic patients

Violeta Stefania Rotarescu<sup>1</sup>, Ioana Alexandra Mircea<sup>1</sup>

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Under the pressure of current external factors (health issues, military conflicts, socio-economic crises) understanding the mechanisms of trauma becomes more important than ever. Thus, the present study aims to investigate factors associated with trauma in a group of cancer patients. In order to achieve this objective, a non-experimental correlational study was conducted and a series of variables measured through self-report questionnaires were assessed. The scales that were used were: The Trauma Symptoms Scale (PSS-SR5), The Emotional Valence of the Traumatic Event measured through patients' narratives of the traumatic event, The Centrality of Event Scale short form (CES), Adaptive and Maladaptive Coping Mechanisms (Brief-COPE) and Perceived Social Support (BSSS). 83 cancer patients participated in the study (N=83). Results show that the emotional valence of the traumatic event is negatively associated with trauma symptoms ( $r = -.26, p < .05$ ). Moreover, centrality of event, coping mechanisms and social support played an insignificant influence on trauma symptoms ( $R^2 = .06, F = 2.36, p > .05$ ). The reduced action of the mechanisms of dealing with trauma on trauma symptoms are probably due to emotional numbing produced by an extended trauma, like cancer diagnosis is. The negative correlation between the emotional valence of the traumatic event and trauma symptoms ( $r = -.23, p < .05$ ) can be explained by the large number of female patients ( $n = 75$ ), who tend to perceive life events more negatively than men, while also having more adaptive coping mechanisms.

## **Validation of the Polish version of the Enright Forgiveness Inventory for assessing forgiveness towards others**

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Instruments designed for the situational assessment of forgiveness offer numerous research possibilities, including the exploration of forgiveness dynamics, sources, motivations, and the relationship between the type and severity of harm and forgiveness. This encompasses investigating the category of the offender (close person, family member, outsider, stranger, etc.) and its association with forgiveness. The objective of the presented research was to create a Polish adaptation of the Enright Forgiveness Inventory (EFI; Enright, Rique, 2004), initially developed within the American cultural context.

The EFI enables the examination of situational forgiveness towards others while also providing insights into one's forgiveness abilities. It consists of six scales: positive affect, positive behavior, positive cognitive attitude, negative affect, negative behavior, and negative cognitive attitude. In total, it comprises 35 items, including 5 control questions related to pseudo-forgiveness. The study involved over 302 adult participants, comprising 232 females, 62 males, and 8 individuals identifying differently, aged 18 to 77 years ( $M=39.3$ ,  $SD=15.75$ ).

The poster will present reliability indicators for individual subscales of the original English version and the results of correlation analyses between the questionnaire dimensions and other measures (Interpersonal Relationship Inventory TRIM-18, Oxford Happiness Questionnaire OHQ). This tool can be applied in clinical contexts, including the examination of coping mechanisms related to traumatic events, as well as in the fields of health psychology.

## The psycho-social impact of orthodontic treatments on patients' well being

LAVINIA MARIA Hoge<sup>1</sup>, Brenda Bernad<sup>2</sup>, Elena bernad<sup>3</sup>

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The aim of the present study was to observe how orthodontic treatment has a positive impact on the patient's well-being.

The study included 52 patients aged between 11-38 years. The reasons why patients sought orthodontic treatment were one or more of the following: crooked teeth, gapped teeth, protruding jaws, the dentist's suggestion for an orthodontic consultation in order to obtain improved aesthetics. Participants completed the PIDAQ questionnaire pre- and post-treatment. Factors studied included dental self-confidence (DSC), social impact (SI), psychological impact (PI) and aesthetic concern (AC).

Following the completion of the questionnaire in the final stage of the treatment by the participants, significant differences ( $p < 0.05$ ) were found in terms of gender variability, education, on the scales: personal beliefs, self-confidence and social impact. The distribution of the five factors of the questionnaire in the first stage showed us that the personal beliefs factor was the most important for the participants (30.43%), and in the second stage, the social impact factor (31.02%).

The results of the study support the argument that orthodontic treatment not only results in improved dental aesthetics, but also has a significant impact on the psychosocial aspects of the patient's life. The esthetic dental improvement after orthodontic treatment and the newly acquired level of confidence is probably reflected in a more relaxed social behavior and smiling without hesitation. Further supporting this finding is that factor V, the social success item, became significant post-treatment.

## Severe psychological distress in females suffering from lipedema

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**Background:** Lipedema is a multifaceted chronic and progressive female disease of adipose tissue with abnormal subcutaneous fat deposition, leading to swelling and enlargement of the lower limbs. Lipedema can be classified in stage 1: smooth skin with enlarged and nodular sub-dermis, stage 2: larger mass form, bands of peribulbar fascia thicken and contract, pulling the skin down in a mattress pattern, stage 3: thin skin loses elasticity allowing adipose tissues to grow in excess inhibiting flow.

**Objective and Methods:** Aim of the internet study was to analyze psychological distress, coping with disease, and body acceptance in women in the three different stages of the disease.

**Results:** The sample resulted in 735 women (mean age 34 years,  $\pm 10$ ) suffering from lipedema: 20.1% in stage 1, 66.1% in stage 2, and 13.7% in stage 3. Age, weight, BMI, and concurrent arm and leg involvement increased with advancing stage ( $p < .001$ ). 51% suffered from severe, 31% from remarkable, and 7% from mild psychological distress. Women in stage 3 suffered most from psychological symptoms and depressive coping with illness. They had the least social support and were the most eager to seek information and share experiences. Stage 1 was more energetic and enjoyed physical contact, while stage 3 showed the lowest self-acceptance and self-enhancement.

**Discussion:** Women with lipedema are a psychosocially underserved group. The high psychological distress as well as depressive and trivializing attempts to cope with the illness combined with low self-acceptance offer a variety of starting points for psychological support.



## Negative Emotions, Body Image and Long-Term Work Disability in Head and Neck Cancer (HNC) Survivors

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**Background:** HNC treatment often results in disfigurement and psychological distress, which, alongside persistent symptoms in cancer-affected areas, may play a significant role in survivors' return to work. Given the high prevalence of work disability in long-term HNC survivors, identifying modifiable predictors is crucial for survivorship care. Our study explored how negative emotions, body image, and communication-impacting oral symptoms relate to long-term work disability in this population.

**Methods:** This cross-sectional study assessed 145 long-term HNC survivors (Mage = 59.99, SD = 7.48) who completed the EORTC QLQ-30, EORTC QLQ-HN35 and BIS questionnaires. Multivariable logistic regression was used to examine the associations of negative affectivity, body image concerns, oral pain, teeth and speech problems, with long-term work disability, adjusting for demographic and clinical factors.

**Results:** Higher negative affectivity (OR=2.25, 95% CI=1.24-4.07) and body image distress (OR=9.43, 95% CI=1.31-67.73) significantly predicted long-term work disability. Additionally, individuals in blue-collar professions (OR=8.34, 95% CI=2.17-32.01) were more likely to receive disability benefits. No significant associations were found between oral symptoms or clinical factors and disability status.

**Discussion:** HNC survivors on long-term work disability are more likely to experience negative emotions and body image distress. Individuals in blue-collar occupations are also at increased risk of work disability. This finding suggests that the demands of such jobs, combined with the aftereffects of HNC, can contribute to greater work disruption. Since oral symptoms and clinical variables seem less impactful, we emphasize the need for interventions that address mental health and appearance concerns after HNC treatment to enhance work reintegration.

## **Interoceptive sensibility and body appreciation in rare disease: experience of patients affected by Hereditary Angioedema**

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**Background:** Hereditary Angioedema (HAE) is a rare genetic disease impacting patients' quality of life (QoL), posing life-threatening risks. This study investigates the impact of HAE on patients' interoceptive sensibility and their body and functionality appreciation.

**Method:** This study included 22 participants, 11 HAE patients and 11 matched healthy controls. Assessments involved the Hospital Anxiety and Depression Scale (HADS), Multidimensional Assessment of Interoceptive Awareness (MAIA), Body Appreciation Scale-2 (BAS-2), Functionality Appreciation Scale (FAS), and HAE-QoL. HAE patients were classified into two subgroups: HAE\_A (with attacks) and HAE\_noA (without attacks) based on the presence/absence of attacks in the prior 6 months. Four patients were classified in the HAE\_A group as they reported 1 or 2 attacks, while 7 fell in the HAE\_noA one. Exclusion criteria included psychiatric diseases and recent acute attacks for HAE subjects. Non-parametric statistics analysed the between-group differences.

**Results:** No significant differences were observed in HADS, MAIA, BAS-2, and FAS scores between HAE and controls. The HAE\_A group showed higher anxiety levels than the controls. The HAE\_noA group exhibited lower body and functionality appreciation but higher scores in two MAIA subscales (Noticing and Self-regulation) compared to the HAE\_A group. No differences in HAE-QoL were observed.

**Conclusion:** HAE differentially impacts patients' anxiety levels, functionality, and body appreciation, based on the presence/absence of attacks in the past 6 months. These findings suggest the need for tailored psychological support and interventions in HAE management, with further research required to explore the effect of HAE on psychological well-being and its relationship with interoception.

## **Social Distance towards persons with psoriasis among psoriasis patients and healthy skin controls**

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**Background:** Psoriasis (PSO) is a chronic, inflammatory skin disease associated with psychosocial burden. PSO-patients report more stigmatization than healthy skin (HS) controls. However, the desire to socially distance from persons with PSO has not yet been compared between PSO-patients and HS-controls. Therefore, the aim of this study is to compare both groups regarding their desire to socially distance from persons with different severity levels of facial PSO.

**Methods:** In this quasi-experimental cross-sectional online-study, PSO-patients and HS-controls viewed faces with no, moderate or severe PSO symptoms. Primary outcome variable was the desire to socially distance from the persons depicted, measured by a validated Social Distance Scale. Groups were stratified regarding age and gender.

**Findings:** A two-way ANOVA with repeated measures was conducted including participants aged 41-65 (N=72 PSO-patients, N=72 HS-controls). Power analysis showed that the size of this subgroup was sufficient for this analysis method. The analysis revealed two significant main effects: HS-controls reported an overall higher desire to socially distance from the depicted persons than PS-patients ( $p=.001$ ,  $\eta^2_{\text{partial}}=.07$ ); With increasing level of severity, the desire to socially distance from the depicted persons increased in both groups ( $p=.011$ ,  $\eta^2_{\text{partial}}=.04$ ). The interaction effect did not reach statistical significance ( $p=.296$ ).

**Discussion:** Stigma towards PSO is prevalent in both PSO-patients and HS-controls. However, compared to HS-controls, PSO-patients seem to be more willing to socially interact, regardless of the severity of visible PSO in their counterpart. In further analyses, participants aged 18-40 will be included and the effect of age and gender will be investigated.

## Supporting individuals with a visible difference: A UK survey of needs and preferences

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### Background and Objectives

People with visible differences, resulting from injuries, health conditions, or treatment, can face varied and lasting psychosocial effects. Existing interventions are limited, and specialists note inconsistent support, emphasising the need for improved accessibility. However, the self-perceived needs and preferences of individuals with visible differences remain unreported. We conducted a survey of affected adults to inform future support interventions.

### Methods

We conducted an online survey in the UK from October to December 2022 through visible difference support organisations. The survey inquired about support preferences, delivery methods, and considerations for seeking assistance. Quantitative data were analysed descriptively using SPSS and open-ended responses with content analysis.

### Findings

550 individuals with various visible differences participated. Of these, 489 (89.9%) were women, and participants were aged 18-82. Most (80.5%) sought more information on potential treatments, while 53.6% wanted insights into causes. Approximately 61.3% needed help accepting their appearance, 59.3% desired support for confidence and self-esteem, and 56.3% for mental health. Many participants (41.9%) sought guidance on communicating about their appearance, addressing questions and reactions (31.8%), and managing social situations (30.2%). Respondents sought multiple forms of support, averaging 7.4. Preferred sources included healthcare professionals (89.3%) and online platforms (websites 65.8%, online support groups 47.6%). Key factors influencing support-seeking included access to condition-specific information, evidence-based support, and healthcare professional awareness.

### Discussion

Individuals with visible differences have diverse medical and psychosocial support needs, requiring holistic support from various providers, and delivered in different formats. Findings could be used to inform support strategies and services.

## Self-reported and actual body focus

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**Background:** Self-reported trait-like aspects of body focus are typically unrelated to the accuracy of perception of internal activity. The present experiment aimed to extend these findings to actual body focus.

**Methods:** We investigated 90 young adults with a within-subject design. Participants' actual and perceived body focus was assessed in three experimental conditions (white noise control, body-related and body-unrelated film clips), during which they had to detect weak tactile stimuli. Participants' trait-like body focus was assessed with questionnaires (i.e. Body Awareness Questionnaire, Attention Regulation sub-scale of the Multidimensional Assessment of Interoceptive Awareness and Patient Health Questionnaire Somatic Symptom Severity Scale, PHQ-15). We applied repeated measures ANOVAs and correlation analyses.

**Findings:** There were significant differences among the three conditions with respect to hits in the tactile detection body focus task ( $F(2,178) = 8.971$ ;  $p < .001$ ;  $\eta^2 = 0.092$ ). Post hoc test ( $p_{\text{Holm}} < 0.05$ ) showed that the film clip conditions were characterized by worse performance than the control condition. An identical pattern emerged for false alarms and perceived performance. Actual and perceived detection performance was largely unrelated to questionnaire scores. There were significant negative associations, however, between PHQ-15 score and the number of hits in the body clip ( $r_s = -.268$ ;  $p = .011$ ) and neutral conditions ( $r_s = -.263$ ;  $p = .012$ ).

**Discussion:** Self-reported body focus is not associated with actual body focus. The perception of discomfort and potential symptoms is a top-down process, this may have inhibited bottom-up processes.

## Personality traits and social support as predictors of stigmatization due to body weight

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**Background:** Theoretical models and empirical studies show that some personality traits and social support can be protective factors for stigmatization due to body weight. The aim of the study was to investigate the relationships between personality traits, social support and the experience of stigmatization.

**Method:** A total of 1014 high school students (60% females) completed the Big Five Inventory, the Rosenberg Self-Esteem Scale, the Social Support Scale and the Stigmatization Scale.

**Findings:** The results were analyzed separately for overweight, average weight and underweight adolescents. The results for the overweight group (BMI 25.00 through highest, n=121) showed that neuroticism was a positive and self-esteem a negative predictor of stigmatization. In addition, self-esteem fully mediated the relationship between neuroticism and stigmatization. Support from friends was a negative predictor of stigmatization after controlling for personality traits. In the average weight group (BMI=18.5 to 24.99; n=728), neuroticism and self-esteem predicted the experience of stigmatization. The relationship between neuroticism and stigmatization was mediated by self-esteem. Agreeableness was also a negative predictor of stigmatization. After controlling for personality traits, support from friends and family negatively predicted stigmatization. In addition, the effect of agreeableness on stigmatization was mediated by family support. Finally, the results for the underweight group (lowest BMI up to 18.49, n=152) showed no significant effect of either predictor on the experience of stigmatization.

**Discussion:** The results obtained are in line with existing studies on psychological mechanisms of stigmatization and may provide information for the development of interventions against the stigmatization of adolescents with obesity.

## Shame in individuals with PCOS: the Contribution of failures in mentalizing and distress symptoms

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**Background:** Polycystic ovary syndrome (PCOS) is an endocrine condition associated with culturally perceived unfeminine features like overweight, hirsutism, acne, and alopecia, often leading to Shame. Previous findings emphasized Shame's potential role in exacerbating distress. Concurrently, failures in mentalizing have been identified as a transdiagnostic factor linked to various psychiatric symptoms. This study aims to investigate the mediating role of shame in the relationship between failures in mentalizing and distress symptoms in PCOS individuals.

**Methods:** Individuals diagnosed with PCOS were recruited to complete a protocol assessing mentalizing abilities, Shame, and distress. Structural equation modeling with latent variables was utilized, with mentalizing deficits as predictors, Shame as the mediator, and Distress as the outcome.

**Findings:** Fit indices were adequate:  $\chi^2(51) = 235.76$ ,  $p < .001$ ; CFI = .95, RMSEA = .08 (90% CI = .07 – .09), SRMR = .05. Significant paths were observed from mentalizing deficits to Shame ( $\beta = .26$ ) and distress ( $\beta = .55$ ). Furthermore, an indirect association was found from mentalizing deficits to distress via Shame ( $\beta = -.19$ ).

**Discussion:** Low ability to interpret self and others in terms of mental may prevent individuals with PCOS from dealing with their feelings and emotions, like embarrassment or mistrust, and consequently fostering pain self-evaluation concerning their bodies, and this may be in turn translated into higher levels of distress. An integrated approach fostering mentalizing ability may help individuals with PCOS.

## **Experiences of students with chronic illness in third level education in Ireland**

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**Background:** Chronic illness can represent significant challenge to successful undertaking of higher education, as students need to successfully juggle the requirements of study with the ongoing management of their condition. The aim of this study was to explore the experiences of third level students with a chronic illness in Ireland. The study also aimed to gain insight into students' experiences with Disability Support Services (DSS) and identify gaps where additional supports and resources may be needed.

**Methods:** This was a cross-sectional qualitative study, using qualitative description methodology. Fourteen students from three Irish third-level institutions participated in semi-structured interviews. The interviews were audio-recorded, transcribed, and analysed through reflexive thematic analysis.

**Results:** Four themes were developed: (1) The burden of managing a chronic illness alongside third level education; (2) Interruptions, disruptions and alterations to college life; (3) Flexible supports for fluctuating conditions; (4) Achieving in educating while living with a chronic illness.

**Conclusions:** Participants reported a physical and emotional burden. Despite engaging in rigorous management strategies, many participants still missed lectures and socialising with peers. Some found the supports from DSS to be useful, however many were unsure if they qualified for support, or found the supports available to be generic and inadequate for their needs. There is significant scope for both the delivery of teaching and DSS to be improved for this cohort, ensuring that all students, regardless of their health status, have equal opportunities for success.



## **Meaning-making, meanings made and well-being in patients before hematopoietic cell transplantation - indirect effect analysis**

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The meaning-making model posits that in a stressful situation, such as hematopoietic cell transplantation (HCT), people tend to search for meaning. The product of this process is meanings made. Potentially, it is related to improved well-being. However, results regarding the relationship between meaning-making and well-being are mixed. The missing variable in this relationship may be meanings made. Therefore, the aim of the study is to investigate the indirect effect of meaning-making on well-being through meanings made.

Patients fulfilled questionnaires before HCT (N = 202). Meaning-making and meanings made were measured using Meaning in Life Questionnaire, Search and Presence subscales, respectively. Meanings made was additionally measured using situational version of the Post-Traumatic Growth Inventory-Short Form (C-PTGI-SF). Well-being included depression and anxiety symptoms, loneliness, and health-related quality of life (HRQoL). It was measured using Centre for Epidemiological Studies Depression Scale Short Form, Generalized Anxiety Disorder Scale, Revised UCLA Loneliness Scale and three subscales of EORTC QLQ-C30: General Health Status (GHS), Functional Scale (FS) and Somatic Symptoms (SS). An indirect effect analysis was conducted using Hayes' Process in SPSS.

Meaning-making was significantly associated with greater meanings made (C-PTGI-SF), which, in turn, was significantly linked to lower levels of depressive symptoms and loneliness, and higher levels of HRQoL. Significant direct associations were found between meaning-making and depression, FS and SS, but not between meaning-making and loneliness and GHS.

The study showed the indirect effect of meaning-making on well-being through meanings made. These results serve to confirm and extend current knowledge about the meaning-making model.

## Mental Health in Individuals with Chronic Illness

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**Objective:** This study examines mental health, loneliness, and social life associated with chronic illness. Because chronic illness is a prolonged health condition with the potential to impact many aspects of daily function, individuals with chronic illness may be at higher risk for mental health concerns, particularly when the chronic illness is difficult to diagnose and not easily discernible to others. Despite this, little is known about mental health in individuals who live with this type of chronic illness. **Methods:** Individuals were recruited through online support groups for chronic illnesses that were primarily autoimmune in nature and not easily visible to others (e.g., Lup, Multiple Sclerosis). The sample included 131 individuals (78% female) who completed an online questionnaire asking about their perceived mental health, loneliness, and social life from before and after their chronic illness diagnosis and how frequently they experienced difficulties with their daily function, social support, and transition to chronic illness. **Results:** Individuals rated their mental health ( $p < .001$ ) and social life ( $p < .001$ ) as significantly worse after they were diagnosed compared to before, and rated their loneliness higher ( $p < .001$ ). The vast majority of participants (93%) reported their mental health was negatively impacted by the changes to their daily function related to their chronic illness. **Discussion:** These results suggest that assessment and treatment of mental health concerns should be a critical component of healthcare for chronic illness. Mental health concerns related to chronic illness are particularly relevant to women's healthcare given the vast majority of individuals with autoimmune disorders are female.

## **Conceptualising and measuring fear of disease progression and recurrence in cardiac patients**

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**Background:** One in two cardiac patients fear having another heart event or their heart condition getting worse, and almost all report these fears as distressing. A recent review identified several types of fears relating to disease recurrence and progression in cardiac patients. However, no research has undertaken a comprehensive investigation into such fears. The paucity of research in part relates to the lack of a tool with which to measure cardiac disease-specific fears. The current project aims to comprehensively describe fears of recurrence and progression in cardiac patients and to design and validate a measurement tool for such fears.

**Methods, current stage of work, and expected results:** The initial pool of fears to be tested was generated through a literature review and refined through consultation with patients and health professionals. The item pool is currently being tested using a cross-sectional design on a sample of 250 adults who have ever had an acute coronary event, undergone cardiac surgery, or have a chronic cardiac condition. Data collection is expected to be completed mid-2024. The results will comprehensively describe the types and endorsement rates of fears relating to recurrence and progression among cardiac patients. Exploratory factor analysis and Rasch analysis will be used to design a fear of cardiac recurrence and progression scale.

**Discussion:** The outcomes of this research will facilitate the design of tailored psychological interventions to address distress relating to such fears and will assist in the identification of patients who may benefit from such interventions.

# **Fear of Recurrence in Stroke Survivors: Resilience, Self-Management, and Quality of Life - NO FEARSS**

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## **Background**

Stroke is a major medical illness and the most common acquired neurological disease in the adult population worldwide. Within three months of experiencing a stroke, approximately 18% of stroke survivors experience another stroke.

As such, fear of stroke recurrence (FoR) can be seen as a normal response to a major medical event such as stroke. Therefore, it is reasonable to suggest that FoR may play a role in stroke survivors' mental and physical well-being after stroke.

## **Aim**

This research aims to investigate the relationship between Fear of Recurrence (FoR), Emotional Resilience (EM) and Self Management (SM) behaviours and their impact on stroke survivors' quality of life across six months to gain a greater insight into how these factors work together over time to impact a person's post-stroke physical and mental well-being.

## **Methods**

This longitudinal study has three measurement time points across six months (baseline, 3, and 6 months).

Participants are asked about their FoR, ER, SM and their quality of life (QoL) using a variety of standardised and validated measures: The stroke Impact Scale (SIS), Adapted Fear of Recurrence Scale, The Connor-Davidson Resilience Scale (CD-RISC) and the Southampton Stroke Self-Management Questionnaire (SSSMQ).

By assessing participants FoR, ER, SM and QoL overtime the aim of the research is to understand how these factors are related and how they impact each other overtime. As this research is ongoing, we will discuss the findings from timepoint one.

## Personality and psychological problems caused by infertility in women: the mediating role of coping competence

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**Background:** Infertility represents a serious issue for modern mankind. This is confirmed by statistics showing that one in six couples worldwide is confronted with this problem. Additionally, psychological reactions to infertility have become an increasingly common topic among individuals seeking some form of psychological support and help. The study aimed to investigate whether coping competence, defined as resilience to learned helplessness and depression, mediates the relationship between personality traits and psychological problems due to infertility.

**Methods:** The study involved 155 women, aged 23 to 48, undergoing IVF treatment at the time of testing. The following instruments were used: The Big Five Plus Two – short version (measures the following personality traits: Neuroticism, Extraversion, Conscientiousness, Openness to experience, Aggressiveness, Positive Valence – positive self-image, and Negative Valence – negative self-image), the Coping Competence Questionnaire (CCQ) (measures the resilience against helplessness and depression), and The Psychological Evaluation Test for Infertile Couples (PET) (related to aspects of life in which a person with infertility may have problems, such as social relationships, duties and goals, self-image, and partner relationship).

**Findings:** Results indicate that coping competence, i.e. resilience against helplessness and depression, mediates the relationship between Neuroticism and psychological problems due to infertility (partial mediation) ( $\beta=.145$ ;  $p=.002$ ) and between Conscientiousness and psychological problems due to infertility (full mediation) ( $\beta=-.100$ ;  $p=.012$ ).

**Discussion:** The obtained results indicate that psychological interventions aimed at increasing resilience against helplessness and depression can indirectly reduce the negative or enhance the positive effects of personality traits on the psychological adjustment to infertility.

## Human-nature connectedness and chronic disease: a scoping review

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Chronic disease is placing a significant burden on health systems that are supporting increasingly urbanised lifestyles. Engaging in healthy lifestyle behaviours — such as being physically active, eating a healthy diet, and not smoking — may help to ease this burden by preventing the development of chronic disease. One psychological attribute that is positively associated with these healthy lifestyle behaviours is human-nature connectedness, which is relatively easy to measure and modify. If people who feel more connected to nature experience less chronic disease, then interventions increasing human-nature connectedness may be an important ingredient in upstream public health interventions. In this scoping review, we map empirical studies that measure human-nature connectedness in chronic disease populations and compare them to general populations. We conducted a systematic, comprehensive search of current literature and identified just six studies out of 1490 that included a valid baseline measure of human-nature connectedness in relevant chronic disease populations. Among the few disease populations sampled in these studies, we observed that human-nature connectedness was highly variable compared with normative samples. Our review primarily highlights a significant gap in research on human-nature connectedness in the context of chronic disease and the absence of a clear definition of human-nature connectedness in public health research. We offer a definition of human-nature connectedness that distinguishes psychological connectedness from physical engagement with nature and suggest directions for future research focussed on human-nature connectedness for chronic disease prevention.

## **Anxiety, depression, quality of life and adherence in a sample of hemodialysis patients in Spain**

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**Background:** Chronic kidney disease (CKD) is considered a silent epidemic that affects 15.1% of the Spanish population. The diagnosis of CKD and hemodialysis entail significant losses and serious stress in patients, which affect quality of life (QL) and have emotional and behavioral consequences. The objective of this study is to analyze the weight of various variables on anxiety and depression levels, quality of life and therapeutic adherence in patients with chronic kidney disease on hemodialysis.

**Methods:** This is a correlational ex post facto cross-sectional design. An online survey will be administered to 300 patients while attending hemodialysis at Fundación Renal centers. It includes sociodemographic and clinical data and standardized questionnaires to measure anxiety and depression, quality of life, therapeutic adherence, psychological inflexibility and coping. The relationships between the variables will be studied using Pearson correlation and multiple linear regression analysis.

**Expected results:** It is expected to find which clinical, sociodemographic and psychological variables have the most weight in anxiety, depression, QL and adherence of hemodialysis patients

**Current stage of work:** 52 participants have already been recruited.

**Discussion:** Given the high prevalence and chronicity of kidney disease, it is expected that the results will contribute to know the psychosocial needs of these patients. It is also expected to better understand which variables should be considered when designing psychological interventions. Specifically, the results will be useful for the implementation of an upcoming randomized clinical trial with the same patient population.

## **Patient-reported outcomes to guide psychosocial interventions among people living with HIV/AIDS: a longitudinal cohort**

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### **Aim:**

Psychosocial services for people living with HIV/AIDS (PLWHA) need to consider multiple dimensions and adapt to evolving individual needs. We aimed to develop a multidimensional PRO assessment and implement it in routine care at the Baylor Clinical Center of Excellence in Constanta, Romania, and examine its feasibility and longitudinal changes in health outcomes.

### **Methods:**

The COM-B model was used to structure the PRO assessment. It included questions on health status, quality of life, medication adherence and self-management behaviors, and behavior determinants pertaining to capability (knowledge, cognitive skills, memory and decision, behavior regulation), reflective and automatic motivation, and social and physical opportunity. PLWHA were assessed thrice during 2018-2022, followed by personalized feedback and referral to psychosocial support if appropriate. We examined changes in health outcomes between assessment waves.

### **Results:**

306 PLWHA participated, from 17 to 72 years old (median 34 years), 50% women; 63.1% of assessments were followed by interventions, mostly on capability (30%) and reflective motivation (15%). We found significant improvements in perceived health status, physical functioning, and life satisfaction across the three assessment waves (Friedman chisq (2) = 36.2, 24.1, and 18.7, respectively,  $p < .001$ ). Changes in health behaviors and determinants will be presented and discussed. Analyses of measurement properties of the PRO assessment are in progress.

### **Discussion and conclusions:**

Integrating PRO assessment in routine clinical care allows better structuring interactions with PLWHA. Prioritizing patients for psychosocial interventions contributed to maintaining constant satisfaction, functioning, and quality of life among PLWHA confronted with illness-related behavioral barriers.



## Health literacy and quality of life of cured cancer patients

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**Background:** The prevalence and incidence of cancer has been permanently increasing worldwide. Therefore, exploring the predictive factors of patients' survival and quality of life is essential. The importance of health literacy has already been approved in mortality and quality of life in other chronic illnesses. However, cancer is underresearched in this respect.

**Methods:** In our cross-sectional study, 94 cancer survival patients (84 female, mean age: 56.12) completed a questionnaire focusing on patients' health literacy (FCCHL), on their satisfaction with the information they received during their disease and its treatment (EORTC QLQINFO-25), on their gained empowerment by this information and on their quality of life (FACT-G).

**Findings:** In multiple hierarchical regression models, we tested the predictive power of health literacy on the dimensions (physical, social, emotional and functional well-being) of quality of life, after controlling demographic (age, educational level, marital status) and illness-related (number of cancer diagnoses, elapsed time from the diagnosis, number of treatments) variables. Health literacy predicted positively with a middle effect-size physical well-being ( $\beta=0.415$   $t(86)=4.272$ ,  $p<0.001$ ), social well-being ( $\beta=0.416$   $t(86)=4.102$ ,  $p<0.001$ ), emotional well-being ( $\beta=0.495$   $t(86)=5.120$ ,  $p<0.001$ ) and functional well-being ( $\beta=0.410$   $t(86)=3.982$ ,  $p<0.001$ ). Furthermore, higher health literacy predicted higher global quality of life with a high effect size ( $\beta=0.518$   $t(86)=5.487$ ,  $p<0.001$ ).

**Discussion:** The skills of gaining information, understanding and using it in the navigation of the health care system may contribute to the quality of life of cancer survival patients. Therefore, we suggest including the assessment of health literacy in patients' treatment plan.

## How did asthma patients experience the COVID-19 pandemic across key timepoints?

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**Background:** The COVID-19 public health emergency had significant impacts on people living with long-term health conditions. The specific impacts of the pandemic on people with asthma across key timepoints are less certain. This study therefore aimed to: (a) explore the experiences of people with asthma across the COVID-19 pandemic as risk-level changed, and (b) understand the effects on wellbeing and behaviour.

**Methods:** Semi-structured interviews (N=20 people with asthma) asked about experiences covering pre-COVID, initial outbreak/lockdown, restrictions lifting, and time-points salient to them (e.g., vaccination, catching COVID-19). Data were analysed using thematic analysis.

**Findings:** There were three themes. 'Doing my own risk assessment' was an active process using pre-existing/acquired knowledge to determine risk and subsequent asthma-management and COVID-19 behaviours at all time-points. 'Asthma from background to foreground' highlighted how asthma that was mostly previously unobtrusive was suddenly a 'pre-existing condition' leading to prolonged stress and anxiety. 'Place in society' describes how the participants were included/excluded by society from the initial outbreak to restrictions completely lifting (e.g., shielding; moving everything online; deprioritisation of risk) and left behind by society that occurred from restrictions lifting onwards (e.g., frustration and anger that everyone has moved on and they are still stuck in survival mode).

**Discussion:** The mental wellbeing of asthma patients was negatively affected at all stages of the pandemic. In future pandemics, government agencies should use the present study's findings to (a) guide decision-making, (b) inform public health messaging aimed at targeting at-risk populations and (c) provide support for at-risk populations.

## **Severe nausea and hyperemesis gravidarum: prevalence, daily functioning, maternal mental health, and social support**

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**Background:** Hyperemesis gravidarum (HG), characterised by severe nausea and excessive vomiting during pregnancy, poses a significant burden on maternal and neonatal health, and pregnancy outcomes. Despite the serious consequences, research on HG's impact on maternal well-being and functioning remains scarce. This study aimed to investigate the prevalence of HG, the frequency of vomiting, and its impact on daily functioning, mental health, and perceived social support.

**Methods:** Pregnant women in the second trimester participated in an online study (N = 850), completing the Edinburgh Postnatal Depression Scale, Depression, Anxiety and Stress Scales, Pregnancy Concerns Scale, Social Support Appraisals Scale, Perceived Support from Partner Scale and HG-related questions.

**Findings:** In total, 1.9% had a diagnosis of HG, while 17.2% experienced severe nausea that disrupted daily functioning. Most women with HG reported vomiting up to 10 times per day (62.5%). HG most severely impaired work and household functioning and moderately adversely affected physical, psychological, and social functioning. Regarding mental health and social support, women with HG or severe nausea exhibited significantly higher depression, general and pregnancy-specific anxiety, and stress levels, along with lower support from family compared to women without nausea.

**Discussion:** One in five women experienced severe nausea during pregnancy, with a smaller proportion diagnosed with HG. Severe nausea or HG disrupted daily functioning across all aspects of life and was related to impaired mental health and lower perceived family support. These findings demonstrate the severity of such conditions and underscore the urgency for prompt attention and adequate support for these women.

## Inventory of perceived barriers related to self-care after heart transplantation

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**Background:** After heart transplantation (HT), if patients are unable to invest adequately in self-care and adhere to the proposed treatment (e.g., immunosuppressant medication), there is a risk of the procedure failing. Identifying the barriers that hinder treatment adherence early on can make a difference in the outcome of the transplant.

**Methods:** The author developed an instrument to identify the factors that hinder adherence to treatment after HT. The inventory of barriers provides a qualitative survey of the barriers perceived by the patient (up to 5), allowing for a personalized analysis and a quantitative score of the frequency of perceived barriers and their degree of difficulty. Data collection included 69 patients assessed through face-to-face interviews by trained psychologists.

**Findings:** Sixty-nine patients were interviewed (58% men; 88% white; 34,7% university studies), 13 reported at least one perceived barrier, 23 reported two barriers, 20 reported three barriers, three four barriers, and two five barriers. The nature of the barriers varied from one patient to another. The degree of difficulty that the barriers imposed on adherence to treatment and self-care varied according to frequency (e.g., reporting one barrier: M=2.3 and reporting five barriers: M=3.0). The degree of difficulty was associated with non-adherence to the schedule for taking immunosuppressant medication ( $\rho=-0.38$ ,  $p=0.001$ ) and discontinuing treatment ( $\rho=-0.26$ ,  $p=0.031$ ).

**Discussion:** The identification of barriers to self-care after HT is necessary and can help in the management of difficulties and in the planning of self-care strategies tailored to the challenges of each transplanted individual.

## **LyRE study: Lyme suspicion, REpresentations and relations with the healthcare team**

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**Background:** Lyme disease (LD) is an infectious pathology transmitted by tick bites. Some patients develop Post Treatment Lyme Disease Symptoms (PTLDS). Other patients are wrongly labeled "LD". Nevertheless, persistent symptoms lead to a reduced quality of life. The aim of the study is to assess the perceived health of patients with suspected or confirmed LD in France.

**Methods:** A quantitative study was carried out to assess patients' perceptions of their health. The questionnaires evaluated various dimensions such as anxiety-depressive symptoms, quality of life, perception of illness, beliefs towards medicine, basic psychological needs and communication between physicians and patients. Data collection was carried out online, using a QR code from a poster hung in doctors' waiting rooms and available on internet.

**Findings:** Data from 37 participants were analyzed, with 83.78% reporting confirmed LD and 16,22% suspected LD. Perceived personal control over the disease was associated with fewer depressive symptoms ( $p < .001$ ) and better quality of life ( $p < 0.033$ ). Treatment-related representations were associated with anxiety ( $p < 0.017$ ) and depression ( $p < 0.02$ ). Communication with the medical team appeared to be essential for patients.

**Discussion:** Physicians play an important role in the acceptance and adaptation of LD. All these factors need to be considered to improve patients' experience of the pathology. New management approaches need to be developed to take account of these findings, and improve patients' perceived health.