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Conference abstracts

Physical Activity Predictors Among Moroccan Medical Students A Cross-sectional study informed by the Socioecological Model

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Rationale and aims: Physical inactivity is considered a key risk factors for health. Evidence suggests that predictive models of physical activity (PA) are multiple, multilayered including Environmental, social and individual factors. To this end, WHO urged governments to design multilayered, and systemic theory-informed behavioral interventions based on behavioral theories to increase PA and reduce sedentary behavior. To this end, we conducted an observational study on PA and SB to identify the predictive to be physically active according to the socio-ecological model among medical students.

Methods and Analysis: We used an integrative behavioral framework based on behavioral theories, including three dimensions: intrapersonal, interpersonal, and environmental. We carried out a cross-sectional study with medical student at the Mohammed VI University of Sciences and Health (UM6SH) between March and April 2024. We used IPAQ questionnaire to measure PA and sedentary behaviors. We developed a unique questionnaire based on the integrated behavioral change frameworks used in a previous review. The study was conducted through an online, self-administered survey. We used descriptive statistics, correlational analysis, and multivariate regression analysis using Jamovi software.

Findings: A total of 310 students from the (UM6SH) responded to our study. Results revealed that 64.9% of students are physically active and 97% have high to moderate sedentary behavior. Correlation analysis showed positive correlations between PA levels and intrapersonal factors: self-efficacy ($r = 0.196$, $p = 0.001$) and self-regulation ($r = 0.330$, $p < 0.001$) and interpersonal factors: social support ($r = 0.186$, $p = 0.002$) and basic psychological needs ($r = 0.413$, $p < 0.001$). Multiple linear regression analyses revelated that a significant variance ($R^2 = 28.2\%$) was associated with the model including intrapersonal dimensions (self-efficacy, self-regulation, and motivational stage) and interpersonal factors (basic psychological needs).

Conclusion: Our study results indicate that Intra- and Interpersonal dimensions, informed by the Self-Determination Theory, the Social Cognitive Theory, and the Transtheoretical Model, proved to be effective in modifying PA behavior among students. Behavioral interventions need to focus on targeting these mechanisms and include, for instance digital mobile health devices, who are considered to be well-suited for increasing physical activity by reinforcing medical students' intrapersonal and interpersonal constructs.

Education faculty students' attributions of illness causes and health behaviour effects

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Rationale and aims: Whether natural or supernatural, attributions of illness affect health-seeking behaviors. This study examines students' beliefs about the causes of disease and affect on their health behaviour.

Methods: The research population was 564 students from the Faculty of Education in Rize, Turkey. Of the population, 71.8% was reached without sampling (405 students). Data collected in classrooms using a self-reported questionnaire in Feb-March 2024. The questionnaire included the modified "Cultural Health Attributions Questionnaire (CHAQ)", along with questions on age, health, beliefs, scientific attitude, and traditional treatment experience. The Turkish CHAQ scale is untested. Cronbach's alpha was determined to be 0.78 for natural and 0.85 for supernatural attribution in the present study. The CHAQ is a 5-point scale on causes of six diseases. It has two subscales: natural and supernatural. High scores indicate high levels of belief. Scores of subscales were categorized as low (<2.5), medium (2.5-3.5), high (>3.5). Data analysis was conducted using PASW18 software. Non-parametric hypothesis tests and logistic regression were utilized. The study approved by the ethics committee and rectorate.

Findings: The average student age was 20.8, most respondents were women (76.3%), 53.1% in first and 46.9% in fourth grade. Belief in God (90.4%) and justice (77.5%) were common. Mean supernatural and natural citations are 2.2±0.05 and 4.7±0.02. Most of the students (97.0%) attributed illness to natural causes. Of them, 15% exhibited high-level supernatural attributions. Students attributing illness supernaturally likely followed scientific developments (OR=3.5), believed in divine justice strongly (OR=3.1), studying in mathematics, science or regular classroom teaching (OR=2.5) and had a specific educational background (pulpit orator school graduate) (OR=2.3). Presence of a retired or civil servant father found to be a protective factor against supernatural attributions (OR=0.5). Students who did not drink, believed in divine justice, showed low health-seeking behavior, and practiced traditional activities (cupping therapy, hijama, prayer,zikr) had higher supernatural attribution averages.

Conclusions: Natural disease attributions were dominant among students. Supernatural beliefs were also common affecting health behaviors in various ways. It is evident that there was a coexistence of supernatural attributions and scientific practices. An epidemiological approach to education on causal attributions is recommended.

Improving Diabetes Care Through Evidence-Based Coaching: A Systematic Review and Meta-Analysis

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Rationale and Aims: Type 2 diabetes (T2D) remains a significant global health challenge. Health coaching, a patient-centered approach, has shown promise in improving glycemic control, yet the effectiveness of various behavior change techniques (BCTs) within health coaching interventions remains unclear. This meta-analysis systematically reviewed and synthesized evidence on the impact of specific BCTs in health coaching interventions on HbA1c levels among individuals with T2D.

Methods: A comprehensive literature search was conducted in Medline, Web of Science, and PsycINFO following PRISMA guidelines. Eligible randomized controlled trials (RCTs) comparing health coaching with usual care or active control interventions were included. BCTs were identified and coded using the BCT Taxonomy V1. A random-effects meta-analysis was performed to calculate the pooled effect size (Hedges' g) for HbA1c reduction.

Findings: Meta-analysis of 20 RCTs (n = 3,222) demonstrated a small but statistically significant reduction in HbA1c levels with health coaching (g = 0.29, 95% CI: 0.18 to 0.40). While goal setting (behaviour) and problem-solving were the most frequently used BCTs, no consistent association was found between the number of BCTs and intervention efficacy. Interestingly, BCTs related to credible source and social reward were associated with smaller HbA1c reductions, suggesting potential nuances in BCT selection and implementation.

Conclusions: This meta-analysis highlights the need for a more nuanced, theory-based approach to BCT selection in health coaching interventions for T2D. Future research is needed to explore optimal BCT combinations and underlying mechanisms to enhance the effectiveness of health coaching in improving glycemic control and other diabetes-related outcomes.

A HEALTH BELIEF MODEL APPROACH FOR CHANGING BEHAVIORS RELATED TO THE ADOPTION OF LIFE INSURANCE IN ROMANIA

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In 2023 the financial protection deficit of a Romanian family for life and health associated risks was estimated at 26.400 euro (an amount more than double the average annual income). Given the high degree of economic and emotional vulnerability embedded in these figures, this paper examines potential solutions for increasing the acceptance rate of term life insurance products. We consider owning a life insurance policy as a preventive behaviour and we apply the optics of the Health Belief Model.

Methods

We applied a mixed research approach:

(i) a survey to asses to role of the various health beliefs and other control variables upon life insurance decisions (intention and ownership);
(ii) a quasi-experiment to evaluate if respondents would be interested in buying an insurance policy with the ROP (Return of Premium) feature (e.g. a percentage of the initial premium is reimbursed to the client if no indemnity is paid during policy duration).

We test if the perceived loss aversion linked to the payment of the insurance premium is decreasing when such a reimbursement at policy maturity is granted. We further consider small and large amounts, as experimental treatments.

Findings

Both the intention and behavior of having life insurance increase (in terms of probabily) positvely corelate with the perceived severity of the risks and self-efficacy. Conversely, there is a negative influence when one is able to rely on alternatives like an emergency fund or asking friends and family to help. The experiment showed a higher preference for the ROP type insurance almost across all scenarios, but no differences in behavior depending on the level of stakes.

Conclusions

The application of HBM on life insurance cases illustrates two points of action: emphasis on perceived severity of risks (e.g. better communication) and the need to defined a take on individual self-efficacy/resilience facing uncertainty. On the practical side, the evidence suggests expanding insurance products with ROP features across various levels of stakes.

Stronger Together: a community-based intervention to promote healthier lifestyles among women with low socioeconomic status: A feasibility study

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Rationale and aims

The prevalence of non-communicable diseases is higher among lower-income women in Saudi Arabia. Community-based interventions could improve health behaviours, yet there is a lack of such interventions in Saudi Arabia. This highlights the need for research on their feasibility and effectiveness for women with low socioeconomic status. To address this, we assessed the feasibility of "Stronger Together" program, a community-based behaviour change intervention targeted at this demographic.

Methods

The Stronger Together program was a single-arm feasibility study conducted at AlNahda Society in Riyadh, Saudi Arabia. AlNahda is a non-profit organisation focusing on empowering low-income women socially and economically. Following the Medical Research Council's guidance and using the Behaviour Change Wheel, the five-week intervention included two-hour weekly face-to-face sessions and daily virtual support. It aimed to help participants adopt healthy lifestyle changes using readily available resources. We evaluated the recruitment process, intervention completion rates, and participant engagement. We assessed health outcomes, including weight, dietary behaviour, physical activity, mental health, and quality of life at baseline, post-intervention, and one month later.

Findings

Out of the 70 eligible participants identified by AlNahda and invited to join the program, 49 (70%) attended the introductory session, and 41 (59%) agreed to participate. The adherence rates in the weekly sessions ranged from 85% to 93%. At follow-up, 38 participants (93%) completed both the post-intervention and one-month follow-ups. Engagement with the virtual support was strong during the first three weeks, as most participants regularly posted. However, engagement declined during the fourth and fifth weeks of the intervention. The intervention showed improvements in target behaviours, diet, physical activity, and positive changes in weight, mental health, and quality of life.

Conclusions

This study demonstrated that a community-based intervention aimed at low-income women is both feasible and potentially beneficial for health-related outcomes. This suggests the need for further investigation in a larger, randomised, controlled trial conducted over a longer period to determine its effects on sustained behaviour change and related health outcomes.

Understanding the Nexus between Climate Change, Gender, & Displacement in the Arab States

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Rationale and Aims

The Arab States are facing unprecedented environmental changes, including rising temperatures, frequent droughts, and severe water scarcity, with worsening trends predicted. Global evidence shows that women are disproportionately affected by climate change, especially those experiencing poverty, conflict, or displacement. However, little research has focused on how climate change uniquely affects women in the Arab States, particularly displaced women. This study explores the interconnections between climate change, gender, and displacement in the region, with case studies from Jordan, Lebanon, Iraq, and Yemen. It aims to identify ways to better integrate gender considerations into climate programming.

Methods and Analysis

MAGENTA conducted a comprehensive literature review, six key-informant interviews with experts and practitioners in Iraq, Jordan, Lebanon, and Yemen, and four focus group discussions with displaced individuals in an Iraqi camp. The analysis applied the 5 Domains Gender Analysis Framework from Jhpiego, enhanced by a Social and Behavior Change (SBC) perspective to incorporate relevant drivers.

Findings

Results highlight considerable challenges for displaced women, particularly in rural and climate-vulnerable areas. Economic stress linked to climate change forces many women into additional productive work, creating a “double burden” that intensifies their vulnerabilities in crisis contexts. Financial strain and scarce resources also increase risks of gender-based violence, including domestic violence and early marriage. Water scarcity presents gendered health challenges, particularly around reproductive needs. Additionally, displaced women face barriers to land ownership, finance, and market access, limiting their adaptive capacity and leadership in climate resilience. While economic pressures are shifting traditional gender roles, displaced women remain underrepresented in decision-making circles and national climate policies, where their needs are often overlooked.

Conclusion

This study addresses current gaps in understanding the climate, gender, and displacement nexus in the Arab States and the associated behavioural drivers and barriers that impact women. The insights and recommendations from this research aim to inform policy and programme development, fostering a more integrated, gender-responsive approach to climate initiatives that accounts for displacement dynamics.

Possible, but elusive: review of behavioural interventions to inform dementia prevention among socioeconomically disadvantaged adults

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RATIONALE AND AIMS: Behaviours that increase risk of chronic disease, including dementia, are often associated with socioeconomic disadvantage. This is reflected in disease prevalence. For example, 153 million people are predicted to be living with dementia globally by 2050, with disproportionate effects on socioeconomically disadvantaged groups who experience higher rates- and earlier onset of dementia. Almost half (45%) of dementia incidence could be prevented or delayed by eliminating 14 mostly lifestyle-related risk factors closely associated with disadvantage. However, few - if any studies explicitly explore risk-reducing behaviour change for dementia among socioeconomically disadvantaged adults. Our study therefore sought to characterise relevant health behaviour change interventions implemented within this priority population.

METHODS: We conducted a scoping review of health behaviour change interventions targeting multiple 'dementia-related' risk factors among adults with lower socioeconomic status in OECD countries. We identified 1003 records; 34 met our criteria for inclusion – involving more than 17,500 lower SES participants from 13 countries.

ANALYSIS: To address inconsistencies in the description of interventions, Michie et al.'s (2013) taxonomy of behaviour change techniques (BCTs) was used to categorise intervention elements. We used narrative thematic analysis and logistic regression modelling to explore intervention characteristics and outcomes (behaviour change and retention rates), and relationships between them.

FINDINGS: The multidomain interventions reviewed mostly targeted behaviours related to diet (28), physical inactivity (27), obesity (22), diabetes (9), hypertension (8), smoking (6). While there was significant diversity in the design, delivery and outcomes of interventions, most (63%) reported significant improvements in at least one health behaviour. Significant outcomes were associated with the use of a wider range of BCTs but not with the use of specific techniques or other intervention characteristics.

CONCLUSIONS: We identified a need for greater clarity regarding the effectiveness of BCTs for socioeconomically disadvantaged groups. Based on our analysis of interventions, we proposed a participatory design approach for developing targeted behaviour change interventions for dementia risk reduction. Our approach advocates the assessment of risk factors and their behavioural determinants in context, the selection of behaviour change techniques based on their mechanisms of action, and the robust evaluation of interventions to build evidence.

A Behavioural Approach to Understanding Challenges to Connecting to the Sewage System in Fernando de la Mora, Paraguay

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Rationale and aims: To improve rates of connectivity to the sewage utilities network in Fernando de la Mora, Asunción, Paraguay, MAGENTA conducted a behavioral diagnosis in collaboration with the Inter-American Development Bank. This project aimed to address a critical environmental and public health issue—low household connection rates to the sewage network—through the application of behaviourally informed interventions based on the COM-B behavioural model (Capability, Opportunity, Motivation). The diagnosis explored two components of the decision-making process: the intention of citizens to connect to the network; and the barriers to connectivity during the official process.

Methods: The behavioural mapping was conducted through field data collection activities. • In-depth interviews: MAGENTA gained behavioral insights by conducting 20 in-person interviews with citizens that lived in the area where the sewage project was built. • Observation exercise: to better understand the process that citizens have to go through to connect, we implemented a “secret shopper” exercise. The MAGENTA team followed the different steps that citizens need to know to obtain information about the service by calling and visiting the website of the sanitation services company.

Findings: The study identified key behavioral barriers and drivers, categorized within the COM-B model, as follows: Capability. Despite awareness of the benefits of connecting to the sewage system, participants face significant barriers in connecting to the sewage network due to limited knowledge, awareness, and hurdles. Opportunity. Structural factors, such as lack of economic resources and poor household infrastructure, are major barriers hindering citizens from connecting to the sewage network. Motivation. Connectivity costs emerge as the most significant barrier shared by the study participants. Other barriers include negative emotions towards the service and anger at being charged for the service regardless of their household's connection status.

Conclusions: The behavioral determinants served as crucial insights that informed the development of an SBC strategy aimed at inspiring positive behavioral change, fostering trust in service providers, and raising awareness about the benefits of connectivity. MAGENTA endeavours to enhance connectivity rates in the city, promoting sustainable sanitation practices, and ultimately improve the overall quality of life of citizens.

Assessing parents' acceptability and perceived impact of a web-based intervention to promote responsive feeding practices

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Rationale and aims: Early childhood eating patterns are a growing public health concern. Although programs that actively involve parents in modifying parental feeding practices are promising, the individual's process of change and acceptability regarding specific behavior techniques have been slightly studied. This work aims to assess parents' experience participating in a brief, self-guided, and individualized online intervention to promote parents' responsive feeding practices and a healthy diet in their 2-5-year-old children.

Methods: The SmartFeeding4Kids program combines various behavior change techniques to deliver personalized information, encourage individual goal setting, and foster reactive self-monitoring with feedback. We interviewed fourteen parents who participated in the SmartFeeding4Kids intervention program pilot and effectiveness studies. The interview included questions about the overall evaluation of the program's online platform, motivation to participate, expectations about the program, and perceived changes regarding feeding practices and eating behaviors in children and families. Data was collected between April 2021 and May 2022. The study was approved by the Ethics and Deontology Committee of the Faculty of Psychology, University of Lisbon. Analysis: Transcriptions were submitted to a thematic analysis.

Findings: Five major themes emerged in the qualitative analysis: 1) Child's health and eating concerns were the starting point; 2) Friendly app, new information, and helpful strategies; 3) Raising consciousness and setting goals to move forward; 4) Challenges and barriers that keep from going; 5) Changes in perspective and behavior for me and my child.

Conclusions: Parents' subjective experience plays a relevant role in motivating behavior change and this experience contour is impacted by participant's characteristics, background, and context. The program was perceived as useful and had a significant impact on parent's perspective towards food and eating and adoption of structure and child's autonomy promotion feeding practices. Self-regulatory strategies were well received by parents. However, it is relevant to continue investing in participants' burden reduction on records and to improve the interaction between monitoring and feedback to ensure the positive impact of tools on motivating change is not undermined. Some parents argued in favor of having individualized counseling during intervention. The results will inform future adjustments regarding the program's structure and content.

Conceptualising and advancing heatwave resilience: stakeholder insights and behavioural challenges

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Rationale and aims: The escalating frequency and severity of heatwaves due to climate change present severe public health risks, necessitating enhanced resilience frameworks. Despite public health planning measures, recent heatwave mortality rates indicate a gap in effective resilience strategies. This study aims to understand diverse conceptualisations of resilience among stakeholders involved in heatwave planning and to identify behavioural and systemic barriers that hinder effective public health planning. The study advances behaviour change research by focusing on a holistic approach to resilience, engaging multiple societal levels to address these critical challenges.

Methods: This qualitative study employed in-depth, semi-structured interviews with 26 stakeholders across government, private sector, civil society, and academia in the UK. Participants, identified through purposive and snowball sampling, provided insights into resilience and challenges in heatwave public health planning. Data were analysed through NVivo using inductive and deductive coding, categorising findings into thematic areas such as operational, political, economic, and social barriers, and mapping resilience definitions through content analysis.

Findings: Stakeholders identified resilience as an adaptive capacity applicable to individual, community, and institutional levels. Conceptual variations in resilience centred on ‘whom’, ‘what’, ‘how’, ‘when’, and ‘why’ aspects, revealing a complex understanding but strong agreement on key attributes like adaptability and resourcefulness. Major challenges highlighted included limited inter-sectoral communication, under-resourced institutions, political inertia, and insufficient behavioural awareness in public messaging. Additionally, linguistic and cultural factors impacted public perception, with heatwaves often regarded as infrequent, non-threatening events, limiting proactive behaviour change and preparedness.

Conclusions: Findings underscore the necessity of an integrated resilience framework that incorporates behavioural, institutional, and policy-focused strategies for heatwave public health planning. Behaviour change efforts should prioritise evidence-based communication, broadened public engagement, and adaptive capacity-building at multiple levels. Targeted interventions—like consistent public awareness campaigns and structured inter-sectoral coordination—are vital for fostering resilience. The study’s implications highlight the need for comprehensive, multi-sector approaches to heatwave resilience that address both systemic and individual behavioural factors, contributing to sustainable climate adaptation strategies.

The mediating role of financial scarcity in the relationship between income and health improving behaviors

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Rationale and aims: Health behavior could be impaired by financial scarcity. Financial scarcity entails several cognitive processes elicited by the feeling of having too little financial means to make ends meet. Evidence of how financial scarcity affects health behaviors is scarce. This study aimed to assess whether financial scarcity mediates the association between income and health behaviors.

Methods: We used causal mediation based on the counterfactual framework on cross-sectional data of 2.379 adults from the 2021 wave of the Dutch population-based GLOBE study. The exposure was household income. Participants' incomes ranging from low to high. The mediator was financial scarcity, measured with the validated Psychological Inventory of Financial Scarcity. The outcomes were BMI, fruit and vegetable consumption, physical activity, and adoption attempts to improve eating behavior, increase physical activity and lose weight. We adjusted for seven covariables.

Findings: Income was significantly associated with BMI (total effect (TE): -.95, 95%BCI: -1.66;-.22) and fruit consumption (TE: 155.19, 95%BCI: 19.61;281.40). Income was not significantly associated with physical activity (TE: 19.50, 95%BCI: -93.15;108.05), vegetable consumption (TE: .00, 95%BCI: -.03;.03), attempts to lose weight (TE: 1.19, 95%BCI: .96;1.45), to improve eating behavior (TE: 1.22, 95%BCI: .91;1.60) and to increase physical activity (TE: 1.37, 95%BCI: .98;1.86). Financial scarcity significantly mediated the association between income and all outcomes, except vegetable consumption: BMI (indirect effect (IE): -.44, 95%BCI: -.64;-.25), fruit consumption (IE: 41.78, 95%BCI: 3.46;79.88), physical activity (IE: -36.37, 95%BCI: -59.88;-14.91), and adoption attempts to improve eating behavior (IE: 1.20, 95%BCI: 1.04;1.38), to lose weight (IE: 1.12, 95%BCI: 1.01;1.22), and to increase physical activity (IE: 1.17, 95%BCI: 1.02;1.37). Non-significant was the mediation of financial scarcity on the association between income and vegetable consumption (IE: .00, 95%BCI: -.00;.01). None of the direct effects of income on the outcomes were significant.

Conclusions: Financial scarcity could be a potentially relevant factor in explaining how income affects health behavior. Future research, such as longitudinal studies, is needed to understand how and to what extent cognitive processes triggered by financial scarcity affect health behavior. Insights into these mechanisms may contribute to the further development of personalized health behavior interventions.

Behavioural and observational analysis of 'Be Active with Arthritis' exercise programme to maintain physical activity

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Rationale and aims: The Irish Society of Chartered Physiotherapists (ISCP) and Arthritis Ireland (AI) developed 'Be Active with Arthritis' (BAWA), a physiotherapy-led, group-based exercise programme to promote PA in people with arthritis. Participant feedback suggests BAWA participants initially become more active, but many reduce their PA levels after programme completion. This may be explained by the absence of specific behaviour change techniques (BCTs) supporting PA maintenance.

The study objectives are: Identify core BCTs recommended in BAWA training materials and distinguish between those used for supporting in-class exercise versus those supporting day-to-day PA maintenance. Complete an observational analysis of BAWA delivery to explore which BCTs are used to support PA maintenance.

Methods: As part of this observational study, training materials for the delivering therapists were reviewed for the presence of core BCTs. The core BCTs linked to PA in-class and PA maintenance were identified. Team members attended and audio-recorded BAWA classes; recordings were analysed for the presence of core BCTs (in-class and maintenance). Ethical approval was granted by RCSI Human Research Ethics Committee.

Findings: Twenty-three core PA in-class BCTs (23/93), and 11 core PA maintenance BCTs were identified in the training materials. The research team observed 13 BAWA classes from four programme blocks; led by 3 different physiotherapists, at 3 separate locations. Seven of the 11 core maintenance BCTs (64%) were identified in at least once from the recordings. The most frequently used were: "Generalisation of target behaviour", "Credible source" and "Body changes". An additional seven BCTs were identified in the recordings and documented as potentially pertinent to PA maintenance. The most frequently used additional BCTs were "Behavioural practice/rehearsal" and "Habit formation".

Conclusions: The inclusion of BCTs into the training material was low. There was limited prevalence of BCTs previously thought to be linked to PA maintenance. The observed absence of BCTs such as "Self-monitoring of behaviour" in daily life using digital devices such as smartwatches was notable. Future development of a maintenance intervention for people living with arthritis should adopt evidence based BCTs and involve people with arthritis in making judgements on what is acceptable.

Feasibility and Acceptability of the BeSafe Intervention: A Behaviour Change Approach to Farm Safety

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Rationale and Aims: Tractor-related incidents remain a leading cause of fatalities on farms internationally with particular risks for vulnerable populations, including older farmers and children. Educational safety interventions have shown limited success in fostering lasting behavioural change due to the knowledge-action gap. The BeSafe for Tractor Operations (BTO) intervention, grounded in the Behaviour Change Wheel framework, aimed to address this gap by focusing on practical, theory-driven strategies tailored to farmers' needs. This study aimed to evaluate the feasibility, fidelity, and acceptability of the BTO intervention in promoting tractor safety behaviours among Irish farmers, with an emphasis on understanding the immediate and short-term impact of its individual components.

Methods: A single-group feasibility trial employed a mixed-methods design with twenty farmers participating in a one-day BTO intervention. Intervention components included peer-led demonstrations, facilitated discussions, goal-setting exercises, posters and SMS messaging to support tractor safety practices. Data were gathered through exit surveys and qualitative interviews. Fidelity and acceptability were assessed using the NIH BCC Framework and Theoretical Framework of Acceptability, respectively. Quantitative data were analysed descriptively, while qualitative data were examined using directed content analysis.

Findings: The BTO intervention demonstrated high acceptability among participants, especially for its hands-on, peer-led components, which aligned with farmers' preference for practical, experience-based learning. Participants demonstrated increased awareness of tractor blind spots and effectively transferred skills to home settings, engaging family and peers in safety practices. Participants expressed intent to repeat these demonstrations, highlighting the intervention’s potential as a scalable “train-the-trainer” model. Feedback on posters and SMS reminders indicated limited engagement.

Conclusions: The structured, evidence-based design and evaluation not only enhances understanding of effective interventions but also underscores the potential of BTO as a scalable train-the-trainer model for wider farm safety initiatives. The multifaceted evaluation identified key active ingredients for promoting safety behaviours, highlighting how each component is perceived by farmers and can inform replication for other safety topics. The intervention’s potential as train-the-trainer model demonstrates that trained farmers could serve as safety ambassadors, amplifying the intervention's impact. The model’s adaptability to existing farm safety programs also presents a scalable approach to fostering safety advocates within farming communities.

Effectiveness of Sensorimotor Training on Postural Control in Older Adults: A CoP Variation Study

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Background: Postural control is vital for balance and mobility in older adults, as declines increase fall risk and reduce quality of life. Analyzing center of pressure (CoP) variations, especially using linear methods, helps identify stability deficits linked to aging. Sensorimotor training, which integrates sensory and motor systems, shows promise in enhancing balance and lowering fall risk. This study evaluated postural control in older adults following a 12-week sensorimotor training intervention, using linear methods to determine if improved stability and increased physical activity contribute to better quality of life through behavior change.

Methods: The study included a total of 44 participants, with 22 in the Control Group (CG) (mean age: 73.10±5.61; BMI: 27.30±4.39) and 22 in the Intervention Group (IG) (mean age: 70.90±7.64; BMI: 24.60±4.41). Following sensorimotor training intervention, postural control was assessed by measuring CoP variations, specifically total excursion (TOTEX), using a force platform under eyes-open and eyes-closed conditions. Participants stood in a bipedal position on a force platform (Biosignalsplux, PLUX wireless biosignals S.A., Lisbon, Portugal) for 120 seconds, with their arms at their sides. Non-parametric data were analyzed using Jamovi (version 2.3.16). Student's T-test and Cohen's d were used to analyze changes, with Cohen's d effect sizes (ES) categorized from trivial (0-0.2) to extremely large (>4). Statistical significance was set at $p<0.05$.

Results: Significant CoP variations were observed post-intervention, with TOTEX notably increasing under eyes-open conditions CG ($p=0.009;\eta^2=0.614$) and IG ($p=0.970;\eta^2=0.008$) reflecting improved balance and postural control. The mediolateral TOTEX also increased significantly CG ($p=0.007;\eta^2=0.642$) and IG ($p=0.640;\eta^2=0.101$), indicating enhanced dynamic stability.

Discussion: Reduced fear of falling is associated with greater confidence in mobility, which encourages physical activity and preserves independence in older adults. Fear of falling can restrict activity and lead to physical decline, while interventions that improve balance, such as sensorimotor training, can enhance confidence and reduce fall risk.

Conclusion: In conclusion, while the CG showed an increase in TOTEX, indicating a decline in postural control, sensory-motor training effectively helped maintain TOTEX levels. This suggests that sensory-motor training stabilized postural control in older adults, whereas those who did not undergo training experienced a deterioration over time.

Family-centered health behavior modification for the prevention of cardiometabolic risks across generations – Intervention development

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Rationale and aims: Family plays a crucial role in the development of efficient and sustainable health behavior strategies to improve cardiometabolic health both in adults and children. Evidence calls for new diabetes interventions for entire family to improve health and well-being across generations and reduce heritability of diabetes. This study aimed to describe the planning process of a family-centered intervention called ”GO EASY“ seeking to improve everyday life physical activity and healthy eating in families of adults with or at risk of type 2 diabetes and their children.

Methods: Development of the GO EASY intervention was structured according to the Medical Research Council recommendations on the development and evaluation of complex interventions. A multidisciplinary team of clinicians and researchers developed the preliminary, theory-based intervention plan informed by the nutritional and physical activity guidelines. Then, according to the participatory action research methodology, we defined the study population, reviewed the current evidence on family-centered diabetes interventions, and depicted the program theory. We involved stakeholders, such as families representing the study population and the community organizations, in co-creation process including user-informed decisions to refine the intervention plan.

Findings: The evidence review emphasized the importance of accessibility, appropriate timing, community involvement, and promotion of healthy family meals. Parents from the target population perceived changing lifestyle as a stressful task and expressed the need for tailored and flexible interventions containing joint family activities, active local networks, and diversified social support opportunities. Organizational stakeholders from the community involved in the research added open activity events and a digital communication platform as initiatives that would help improve the community health.

Conclusion: The refined GO EASY prototype incorporated enhanced flexibility in delivery, community-anchored multi-level social support, and the assessment of family functioning for adults and children. This preparation enabled the GO EASY intervention to advance to the feasibility test as the next research phase.

The critical role of addressing communication to improve patient safety in hospitals

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Rationale: Effective communication between all stakeholders—from patients to board members – is essential for enhancing patient safety within healthcare. Despite its importance, numerous barriers to effective communication in the health system exist; at the interpersonal level, inter-department level and across the service and system levels.

Methods: Two prioritisation processes identified projects to improve patient safety in Victorian hospitals, Australia. Every topic prioritised related to an aspect of communication, which were then explored through seven pilot projects, as part of a 3-year program of work with the State hospital insurer. All projects were approved by a University Ethics Committee.

Findings: Over seven projects, key barriers were identified to improving communication; challenges and lacking capability in navigating difficult conversations, hierarchical dynamics and structures within the system, working in siloes, attitudes to different disciplines and teams and 'geographic narcissism' towards regional and rural health services, and lack of open channels of communication. Through the program of pilots, formative research for seven behaviour change projects was completed. Unfortunately, only six trials were implemented due to covid-19 disruptions. The pilot trials included:

- Simulation-based training for health board members to develop skills in having difficult conversations
- Seeking a second opinion and using de-biasing tools in diagnostic discussions
- Purpose-designed communication tools for patients to open communication channels with their healthcare team,
- Interactive training video for escalation of care conversations to navigate the role of hierarchy and pushback,
- Persuasive messaging to reinforce shared responsibilities among clinicians between metropolitan and regional healthcare professional, and
- Mobile apps to streamline test result communications to overcome delays and miscommunication.

The final, untrialled, project developed a self-reflective tool for practitioners to use for informed consent discussions with patients and their families and support networks.

Conclusions: All six pilots demonstrated that the communication tools effectively altered the targeted behavioural drivers, with measurable behaviour change observed in three trials. The findings across these projects underscore that timely and accurate information exchange among all healthcare participants from patients and families to clinicians and boards, can optimize patient care, increase accuracy of care treatment and facilitate prompt issue resolution, ultimately improving both patient safety and care quality.

Behavioral Sciences for Sustainable Development: A Systematic Review on Food Production and Consumption.

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The present study aims to identify interventions carried out in different groups, supported by behavioral sciences, in the thematic areas of food consumption and production, with the objective of mitigating the effects of climate change. In recent years, the urgency of climate change – long-term transformations in the planet's temperature and climate patterns – has been reflected in the media and government agendas (Echegaray; Afonso, 2014). Society's perception of the topic tends to be influenced by the current socio-political context, as cultural and social transformations shape ways of acting according to local beliefs, as evidenced by Zanirato and Rotondaro (2016). In this regard, the United Nations (UN) created 17 SDGs in 2015 to guide the world toward a more sustainable reality; among them, SDG 12, “Responsible Consumption and Production,” highlights the relevance of this issue today. Despite global actions focused on technological development to achieve these goals, numerous initiatives emphasize individual behavior in daily life. Furthermore, several groups, such as academics argue that lifestyle changes would be the most effective solution for long-term impact (Mont et al., 2012). Within this discussion, behavioral sciences demonstrate their significance when applied as a tool for understanding individual decision-making, and scholars propose using science to reduce climate change (Toomey, 2023; Zhao and Luo, 2021; Palomo-Veléz and Hornsey, 2016). The present study is exploratory, with a descriptive-analytical approach and a mixed qualitative and quantitative methodology, based on a systematic literature review using the Dimensions.ia, Web of Science, and Scopus databases. Initially, the first step follows the PRISMA 2020 guidelines to identify studies in the field of Behavioral Sciences applied to interventions carried out by various groups and institutions. Afterward, the second step consists of selecting studies based on inclusion and exclusion criteria to identify behavioral interventions. Finally, a full reading of the selected studies will be conducted. This study seeks to develop analytical models that compile the main strategies adopted in different contexts. These models will serve as resources for the formulation of new behavioral interventions focused on combating climate change, with special attention to the previously defined themes.

Co-design and testing of theory-based risk communication strategies to prevent exposure to endocrine-disrupting chemicals

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Rationale and aims

Endocrine-disrupting chemicals (EDCs) interfere with hormone function and pose serious risks to human health, particularly during vulnerable developmental periods, such as prenatal and childhood stages. Despite the established health impacts, public awareness of EDCs remains low, highlighting the need for effective, targeted communication strategies to raise awareness and promote preventive behaviours. The NEMESIS project (Novel Effect Biomarkers for Metabolic Disruptors: Evidence on Health Impacts to Science and Policy Needs) brings together experts across Europe to strengthen risk assessment and inform policy actions to mitigate EDC exposure. This research, framed within the NEMESIS project, aims to improve public communication on EDC risks by involving citizens, especially pregnant women and parents of young children, through the development and testing of theory-based communication materials. The overarching goal is to empower individuals to make informed decisions, enhancing EDC risk understanding and encouraging preventive behaviours.

Methods and Analysis

This research uses a mixed-methods approach, integrating health behaviour theory and participatory methods. The Capability, Opportunity, and Motivation (COM-B) model will guide each step of the communication material development process. An initial online questionnaire will assess citizens' baseline knowledge and risk perceptions on EDC exposure across different European countries. Subsequently, qualitative methods will explore main drivers and barriers to preventive behaviours, especially among pregnant women and parents. Co-design workshops with citizens and stakeholders will be used to refine communication materials, which will then be tested for effectiveness. Key factors, such as message framing, will be analysed to identify the most impactful strategies for promoting health-protective behaviours.

Findings

While findings are not yet available, this project's poster will delve further into the rationale and methods guiding the research, setting a foundation for the project's next stages. The testing of theory-based materials will provide evidence-based insights for future risk communication strategies for the prevention of exposure to EDC among different population groups.

Conclusions

By combining health behaviour theory with participatory methods, this project aims to address existing research gaps, foster public engagement, and improve public understanding of EDC risks. These efforts are ultimately expected to support preventive behaviours and regulatory measures, contributing to public health protection against EDC exposure.

Understanding the local vectors of influence to increase polio vaccination uptake in high-risk regions of Afghanistan.

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Rational and aims

Afghanistan remains one of the last two polio endemic countries, with fluctuating progress in eradication efforts. Vaccination campaigns in this region face numerous obstacles, such as misinformation stemming from conservative social and religious norms. In such a context, it is essential to understand which local key stakeholders/influencers organisations should be working with to enhance polio vaccination uptake.

Methods

MAGENTA partnered with UNICEF Afghanistan to conduct a qualitative study including 12 focus group discussions with pro-polio vaccine influencers; 28 key informant interviews with pro- and anti-polio vaccine influencers following a week-long diary recording exercise; and 12 in-depth interviews with caregivers. The study was conducted in six high-risk polio provinces (Nangarhar, Kunar, Kandahar, Zabul, Paktika and Khost).

Analysis

Using the COM-B Model as a framework for analysis, MAGENTA unpacked the capacity, opportunity and motivation of influencers to promote or discourage the uptake of polio vaccination, looking at influencers' own source of influence, particularly when it comes to negative influence.

Findings

Polio vaccine influencers in Afghanistan exhibit varying capacities, opportunities, and motivations. While medical professionals, teachers and community leaders possess strong capacity due to their knowledge and social standing, religious leaders stood out as key players who can act either as an enabler or an insurmountable barrier to vaccination uptake. While pro-vaccine influencers are motivated by social responsibility and community health (seeking recognition for their efforts), anti-vaccine influencers often rely on religious beliefs, fear, and misinformation to oppose vaccination. Working as a team, building peer networks, and equipping influencers with practical knowledge and effective communications approaches appeared as strong predictors of their ability to positively influence others.

Conclusion

The study provided UNICEF with specific recommendations to inform future intervention design to enhance engagement with community influencers in Afghanistan. Strategies include training influencers with accurate vaccine information, leveraging religious and community leaders, and empowering women and youth. Sustainable support and respect for cultural practices are essential, along with strong feedback mechanisms. A multi-faceted approach combining traditional and modern outreach methods, along with partnerships, will maximize impact and foster local ownership of vaccination campaigns.

Exploring consumer behavior and sustainability: intentions, barriers, and responsibility

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Rationale and aims

The paper aims to prove that consumers want to make sustainable choices but often feel that they lack clarity on what it means to be sustainable. As Trudel says, ‘Most people want to live and make decisions to satisfy their present needs without compromising the environment’ . The investigation will consider how levels of consumer education impact their understanding of product sustainability, with a particular focus on ownership and responsibility for sustainability.

Methods

Primary research from online surveys and interviews will be used in the analysis and scrutiny of the investigation aims, with a focus on participants from England and Wales. Secondary research generated from the wider audience of social media will support the construct of the primary research format. Research from several key thinkers, Remi Trudel, Michael G. Luchs and John Thøgersen will be considered in the evaluation of the collated data.

Findings

These are still being gathered, but so far, the results indicate the level of education has no relation to the care for sustainability that individuals have. Although most consumers have the intention of being sustainable, there are still barriers to this. The ‘sales of sustainable products (i.e., products with positive social and/or environmental attributes) still represent “only a small fraction of overall demand” (United Nations Environment Programme 2005, p. 3)’ . This is supported by my results so far, I have found that consumers put the environmental impact in third place, with both the quality of the product and the price ranking as more important. There is also an equal split between who handles sustainability.

Conclusions

Overall, consumers at every level of education want to be more sustainable in their lifestyle. However, many barriers still need to be overcome, which consumers are not always aware of. So far, these results support the work that Trudel has conducted and show that there is a want to be more sustainable. There is an even split of who is responsible for sustainability- individuals, consumers or governments.

Application of Behavioral Sciences in Health and Sustainability Policies: An Analysis of Universities' Contributions in Policy Documents

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Behavioral Sciences have been incorporated by governments and multilateral organizations over the past decades in various ways, such as through the creation of behavioral units, consulting services, and partnerships with universities. These strategies for producing, utilizing, and disseminating knowledge from Behavioral Sciences generate varied impacts on public policies and on the development of the field itself, especially in developing countries, where there are indications that behavioral knowledge is predominantly being produced in the context of consulting firms. At the same time, issues of sustainability and health have gained prominence as central topics for states, governments, universities, and society in general. In this context, this study aims to identify and analyze the contribution of universities in policy documents that address Behavioral Sciences, especially those focused on Health and Sustainability. We conducted the study by identifying policy documents on the Overton.io platform (currently the largest index of policy documents) using the search query ((“behavioural science”) AND (“Health” OR “Sustainability”)). Preliminary results indicate the mapping of approximately 6,494 documents from 82 countries and 659 sources on behavioral sciences related to health and sustainability. The geographical analysis highlights the prominence of the United Kingdom (1,959 documents) and intergovernmental organizations (1,945 documents), followed by Australia, the European Union, and Canada. Among the most cited institutions are University College London (1,899), the University of Oxford (1,841), and Harvard University (1,734). Regarding the Sustainable Development Goals (SDGs), the documents primarily focus on Good Health and Well-Being (SDG 3, 1,053 documents), Quality Education (SDG 4, 314 documents), and Climate Action (SDG 13, 236 documents).

Scotland's model of a blue-green prescribing programme for primary mental healthcare: participatory co-creation research with Q-Methodology

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Rationale and aims: In Scotland, blue-green prescribing (BGP) is being embedded in the healthcare system as an upstream innovation to improve population and planetary health. BGP is a stepwise, co-decided, and person-centred prescribing of blue space activities and eco-informed prescribing of antidepressants to people with anxiety and depression. In this study, we investigated the selection, prioritisation, and formative evaluation of implementation strategies that could be considered in developing Scotland's BGP programme for primary mental healthcare.

Methods: We used the Double Diamond process to deliver three co-creation workshops: 1) Selection and Prioritisation of Strategies using Q-Methodology and logic model development; 2) Refining the Strategies using online breakout groups; and 3) Evaluating the Strategies using virtual world cafés and the Acceptability, Appropriateness, and Feasibility Measures of Intervention questionnaire. Co-creators were at least 18 years of age and who have expertise and whose works are directly linked with the health, environment, third sectors, and patient groups in Scotland. Data were analysed using descriptive statistics, and factor, and thematic analyses using the Behaviour Change Wheel (BCW) and the Consolidated Framework for Implementation Research.

Analysis and findings: Between 25-36 co-creators attended the workshop series. Results of the factor analysis showed that co-creators selected 12 most important implementation strategies categorised into four thematic areas. The 12 implementation strategies were also mapped to the domains and components of the BCW, as well as to the constructs and domains of CFIR. The implementation strategies focus on having accessible and equitable blue space activities for people with mental health conditions; delivering environmentally friendly mental healthcare; building collaborations to develop the evidence base for BGP; and increasing investment in the socio-ecological determinants of mental health. The formative evaluation showed that the co-creators perceived the programme model to be acceptable, appropriate, and feasible in the Scottish context.

Conclusion: The co-created BGP programme model suggests a robust framework for a person-centred, sustainable, and transformative primary mental healthcare that could help drive Scotland's ambition towards a Net Zero and Wellbeing Economy. The model could be adapted in other healthcare settings and geographical contexts with proper formative, process, and impact evaluations.

Theoretical Evaluation of Mental Health First Aid using the Behavioural Change Wheel (BCW)

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Abstract Background: The Mental Health First Aid (MHFA) program is a mental health literacy intervention aimed at promoting help-seeking behaviour for mental health difficulties. This study retrospectively maps the MHFA intervention to characterise the intervention content using the Behavioural Change Wheel (BCW) to identify the active ingredients and mechanisms of action.

Methods: Three data sources formed the data for the current study. Namely, the MHFA training manual, a roleplay video demonstrating how to implement the intervention, and interviews with mental health first aiders (n=9) and MHFA recipients (n=5) on their experiences of the MHFA intervention. The study utilised a two-step approach: a) The intervention was described using the Template for Intervention Description and Replication (TIDIER) framework, and b) The content was analysed to identify the Behavioural Change Techniques (BCTs) using the Behavioural Change Techniques Taxonomy version 1 (BCTTv1) and intervention functions using the Behavioural Change Wheel (BCW). The mechanisms of action were specified using the Capability, Opportunity, Motivation for Behaviour model (COM-B) and Theoretical Domains Framework (TDF).

Findings: Twelve BCTs and four intervention functions were identified across the three data sources. Only Social support BCTs and the intervention functions of enablement and persuasion were consistently identified across the three data sources in MHFA. The most frequent mechanisms of action were reflective motivation (particularly 'beliefs about capabilities' and 'goals') and social opportunity (particularly 'social influences'). Only five MHFAiders had supported a recipient following their training, and highlighted barriers relating to a reluctance to engage including uncertainty regarding support and psychological safety.

Conclusion: Whilst the intervention incorporates BCTs to increase reflective motivation and social opportunity to seek help, there is a need to address the psychological capability and physical opportunity to enhance help-seeking behaviours.

Healthcare professionals' barriers and facilitators to physical activity promotion for type 2 diabetes in Oman

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Rationale and aims: Physical activity (PA) is a crucial element in managing type 2 diabetes, yet individuals with this condition are less active than the general population. As a result, it is recommended that Healthcare professionals (HCPs) should promote PA to these patients. However, research has demonstrated that HCPs often report challenges to this in their routine clinical practice. There is a growing body of research using the Theoretical Domains Framework (TDF) to explore HCPs' professional practice behaviours in Western settings, yet there is a notable lack of research applying this framework to HCPs behaviours in non-Western contexts. The aim of this study was to explore HCPs barriers and facilitators to PA promotion for adults with type 2 diabetes in Oman, using the TDF.

Methods: In this qualitative online interview study, twenty-three one-to-one semi-structured interviews were conducted, lasting approximately 60 minutes each, with HCPs (physicians, endocrinologists, diabetologists, dieticians, and diabetes educators) that support adults with type 2 diabetes. The TDF guided the interview questions. Analysis: Using content analysis, the data were extracted, coded as barriers or facilitators, mapped to the TDF and COM-B model, and analysed using inductive reflexive thematic analysis.

Findings: Barriers were reported in all TDF domains except emotion and reinforcement, and facilitators were reported in all TDF domains except intentions. Barriers included lack of clarity on who is responsible for PA promotion (social, professional role and identity), lack of knowledge to promote PA to patients with complications or comorbidities (knowledge), limited understanding of behaviour change approaches and their application in real-world situations (skills), insufficient staffing resources, and culturally relevant guidelines (environmental context and resources). Facilitators included HCPs developing their own resources, such as checklists and patient questionnaires (environmental context and resources) and increasing their knowledge of community resources for patient referrals (knowledge).

Conclusions: The TDF and COM-B model enabled a focused and systematic approach to explore and understand influences on HCPs behaviour at multiple levels. Recommendations include identifying key roles responsible for PA promotion, increasing community engagement and partnership working, and integrating PA into the electronic health system to act as a discussion prompt and monitoring/feedback tool.

How Segments, Time Pressure, and Behaviour Change Techniques Shape Route Choices in Simulated Travel Apps

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Rationale: Transport is a major contributor to global CO_2 emissions, and behaviour change techniques (BCTs) embedded in journey-planning apps offer a promising avenue for promoting sustainable choices. This study investigated how exposure to BCTs, user segment, and time pressure influence green route selection. Applying BCTs in a journey-planning app rather than a carbon-saving app, addressed a critical research gap. Employing emerging techniques to simulate apps enabled a robust controlled experimental design. Three psychographic segments (Maximisers, Advocates, and Solo Explorers) were targeted, capturing differences in environmental attitudes, public transport preferences, and travel needs. All segments demonstrated above-average attitudes to technology.

Methods: Using a mixed-effects, randomized controlled 2x3x3 factorial design, 600 participants from three predefined segments completed travel booking tasks under low, moderate, and high time pressures via simulated journey-planning apps. Tasks were presented using control (no BCTs) and intervention (BCT-enhanced) app versions. Data were analyzed using multilevel logistic regression with random intercepts to examine main effects and interactions between predictors.

Findings: Significant main effects were observed for Condition, Segment, and Time Pressure. Participants in the intervention group were significantly more likely to choose green modes than those in the control group (OR = 5.391, $p < .001$). Solo Explorers were less likely to choose green modes than Advocates (OR = 0.313, $p = .020$), while differences between Maximisers and Advocates were not significant ($p = .353$). Participants were less likely to choose green modes under Low (OR = 0.155, $p < .001$) and High (OR = 0.477, $p < .001$) time pressure compared to Moderate.

Conclusions: This study highlights the potential of BCT-enhanced journey-planning apps to increase sustainable transport choices, particularly among less environmentally conscious groups (e.g., Solo Explorers). Medium time pressure encourages green decisions, while low and high time pressures deter them. The findings offer practical insights for designing targeted interventions, including segment-specific strategies. By leveraging psychographic segmentation and novel simulated app environments, this research provides a replicable framework for understanding sustainable decision-making and demonstrates generalizability to a range of digital interventions. These results showcase the feasibility and utility of simulated app-based studies for addressing critical environmental challenges.

Measuring Habits: Testing the Independence of the Factorial Structure of the SRHI and SRBAI scales Across Behaviors

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Rationale and aims.

Habits are behaviors that have been frequently repeated and reinforced in a stable context, and that are carried out automatically when that context is encountered. The two main tools used for self-reported measurements of habits are the SRHI scale that measures habit strength (12 items assessing the sense of repetition, the experience of automaticity, and identity), and the SRBAI scale that is a subset of the SRHI focusing solely on measuring automaticity. These tools can apply to any habit simply by specifying the target behavior in the scale's stem. However, an observation of the previous literature (e.g., Verplanken & Orbell, 2003; Gutiérrez-Sánchez & Pino-Juste, 2011; Gardner et al., 2011) seems to reveal that the factorial structure of the scales varies depending on the behaviors under study. Thus, the aim of this study was to analyze the independence of the SRHI and SRBAI structures as a function of behaviors.

Method.

As part of a larger project, a total of 1,411 participants completed the SRHI and SRBAI scales. Importantly, they were divided into six experimental conditions, each corresponding to a specific behavior: go wash hands, go take a shower, snack, have a coffee, go exercise and put on a movie.

Findings.

Exploratory and confirmatory factor analyses are in progress to determine which factor structure best fits the data for all the selected behaviors. We then plan to carry out a measurement invariance analysis on the six behaviours to determine whether the scale remains invariant across all six behaviours.

Conclusions.

Results will be discussed with regard to: (1) the need to validate the scales for each behavior, (2) the ways to measure habits, in particular the different facets of automaticity, (3) the contribution of these scales to the study of the formation and cessation of behavioral habits.

Health, Convenience, and Sustainability: What Drives Food Choices Among Brazilian University Students?

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Rationale and Aims: This study examines the psychosocial factors that influence food choices among Brazilian university students, with a focus on health, sustainability, and ethics. The research aims to understand how these motivations vary across different dietary groups, such as omnivores, flexitarians, vegetarians and vegans, with the objective of supporting the development of interventions and policies that encourage healthier and more sustainable food choices.

Methods: A questionnaire was administered to 1,582 university students from various regions in Brazil. The study received approval from the ethics committee (protocol CAAE 48959621.7.0000.5347). The Food Choice Questionnaire (FCQ), adapted to the Brazilian context, was used to measure dimensions including health, convenience, sensory appeal, natural content, price, familiarity, ethics and an additional dimension of animal welfare, introduced to assess concerns regarding the treatment of animals. Differences between dietary groups were analysed using ANOVA and Tukey's post-hoc tests.

Findings: Health and sensory appeal were the most valued motivations across all groups. Vegetarians and vegans placed significantly greater importance on health and ethical issues, including animal welfare, compared to omnivores. Convenience was a crucial factor for vegetarians, reflecting the need for accessible options that align with their dietary preferences. Omnivores emphasised sensory appeal, valuing taste and texture, but assigned low importance to ethical concerns and animal welfare, highlighting barriers to more sustainable food choices. Familiarity had less influence in all groups, especially among participants open to innovative and sustainable food practices. These findings reveal a diversity of food motivations, which vary according to the students' dietary profiles.

Conclusions: The results indicate that food education policies and campaigns focused on health and sustainability may be more effective when considering the sensory appeal and accessibility of ethical and healthy options. The emphasis on health and sustainability, particularly among vegetarians and vegans, suggests that university environments have the potential to foster conscious eating behaviours. These findings provide valuable insights for developing guidelines that promote healthy and sustainable food choices among young Brazilian university students.

Life after a combined lifestyle intervention. Do participants maintain behaviour changes?

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Rationale and aims

Since 2019, two-year combined lifestyle interventions (CLI), aimed at reducing weight-related health risks through behavior change, have been covered by Dutch health insurance. Although promising health-related effects are found during the CLI, insights into outcomes beyond this period remain lacking. This study examines health and lifestyle outcomes up to 9 months post-CLI, aiming to provide insights into sustaining healthy lifestyle changes. ag

Methods

In this prospective cohort study, we used online questionnaires to assess outcomes in individuals (BMI ≥30) who recently completed a CLI. The study measures multiple health and lifestyle aspects, including anthropometric data and behavioural changes, at four time points: directly after CLI (T0), and at 3 (T1), 6 (T2), and 9 (T3) months.

Analysis

All analyses were conducted using SPSS 24, including descriptive statistics and sum score calculations for various scales.

Findings

These findings focus on T0. At the conference, results of T0, T1 and T2 will be presented. The study sample (n=55) was predominantly female (93%). Participants were on average 56 years old. At T0, their average Body Mass Index (BMI) was 34.3 and waist circumference was 110 cm. Thirty-six percent fully achieved their initial CLI program goal, while 45% partially achieved it. Around 40% used weight-loss medication. On the EQ-5D scale for quality of life, participants scored an average of 73 out of 100. For self-efficacy, participants scored an average of 18.5 out of a possible 24. The values observed in our cohort closely align with the results from the CLI monitor by the RIVM, particularly regarding BMI, waist circumference, and quality of life. The RIVM reports respectively 34.5 (BMI), 111 cm (waist circumference) and 71 (EQ5D) after a two-year CLI.

Conclusions

The findings at T0 show the demographic and health characteristics of individuals who completed a CLI. The cohort is a representative sample of the broader population of CLI participants in the Netherlands, as our results are comparable to the CLI monitor from the RIVM. Knowing T0 characteristics is crucial for tracking changes over time and evaluating the sustainability of healthy behaviour. Future measurements will determine the long-term effectiveness of these interventions.

Does heat impact quality of care during birth? a cross-country study using time-motion methods for behaviour observation

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Rationale and aims

Healthcare workers (HCWs) facing elevated temperatures in healthcare settings often suffer from thirst, excessive sweating, and fatigue, which can hinder their concentration and ability to provide quality care. In resource-limited areas that lack adequate readiness for extreme heat events, assessing the performance of HCWs under heat stress is crucial for enhancing service delivery and strengthening healthcare systems' resilience to climate change. This study intends to evaluate the effects of heat on HCWs' performance in labour wards located in Zimbabwe and South Africa. The findings are expected to contribute to understanding how heat influences HCWs' behaviour and design interventions to support them in managing heat stress.

Methods

We used time-motion methods to collect information on health workers' activities (time stamped actions) during labour and delivery. Quality of care was defined using the WHO guidelines on the management of pregnancy and childbirth. The tool was piloted and refined, and inter-observer agreement calculated. We observed health workers' actions during the labour and delivery process, as well as contextual information such as availability of soap and water and delivery characteristics such as complications. Data collection occurred in two high volume delivery facilities: Mt Darwin Hospital in Zimbabwe between Oct-2023 and Jul-2024, while data from South Africa were collected between Feb-2024 and Sep-2024 in Mamelodi Hospital. Exposure to heat was the air temperature at 2m as measured using ERA-5 data. The impact of heat stress will be estimated using mixed-effect models, where sessions are clustered by midwife, controlling for workload, staffing level, and complications. Qualitative participant observation and interviews were also collected to understand the health workers experience of heat and how this impacts their work, and triangulate the quantitative behavioural data.

Findings

We collected data from approximately 500 hours of observation. Analyses is currently underway, and results will be presented at the conference.

Conclusions

This study represents a first-time example of using the time-motion method to assess the impact of heat on HCW service delivery and healthcare workers' behaviour. The findings will guide climate adaptation interventions at the facility level, and larger initiatives aimed at enhancing health system climate resilience in Zimbabwe, South Africa, and other regions.

Conceptions of Technology in Behavioral Sciences: A Critical Analysis

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In the face of growing global challenges such as climate change, social inequality, and the weakening of public institutions alongside declining public trust, there is an increasing reliance on technological development and innovation as strategic responses. Various fields of knowledge, including behavioral sciences, have sought to understand these phenomena and propose solutions (Toomey, 2023; Zhao & Luo, 2021; Palomo-Veléz & Hornsey, 2016). However, a central question, still scarcely explored in the literature, concerns the perceptions and interpretations of what constitutes technology and its role within the field of behavioral sciences. This study, grounded in the critical literature of Science and Technology Studies (STS), including authors such as Feenberg (1991, 2013), Shapin and Schaffer (1985), Latour (1997, 2000, 2012), and Pinch and Bijker (2012), proposes a theoretical reflection on the epistemological and methodological foundations of behavioral sciences with regard to their conceptions of technology. An extensive literature review was conducted based on the keyword "behavioral science" in English, Portuguese, and Spanish. A co-citation analysis of cited reference was conducted, leading to a systematic review of 44 studies considered central and integral to the intellectual structure of the behavioral sciences field. The objective was to identify adopted conceptions of technology and interpretations of technological influence on human behavior. The findings reveal an absence of explicit discussion about technology within the field's theoretical and methodological propositions. However, a critical analysis of these studies enabled the identification of three implicit conceptions of technology: (1) the notion that human behaviors can be treated as technologies, subject to modification and "programming"; (2) the view that methodologies and frameworks developed within the field become material and literary technologies for scientific practice; and (3) the transformation of these methodologies and frameworks into behavioral technologies when applied in societal contexts. This contribution aims to initiate a debate and foster reflection within the field of behavioral sciences on the conceptions and implications of technology, with the intention of advancing the field’s development and application to address challenges in sustainability and health.

Charity stakeholder perspectives on eating behaviours of low-income families during the Cost-of-Living Crisis in England

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Rationale and aims: Identify charity stakeholder perspectives of the barriers and facilitators that low income families are facing regarding eating behaviours during the United Kingdom's Cost-of-Living Crisis.

Methods: Qualitative study of five research dyads and 12 individual semi-structured interviews. The Theoretical Domains Framework was used to analyse transcripts using a combined inductive and deductive reflexive thematic analysis approach to identify the barriers and facilitators that low-income families face regarding eating behaviours during the United Kingdom's Cost-of-Living Crisis.

Findings: 22 participants were recruited. Participants consisted of volunteers (n=5) and employees (n=17) from thirteen organisations in London, England. Perceived barriers to children's healthy eating in low income families were i) environmental context and resources (100% of participants); higher cost of healthy foods, energy and appliances, political factors, and less funding available for charities, ii) beliefs about capabilities (100% of participants); higher demand of charities, iii) knowledge (77% of participants); lacking education on specific foods and recipes, iv) social and professional role and identities (68% of participants); quality of support provided by organisations, and v) beliefs about consequences (55% of participants); avoiding food waste. Perceived facilitators of how charities can further support families were i) environmental context and resources (100% of participants); providing available forms of support, government and policy decisions, and working in classrooms and schools, ii) knowledge (82% of participants); knowing accessible and affordable food and appliances and a variety of food options, iii) motivation and goals (73% of participants); provide accessible and available foods and reach families directly, iv) social professional role and identity (68% of participants); charities changing goals to meet needs of families, and communicating effectively with families , and v) social influences (50% of participants); reducing shame and stigma and providing a sense of community.

Conclusion: Using the Theoretical Domains Framework provided a deeper understanding of how the Cost-of-Living Crisis has impacted eating behaviours of low income families and how they can be further supported. These findings provide valuable insight towards a behavioural diagnosis needed for intervention development to further support eating behaviours of low-income families during the Cost-of-Living Crisis.

Behavioral Approaches to Climate Change Mitigation: A Systematic Review

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Abstract: This study aims to identify the key behavioral methods and insights used by institutions and research teams to influence individual and collective actions toward mitigating environmental issues. Recent studies, such as those by Toomey (2023), Chan and Faria (2022), and Palomo-Vélez and Van Vugt (2023), examine how behavioral sciences can contribute to slowing down climate change on a global scale. The research methodology is based on an exploratory, descriptive-analytical approach with a qualitative-quantitative perspective, utilizing a systematic literature review divided into three stages. In the first stage, a search strategy was developed in alignment with the PRISMA 2020 protocol to identify behavioral interventions focused on climate change. The second stage selects studies from the previous search based on predefined inclusion and exclusion criteria, focusing on behavioral interventions in the thematic areas of energy, deforestation, ocean conservation, and sustainable water management, in accordance with the study's objectives. In the third and final stage, detailed analyses of the selected studies will be conducted to understand the contexts in which behavioral insights were designed, applied, and evaluated. By the time of the event, it is expected that the main methods and tools will have been extracted and systematized, that biases and heuristics in behavioral interventions will have been identified, and the synthesis of the primary results will be completed. At the study's conclusion, analytical tables will be developed to highlight and contextualize the main approaches adopted to promote climate change mitigation actions, serving as resources and references for the future development of behavioral applications aimed at climate change mitigation. Keywords: Behavioral Sciences; Climate Change; Water Consumption; Energy Consumption; Deforestation.

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Leveraging Rational Addiction Theory to Reduce Mobile Usage

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The pervasive use of smartphones has raised concerns about their addictive and maladaptive nature. This manuscript introduces an intervention based on rational addiction theory to cost-effectively nudge consumers towards reducing their smartphone usage and promoting sustainable digital consumption. Specifically, we study how pre-announcing future targets to reduce smartphone usage affects current consumption and behavioral change. We develop a mathematical model incorporating habit formation, satiation, and projection bias to derive predictions. In two pre-registered randomized control trials, we test these predictions. When future targets and incentives are pre-announced, consumers exhibit forward-looking behavior and reduce their mobile usage pre-emptively as predicted by rational addiction theory. This pre-emptive reduction is stronger among heavy mobile users and those who have stronger beliefs in their target achievement. Consumers maintain a lower usage during the incentivized period and sustain this lower usage even after the removal of incentives. The pre-emptive reduction helps consumers meet their targets during the incentivized period and enables post-treatment behavioral sustenance. Through our model fitting, we explore heterogeneity and identify the goal structures necessary to encourage consumers to exhibit behavior akin to “rational addicts.” Practically, we provide insight into structuring digital detox experiences for sustainable behavior change.

Behavioral determinants driving the prescription of antimicrobials in Portugal: a discrete choice experiment

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Rationale: Alarming evidence indicates antimicrobial resistance as the leading cause of mortality worldwide with a burden similar to the cumulative impacts of HIV, influenza and tuberculosis. The main driver of antimicrobial resistance is the misuse of antimicrobials, with up to 51% of the prescriptions considered unnecessary. Previous research has identified the behavioral determinants that influence the prescription of antimicrobials. Researchers emphasize the need for quantitative investigations to determine the relative significance of each determinant, since they may not be equally relevant nor influenced to the same extent.

Aims: This study examines the antimicrobial prescription behaviors of Portuguese physicians determining which behavioral determinants are prioritized and put into practice. This knowledge might assist in designing more effective interventions and formulating better policies to minimize misuse of antimicrobials.

Methods: An electronic survey to all physicians registered with the Portuguese Medical Association. It will expose the participants to a discrete choice experiment (DCE), structured through the recommendations of the International Society for Pharmacoeconomics and Outcomes Research (ISPOR). Evidence from systematic/scoping reviews and experts' opinions via semi-structured interviews will support the selection of behavioral determinants to be included in the experiment. The COM-B model will be adopted to map the nature of behavioral determinants. Physicians' preferences will be elicited in hypothetical yet realistic tasks containing scenarios with an assort of combinations of determinants of prescription. DCE will be designed to optimize the relationship between statistical efficiency, which involves many tasks and intricate trade-off questions, and response efficacy, with a small number of tasks and simpler trade-off questions. Participants will be asked for consent.

Analysis: A subtype of conjoint analysis, DCE, will quantify the relative weight of importance of behavioral determinants of antimicrobial prescriptions, expressed as relative weight or utility.

Findings: Results will be out in the first trimester of 2025 and will deepen the comprehension on the decision-making process for the prescription of antimicrobials by Portuguese physicians.

Municipal Food Waste Collection Reduces Food Waste in Landfill and Promotes Positive Behavioral Spillovers

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Rationale and Aims

Food waste is a significant contributor to landfill waste, producing methane, a greenhouse gas with 28 times the warming potential of CO_2. Composting offers a more sustainable alternative by reducing methane emissions, but many Americans face logistical and psychological barriers, such as concerns about cleanliness, limited access, and confusion about compostable materials. In partnership with the City of Durham, this study aimed to develop a user-centered municipal composting program and test its effectiveness through a randomized controlled trial (RCT). The primary aim was to assess whether the program could reduce food waste sent to landfills. A secondary aim was to explore whether participation would lead to “spillover” behaviors, where individuals adopt other pro-environmental actions.

Methods

The program was designed using human-centered methods, involving early prototypes with residents to address barriers such as cleanliness concerns and contamination of compostable materials. Two pilot tests established the viability of the program. Following these, a 16-week RCT was conducted with 360 households in Durham. Half the households (181) received weekly curbside composting pick-up, while the remaining households (179) acted as a control group, with delayed access to the service. Analysis Data collection included weekly measurements of household trash weights using collection truck scales. Additionally, surveys were administered at multiple points to measure shifts in pro-environmental identity and adoption of other sustainable behaviors. The analysis compared the trash weights of treatment and control households to evaluate landfill diversion. It also examined differences in survey responses to assess behavioral spillovers and identity development between the two groups.

Findings

Households participating in the composting program generated significantly less landfill waste compared to control households, indicating successful diversion. While participants did not report significantly greater changes in pro-environmental identity compared to the control group, they did engage in more spillover behaviors, adopting additional sustainable practices. The findings suggest that behaviors can precede and shape identity development, aligning with self-perception theory.

Conclusions

This study demonstrates the potential of municipal composting programs to reduce landfill waste and foster additional pro-environmental behaviors. Future research should explore the role of identity development in promoting spillover behaviors.

Advancing social impact evaluation: a holistic framework for behaviour change initiatives

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Rationale and aim

Behaviour change initiatives play a vital role in addressing health and sustainability challenges, driving societal progress, and fostering well-being. However, the ability to comprehensively measure these impacts remains a significant challenge. Social impact encompasses the tangible and intangible outcomes of behaviour change initiatives on individuals, communities, and systems, highlighting their contribution to public health, environmental sustainability, and broader societal benefits (Chianca, 2008). This research addresses the question: How can we evaluate the social impact of behaviour change initiatives to advance health and sustainability?

Method

Existing evaluation frameworks, such as the Precede-Proceed model (Gielen et al., 2008), Consolidated Framework for Implementation Research (CFIR) (Damschroder et al., 2022), Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) (Glasgow et al., 2019), and Theory of Change, provide valuable starting points for assessing behaviour change impacts but often fall short of capturing the long-term, multifaceted nature of these outcomes. This paper proposes a holistic framework that integrates these models while addressing their limitations. The framework incorporates both quantitative and qualitative measures to evaluate outcomes across health and sustainability domains. Quantitative indicators include metrics such as changes in health-related quality of life, reductions in environmental footprints, and shifts in public behaviours (e.g., smoking cessation, increased recycling rates). Longitudinal assessments will ensure the capture of sustained impact over time. Qualitative metrics, including community narratives, case studies, and testimonials, will provide rich, contextual insights into how initiatives influence behaviours and societal norms.

Findings

The framework emphasises inclusivity by evaluating the reach and equity of behaviour change outcomes across diverse priority groups. Additionally, it examines how effectively research findings are integrated into policies, programs, and public discourse to amplify their societal impact. Metrics for knowledge dissemination, such as stakeholder engagement, publication reach, and accessibility, will ensure that findings enable a wide range of audiences to adopt and sustain evidence-based behaviours.

Conclusions

This conceptualisation advances behavioural science by offering a comprehensive, replicable approach to evaluating the social impact of behaviour change initiatives. By systematically capturing both short- and long-term outcomes, the proposed framework enables researchers, practitioners, and policymakers to design and implement more impactful programs that drive meaningful change in health and sustainability.

Developing and validating the Comprehensive Hierarchical Eustress Review (CHER)

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Rationale and aims: Psychometric research on eustress—positive experiences in challenging situations—confronts a variety of issues that include: What features of eustress are central to experiencing challenging situations positively? What psychometric structure best fits these features (unidimensional, multidimensional, bifactor)? How is eustress related to distress and wellbeing? Can individuals be clustered effectively into different eustress profiles? Our empirical study aimed to address these theoretical and practical issues.

Methods: We developed a novel eustress instrument: the Comprehensive Hierarchical Eustress Review (CHER), motivated by a new model, the Comprehensive Hierarchical construct of Eustress (CHE). CHER contains 47 items that were split into 3 subscales, reflecting CHE's 47 features and 3 sources of eustress (goal-directed action, momentary experience, stable qualities). To evaluate CHER and explore its potential for insight into eustress, we validated it in a well-powered UK adult sample (N = 260; 49% female; Mean age = 44.60 years).

Analysis: We established central features of eustress and its psychometric structure through comparing various confirmatory factor models. We evaluated the best-fitting model internally (reliability and item discriminatory power) and externally (associations with distress and psychological wellbeing). Using latent profile analysis, we identified clusters of individuals with similar eustress experiences.

Findings: Our best-fitting solution was a bifactor model, suggesting that the psychometric structure of eustress is best described as both a unidimensional and a multidimensional construct, with items from all three subscales contributing to its conceptual core. The best performing model exhibited satisfactory reliability and item discrimination with eustress being negatively related to distress and positively related to wellbeing. We identified four distinct clusters of individuals with similar eustress profiles who differed across sociodemographic characteristics and personality traits.

Conclusions: Findings from this study have theoretical, empirical, and interventional implications for future work on eustress and beyond. Establishing the psychometric structure of eustress validates and extends existing theory. Relations with distress and wellbeing hint desirable spillover effects from fostering eustress that require further investigation. Lastly, identifying distinct eustress profiles can help designing tailored eustress interventions for different groups of individuals.

The Psychology of Urban Climate Adaptation: Identifying Behavioural Influences and Dynamics in Policy Decision-Making

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Rationale and Aims: As climate change progresses, the urgency to adapt urban areas has increased, yet current adaptation efforts are insufficient to cope with the climate change impacts cities are facing. Addressing climate adaptation shortcomings requires understanding psychological mechanisms that shape people's climate adaptation behaviour. While behavioural science research has explored citizens' climate adaptation behaviours, policymakers' decision-making is often overlooked despite its centrality to adaptation outcomes. For instance, urban policymakers decide which measures, such as green roofs, they prioritise to protect cities from extreme weather. This study integrates behavioural insights and system analysis to examine behavioural influences on policymakers' decisions in the context of urban climate adaptation.

Methods: Building onto 32 semi-structured interviews with urban policymakers in the Netherlands and a systematic review of behavioural influences in climate adaptation decision-making, this study examines the psychological antecedents of these behavioural influences, their influence on adaptation decisions, and the dynamics in the multi-actor system in which they arise.

Analysis: Drawing on the Behaviour Change Wheel and the Theoretical Domains Framework, the study applies behavioural system mapping to analyse and showcase the complex interplay of factors and dynamics influencing policymakers' adaptation decisions.

Findings: The findings show that behavioural influences, such as outcome expectancy and uncertainty perception, emerge through the interaction of contextual factors and dynamics within the system, leading to decision-making patterns, such as a reliance on adaptation role models.

Conclusion: By focusing on policymakers' decision context, this study contributes to a more nuanced understanding of urban climate adaptation decisions, addressing recent calls in the field of behavioural science to recognise the critical role of contextual influences in shaping behaviour. It proposes a new direction for integrating behavioural insights and systems analysis to understand policymakers' decision context in urban climate adaptation. Through its focus, this investigation aims to improve the understanding of behavioural influences on policymakers' decisions and provide a foundation for developing behavioural interventions that are tailored to the specific psychological mechanisms and contextual dynamics in urban climate adaptation.

Nature Connection, Environmental Self-Efficacy, Engaging in General Pro-environmental Behaviours as Determinants of Waste Prevention Behaviours

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[1]University of Derby

Rationale

To tackle climate change and reach net zero, individuals need to adopt sustainable behaviours, such as consciously consuming less, repairing, reusing, refilling, and buying second-hand products. Minimising consumption and waste conserves natural resources, reduces the degradation and biodiversity loss associated with mining raw materials, as well as the carbon emissions and pollution associated with the production, transportation, and energy-intensive disposal of materials. Existing research shows that nature connection and environmental self-efficacy influence engagement in pro-environmental behaviours and demonstrates spillover effects between similar and dissimilar pro-environmental behaviours. This study sought to understand whether nature connection, environmental self-efficacy and engaging in other general pro-environmental behaviours predict waste prevention behaviours and whether these variables predict recycling (a more accessible behaviour) to the same extent.

Methods

North London residents' (n=458) level of nature connection, environmental self-efficacy, engagement in general pro-environmental behaviours, waste prevention and recycling behaviours were measured via a self-reported online survey. The data were analysed using multiple regression analysis to evaluate the relationships between nature connection, environmental self-efficacy, engagement in general pro-environmental behaviours and the waste prevention behaviours consciously consuming less, repairing, reusing and refilling, and buying second-hand products.

Findings

The results showed that, together, nature connectedness, engaging in other pro-environmental behaviours and environmental self-efficacy significantly predicted engagement in waste prevention behaviours ($F(3,454) = 41.437$, $p < .001$). Nature connection and engagement in general pro-environmental behaviours significantly predicted waste prevention behaviours, but, environmental self-efficacy did not. Further analysis found that, together, nature connectedness, engaging in general pro-environmental behaviours and environmental self-efficacy significantly predicted recycling behaviour ($F(3,454) = 22.904$, $p < .001$). However, whilst environmental self-efficacy and engagement in general pro-environmental behaviours significantly predicted recycling behaviour, nature connection did not.

Conclusions

The results suggest interventions aiming to increase residents' connection to nature, make waste prevention behaviours more accessible, and engage residents in other general pro-environmental behaviours could increase engagement in waste prevention behaviours. Interventions should be developed, delivered and evaluated to further understand the relationships between these variables and waste prevention behaviours. This research has implications for future policy developments relating to waste prevention and the transition to a circular economy.

Assessing fidelity of a football based intervention for children: “11 for Health”

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Rationale: The "11 for Health" program is an 11-week, school-based health promotion intervention delivered through football aimed at children aged 8-14 years. The intervention has demonstrated effectiveness in improving both mental and physical health outcomes among children and adolescents (Møller et al., 2024, Fuller et al., 2017). To accurately interpret the intervention's effects, it is crucial to assess fidelity, to increase confidence that the outcomes are a result of the intervention itself and that it was delivered as intended.

Aims:

- To develop a fidelity checklist for the "11 for Health" program.
- To evaluate the fidelity of both training and treatment delivery.

Methods: Step 1: Developing the Fidelity Checklist: A fidelity checklist was created based on 25 behavior change techniques (BCTs) outlined in the program manual and 4 major components identified by stakeholders as essential for the effective delivery of the intervention, for example a positive communication style and an environment focused on learning rather than outcome. The checklist was developed using the steps indicated by Walton (2020) as guidance. Step 2: Assessing Fidelity: Based on Borelli's (2011) five core components of fidelity, two key aspects were chosen for evaluation: training and treatment delivery. Training fidelity was assessed through video observations of the one day course lasting 8hrs, and subsequently coded by two independent raters using the checklist. Similarly, the fidelity of treatment delivery was evaluated by observing five trainers for three sessions each, as they delivered the program to children.

Findings: Data from the video observations are currently being analyzed, and the results will be available in time for the conference presentation.

Conclusion: A fidelity score of 80-100% indicates high fidelity, while a score of 50% or lower is considered indicative of low fidelity (Perepletchikova & Kazdin, 2005). The fidelity checklist developed can be utilized in future iterations of the "11 for Health" program to ensure consistent delivery and adherence to the program's intended BCTs and major components.

Self-care attitudes and behaviours: Identifying gaps across general adult population

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Rationale and aims.

Self-care refers to the deliberate engagement in activities aimed at prioritizing, preserving, protecting, monitoring, and restoring one's health, well-being, and life satisfaction. During periods of global uncertainty, self-care becomes increasingly vital for maintaining health and well-being, especially when facing personal or societal crises. Since the Covid-19 outbreak in 2020, research has highlighted self-care as an area necessitating behaviour change, revealing that individuals often lack the capacity to fully utilize this multifaceted resource. According to the Theory of Planned Behaviour, awareness of the attitude-behaviour gap is essential before behaviour change can occur, as it highlights the discrepancy between what individuals perceive as beneficial or intend to do and what they actually practice. The current study aimed to explore self-care attitudes and behaviours within the general adult population and reveal the attitude-behaviour gaps.

Methods.

A quantitative cross-sectional survey was conducted online with a sample of adults aged 18 to 76 (N = 965; M = 42.83; SD = 13.13; 91% female, 9% male). The Revised Self-Care Strategies Questionnaire (SCSQ-R; Martinsone et al. (in press)) was used to measure self-care strategies, including spiritual practices, professional development, psychological development, seeking collegial, friend, and family support, and practicing health behaviours. All strategies were assessed in terms of both self-care attitudes and behaviours.

Analysis.

The Shapiro-Wilk test was employed to assess the normality of the data distribution. Given that the data were non-parametric, the Wilcoxon signed-rank test was used to identify differences between self-care attitudes and behaviours.

Findings.

Statistically significant differences were found across all seven self-care strategies ranging from [-17.363; $p < .001$] for professional development to [-23.561; $p < .001$] for practicing health behaviour.

Conclusions.

The study revealed an attitude-behaviour gap across all the seven self-care strategies. The findings indicate that while individuals maintain a positive attitude toward most of self-care strategies and recognize them as helpful, their actual behaviour does not fully align with these attitudes. These identified gaps underscore the need for behaviour change in the domain of self-care.

The impact of real-time feedback and reflection prompts on fruits and vegetable purchases – a randomized-controlled trial.

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Rationale and aims: Poor dietary habits pose the greatest health risk worldwide. Although most consumers do express a desire to improve their diet, the majority seem to struggle to act on these intentions. Information-based interventions to improve consumer diets consistently show moderate to negligible effects, even those directly provided at the point of purchase, such as health and nutrition labels. This is not surprising given the “hyper-choice” environment of food shopping, where consumers face hundreds of decisions, often relying on mental shortcuts and heuristics. Our study investigates how digital interventions in an online supermarket can increase the alignment between consumers’ actions and their health goals by following the principles of Persuasive Systems Design (PSD) which considers motivation, ability, and behavioral prompts to increase the likelihood of a target behavior: While healthy diets are a multifaceted and highly-individualized issue, the World Health Organization links insufficient fruit and vegetable (FV) consumption to millions of deaths from noncommunicable diseases.

Methods: Hence, we will test the effect of two interventions on FV portions in a randomized-controlled experiment in a simulated online supermarket, which is a validated method for studying food choice behavior. In the experimental group, real-time feedback (RTF) will show the current number of FV portions in participants’ baskets alongside the checkout total (between-subjects comparison to a control group without RTF). Moreover, a reflection prompt on the checkout page will encourage participants to reflect on the FV content in their product selection (within-subject comparison of basket contents before vs. after the prompt).

Analysis: This design enables us to investigate the individual and combined effects of the interventions, with the number of FV portions as the primary outcome. Guided by the PSD framework, we will examine the moderating effects of constructs related to motivation and ability, such as health consciousness, healthy eating intentions, mental load during shopping, and food literacy.

Expected contributions: The study's findings will contribute to research on behavior change interventions and may provide insights for retailers and policy makers in designing online shopping environments that promote healthier food choices.

Drawing on Human Behaviour Change Science to Improve Animal Welfare & Sustainability Practices Among Farmers

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Rationale & Aims

Inappropriate feeding of pregnant cows is a common problem in terms of environmental sustainability and animal health and welfare. Obesity causes calving difficulty and excess greenhouse gas emissions through increased methane production and feed wastage. Excessive leanness can also reduce the vigour of newborn calves and possibly cause chronic hunger in the cows. One way to offset the problems associated with body condition extremes is to engage in body condition scoring (BCS) by hand. Knowing each animal's BCS helps the farmer identify "at risk" cows leading to improved feeding efficiency, easier calving, more vigorous calves, decreased costs to farmer, and a subsequent reduction in greenhouse gas emissions. Despite what would appear a simple solution to the problem, very few farmers engage in BCS by hand. We therefore utilised the Behaviour Change Wheel (BCW) to identify a way to effectively elicit behaviour change, namely, to increase BCS by hand among farmers.

Methods & Analysis

Data were collected from six focus groups and a survey. The focus group transcripts and open-ended survey answers were content analysed using latent and manifest coding. The barriers and drivers of our target behaviour were then used in our behaviour change intervention design. We systematically followed the intervention design steps outlined in the BCW (i.e. COM-B diagnosis to identification of Behavioural Change Techniques: BCTs) applying the APEASE criteria at each respective stage of the intervention design.

Findings

We successfully developed a potential intervention to increase BCS cattle by hand using the BCW framework. The final intervention strategy includes the use of key BCTs (e.g. 5.3 Information about social, & environmental consequences & 6.1: Demonstration of the Behaviour) to be delivered through Guidelines and Communication & Marketing.

Conclusions

Animal welfare research and policy development has much to gain from drawing upon human behaviour change science. To ensure the goals outlined in animal welfare and farm sustainability policies translates into actual behaviours, we must ensure that policies are focusing on the right behaviours and the right people. To achieve this, it is essential that we follow the rigorous frameworks afforded by tools such as the BCW.

Factors Influencing Sedentary Behaviour when Working from Home in Desk-Based Older Employees

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Objective: Those employed in desk-based occupations sit for large amounts of their working day, often in long uninterrupted bouts, exposing them to the health risks associated with sedentary behaviour (SB). The number of older workers (≥50) is increasing and it is vital to promote healthy ageing in the workplace to ensure this population are not put at increased risk due to occupational sitting. With more workplaces offering homeworking options, it is important to explore how this environment influences SB. This study aimed to use the Theoretical Domains Framework (TDF) alongside the Capability, Opportunity, Motivation-Behaviour (COM-B) model to identify the barriers and enablers to interrupting SB in homeworking older employees.

Methods: Twenty-two semi-structured interviews were conducted online with older employees (aged ≥50) from a local council in Greater Manchester who regularly work from home. Inductive reflexive thematic analysis was used to identify themes before deductively mapping these to the TDF and COM-B model.

Results: Six themes were identified: 1) Ambiguous knowledge of sedentary behaviour 2) Nature and demand of professional role in conflict with behaviour change 3) Lack of conscious action in relation to sedentary behaviour 4) Health as potential motivator for older employees 5) There is hope for targeting workplace sitting at home and 6) Interrupting sedentary behaviour not actively embedded in homeworking culture.

Conclusions: SB is influenced by a range of factors for those working from home. The unique blend of conducting work tasks in one's own home was found to play an important role in SB and future work should consider how interventions can be implemented across such varying homeworking environments. The experience and needs of older employees, especially those relating to health, should be taken into account and used to target motivation. Future work should use these findings to develop a suitable intervention for the target population.

Air Quality and Conference Engagement

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1. Rationale and Aims: Indoor air pollution has well-documented adverse health effects, but there is less evidence on how air pollution impacts non-health outcomes. This paper examines the behavioral effects of air pollution on participation, collaboration, and feedback in a workplace setting.

2. Methods and analysis: We run a field experiment in which we randomly assign air purifiers to rooms at large academic conferences and investigate the causal impact of air pollution on participants' engagement. During the conferences, Research Assistants record 12 presentation-level behavioral outcomes, which can be grouped into three main outcome categories: engagement (fraction leaving, frequency checking phone, engagement level, number of questions asked, fraction of back and forth, number of laptops opened), politeness (tone of question, tone of answer, tone of presenter, fraction of raised hands), and quality (clearness of presenter, punctuality of presenter). We construct a participant engagement index as our preferred indicator of overall engagement, weighted according to expert preferences elicited through the Social Science Prediction Platform.

3. Findings: Conference rooms treated with air purifiers exhibit 20% less PM2.5 compared to the control rooms. Exploiting variation in participants' exposure to air purification, we find that conference rooms treated with air purifiers are associated with higher engagement (0.121 standard deviations on our overall index) at the presentation level. Instrumenting air pollution (PM2.5) with our air purifiers treatment, we find that a one unit (micrograms per cubic meter) increase in air pollution in treatment rooms is associated with 0.0685 standard deviation decrease in engagement. Among our three categories of outcomes, the effect on quality appears to be the largest.

4. Conclusions: Our preliminary results indicate that better air quality at the workplace improves participation and engagement.

Promoting Healthier and More Sustainable Menus in University Canteens

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Rationale and aims: Food service comprises the production of meals consumed outside the home, including consumers from all age groups and in different sectors. This service sector has evolved through the years, providing an increasing number of meals, which have been drifting away from the Mediterranean Food Pattern. Food service is an important setting for public health interventions, educating consumers, and modulating behaviors through the meals provided. Here, we will present the findings of an international project - MedDietMenus4Campus - that examines the barriers and facilitators of adherence to the Mediterranean Diet (MD) in the menus offered in public high education institutes (HEI) canteens in Portugal, Turkey, and Croatia.

Methods & Analysis: To promote the identification of effective intervention pathways, we have taken on an interdisciplinary approach, integrating the theoretical and methodological frameworks of Psychology, Nutrition, and Marketing. Specifically, we have analyzed the current menus offered in HEIs across the three partner countries and the perspectives of the students about food services and offers in campus canteens (N = 1614), as well as their knowledge, perceptions, and adherence to the MD. Moreover, based on the challenges and opportunities identified based on interviews with other key stakeholders (e.g., canteen managers and staff), we are also working with chefs to further improve the menus.

Findings: Multiple barriers and opportunities to improve dietary habits on campuses have been identified. For example, menus currently offered are not aligned with the main principles of the MD diet. Overall, students' compliance with MD was low to moderate, as well as low self-reported knowledge about MD. Canteen food obtained low evaluations and most students would not recommend it. Time to eat is pointed out as a major constraint to healthy eating.

Conclusions: The evidence will be integrated to develop solutions to the major solutions to the major barriers identified (e.g., on-the-go healthy meals to overcome the lack of time) and implement a social marketing plan to foster adherence to healthier and more sustainable diets on campuses.

Understanding children's views on sugar consumption: Unlocking pathways to healthier eating practices

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Dietary habits play a key role in preventing non-communicable diseases. Yet, adherence to healthy eating behaviors among children is often hindered by contextual factors, such as school-wide barriers and limitations. This talk introduces a project (Less Sugar 4 Kids: Children, parents, and teachers' perspectives on sugar intake reduction) designed to address the issue of excessive sugar intake in children. This project focuses on individual (e.g., children's food preferences and perceptions) and contextual (e.g., parental and teacher attitudes) determinants of sugar consumption. Through an integrated series of studies, employing both qualitative and quantitative methods, this project will examine the perspectives of children, caregivers, teachers, and health professionals. The findings aim to deepen our understanding of the factors driving excessive sugar consumption among children, paving the way for effective, targeted interventions to promote healthier eating. The project will also inform the development of a toolkit designed to equip children and educators with strategies to reduce sugar intake and improve eating practices.

Paradise or danger? Place attachment, risk and protection in the face of coastal erosion at Costa da Caparica

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Rationale and aims: The Portuguese coastline is susceptible to extreme natural events that can jeopardize the safety of coastal populations, with coastal erosion being one of the most prevalent natural phenomena on the portuguese coast. Costa da Caparica is a city with a long history of coastal interventions aimed at mitigating the cumulative effects of coastal erosion in the region. Exposed to such threats and the interventions made to mitigate it, residents and visitors will adopt different ways of perceiving and acting upon the risk. Place bonds may intervene in these perceptions, but the literature reports contradictory effects for this variable. This study aimed to assess whether different types of place attachment among residents of the Almada municipality are associated with different levels of adoption of protective behaviors, and whether this relationship is mediated by risk perception. It also examined whether the participant's status, as either a resident or a visitor of Costa da Caparica, and their trust in authorities moderate the relationship between the variables.

Methods and Analysis: The study included 197 participants who were asked to complete an online questionnaire. From the total sample, 101 were residents at Costa da Caparica and 96 were non-residents/visitors. Descriptive and multivariate analyses were performed with SPSS and macro Process.

Findings: The results indicate that most participants in this study perceive the risks associated with coastal erosion as moderate and reported low levels of protective behavior adoption, suggesting that people are only motivated to adopt certain behaviors when they feel their safety is at risk. The data shows that an active attachment to the place is associated with greater adoption of protective behaviours, while no significant effect of traditional place attachment was found nor the expected mediation effect. A moderating effect of participant status suggests that risk perception is more dependent on active place attachment for visitors than for residents.

Conclusions: This research highlights the importance of considering psychosocial aspects in the way people deal with the threats to better involve citizens in coastal protection, since it is fundamental to consider the individual and their respective community as part of the solution.

Impacting adoptive parenting through a web-based psychological intervention

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Rationale and aims: The lack of specialized resources that can endure beyond the adoptive placement and which are designed to address the specific needs of parents in navigating the emotional hardships of adoptive parenthood leads to adoptive families only being able to benefit from generalized support services. Evidence-based psychological interventions aimed to promote parental well-being and positive parenting among adoptive families are an urgent need. Through a promising approach in this field, such as mindful parenting interventions, and a state-of-the-art form of intervention delivery, such as eMental health tools, the current project aims to assess the efficacy, mediators, and moderators of treatment response, and cost-effectiveness of a web-based mindful parenting post-adoption intervention.

Methods: The AdoptMindful2Care@web is a brief, self-guided, web-based psychological intervention, comprising 9 modules, in which adoptive parents learn to apply mindfulness and (self-)compassion skills to themselves and to their parenting experience. Complying with the legal framework for the provision of post-adoption support in Portugal and building on the prior work of our host institution, a randomized controlled trial (RCT) of AdoptMindful2Care@web will be conducted. Adoptive parents will be randomly assigned (blocked randomization, with allocation concealment) to the experimental group (i.e., with immediate access to the AdoptMindful2Care@web) or to the waiting list control group (i.e., with access to the intervention only at the end of the study). Participants in both conditions will complete baseline, mid-intervention, post-intervention and follow-up (at 3 and 6 months) assessments. Data will be collected through a set of self-report measures adapted to the Portuguese population. Variables to be assessed are parenting stress (primary outcome); and parents' mindful parenting, compassionate parenting, reflective parenting, depression and anxiety, positive mental health, and children's emotional and behavioral difficulties (secondary outcomes). Additionally, parents' psychological mechanisms (e.g., mindfulness) and intervention-related variables (e.g., cost-effectiveness) will also be assessed.

Conclusions: While overcoming treatment uptake barriers of face-to-face interventions, the AdoptMindful2Care@web will be developed to efficiently respond to the need of psychological programs capable of addressing the specific needs of adoptive families, thus preventing adoptive parents from resorting to generalist mental health services, promoting adoption quality and stability, and the children's well-being.

Advancing Prevention Research In Cancer through Ontology Tools (APRICOT): Building on the Human Behaviour-Change Project

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Rationale and aims: Changing behaviour at scale is needed to address the major challenges facing humanity, from preventing and treating disease to tackling the climate crisis. Developing effective interventions to achieve this requires effective and efficient generation and use of scientific evidence. The Human Behaviour-Change Project has developed an extensive ontology of behaviour change interventions, their contexts and mechanisms of action to organise global evidence about behaviour change and predict intervention outcomes in novel behaviour change scenarios. In this poster, we will present the APRICOT (Advancing Prevention Research In Cancer through Ontology Tools) project which extends this work by elaborating ontologies covering health and other behaviours, and developing tools and resources to make ontologies more useable and useful, to encourage their use in behavioural and scientific practice.

Methods: We will follow FAIR (findable, accessible, interoperable and reusable) Guiding Principles to ensure that the ontology and its tools and resources are developed and implemented in a way that promotes widespread adoption and meets the varied and evolving needs of users. We will work collaboratively with the National Institutes of Health Dissemination and Coordination Center and the other funded projects in NIH's Behavioral and Social Science Ontology Development Research Network.

Expected Results: Deliverables of the project include the following: (1) We will update and extend existing ontologies, covering social and economic health determinants, specific health behaviours (e.g. physical activity), methodological features of intervention evaluation studies and causal relations between potential mechanisms of action and intervention components. (2) We will update tools and resources for creating, maintaining, extending, searching and visualising ontologies, as well as matching and aligning ontologies. These can be used for linking datasets and bodies of knowledge across silos. (3) We will create a global and multidisciplinary Community of Practice to ensure that the outputs from APRICOT are useful and used across areas of research and practice.

Conclusions: The APRICOT projects will build on the Human Behaviour Change Project by extending the ontologies and tools developed. The project aims to ensure that ontologies and ontology tools become embedded in behavioural and social scientific practices, and their applications.

Impact of occupant behaviour on ventilation and indoor air quality in Irish energy-efficient homes (Be-Vent)

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Rationale and Aims: Europe has set ambitious plans to be the first carbon neutral continent by 2050. To achieve this goal the European Commission has set energy reduction targets for all sectors including the built environment, which currently accounts for 40% of total energy consumption. Member states have developed regulations and guidelines to reduce energy consumption in both new builds and the current building stock via energy retrofit. Energy retrofit has the potential to enhance and improve indoor environmental quality for millions of citizens, however a 'fabric' first approach, and resulting increased building air tightness can have a negative impact on indoor air if ventilation is not adequately addressed. As such, investigating occupant knowledge about IAQ and indoor pollution, alongside attitudes and behaviours around ventilation systems in energy-efficient residential buildings would provide important findings that will guide the implementation of behaviour change interventions to promote sustainable healthier energy efficient buildings.

Methods: An Irish nationwide survey (both online and in paper form) was distributed to occupants living in energy-efficient homes (both new builds and retrofitted builds). The survey instrument was designed to gather information around occupants' knowledge, attitudes and behaviours regarding ventilation practises and IAQ. Data collection will run from November 2024 to February 2025. Results will be used in combination with indoor air quality sampling to design a behaviour change intervention

Analysis: Exploratory, quantitative data analysis will be conducted, examining group differences (such as new builds vs retrofitted builds, and gender and age differences).

Findings: Data collection is currently underway and will close in early 2025. Preliminary results will be discussed in presentation.

Conclusion: The collection of baseline data on knowledge, attitudes and behaviours of occupants in energy efficient dwellings, is crucial to inform the design of scalable interventions to improve indoor air quality in such homes.

User engagement in digital health Intervention in primary care in France : a realist evaluation.

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Rationale and aims: Primary care has a crucial role in health systems, not only in curative terms but also in prevention. Digitally delivered e-prevention is emerging alongside traditional prevention interventions delivered by m-Health which includes device such as mobile phone. However, what role does the patient assume in this m-Health and why is it crucial? The Ottawa Charter and WHO's strategy Health for All by 2030 underline population participation importance in public health programs. Researches indicate a correlation between user engagement and health outcomes, as well as the effectiveness of apps or web-based interventions. The concept of engagement extends not only to technology use but also to exploring the usage. Nevertheless, a universally accepted definition of participation is lacking.

Methods: Following PRISMA-ScR guidelines, we conducted a scoping review to identify participation attributes on mHealth interventions for health promotion and prevention in digital intervention. After that, we conducted a qualitative study employing a realist evaluation framework to explore how and why user engagement influences the effectiveness of digital health interventions, particularly in preventive care. For this purpose, we used Medprev, an innovative preventive health intervention for primary care in France that integrates human (with healthcare professionals) and digital interventions. Patients complete a questionnaire covering various aspects of daily life, followed by a consultation with the professional for discuss the results and define adaptable personalized behavioral change plan.

Analysis: For analyze the role of participation in this intervention, we developed our data collection tools based on our review. We gathered data from professionals' and patients' users, conducting observations of Medprev consultations. The results are analyzed in NVivo and presented to designers, professionals and patients at three separate deliberative workshops.

Findings and Conclusion: The results indicate that user participation in digital health interventions is complex and influenced by multiple factors. For example, the use of theoretical frameworks, behavioral change techniques (BCTs), gamification, and user-centered design principles in intervention design promote user engagement. All detailed results will be presented at the conference.

Exploring othering of harmful drinking contexts among increasing-and-higher-risk drinkers: A qualitative, arts-based focus group study

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Rationale and aims; UK drinking practices are diverse. It is possible that increasing-and-higher-risk drinkers create 'othering' narratives about what constitutes harmful drinking to normalise their own drinking practices. This can negatively impact problem recognition and behaviour change. This study explores drinking contexts (e.g. pub drinking with friends) and features of drinking contexts (e.g. drinking alone) perceived as being linked to or indicative of harmful drinking, and how othering shapes these perceptions.

Methods: Emergent-systematic focus group design with novel, arts-based methods. We held four focus groups with increasing-and-higher-risk drinkers (n=21). Participants were asked to discuss harmful drinking contexts and to draw contexts that they thought of as being harmful. To explore othering in more detail, the four focus groups were made up of people who reported: lone drinking, drinking with partner, social drinking in a home or social drinking out of the home.

Analysis; Transcripts were analysed using reflexive thematic analysis underpinned by critical realism. Participants drawings were analysed using content analysis guided by previous literature and emergent themes. This was an iterative process with input from multiple coders, to reduce individual bias.

Findings; Participants described a range of alcohol-related harms which were differentially linked with different drinking contexts. These were organised around four broad themes: Physical Harms, Mental Harms, Social Harms and Societal Harms. Physical Harms tended to be associated with social drinking out of the home (e.g. violence) or home drinking alone (e.g. liver disease). Mental Harms were also linked with lone drinking. Societal Harms focused on the proliferation of alcohol in social spaces and were discussed in the context of work drinks. Seven themes focused on features of drinking contexts thought of as being indicative of more harmful drinking: Alone, Home, Amount, Drink Type, When on Duty, Reason and Timing/Pattern. Finally, there was evidence of othering in both the thematic analysis of data and the content analysis of drawings, with participants differentiating their own drinking as non-harmful relative to contexts and features of contexts they viewed as harmful.

Conclusions; Drinking contexts and features of drinking contexts shape othering narratives which influence problem recognition amongst increasing-and-higher-risk drinkers.

Eco-anxiety as a catalyst for sustainable behaviour: A systematic review on mental health and resilience

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Rationale and aims: Eco-anxiety, increasingly acknowledged by mental health professionals and environmental advocates alike, represents a psychological response to climate change, manifesting as chronic worry and anxiety over environmental degradation. While it poses mental health risks, eco-anxiety is also recognised for its potential to catalyse pro-environmental behaviours, making it both a challenge and an opportunity. This systematic review synthesises findings from 40 studies to explore eco-anxiety's role as both a mental health concern and a driver for sustainable action. The primary aim is to identify strategies in education, community engagement, and policy advocacy that leverage eco-anxiety to foster resilience, promote positive behaviour change, and support long-term sustainability.

Methods: A comprehensive systematic review was conducted following PRISMA guidelines, focusing on studies published within the last decade on eco-anxiety, its psychological impacts, and its influence on pro-environmental behaviour. Studies were selected based on their relevance to both mental health and environmental sustainability, with thematic synthesis used to identify key areas for intervention. Specific focus was given to educational, community, and policy-based approaches shown to mitigate distress while encouraging sustainable actions.

Analysis: Thematic synthesis allowed us to categorise interventions based on their effectiveness in promoting sustainable behaviours among different demographics. We analysed studies by age groups and intervention types to highlight trends, particularly the high eco-anxiety levels among younger populations and the types of programs they respond to most positively.

Findings: Eco-anxiety is notably prevalent among younger populations, particularly those aged 18-34, who are more likely to experience psychological distress related to climate change. Programs integrating eco-anxiety resilience with pro-environmental messaging such as school-based eco-resilience workshops and community-led conservation projects have been effective in mobilising eco-anxiety for positive behaviour change. Community engagement and education interventions are particularly effective for increasing sustainable actions and commitment among this demographic.

Conclusions: Integrating eco-anxiety awareness and resilience-building programs into public policy and educational frameworks can enhance both mental health and sustainability goals. Collaboration between mental health and environmental sectors is needed for comprehensive eco-anxiety interventions that encourage sustainable actions. Further research should examine eco-anxiety across demographics and assess the long-term impact of these interventions.

Leveraging Traditional Knowledge Systems and Behavioral Interventions for Urban Heat Island Management: A Case Study of Delhi, India

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Rapid urbanisation and climate change amplify the urban challenges in terms of increased frequency and intensity of extreme weather events at a micro level. The effect of urban heat island (UHI) is an increasingly critical challenge to the metropolis of Delhi. The excessive use of air conditioning, frequent usage of personal vehicles and over-reliance on energy-intensive appliances increase the effect of UHI multifolds. This excessive demand needs innovative solutions that create a synergic between traditional knowledge systems and individual behavioural interventions in UHI management. The present research explores the urban cooling strategies focused on culturally rooted traditional knowledge systems. The objective of this studies to examine Indigenous knowledge systems such as urban greening techniques, sustainable architectural design, and climate resilience practices adapted to heat stress. This research will explore the intricate relationship between sociodemographic factors, lifestyle choices, social norms, cultural values and community engagement in East and North West Delhi, investigating the behavioural barriers and enablers in adopting urban cooling practices in the city's thermal landscape. This research employs a quantitative approach to collect primary data through a survey method of 564 respondents from east and southwest Delhi, which will help policy frameworks support the integration of traditional knowledge with modern urban planning solutions. This study also provides actionable recommendations for urban planners, policymakers and community-led- traditional practitioners for effective UHI management and making climate-resilient urban development.

Behavior Change Techniques in Pulmonary Rehabilitation Interventions for Chronic Obstructive Pulmonary Rehabilitation: A Systematic Review

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Rationale: Chronic obstructive pulmonary disease (COPD) is a leading cause of death worldwide and without proper management can lead to increased health care demand. Despite evidence recommending pulmonary rehabilitation (PR), there are many barriers to the referral, uptake and attendance of programmes. As a result, interventions have been developed around the world in attempt to address these barriers and enablers however, effectiveness and designs of these interventions vary.

Aim: This systematic review aimed to apply behaviour science frameworks to specify the behavioural components of interventions to improve PR referral, uptake and adherence for people with COPD, and explore those associated with improved outcomes.

Methods: Electronic database searches were conducted to identify relevant studies. Data on whose and which behaviours were targeted were extracted and summarised using Action, Actor, Context, Target, Time (AACTT) framework. Descriptions of intervention content were extracted verbatim and coded into behaviour change techniques using the Behaviour Change Technique Taxonomy (BCTO) and Behaviour Change Technique Taxonomy (BCTTv1). To assess BCT effectiveness, promise ratios were calculated.

Results: From 1,623 initial articles, 29 studies met inclusion criteria and were included. These studies exhibited diverse designs, targeting either patient or healthcare provider (HCP) behaviors across PR's referral, uptake, and adherence stages. Interventions included on average approx. 7 BCTs (Range: 2-16). The most frequent BCTs targeting PR across all interventions were: 'monitoring of behaviour by others without feedback' and 'add objects to the directly experienced environment'.

Discussion: This review underscores the need for strategic BCT selection, as certain techniques consistently proved effective in specific PR pathway stages. Findings suggest that interventions involving HCPs yield better outcomes. However, underreporting of control conditions and BCT components across studies limits definitive conclusions, emphasizing the need for standardized reporting. Future research should explore less-utilized BCTs to enhance PR engagement and consider tailored interventions to address PR barriers in diverse healthcare settings.

Conclusions: By applying behavioral frameworks, this review identifies promising BCTs that could optimize PR referral, uptake, and adherence. Enhanced PR programs incorporating these BCTs can contribute to improved patient outcomes and potentially reduce healthcare burdens associated with COPD.

Keywords: Systematic Review, Chronic Obstructive Pulmonary Disease, Pulmonary Rehabilitation, Interventions, Behaviour Change Techniques

Media-Based Approaches to Adolescent Health Awareness: Language, and Topic Preferences in Ghana's Interactive TV Drama Series

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Rationale and Aim: While mass media provides broad access to health messages, customizing media content through language, platform selection, and culturally relevant topics may enhance audience engagement and message retention. This study aims to examine how these factors affect adolescents' comprehension and recall of health information delivered through the You Only Live Once (YOLO) interactive TV Drama series.

Methods: A mixed-methods approach was used, incorporating data from surveys, focus groups, and social media analytics. The sample included 50 adolescents aged 15-25 from Accra and Tamale. Data on bilingual preferences (English mixed with local languages) and social media engagement metrics (e.g., 2,000–8,000) views per post on Instagram and Facebook) were analyzed to understand audience preferences for language, platform, and health topics.

Findings: The majority of participants (85% in Accra, 80% in Tamale) watched YOLO drama series on TV or social media (YouTube) , with 75% favoring a bilingual format for better comprehension and engagement. Key health topics retained included SRH, mental health, and malaria prevention, with storytelling elements enhancing message recall and relatability.

Conclusion: Bilingual, narrative-driven SBC media, accessible across social platforms, can enhance health awareness and retention among adolescents. This study suggests that blending language formats with digital platforms can maximize reach and resonance, especially when focusing on culturally relevant health topics.

Keywords: Adolescent health, social behavior change, bilingual messaging, media engagement, You Only Live Once (YOLO) TV drama series, Ghana

Identifying Psychosocial Needs of Medical Trainees Through Qualitative Analysis and Literature-Based Insights

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Rationale and Aims: This exploratory qualitative study aims to investigate the psychosocial needs of medical trainees and early-career physicians (up to 5 years of professional experience). The research seeks to understand their internship experiences, primary challenges, unmet needs, and prevailing concerns, with the goal of providing critical insights for the development of effective psychological coaching interventions. This study is informed by a systematic literature review conducted over the past 20 years, examining the psychological interventions targeting medical students and physicians to identify key concepts and existing research gaps.

Methods: The study will employ focus groups comprising 30 participants, divided into two cohorts: 15 medical trainees and 15 physicians with up to 5 years of experience. Recruitment will be facilitated through the association of medical interns from Lisbon's medical schools. A structured focus group guide, designed and validated based on the intervention planning framework outlined by Kinalski et al. (2017), will be used to explore topics related to self-care practices, psychosomatic symptoms, social and emotional competencies, quality of life, and occupational stress.

Data Analysis: The qualitative data will be analyzed using thematic analysis, supported by the MAXQDA software. This approach will enable the identification of recurring patterns and significant insights regarding the participants' challenges and psychosocial needs. Exclusion criteria will apply to individuals reporting severe emotional distress or significant mental health issues as indicated by preliminary questionnaires.

Findings: It is anticipated that the data analysis will highlight specific challenges such as high levels of stress and anxiety, difficulties in maintaining self-care, and gaps in emotional competencies. Additional themes are expected to include participants' perceptions of institutional support and barriers to accessing mental health resources. These findings will provide a comprehensive understanding of priority areas for intervention.

Conclusions: Understanding the psychosocial needs of this population, informed by empirical evidence and systematic review insights, will facilitate the adaptation and development of more effective psychological coaching programs. These results will establish a solid foundation for the construction of a coaching program, focused on the implementation and evaluation of specific interventions.

Connectedness with Nature and Primary Emotions as Predictors of Pro-Environmental Behaviors

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Rationale and aims: Affective neuroscience offers a model for understanding behavioral changes. In a context of environmental crisis, the promotion of pro-environmental behaviors aimed at preventing environmental damage, understanding the factors associated with behaviors is highly relevant. This study analyzed the mediating effect of primary emotions on the effect of connection to nature on pro-environmental behaviors.

Methods: A sample of Portuguese adults was recruited for this study, Participants aged 18 or older, were selected for this study. A convenience sampling technique was used to collect the data. Data was collected through a survey that included self-reported questionnaires, inserted in an online platform using the Jotform. Participants filled out a questionnaire package containing questions concerning Connectedness with Nature, Pro-Environmental Behaviors, Primary Emotional Systems, and sociodemographic variables.

Analysis: The test of serial mediation hypothesis was conducted using a multiple step mediation methodology with a bootstrapped confidence interval for indirect effects (Hayes, 2013). The test of serial mediation hypothesis was conducted using a multiple step mediation methodology with a bootstrapped confidence interval for indirect effects (Hayes, 2013). Specifically, a model was tested in which: (a) Connectedness with Nature was directly linked to pro-environmental behaviors; Connectedness with Nature was indirectly linked to pro-environmental behaviors through Primary Emotional Systems.

Findings: Higher levels of Connectedness with Nature was directly linked to higher levels of pro-environmental behaviors. Higher levels of Higher levels of Connectedness with Nature were indirectly linked to higher levels of pro-environmental behaviors through higher levels of CARE and SEEKING Primary Emotional Systems. It was also observed that higher levels of FEAR and PANIC/LOSS were associated with lower levels of pro-environemental behaviors.

Conclusions: These results highlight the relevance of Connectedness with nature and the influence of primary emotions as factors involved in the behavioral changes of individuals in the context of climate change and in the promotion of pro-environmental behaviors.

UNLOCKING THE POWER OF VALUES AND ENVIRONMENTAL IDENTITY TO DRIVE SUSTAINABLE BEHAVIOURS

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Rationale and aims: The present study investigates the role of values and identity as stable predictors of pro-environmental behaviour compared to attitudes that explain specific actions. Drawing on the Theory of Planned Behaviour, the research explores how identity integrates values to influence behaviour across different contexts.

Methods: The study analysed data within the Bulgarian socio-cultural context, with a sample of 551 participants. The participants' age ranged from 13 to 90 years (M = 27.38, SD = 13.34). There were 223 male participants, 312 female participants, and 16 participants who did not specify their gender. The research examined the relationship between values, environmental identity, and pro-environmental behaviours. We applied the Higher-Order-Value Scale (Lechner et al., 2022), which consists of 17 items designed to measure value orientations, the Environmental Identity Scale with 24 items (Clayton, 2003), and the 16-item scale for Pro-environmental Behaviours (Mateer, 2022). Analyses: Several mediation analyses were conducted to examine the indirect effect of environmental identity on the relationship between values and pro-environmental behaviour. By identifying the mediating role of environmental identity, the study sought to provide deeper insights into the underlying mechanisms that drive sustainable behaviour.

Findings: Environmental identity strongly predicts pro-environmental behaviour and mediates the influence of conservation, openness to change, and self-transcendence on pro-environmental behaviours such as eco-activism, organic food consumption, the use of eco-friendly products, and social media engagement. High-order values that reflect concern for the welfare of others and the environment, emphasize the importance of security and stability in society, and favour independence in thought and action are linked to pro-environmental behaviour.

Conclusions: The relationship between values and behaviour, mediated by environmental identity, underscores the empowering role of identity in translating values into actions. Environmental identity is a powerful tool for encouraging sustainable behaviours, and future research should focus on how identities develop and are maintained. The findings also support using identity-focused campaigns to empower individuals to make a significant impact on environmental sustainability.

Community Conversations as Catalysts for Improving Self-Efficacy: Promoting Childhood Vaccination in Urban Slums in India

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Rationale and Aims: Innovative health communication approaches are needed to close the gap in vaccination coverage between underserved and majority populations. Despite overall improvements in childhood vaccination rates in India, significant disparities remain—especially in densely populated urban slums, where overcrowding, overwhelmed frontline workers, and high migration rates compound the problem. This study investigated whether a WhatsApp-based chatbot, designed to model healthy behaviors and reinforce positive social norms around vaccination, could effectively tackle these barriers and improve childhood vaccination coverage.

Methods: The “Happy Baby Program” was a quasi-experimental intervention conducted in six slum areas in Varanasi, India. The intervention arm (“Vaccine Arm”; N=630) exclusively promoted vaccination, the second arm (“Wellness Arm”; N=646) promoted vaccination, breast-feeding, nutrition, and handwashing and the third (“Control am”; N=603) was the usual care control arm. Bi-weekly messages were delivered via WhatsApp-based chatbots for 11 weeks, prompting community conversations about general health topics and vaccination. Pre- and post-intervention longitudinal data were collected.

Analysis: Difference-in-difference tests were used to evaluate changes in conversations, and multiple regression analyses assessed whether increased conversations were associated with vaccination self-efficacy.

Findings: Improvements in conversations about general topics and vaccines were both greater in each of the two study arms as compared to the control arm (all Ps<.001). Changes in community conversations (for both topics) were marginally associated with changes in vaccination self-efficacy (P<.1), after controlling for demographic variables. Significant interactions also emerged between community conversations and the intervention arm, with conversations further boosting the intervention’s effect on self-efficacy.

Conclusions: The Happy Baby Program effectively used community conversations to support vaccination intentions and confidence among participants. Culturally tailored messaging can raise awareness, dispel myths, and enhance understanding of vaccine benefits, fostering trust and addressing knowledge and behavioral gaps that often hinder vaccination efforts in vulnerable communities. Future research should examine whether this approach can also foster constructive dialogue in more contentious public health areas, testing the scalability of community conversations as a behavioral change strategy in diverse settings. Whereas the field of marketing uses “buzz” to promote various products, use of this approach in public health is still rather limited.

Pilot behaviour change intervention to reduce unnecessary non-sterile glove use in operating theatres

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Rationale/Aims

Non-Sterile Gloves (NSGs) are frequently used unnecessarily in operating theatres (OT), leading to significant financial and environmental costs for the NHS, as well as potential safety risks. Our previous qualitative and quantitative research identified that this unnecessary usage by staff is habitual, driven by perception of risk to themselves and patient safety, social pressures, and lack of availability of alternatives. In this study we piloted a behavioural intervention to reduce unnecessary NSG use in OTs.

Methods

The design of the intervention was informed by 2 systematic reviews, and a subsequent ethnography of the OT environment, and a mixed methods study (semi-structured interviews and survey with OT staff), all based on the Theoretical Domains Framework. Co-design meetings were held with OT staff. The intervention includes Education, Training, Environmental Restructuring, and Modelling from the Behaviour Change Wheel. The intervention was piloted at 2 theatres of St Mary's hospital, London. Total pairs of NSGs used – and unnecessarily, instances of hand gelling and an account of facilities (gel, glove and bin availability) were documented for each procedure, twice a week during random half-day observation periods. Fourteen weeks of baseline observations (55 procedures) were followed by a phased implementation of intervention: 1. Additional gel dispensers and point of use posters alerting when NSGs are not needed (6 weeks, 17 procedures) 2. Short animation video (3 weeks, 10 procedures), and 3. Drop-in education/training sessions (ongoing, 4 weeks).

Findings

From 82 procedures observed, around 12 pairs of NSGs were used in total per procedure (IQR = 6.75) of which 8 pairs (67%) were unnecessary (IQR = 5.00). Within unnecessary NSG use, there were significant differences between baseline, phases 1 and phase 2, χ^2 (2) = 23.9, $p<.001$, with lowest unnecessary use in phase 2. Staff used 9 pairs unnecessarily per procedure at baseline (IQR = 5.50), 9 pairs in phase 1 (IQR = 3.00) and 4 pairs in phase 2 (IQR = 3.00).

Conclusions

The intervention, which was designed to address identified determinants, appears to have reduced unnecessary glove use during phase 2. We expect a further reduction following the final training phase of the intervention.

Uptake and effectiveness of an Instagram intervention on antimicrobial resistance among undergraduate students

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Background: With the large volume, diversity and amount of information shared on social media, this offers opportunities to deliver and disseminate health interventions through these platforms. Social media campaigns have been found to be effective in raising public awareness of health issues during the COVID-19 pandemic. Social media is however not widely used to raise awareness on antimicrobial prescribing and resistance.

Aim: To study the potential of Instagram as a tool for promoting awareness and understanding of critical health issues such as AMR among undergraduate students.

Methods: A 3-month Instagram-based educational intervention with Instagram posts with messages on antimicrobial resistance (AMR) was implemented from January to April 2024. The planning phase involved two co-design sessions and two key-informant interviews, which provided valuable insights and guidance for structuring the intervention. The messages on AMR were developed based on the planning phase to ensure relevance and effectiveness. To evaluate the impact of the intervention, a collective intelligence session was conducted 6 months post-intervention to measure the knowledge levels of the participants and get feedback about the intervention.

Results: A total of 36 messages were posted during the intervention with an engagement of 2.5% and a daily engagement of 4.6%. The average likes per post was 14. The co-design sessions and key informant interviews stressed on the themes of visual appeal and content clarity, simple and concise health information, preference for formal language and user interaction through quizzes on stories for the intervention.

Conclusions: Type of message and change in knowledge on AMR will be explored to inform future Instagram AMR awareness campaigns.

Climate and energy related norms and attitudes – a foundation for interventions

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Rationale and aims

The present study aims to assess existing attitudes, norms, knowledge or misconceptions around climate related issues and policies in developing Green Building Neighbourhoods within a H2020 project, PROBONO. For this purpose, the CERNA (Climate and Energy Related Norms and Attitudes) tool was created to examine citizens' knowledge, second-order beliefs, and the influence of social norms and political ideologies on climate perceptions. Pluralistic ignorance occurs when people share the same belief but wrongly assume others think differently, sustaining social norms that don't reflect the group's true feelings. This misconception hinders behaviour change and policy acceptance. Effective interventions however, such as leveraging social norms, can promote pro-environmental attitudes and behaviours. This tool aids in identifying social-psychological factors to ensure interventions succeed long-term.The CERNA survey offers a diagnostic approach to understanding the most effective way to promote environmental behaviours, and design targeted interventions. Practical plans for interventions designed based on the data gathered from our survey will be presented in the session titled “Climate and Energy Related Norms and Attitudes – interventions in practice” linked, but not interdependent to this presentation.

Methods

The CERNA assessment was created based on extensive literature review and in consideration of the project’s needs and intervention potential. The assessment was administered in the spring of 2024, gathering quantitative data from a representative sample from Madrid (N=400). We carried out statistical analysis using IBN SPSS software.

Findings

Madrid citizens show high concern about climate change (74%) but underestimate others' concern, especially within their country (estimating 48.7%). They also misjudge support for environmental policies, underestimating approval in close circles, country, and EU levels. Our results also show that environmental attitudes are most influenced by the perceived social norms within our close circles , and while political affiliations have a mild effect on climate concern, they do not influence the support for climate policies.

Conclusions

We tend to underestimate others' support, and interest in climate related matters, especially nationally. Personal circles significantly influence climate attitudes, guiding our future interventions to address these misconceptions and perceived social norms.

STRESS, SLEEP QUALITY AND SHIFT WORK IN THE MUNICIPAL POLICE

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Police work, in general, is characterized by stressful and demanding tasks, along with shift work that makes it difficult to balance work time with adequate sleep. The objective of this study was to assess occupational stress, sleep quality, and the potential influence of shift work in a sample of 50 municipal police officers through a cross-sectional study. To assess stress, the Spielberger Police Stress Survey was applied, determining the level (intensity) of perceived stress, the frequency of stressful events, and the stress index. To assess sleep quality, the Pittsburgh Sleep Quality Index (PSQI) questionnaire was used, determining the PSQI score. The municipal police officers in the sample exhibited moderate stress intensity (mean stress level 5.9 ± 2.3). However, certain stressors were identified as causing high stress in the sample such as Perceiving that the remuneration is inadequate (66.9), Lack of time for family (49.4), Negative press reports about the police (41.7), Criticism of police performance (42.3), Changing from day to night shifts (39.2), Lack of human resources (38.9), Lack of recognition for professional performance (35.5). The factors causing the most stress among the sample were mainly related to lack of support, followed by administrative and organizational pressure. Men and police officers working night shifts, or rotating day and night shifts, presented higher stress indices. Regarding sleep quality, the average PSQI score in the sample was 8.6 ± 3.9, with 78.6% of respondents showing poor sleep quality (PSQI > 5). The average number of hours slept was 5.2 ± 1.1 hours, which is below the recommended amount, and 16.7% of respondents take sleep medication at least once a week. Police officers working night shifts, or rotating day and night shifts, had a tendency toward higher PSQI scores compared to colleagues with stable day shifts. Among male respondents, a significant, though weak, association was found between stress levels and PSQI scores, showing that, as expected, higher stress is associated with poorer sleep quality among the men in the sample. Administrative and organizational pressure stressors seemed to have the closest relationship with sleep quality. It is important to note that these results do not allow for inferences about causality. In the overall sample, stress levels were associated only with component 7 of the PSQI – daytime dysfunction, meaning that higher stress is associated with daytime dysfunction related to sleep. Among males, there was also an association between stress levels and component 6 of the PSQI – use of sleep medication, indicating that men who experience more stress tend to use sleep medication more frequently. Thus, there is a need for targeted interventions in the studied work context, such as the reorganization of shift schedules, the implementation of health and wellness programs with an vii emphasis on promoting sleep hygiene and stress mitigation. This thesis proposes measures in these areas to help the Municipal Police find ways to promote the health, safety, and performance of their officers.

Switching to renewables: mapping the barriers and enablers for the corporate energy transition

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Rationale and aims: Research shows that global emissions must fall significantly in the coming years to limit planetary temperature rise to 1.5°C and that the most efficient way to achieve this is by transitioning to renewable sources of energy. Ultimately, this energy transition is a matter of behaviour change. The corporate energy transition is especially important because companies produce orders of magnitude greater emissions than individuals or households. Therefore, we aim to identify the barriers and enablers for companies switching from standard grid mix energy to 100% renewable energy, how these factors are interrelated, and which ones are most important?

Methods: System Effects is an online survey-based behavioural systems mapping methodology that has recently been applied to understand problematic environmental behaviours from a systems perspective and develop potential interventions. However, this methodology is yet to be used to investigate the corporate energy transition. This study will involve semi-structured qualitative interviews with around 20 individuals representing different companies. Following the format of a System Effects survey, participants will be prompted to think about the barriers and enablers, and their upstream causes, to switching to renewable energy.

Analysis: Analysis will follow the established System Effects mapping approach of qualitatively coding responses to generate an aggregated set of factors and connections. Using the System Effects software, this will be transformed into a systems map which will then be quantitatively analysed to rank the relative importance of factors based on the number and strength of their connections. Finally, the key barriers will be classified by COM-B type and potential interventions will be hypothesised using the Behaviour Change Wheel .

Findings: This study is ongoing and will produce a behavioural systems map showing the key factors, ranked according to systems metrics, and their connections. Secondly, we will produce a menu of potential interventions that aim to help companies and governments facilitate or expedite the corporate energy transition.

Conclusions: Ultimately, our research extends the literature on the corporate energy transition and provides converging evidence for System Effects mapping being a valid and reliable methodology that future behaviour change research in the field of sustainability can use.

New ways to promote physical activity behavior in individuals with chronic conditions following supervised rehabilitation

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Rationale and aim: The prevalence of people with chronic conditions (CC) is increasing, placing an emphasis on the importance of physical activity (PA) as prevention strategy. Despite the well-documented benefits of PA for people with CC, maintenance appears poor in the transition from supervised rehabilitation to everyday life. This necessitates innovative strategies to sustain PA behaviors post-rehabilitation. Therefore, we propose the ACTI-WAYS project, which aims to support integration of regular PA during this crucial phase. The primary goal is to develop an effective and sustainable transition-support intervention.

Methods: The project applies to the Medical Research Council (MRC) framework for designing and evaluating complex interventions. In an iterative process, the MRC binds the five work packages (WP) together to fulfill the project aim. Systematic reviews (WP1), cross-sectional studies, and qualitative interviews (WP2) will guide the development and feasibility phase (WP3). The intervention will be developed through a pragmatic co-design approach inspired by a three-stage process outlined by Hawkins: 1) Evidence reviews and stakeholder consultation, 2) Co-production, and 3) Prototyping. The intervention will be evaluated in a randomized controlled trial (RCT) (WP4). User involvement will guide processes throughout all phases and support the implementation process (WP5).

Findings: The systematic reviews (WP1) will provide an overview of barriers and facilitators to PA post-rehabilitation, and types of interventions promoting PA, including effectiveness across various CC. The cross-sectional studies and qualitative interviews (WP2) will identify key characteristics across CC that determine engagement in PA and support needs in everyday life, exploring the necessity for support mechanisms. The feasibility trial (WP3) will test the intervention's practicality, while the RCT (WP4) will measure its impact on PA maintenance. Preliminary findings suggest that tailored interventions, combining community-based and digital solutions, could effectively support long-term PA behaviors.

Conclusion: This project has the potential to transform the transition from rehabilitation to everyday life for people with CC, promoting sustained PA behaviors and well-being. If the transition-support intervention proves superior in the RCT, successful implementation could lead to improved health outcomes and reduced healthcare costs. The findings will inform future interventions and policies aimed at supporting PA maintenance in this population.

Assessing barriers to opioid-based pain management in Armenia: Review of access, policy, human rights implications

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Armenia has taken initial steps to reform its regulations on opioid prescriptions, simplify administrative requirements, increasing palliative care providers. However, critical gaps persist, including limited availability and distribution of opioids, territorial access issues, and illegal oversight by law enforcement. This research is needed to understand how these barriers affect patient care and recommend policy adjustments aligning with international standards. This abstract aims to assess the effectiveness of Armenia's policies on opioid access and identify areas where patients' rights to adequate pain management are compromised. This review used qualitative data from NGO monitoring reports, quantitative data from the state on opioid quotas, import data, and patient access metrics. The study analyzed the availability of pain relief medications, regulatory compliance among healthcare providers, territorial accessibility, and police interference in medical prescription processes. Key focus areas included regional disparities, provider awareness of standards, and patient experiences with pain management practices. While the availability of palliative care providers increased, the actual quantity of opioids imported was significantly below WHO's recommended levels. Armenia's need for opioid painkillers in 2023 was estimated at 24.7kg. The state approved a quota of 8.5kg, of which 2.1kg was imported, and 1.9kg was consumed. The amount of imported narcotics dropped by about 5.2% in 2023. The oral morphine was not imported in 2024, and its availability has decreased compared to prior years, forcing patients to rely on injectable morphine and causing additional suffering. Many patients face violations of their right to physical access to medication, and experience territorial access problems. In regions of Armenia, there're very few medical organizations or pharmacies with the necessary license to store and dispense drugs. There's a lack of awareness among doctors regarding on the latest standards in pain management, opioid prescription protocols, and legal regulations concerning opioid use. Police monitoring of prescriptions breaches privacy, causing further distrust among patients. This research underscores the need for policy adjustments to improve access to opioid medications, and palliative care services, protect patient rights. Key recommendations include aligning opioid import quotas with international standards, enhancing territorial accessibility, increasing healthcare provider training, and establishing legal protections against police interference.

Encouraging low carbon lifestyle in urban India

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Rationale and aims

As the world's third-largest emitter of greenhouse gases, India's efforts to pioneer low-carbon solutions while managing poverty will significantly affect global sustainability. Medium and high-income households disproportionately contribute to emissions. The Centre for Social and Behaviour Change,, Ashoka University, and MacArthur Foundation launched the Low Carbon Lifestyles Programme to understand barriers to, and facilitators of individual behaviour change across 4 domains: mobility,, food, energy, and waste disposal. It examined the role of emotional appeal, social influence, choice architecture, information, material incentives, and rules and regulations. Lastly, it developed behavioural pathways (i.e. key levers) to bring about change in the chosen domain.

Methods

We conducted a detailed diagnostic study which included literature review and primary research i.e. interviews with over 300 people in the following 7 areas Increasing adoption of energy efficient cooling devices Improving adoption of roof-top solar panels by households Increasing adoption of non-motorised transport Increasing shift from private to public transport Encouraging purchase of EVs by households Encouraging greener food choices Improving waste segregation in households

Findings

Our analysis across these domains of behaviour suggests encouraging a low carbon lifestyle requires more than informational or knowledge campaigns. 4 most promising strategies are Moving away from climate framing and reframing low-carbon choices in terms of health or financial benefit Changing social norms i.e. shift what is considered “normal” and expected behaviour within groups Well-structured incentives which reduce the pain of high upfront costs and improved price communication Simplification of processes and information

Conclusions

Too often behaviour change is difficult because we expect people to endure short-term pain for long-term gains, a strategy which is doomed to fail. This is usually done through provision of information, and with a paternalistic point of view - “if only they knew better”. Our work uncovers that other strategies may be more useful to bring about behaviour change, and often involves moving away from climate- framing, and instead appealing to other more proximate goals of individuals, be it health or financial. Policy makers would benefit from this view as they put in place programmes to encourage climate action.

Development of tailored self-management intervention for adolescents with asthma in China based on MOST-a protocol

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Asthma is the most prevalent chronic respiratory disease among adolescents in China, with a substantial and increasing number of cases. Research indicates that more than 20% of adolescents with asthma in China remain uncontrolled. Enhancing their self-management skills is critical for improving their prognosis. This study aims to develop a tailored intervention strategy for self-management in asthma adolescents. Firstly, leveraging the Capability, Opportunity, Motivation Behavior model in conjunction with the Theoretical Domains Framework, this project will explore the weights and pathways of influencing factors on self-management of asthma adolescents using a structural equation artificial neural network model. Subsequently, this project will develop multiple intervention modules based on the Behavior Change Wheel, incorporating intervention functions of training, education and persuasion, enablement, incentivization and modelling, and environmental restructuring. Following this, through a multiphase optimization strategy, this project will perform a pilot study to evaluate the effectiveness and feasibility of the intervention modules using a factorial experimental design. Finally, the self-management influencing factor diagnostic system and the optimized intervention modules are integrated into an intervention platform. Utilizing a stepped wedge cluster trial design, this project will conduct a multi-center study to evaluate and further refine the platform. This platform will formulate a workflow from behavioral diagnosis to intervention module matching, and finally generate tailored self-management action plans for each asthma adolescent. With advantages such as minimal medical personnel requirements and ease of scalability, the platform will improve the overall self-management ability of Chinese asthma adolescents.

Development of a personalized nutrition and wellbeing app integrating behavior change methodologies and expert-based recommendations

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During the PREVOLUTION project (R&D project by Eurecat), building on the Horizon 2020 project PREVENTOMICS, Eurecat has developed an innovative tool for personalized nutrition and wellbeing. The tool comprises a personalized nutrition recommender system based on an integrative algorithm of specific biomarkers (under patent protection) and uses BECOME, a recommendation system designed to facilitate behavior change, currently optimized by integrating behavior design methodologies and personalizing dietary recommendations according to the users' profile. The recommender system is accessible through an app that uses missions, scoring systems , and questionnaires and personalized recommendations to promote behaviour changes in nutrition and wellbeing. In collaboration with our multidisciplinary team, researchers from the Behavior Design Lab by the Open University of Catalonia designed a behavior survey based on the COM-B model (Capability, Opportunity, Motivation – Behavior). This survey includes a short 6-question self-report addressing different behaviour aspects to identify behavioral barriers preventing users from adhering to recommendations and improving their lifestyles. Based on the results, recommendations are tailored by metabolic group and COM-B component (already tagged by the experts), focusing on the behavior element with a lower score. For example, a user with high motivation and ability but low opportunity will receive recommendations that help create a more enabling environment for behavior change. In addition to integrating the COM-B model into the app, desk research on similar behavior-change tools was conducted to identify potential enhancements and commonly used interventions. Additionally, a "behavioral audit" will be carried out by UOC's behavior design lab experts at the end of 2024 to identify friction points and obstacles in the product interface. Improvements from these findings will be implemented, followed by a final validation with a sample of users.

Feeding Your Kids Foundation: How Early Lessons Led to Generalizable Complex Behavior Change Theory

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Feeding Your Kids Foundation: How Early Lessons Led to Generalizable Complex Behavior Change Theory In 2010, the Feeding Your Kids program was developed as a volunteer project for the Clinton Global Initiative with the goal of teaching parents how to feed their children healthier and have a healthy attitude toward food. The approach was 42-day behavioral change program delivered two messages per day, one AM and one PM, but with a rich and nuanced design based on a logic model developed in partnership with SRI International. Through grants of free advertising donated by Google Grants, the program reached families in 185 countries. The researchers were pleased with the feedback from users, but beyond just the direct impact, they saw that the program's results suggested a generalizable hypothesis about the techniques needed to succeed in behavior change when complex behavior chains are present.

Aim of the program:

- Make available at scale a program to teach parents how to feed their children healthier and have a healthy attitude toward food, at no cost to parents, delivered across a timeline sufficient for parents to digest and retain its lessons, in a way not available through the healthcare system and clinical settings.

How the program was developed:

- Focus groups with children and parents in the United States.
- Primary research on parents' perceptions of problems related to feeding.
- Comparative study of pediatric weight loss and nutrition programs with publicly available guidelines and parents' practices and perceptions.
- Developed framework, ideal flow, and logic model, with emphasis on failure points and how to recover from them.
- Segmented by meal and type of feeding experience.
- Incorporated feedback from parents outside the U.S. once program became available worldwide.

Results:

- Approximately 100,000 families found and participated in the program online.
- Parents on six continents and 185 countries took the program.
- Materials from the program were adapted by multiple other online programs, both commercial and non-profit.

Discussion:

- How the survey and responses from parents provided the basis for a framework of how to manage complex behavior chains.

From Awareness to Action: Transforming Climate Consciousness in Iraq with an Evidence-Based SBCC Campaign

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Iraq is facing an unprecedented climate crisis which is disproportionately impacting children and young people. An estimated 3 out of 5 children have no access to safe water and more than half of schools lack essential water. To address current challenges around climate change, environment, and water scarcity, MAGENTA collaborated with UNICEF to design and implement a nationwide social behaviour change communications (SBCC) campaign. The project's objectives were to influence behaviours related to environmental stressors, increase public consciousness, and encourage Iraqis to adopt simple and sustainable actions in their daily lives that can help address Iraq's pressing environmental problems.

To curate a data-driven and evidence-based campaign, MAGENTA conducted behavioural research across Iraq. This mixed-methods research explored people's knowledge, attitudes, and practices related to climate change, environment, and water scarcity and identified the critical areas the campaign should address. Based on these insights, MAGENTA designed and launched a cross-platform nationwide multimedia campaign on television, radio, and digital mediums. MAGENTA used a human-centred design approach which involved the active participation of Iraqi youth through co-design workshops.

The evaluation methodology for this study involved conducting baseline and endline surveys with a cross-sectional random sample of Iraqis. To delve deeper into the campaign's effectiveness beyond mere reach and exposure, and to establish a causal relationship between campaign engagement and individual cognition, we created a high-exposure group which was provided with periodic reminders to view the campaign's advertisements, and a control group that was not prompted to view the campaign. The following campaign impacts were observed:

Beliefs and self-responsibility: exposure to the campaign resulted in a stronger conviction regarding collective capacity to mitigate the impacts of climate.

Self-efficacy: there was a clear correlation between higher exposure to campaign messaging and a stronger perceived self-efficacy towards implementing environmentally friendly practices.

Intent and motivation: participants with higher exposure to the campaign felt more compelled and motivated to actively mitigate the effects of climate change compared to the control group.

Overall, the campaign was successful in shifting community attitudes towards climate change, environment, and water conservation, providing a strong, evidence-based framework for future campaigns addressing climate challenges.

Hacking the organization

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The future of sustainability depends on organisations, especially those for profit, changing their behaviours. The high level of burnout within Chief Sustainability Officers and the back pedalling of organisations from their commitments signals underlying issues that need addressing. In this presentation we will look through the lens of behavioural science at why, and what can be done differently. Questions we will answer include:

1. What motivates organisations to change, codifying the role of tribal dynamics and politics in their outcomes

2. Why appointing a Chief Sustainability Officer could be the worst thing you do

3. How to create conviction for Sustainability in corporations, using practical applications of behavioural science to overcome the barriers

If we do the same things, we will get the same outcomes. It is time to do something differently. The team at Pike Squared work with global for-profit organisations to shift their organisational behaviours, including the adoption of sustainable practices. Our behavioural science and field-informed approach quickly achieves insights that lead to the design of practical, easy to adopt tactics which leave a legacy. Pulling on our experience of navigating client board rooms to put sustainability back on the agenda, expect real life examples and the behavioural science that underpinned the science based tactics put in place.

Car journeys reduced using a GPS tracking app, incentives and messaging employing behaviour change techniques

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Rationale

Domestic transport in the UK is responsible for emitting 109 million tonnes of CO2 and transport is the largest contributor to greenhouse gas emissions. Over 300 local authorities have declared a climate emergency and are seeking ways to reduce single occupancy car use. Aim The COM B model of behaviour change asserts that people need the Capability, Opportunity and Motivation to change. This study hypothesised that small scale incentives and messages that employ behaviour change techniques, delivered via a free app, may reduce car driving behaviour among those who regularly drove 2 miles or less, a distance considered possible to walk or cycle for most people.

Method

This study used a free app called BetterPoints which records multi modal journeys using GPS. App users are incentivised to record walking, wheeling, running and public transport trips to earn points that can be exchanged for vouchers. A targeted campaign of enhanced rewards and messaging was designed and delivered across 9 local authority areas. Registered BetterPoints users who regularly recorded car journeys of less than 2 miles were then invited to complete a survey about barriers to changing their car driving behaviour. Those who had the capability and opportunity to change were included in the study Over an eight-week period between August and September 2023, participants could earn extra points for active and sustainable travel. Participants also received messages that employed the behaviour change techniques of goal setting and performance feedback. The frequency of short car journeys (under two miles) per day was measured and compared with the baseline.

Results

Overall, there was a 20% reduction in car journeys of less than 2 miles during the campaign versus the 4-week monitoring period. The number of car journeys continued to remain lower than baseline for two weeks after the rewards period had concluded.

Conclusion

App-delivered, small-scale incentives and messages that employ BCTs, show promise in encouraging modal shift. Future work should use more robust approaches to measure and assess behaviour change, such as a randomised controlled trial. Time series analysis and visualisation of car driving behaviour could inform the design of app features.

The role of media and communications in reducing smoking: insights into action

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Fresh and Balance is the established North East's integrated programme for reducing tobacco and alcohol harm - a unique programme in the UK. Our remit is to reduce smoking rates and the harm caused by alcohol using a multi-strand approach based on best international evidence. This includes mass media campaigns to raise awareness of the risks around tobacco and alcohol, the benefits of behaviour change, signposting to support and communicating the harm as commercial determinants of health. Smoking has killed more than 125,000 people in the North East since the year 2000. Fresh's ongoing "Smoking Survivors" campaign (2023-24) is part of a commitment to reduce smoking across our region, working with partners and real life smoking survivors. Numerous phases ran across TV, radio, outdoor and digital, generating national and regional news coverage, and advocacy work with "survivors" in Parliament campaigning for the UK Govt's Tobacco and Vapes Bill. Evaluation found 61% of smokers more motivated by quitting and 46% taking a quitting-related action. Nearly 500 adults in the North East die each year from alcohol-related cancers, but as few as 1 in 3 people know alcohol causes seven types of cancer. Balance's Alcohol is Toxic" campaign (2023-24) is based on extensive insight and takes a graphic and emotive approach framing alcohol as a Group One Carcinogen. 82% of people said it was important to have campaigns communicating risks, 44% were more motivated to take time off drinking, while 30% cut down how often they drink. People aware of cancer risk were more supportive of policies to reduce alcohol harm. Applying learnings over two decades, the session will outline how communications fits into the goals of vision setting, positive behaviour change and policy support. For smoking, campaigns have been a key driver for a 62% drop in smoking prevalence in the North East since 2005 – the largest in England. We will also look at how this approach has been tailored around alcohol. The session will include clips, take away tips around communications on behavioural change and advocacy, and explore the importance of the concepts of both "harm" and "hope" within communications.

Assessing the suitability of the Capacity, Opportunity, Motivation (COMB) model for a demand strategy

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Aims: We were tasked with creating a strategy for improving demand for healthcare in Nigeria which will inform priority investments of a donor organization. We set out to assess the suitability of the COMB framework for both problem diagnostics and intervention strategy design.

Methodology: We used the COMB model for diagnostics and problem-solving. First, we conducted desk review to identify the barriers to health seeking and service utilization, narrowed down the specific points of friction through a stakeholders' dialogue, then collected primary data to interrogate further the barriers using the COMB-Model. The barriers were synthesized into high level summaries and data insights which formed the basis for a co-creation session with stakeholders in the health eco-system, and internally with the strategy team. This led to the development of strategic insights, entry points, journey maps, recommendations and theory of change.

Results, Observations and Challenges: Due to its relative novelty, some study team members grappled with miscoding in the domains. This was detected and rectified by recoding of transcripts in the right domains. Generally, the domains of motivations and capability were easier to interpret and code than that of opportunity. There were some layers of overlap in some domains. we found a tendency for attribution bias as many respondents tended to attribute most demand problems to supply side, thereby clustering the opportunity domain. While we initially thought the model to be plug and play (problems versus solution) and prescriptive, we got the best use as a guidance to think of possible solution we could design.

Recommendations/Conclusions: Just as with many relatively new frameworks, all study team members must be adequately trained and immersed as wrong coding will derail the prescriptive guidance on using the framework to ideate possible solutions. Because of the wide variety of constructs tolerable under the opportunity domain, design researchers must be conscious of attribution error, and engage reflexivity to even out other potential biases. While the framework is useful as both analytical and design tool, more care must be exercised not to use it prescriptively but as a guidance for design.

Mapping behaviour and potential for intervention: combining the COM-B model and journey maps

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Responding to complex global challenges with a multidisciplinary approach is not unheard of. Diverse teams bring expertise and tools from a variety of disciplines, providing a holistic understanding of the issue at hand and solutions designed around their dimensionality. While it is common practice to blend our toolkits, what about the tools themselves? To support an international organisation's internal change process, we were asked to interview 85 people at 5 offices around the globe to understand how to foster equity and psychological safety in multicultural workplaces. Our human-centred designers used Journey Maps to visualise the physical and emotional experience of behaviours like reporting a microaggression in the workplace, plotting the "pain points" that may impact an individuals' willingness to do so. Meanwhile, our behavioural scientists used models like COM-B to understand when and why these behaviours occur and what factors encourage and discourage them. Journey maps provide insight into the more tangible barriers of going about a task, while a behavioural map focuses on the psychological barriers and biases by bringing in scientific principles. When used in tandem, these tools help us understand both invisible and visible pain points. Together, they can help us unpack the systems and structures that influence people's behaviour at each stage. The resulting "behavioural map" articulates the physical and psychological steps towards desired behaviour. The COM-B structure, used to code research insights to each stage of the journey, creates a heat map - highlighting where barriers and opportunities lie in concentration and the moments where interventions can have the most impact. The combination of Journey maps and COM-B models help to make behavioural insights both actionable and more visible - enabling organisations to foster change with a deep understanding of why people do what they do, and how systems can inadvertently encourage or discourage good behaviour.

Encouraging electric vehicle adoption by identifying the barriers of the prospective audience segments

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The UK government has ambitious goals to facilitate the transition to electric vehicles; setting 2035 the year by which all new vehicle products in Great Britain need to be zero-emission vehicles (ZEV). In line with this mandate, auto manufacturers are shifting their focus to producing and marketing electric vehicles. However, prospective customers have several reservations when it comes to purchasing electric vehicles. Our project aimed to uncover the main barriers prospective EV car purchasers had. We used panel data as a basis and conducted correspondence mapping and statistical clustering to identify the segments in terms of their concerns towards buying an electric vehicle (e.g. driving experience, safety, charging infrastructure, price etc.) also factoring in the extent of their concern. We identified five clusters that were unique in terms of their primary and secondary order concerns. We have also explored the other relevant characteristics of these segments including demographics, values and personality, attitudes, interests, digital behaviour, media consumption and driving-related behaviour to develop a comprehensive view of them. We then used these insights to work with a car manufacturer to craft strategies and messaging to market their EV range and increase the likelihood that the members of the segments will purchase electric cars. The related marketing campaign is ongoing and we expect to see results in Q1.

Beating the Heat: A regional heat-health campaign to influence behavioural change in Oxfordshire, UK

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Rationale: Heat-health impacts are largely preventable if populations, public services and infrastructure are informed and prepared. In the absence of adaptation and preparation, hot weather and heatwaves can be deadly and exacerbate underlying health conditions.

Methods: A desk review of current impacts of heat on residents, health and social services in Oxfordshire was undertaken. Based on the evidence identified, a heat-health strategy and campaign were implemented in 2024.

Findings: We identified adverse effects of hot weather on communities and services in Oxfordshire. In the summer of 2022, 65 excess deaths occurred in Oxfordshire during higher temperatures. There were estimated to be at least 51 care homes, 40 healthcare/GP facilities and 4 hospitals at higher risk of heat-related impacts due to location and infrastructure. Oxford University Hospitals reported the highest burden of overheating events across the Southeast region in 2022, ranking sixth in England with 85 events across four sites. During the September 2023 heatwave, ambulance demand across Oxfordshire increased by 8.6% (compared to the preceding 7 days). Patient acuity increased with higher numbers of category 1 and 2 calls, and a relative reduction in category 3 calls. Moreover, areas with higher levels of deprivation in Oxfordshire frequently experienced higher risks of extreme heat. A heat-health strategy was implemented in Oxfordshire in 2024, including a campaign over summer months and mobilisation of community resilience plans to improve longer-term adaptation to heat. In relation to the COM-B model for behavioural change, factors were identified with respect to i) capability (e.g. accounting for mental and physical state to adapt behaviours during hotter weather among younger children, those with frailty, and/or cognitive impairment), ii) opportunity (e.g., 'normalising' and increasing awareness of serious risks of heat) and iii) motivation (e.g. tailored messaging for specific higher-risk groups, as opposed to generic messaging).

Conclusions: In Oxfordshire, heat has a significant, yet often underestimated, impact on individuals, communities, and health and social care services. Interventions to mitigate this impact are likely to be intersectoral. This heat-health strategy is currently being evaluated, but it is understood that longer-term adaptation of built and natural environments are also recommended.

Media-Based SBCC Interventions To Improve Nutrition Behaviours

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Based on formative research conducted in select rural areas of Tajikistan, comprehensive media-driven social and behaviour change communication (SBCC) interventions were designed to enhance dietary practices and hygiene behaviours across targeted population segments. These interventions employed a content marketing strategy incorporating both awareness-building elements and specific call-to-action messages. These messages, framed through the Health Belief Model, serve as behavioural nudges aimed at fostering positive health actions. Content marketing is a strategic approach centred on fostering meaningful relationships between promotional content and its target audience. This strategy extends beyond the mere presentation of information to establish connections that resonate emotionally with the audience, ultimately encouraging engagement and alignment with the promoted values or behaviours. Although widely applied within commercial marketing, this approach has been adapted to support behaviour change initiatives in Tajikistan through both traditional and social media channels. The intervention featured a cooking show broadcast during evening prime-time on a top-rated national TV channel, carefully designed to engage a broad audience during peak viewing hours. The program incorporated various behaviour-change nudges, strategically integrated through specific communication techniques: (a) demonstration of positive behaviours, such as handwashing, as an essential part of the cooking process; (b) emphasis on the positive health effects of certain nutritious ingredients used throughout the show; (c) inclusion of public influencers as guest participants to enhance viewer relatability and credibility; and (d) integration of pop-up, call-to-action messages, crafted using the perceived benefits and barriers framework from the Health Belief Model, to reinforce positive health behaviours and encourage audience participation. Over the course of eight months, the show reached an audience of over 1 million television viewers and generated more than 2 million online views. A process monitoring initiative, conducted through phone surveys with randomly selected beneficiaries, revealed that nearly 30 percent of viewers could recall the messages and practices promoted in the show and reported adherence to these recommended practices.

Implementation of Cognition, Fatigue, and Mental Health Screening at a Canadian Multiple Sclerosis Centre: A Quality Improvement Initiative

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Background: Mental health concerns, cognitive impairment, and fatigue are prevalent among Canadians with multiple sclerosis (MS), yet many neurology clinics are not equipped to adequately address these concerns. In this quality improvement initiative, low-burden systems were implemented at an MS clinic with the aim of improving the identification of these hidden symptoms among patients with MS.

Methods: Self-report questionnaires assessing anxiety, depression, and fatigue were electronically administered to patients prior to clinic appointments. When moderate mental health symptoms were reported, clinicians were alerted by a best practice advisory and directed to provide the patient with a list of local low- and no-cost mental health services. An MS-sensitive cognitive task was also administered via a tablet upon check-in to patients meeting with the physician assistant. Data was collected from appointment notes over 10 clinic days pre- and post-implementation.

Results: From pre- to post-implementation, the proportion of patients who received formal mental health screening increased from 0% to 54.55%, and the proportion of patients with mental health concerns who were offered resources increased from 23.53% to 47.83%. The proportion of patients who received formal fatigue screening increased from 0% to 22.46%. The rate of cognitive testing in visits with the Physician Assistant increased from 33.33% to 85.11%.

Conclusions: This initiative improved cognitive, mental health, and fatigue screening and established a foundation for ongoing quality improvement initiatives to better meet best practice recommendations for comprehensive MS care.

Climate and Energy Related Norms and Attitudes – interventions in practice

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While global assessments are capturing support for climate action on a large scale, there is a need to assess the local context to foster behavioural changes which have a positive effect towards climate action. The H2020 PROBONO project is developing Green Building Neighbourhoods (GBN), a sustainable urban area designed to minimize environmental impact by integrating green buildings and behaviours in a net-zero neighbourhood. Creating sustainable behaviours while maintaining citizens' support is central to achieving the necessary carbon reductions in a GBN. For this purpose, the CERNA (Climate and Energy Related Norms and Attitudes) questionnaire was created to examine citizens' climate knowledge, social norms and second-order beliefs. The research behind this tool is presented in the abstract submitted under the title Climate and Energy Related Norms and Attitudes – a foundation for interventions. Here, we are presenting two ways the insights will be put into practice. First, CERNA results showed that citizens underestimate others' support for climate action. Therefore, we are targeting citizens with a social norm intervention to correct misconceptions about prevailing social norms. Set in the public space of the project's Living Labs, citizens will be informed about the actual, local level of support for climate actions, guide them to relevant individual actions and how to change habitual behaviours. The interactive intervention will be implemented in March 2025. Second, practical experience and research both show, that decision-makers are biased by underestimating local support for climate change actions. To improve decision-making in GBNs, CERNA analysis is integrated into the GBN digital twin's user interface, supporting a data-driven approach to planning and management. This integration will provide decision-makers such as urban developers and building managers with localized climate action data, allowing GBN actions to be informed by social-psychological insights. Research from the behavioural sciences provide data and insights to understand public behaviour and climate perception. The interventions presented in this abstract aim at bridging the gap between data collection and real-life solutions by prompting citizens and local decision-makers with insights lifting barriers to behavioural change, related to mis-perceptions of prevailing social norms.

Preventing Subculture Fanaticism and Promote Healthy Conflict Resolution among Adolescents: A Pilot Project in 100 Indonesian Youths

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Indonesia's rich diversity, with 1,340 ethnic groups and five recognized religions, is a unique asset but also a potential source of social tension. Adolescents and young adults are particularly susceptible to radicalization due to their developmental needs for belonging and identity formation, making them vulnerable to divisive ideologies and polarization. Prolonged exposure to societal tension can negatively impact their mental health, leading to anxiety, depression, and strained interpersonal relationships. To address this, it is essential for youth to develop skills for healthy relationships across differences. In late 2022, we launched Bersosial: Socio-emotional Learning for Youth, a pilot program designed to teach tolerance through mental health education. Grounded in the belief that tolerance is fostered through positive intrapersonal and interpersonal relationships, the program brought together 100 young participants (ages 18-22) from each province of Indonesia, ensuring the inclusion of ethnic and religious minorities. Over one month, participants engaged in lectures, group discussions, a large forum, and a final project. By the program's end, 70% had completed the full curriculum. Our findings indicate that prior to the program, 48% of participants struggled to accept differing opinions, and 17% opted for silence over expressing opposing views. Post-program, 82.6% reported improved understanding of conflict resolution, with 67% attributing this to enhanced emotional management skills. Participants also showed progress in managing emotions when faced with opposing perspectives. These outcomes underscore the impact of self-management and conflict resolution skills in diverse settings, forming the core of our Wellbeing Curriculum. By nurturing these abilities, we can empower youth to resist polarization, maintain mental wellness, and contribute to a harmonious society.

Promoting uptake of positive health behaviors: the role of community engagement for Health and Well-being

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Issue: In the northern parts of Ghana, efforts have been made by Ghana Health Service and partners using diverse multi-sectorial approaches to empower communities' uptake positive behaviors under the CHPS concept yet the process have been slow. To address these parities, the community engagement for health and well-being (CE4HW) program was rolled out across 572 Community-based Health Planning and Services (CHPS) zones across in districts under the USAID Ghana Accelerating Social and Behavior Change Activity.

Description: The CE4HW is a community-led program that models the CHPS concept of Ghana Heath Service. It leverages participatory community engagement, participation and mobilization, to build local capacity and mobilize Community Health Management Committees (CHMCs) through Community Health Officers, to facilitate data driven participatory health needs assessment and prioritization to develop community health action plans (CHAPs) that are context aware, to address community's health determinants.

Lessons learned: Strengthened linkages between community structures and the health systems, create a sustainable structure where communities actively engage with and benefit from health services. 1,815 health staff and 8,090 CHMCs members were trained with 2,872 CHAPs developed from Q4 2022 to Q2 2024. 8,350 community level activities reaching 567,913 community members were conducted, with ICT interventions reaching 6,200 audiences. These activities led to observed outcomes including service expansion and restructuring, increased community participation in health planning, linkages to care, reinforcing CHPS across sites, strengthened community action and resource mobilization for creating supportive environments for improved health.

Next steps: there is the intrinsic need to deepen interactions between community level structure and health systems to improve and sustain gains.

Key words: demand generation participatory health needs assessment, community engagement, Community health management committees.

Effective Community Engagement Promotes Positive Health Behaviors uptake; Lessons from Covid-19 Pandemic :Ashaiman Municipality, Ghana

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Issue: The outbreak of the COVID-19 pandemic posed significant challenges such as fear of severe outbreaks especially in cosmopolitan and densely populated areas like the Ashaiman Municipality in Ghana. Ashaiman Municipality is 5th densely populated city in Ghana of about 226,139 populace. To address this, Identified and mapped stakeholders and creation of registers linked with languages spoken diverse community groups within Ashaiman Municipality, Training Community Advocates, and Conducting survey on the uptake of the COVID-19 preventive protocol (including vaccination) .

Description: mapped diverse community groups linked up community groups and leaders (local leaders, community and faith-based organizations, community groups, health facility committees, individuals and other key stakeholders.) and with languages, spoken; trained key community influencers from the various groups to serve as advocates, enabling effective community engagement and risk communication across various cultural and linguistic groups. Thereafter, carried out surveys to ascertain communities' perceptions on uptake of the positive behaviors, utilizing findings to inform and tailor health interventions within the Ashaiman municipality.

Lessons learned: Strengthened linkages between community structures and the health systems create a sustainable structure where communities actively engage with, support health service with community mobilized resources and benefit from health services. Despite the high population density, Ashaiman Municipality recorded the fourth-lowest case count in the Greater Accra Region in 2022 emphasizing the effectiveness of tailored risk communication and effective community engagement strategies in mitigating the spread of the virus.

Next steps: The approach underscores the importance of inclusive risk communication strategies and effective community engagement in pandemic responses, aligning previous community engagement experience with current COVID-19 community-based strategy recommendations highlights how communities can play important and active roles in prevention and control.

Key words: community engagement, Community influencers, community advocates

Laughter - small habits, big impact on healthy and sustainable lifestyle

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Rationale and aims: Laughter, a simple yet profound human behavior, has been increasingly recognized for its significant impact on health and well-being. By cultivating a laughter-rich lifestyle, individuals can experience significant improvements in their physical and mental health, leading to a more fulfilling and sustainable existence. This research delves into the multifaceted benefits of laughter, exploring its physiological, psychological, and social implications. This communication aims to identify the benefits for health, health promotion, well-being, and healthy lifestyle of using laughter activities and practices.

Methods: A narrative review of the literature of the past 10 years with clearly defined article screening criteria for integration, which included an assessment based on the abstract, publication, and relevance. The lived experience of the authors in the area of health and wellness coaching and gelotology is of great value in review analysis.

Findings: The neurobiological mechanisms underlying laughter, reveals its capacity to reduce stress hormones, boost the immune system, and enhance overall well-being. The psychological advantages of laughter, include the ability to alleviate anxiety, depression, and negative emotions. Laughter promotes positive emotions, fosters resilience, and improves cognitive function. The social dimension of laughter explored, highlight its role in strengthening social bonds, building trust, and fostering a sense of community. In the realm of self-regulation, laughter emerges as a powerful tool for emotional regulation and self-control. By inducing positive emotions, laughter enhances individuals' ability to manage stress and cope with adversity. Additionally, laughter fosters a sense of self-efficacy, empowering individuals to take control of their lives and pursue their goals. To encourage the incorporation of laughter into daily life, some research explores, uses and proposes practical strategies and habits in relation to behaviour change, setting manageable goals that people can adhere to – goals that can have a positive impact on health, function and quality of life.

Conclusions: The analysis underscores the transformative power of laughter, highlighting the importance of its benefits and making it an integral part of their daily routine. Laughter, often underestimated as a mere emotional response, emerges as a powerful tool in fostering a healthy and sustainable lifestyle.