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ABSTRACTS

Abstract Anne H Berman – incoming ISBM president

Irmela Florin lecture at Opening ceremony

Title: Lowering the threshold for access to evidence-based care: Focus on addiction and mental health

Healthy behavior change among individuals with addictive behaviors and mental health issues can take place in a large variety of ways. It is well known that proportionately few individuals seek formal treatment, to a large part due to stigma and lack of treatment access. While unassisted recovery from addictive behaviors is common, mental health issues often persist through the life course. The volume of research on digital interventions for both these problems is rapidly increasing. In this presentation I will address problematic use of alcohol, drugs and gambling, presenting meta-analytic data on treatment-assisted behavior change and findings from my own research on a stepped care model of digital intervention for problematic alcohol use. I will also describe ongoing work to address addiction and mental health issues among university students. Turning to the concept of recovery from addictive behaviors and mental health issues, I will briefly review recent research and reflect on the possible role of digital interventions in facilitating individual recovery. In conclusion, I will suggest meaningful research questions to go forward with. The presentation should increase knowledge about digital interventions for addictive behaviors and mental health issues and contribute to understanding of what the role of the digital intervention in recovery pathways might be.

Effect of transcutaneous vagus nerve stimulation on stress-reactive neuroendocrine measures in a sample of persons with temporal lobe epilepsy

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Background/purpose: Dysregulations in the activity of the stress-reactive hypothalamic pituitary adrenal (HPA) axis and autonomic nervous system (ANS) have been found to be associated with adverse disease outcomes in persons with epilepsy. We were interested in the acute effect of transcutaneous vagus nerve stimulation (tVNS) on salivary cortisol (sCort, a measure of HPA axis activity) and salivary alpha amylase (sAA, a measure of ANS activity) in a sample of persons with temporal lobe epilepsy (TLE).

Methods: Participants took part in two five-hour laboratory sessions in randomized order (tVNS vs. sham stimulation). They completed questionnaires, medical history, and a number of neuropsychological tests. Saliva samples and subjective stress levels were measured at 5 time points each session (before+after stimulation, as well as 3 time points every hour in between). Data were analyzed using repeated measures ANOVA.

Results: Twenty persons with TLE (age 44±11years, 13 women, 12 with left TLE) were enrolled in the study. There was a significant time*condition effect on sCort (F(2.38, 38.15)=6.50, p=.002, partial η^2=0.29), which was based on a dampened sCort decrease during tVNS. Furthermore, sAA levels were lower in the tVNS as compared to the sham condition at the last measurement time point (T(19)=2.26, p=.035, d=0.51). There was no difference in overall sCort or sAA levels (ps>.45) nor in subjective stress levels between conditions (p=.659; time*condition p=.845).

Conclusions/implications: tVNS shows promise in influencing the regulation of stress-reactive neuroendocrine systems (namely HPA axis and ANS) in epilepsy. It could therefore potentially reverse adverse effects of these systems' dysregulations.

The effects of knowledge, attitude, and subjective norms on intention to obtain HPV vaccine: A longitudinal study

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Background: There is a dearth of studies examining the HPV vaccine uptake rate in Indonesia, even though cervical cancer is one of the highly prevalent and the vaccine uptake rate is relatively low. The HPV vaccine is related to first-time sexual engagement. However, sexual activities are not openly discussed in Indonesia. This longitudinal study aimed to evaluate the effects of HPV-related knowledge, attitude and subjective norms on intention (proxy as future behaviour) to obtain the HPV vaccine.

Methods: One hundred and twenty-four participants (25 males; mean age = 21.2, SD = 2.15) were recruited online in this longitudinal study; with approximately a six month gap between T1 and T2. A 14-item questionnaire assessed attitude (7 items), subjective norms (4 items), and intention (3 items). The instrument to assess HPV-related knowledge (32 items) was a combined version of Chiang et al. (2016) and Marlow et al. (2016). A higher score denoted a more positive view or being more knowledgeable. Multiple regression analyses were used.

Results: At T1, the model was significant in predicting intention (R2= 0.63, p<0.01), as well as the three predictors: subjective norm (β=0.61, p<0.01), attitude (β=0.27, p<0.01), and knowledge (β=0.18, p=0.05). At T2, subjective norm (β=0.32, p<0.01) and attitude (β=0.26, p=0.05) from T1 were significant in predicting intention (R2= 0.26, p<0.01).

Conclusions and implications: Subjective norms and attitude were significant predictors for intention at the initial intake and six months later. Interventions targeting subjective norms and attitudes are recommended to increase intentions in obtaining the HPV vaccine.

The Key Characteristics of Social Media Use Associated with Positive Physical Activity, Diet and Wellbeing Outcomes: An Exploratory Study

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Background: Systematic reviews on social media interventions for physical activity, diet and wellbeing have been published, but none have identified the characteristics of social media use that are associated with positive physical activity, diet and wellbeing outcomes. The study aim is to investigate the types of health-related social media content accessed and used to inform behaviours related to physical activity, diet and quality of life (QoL).
Methods: Data were collected during the COVID-19 lockdown period of 2020, amidst reports of changes to social media use and lifestyle behaviours. Data were generated from a mixed methods exploratory study which included: (i) an online survey (n=786, Mage=45, Range=16-88 years, Females=69%) and (ii) 20 purposive focus groups (n=69, M age=53, Range=21–85 years, Female n=68%). This paper reports descriptive and thematic analysis.
Results: Most participants (72%) reported social media use increased, over half (55%) reported using health-related social media content, and around a third (35%) reported increases in physical activity levels, diet quality and QoL. Health-related social media content was predominantly accessed from celebrities/influencers and national health organisations. Content was used to inform behaviours when it was considered accessible, relevant and trustworthy. Contextual factors that influenced health-related social media use were: home working, social isolation, and physical activity levels prior to the lockdown period.
Conclusions/Implications: Social media use can improve physical activity levels, diet quality and experiences of QoL for diverse groups. The development of effective health-related interventions can be enhanced through social media by addressing the key characteristics of: accessibility, relevance, credibility and social connections.

The nocebo effect as an aetiopathogenetic factor of Idiopathic Environmental Intolerance Attributed to Electromagnetic Fields (iei-emf)

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Background: The exact causes of Idiopathic Environmental Intolerance Attributed to Electromagnetic Fields IEI-EMF), i.e., the experience of somatic symptoms attributed to low-level electromagnetic fields, are still unknown. This study aimed to test whether a nocebo effect in somatic symptom perception can be experimentally induced and is reproducible after one week. We further tested whether potential nocebo effects would be related to characteristic psychophysiological alterations in sympathetic nervous system activity and whether interoceptive accuracy (IAcc) represents a potential moderator.
Methods: People from the general population were instructed that electromagnetic exposure can enhance somatosensory perception. They participated in two cued exposure experiments with tactile stimulation and sham WiFi exposure in 50 % of the trials on two sessions, one week apart (session 1: N = 65, session 2: N = 63). Before session 1, participants watched either a television report on adverse health effects of EMF or a neutral report. IAcc was assessed with the heartbeat detection paradigm.
Results: Evidence for a nocebo effect (i.e., increased intensity and aversiveness ratings) during sham WiFi exposure was observed in both sessions. Skin conductance in response to sham WiFi exposure was increased, as well. IAcc was significantly associated with the nocebo effect, depending on stimulus intensity. Contrary to previous findings, no difference emerged between the health-related EMF and the neutral television report.
Conclusions and Implications: Based on negative instructions, somatic perception and physiological responding can be altered. This affirms the assumption that IEI-EMF could be due to nocebo effects.

The influence of unhealthy behaviours on early exit from paid employment among workers with a chronic disease: a prospective study using the Lifelines cohort

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Background: This study examined the risk of unhealthy behaviours and the additive effects of multiple unhealthy behaviours on exit from paid employment among workers with a chronic disease and investigated effect modification by gender and educational level.
Methods: Data from the Lifelines cohort was enriched with registry data from Statistics Netherlands with up to 12 years follow-up. Workers with a chronic disease were selected (n=11,467). Unhealthy behaviours included physical inactivity, smoking, unhealthy diet, high alcohol intake, and obesity. Exit routes from paid employment were unemployment, disability benefits, early retirement, and economic inactivity. The influence of unhealthy behaviour on exit from paid employment was examined using Fine & Gray proportional subdistribution hazards survival analyses.
Results: Smoking (SHR: 1.24, 95% CI: 1.12; 1.38), low fruit intake (1.12, 95% CI: 1.01; 1.24), and low vegetable intake (1.22, 95% CI: 1.10; 1.37) increased the risk of unemployment. Smoking (1.22, 95% CI: 1.01; 1.48), low fruit intake (1.26, 95% CI: 1.06; 1.51), and obesity (1.45, 95% CI: 1.22; 1.74) increased the risk of disability benefits. High alcohol intake the risk of early retirement (1.29, 95% CI: 1.05; 1.59). Having multiple unhealthy behaviours increased the risk of unemployment and of receiving disability (1.58, 95% CI: 1.27; 1.96 and 1.97, 95% CI: 1.12; 3.48). No consistent effect modification for gender or educational level was found.
Conclusions/implications: Unhealthy behaviours increased the risk to exit paid employment involuntarily through unemployment and disability benefits. Health promotion for workers with chronic diseases may help to extend their working life.

School-based prevention for depression, anxiety, and substance use: effectiveness and long-term follow-up of the climate schools combined study

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Background: Substance use, anxiety and depressive disorders are the leading causes of disability among young people globally. Despite comorbidity of these disorders, no existing online prevention programs concurrently target these issues. The Climate Schools Combined (CSC) Study is the first trial testing the effectiveness of an online prevention model targeting anxiety, depression and substance use issues among adolescents. This presentation will outline outcomes of the CSC study and discuss retention strategies to follow-up students over 7 years into young adulthood.

Methods: A four-arm cluster RCT involving 6386 students from 71 schools was conducted from 2014-2016. Schools were randomised to one of the following conditions; 1) 'Control,' 2) 'Climate Schools-Substance Use,' 3) 'Climate Schools–Mental Health,' or 4) the 'CSC' intervention. From 2018 to July 2021, 5,477 participants have been followed-up until 21 years of age.

Results: Compared to Controls, at 30-months post-baseline the CSC group reported reduced odds in drinking alcohol (OR = 0.25, 95% CI: 0.12, 0.51, p = <0.001), binge drinking (OR = 0.15, 95% CI: 0.04, 0.58, p = 0.006), and reduced increases in anxiety symptoms (SMD = -0.12, 95% CI: -0.22, -0.01, p = 0.029). No difference was found in depression symptoms. The success rates of the participant retention methods will be discussed.

Conclusions: For the first time, there is evidence of the effectiveness of a universal school-based preventive intervention concurrently targeting substance use, depression and anxiety. Retaining young adult participants can be facilitated by novel methods such as Facebook.

Involving children in creating a healthy environment in a low-SEP neighborhood: a Participatory Action Research (PAR) project.

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Background/purpose: To ensure that health behavior interventions for children living in low- socioeconomic positions (SEP) neighborhoods are in line with children's wishes and needs, participation of children in the development, implementation, and evaluation is crucial.

Methods: In this paper, we show how children living in three low-SEP neighborhoods can be involved in a Participatory Action Research (PAR) project and what influences this participation process.

Results: Photovoice provided comprehensive information from the children's perspectives. With the help of the community workers, the children identified feasible actions and implemented them.

Conclusions/Implications: This paper shows that it is possible to involve children from low SEP neighborhoods in a meaningful way. It is important to constantly discuss the process with participants, start with a concrete question or problem and adapt the project to the local context and skills of participants.

Delineating Sociodemographic, Medical and Quality of Life Factors Associated with Psychological Distress in Individuals with Endometriosis

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Background/purpose: Anxiety and depression are highly prevalent in the endometriosis population. This distress has been associated with pain, but little is known about how psychosocial quality of life (QoL) domains, such as social functioning, perceived social support and self-image contribute to this distress. This study aimed to delineate whether these psychosocial domains of QoL contribute to distress in endometriosis populations.

Methods: Individuals living with endometriosis (n=584) reported on medical and demographic factors, psychological distress (DASS21), and quality of life (EHP-30 and SF36v2). Linear regression analyzes explored the relationship between QoL domains and depression, anxiety and stress.

Results: Moderate to severe distress was evident in approximately half the participants [depression (54.07%), anxiety (46.11%), stress (46.77%)]. QoL domains accounted for the most variance in distress. Perceived social support, social functioning, and self-image were independently associated with all distress outcomes. Pain was only associated with anxiety.

Conclusions and implications: These findings suggest that psychosocial factors may be key factors underlying psychological distress in the endometriosis population. There is a need for interventions targeting psychological distress in this population that focus on the broader impact of endometriosis beyond pain and physical symptomatology.

The association between nature-based early childhood education and children's physical activity levels and motor competence: a mixed-methods systematic review

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Background/purpose: To systematically review and synthesise global evidence on associations between nature-based early childhood education (ECE) and children's physical activity (PA) and motor competence (MC).

Methods: A literature search including nine databases and grey literature was conducted in August 2020. Studies were eligible if a) children were aged 2-7 years old and attending centre-based ECE, b) ECE settings integrated nature, and c) they assessed physical outcomes at a child level. Two reviewers independently screened full-text articles and assessed study quality. Data extraction was completed by one reviewer and checked by another. Synthesis was conducted using effect direction (quantitative) and thematic analysis (qualitative).

Results: 1,370 full text articles were screened and 33 unique (25 quantitative; 8 qualitative) studies were eligible. Of the quantitative studies, 20 studies assessed PA, (4,961 children) and 6 assessed MC (523 children). Studies were of controlled (n=5) and uncontrolled (n=2) before/after, and cross-sectional design (n=18). Findings indicated inconsistent associations between nature-based ECE and children's sedentary time, moderate-to-vigorous PA (MVPA) and object control skills (n=2 studies each). A positive association was found for balance whereas there was a negative association on speed and agility (n=3 studies each). Positive associations were found between specific natural elements (e.g. vegetation) and lower sedentary time (n=3), and higher MVPA (n=6) and total PA (n=4). From the qualitative analysis (248 children), most studies indicated that nature-based ECE affords higher intensity PA and risky play.

Conclusions: More high-quality studies are needed to understand the impact of nature-based ECE on children's PA and MC.

A contingency-based progressive delay for smoking cessation

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Background/purpose: Cigarette smoking remains the leading cause of preventable premature death in the United States with an estimate of 480,000 people dying each year due to preventable smoking-related deaths. Literature presents a host of treatments and methods, including prescription medication and over-the-counter agonists. These options are often costly to access and can cause side effects. The science of behavior has offered a limited study of the problem.

Methods: This is a multiple baseline study with four participants. Participants smoking habits were measured in baseline to determine the number of cigarettes smoked per day and the number of minutes between cigarettes smoked. In the intervention phase, participants were asked to engage in activities and consume foods while they waited progressively longer intervals between identifying that they wanted to smoke a cigarette and lighting it.

Results: The results indicated that the CBPD technology was effective in helping all four study participants smoke fewer cigarettes per day, wait longer periods of time between smoking, and wait progressively longer periods of time between the urge to smoke and lighting a cigarette.

Conclusions and implication: The CBPD technology is a promising technology to help cigarette smokers quit smoking. The data recorded in the 8 week study indicate the a behavioral approach should be considered as part of a cessation program. This initial study should be extended to include applying the CBPD technology in conjunction with OTC and prescription cessation programs to explore the ability to achieve great success rates for smoking cessation with less recidivism.

Enrolled in a weight loss intervention during COVID-19: What can we learn?

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Background/purpose: COVID-19 lockdowns have increased unhealthy habits across populations. Yet, little is known about COVID-19 implications on people enrolled in lifestyle interventions. We examined how people with overweight and prediabetes or obesity coped with COVID-19 in daily life while enrolled in a weight loss intervention.

Methods: Fifteen participants enrolled in a time-restricted eating intervention were interviewed about their experiences with the intervention and COVID-19 in daily life. Interviews were conducted by phone or face-to-face with safe social distance. The interview guide was semi-structured, and data analysis was inspired by an explorative thematic analysis approach.

Results: Six participants did not report significant COVID-19 implications on daily life. For the remaining nine participants, COVID-19 was intrusive to daily life structure. Four participants were not able to adhere to the intervention, while five participants were able to adhere to it most days. However, eating became unhealthier and almost all participants exercised less.

Conclusions and implications: Findings emphasise that weight loss interventions should be designed with a greater focus on daily life structure, including directions for organising eating and exercise activities to the COVID-19 situation by using some of the numerous developed virtual opportunities. It is vital that the responsibility is not solely directed towards the individual as our results indicate difficulties in taking individual healthful choices. In this light, policy makers and governments need to take a broader public health responsibility by guiding and supporting people in adjusting daily life to COVID-19 and recommending strategies encouraging healthier activities to minimise further health consequences.

Negative changes in alcohol and cannabis use among active-duty military personnel after the onset of COVID-19: Associations with mental health indicators

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Background/purpose: The COVID-19 pandemic has changed daily routines, impacted health behaviours, and affected well-being. This study examines the relationship between mental health issues and negative changes in alcohol and cannabis use among military personnel, after the onset of COVID-19.

Methods: The Canadian Defence Team COVID-19 Survey was administered online from April-May 2020 and included items on changes in substance use behaviour and mental health indicators. Analyses were conducted on a sub-sample of Regular Force members who reported prior alcohol or cannabis use. Logistic regression models - stratified by gender - examined the associations between increased alcohol and cannabis use and mental health indicators, while controlling for age, rank, marital status, and having children.

Results: Alcohol and cannabis consumption increases were reported by 31% and 34% of men and 39% and 34% of women, respectively. Logistic regression results suggest a relationship between increased alcohol use and anxiety (men: Odds Ratio [OR]=1.9; $p \leq 0.01$; women: OR=2.1; $p \leq 0.01$), depression (men: OR=2.0, $p \leq 0.01$; women: OR=1.5; $p \leq 0.05$), and increased stress (men: OR=1.9; $p \leq 0.01$; women: OR=1.5; $p \leq 0.05$). Similarly, an increase in cannabis use was associated with anxiety (men: OR=1.5; $p \leq 0.01$; women: OR=2.1; $p \leq 0.01$), depression (men: OR=2.2, $p \leq 0.01$; women: OR=2.8, $p \leq 0.01$), and increased stress (men: OR=1.5, $p \leq 0.01$; women: not significant).

Conclusion: Results reveal that a large proportion of military personnel increased their alcohol and cannabis intake after the onset of the pandemic, and this was associated with higher levels of mental health symptoms for men and women. Findings highlight the need for health promotion strategies targeting substance misuse.

Obstetric and medical factors rather than psychosocial characteristics explain why eligible women do not complete the Enhanced Recovery after Elective Caesarean (EREC) pathway: a prospective cohort study.

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Background/purpose: 'Enhanced Recovery after Elective Caesarean' (EREC) with next day discharge and community midwifery, has been implemented at a maternity service in South Australia. Reports indicated that a proportion of women initially eligible were not discharged the next day, therefore not completing EREC. Psychosocial factors were expected to be a leading reason for prolonged hospitalisation. Three main objectives will be reported: the proportion of women who completed EREC and were discharged the next day, reasons for not completing EREC and the antenatal biopsychosocial profile of women who completed and did not complete EREC.

Methods: 74 participants assessed as eligible for EREC were recruited in their antenatal period. 70 completed a demographic and biopsychosocial questionnaire. Patient records were assessed for admission and discharge dates, and reasons for additional hospitalisation.

Results: 62.16% of women did not complete EREC with medical and obstetric reasons being the most common factor (80.43%) rather than psychosocial characteristics. While antenatal psychosocial characteristics were similar for those who did and did not complete EREC, there was a statistically significant difference in median antenatal stress levels

(possible range 0-36) between those who completed EREC (median=5) and those who did not (median=8) (W=402, Z=-2.11, P=0.034).
Conclusions/implications: This study demonstrates that the most common factors for not completing EREC were medical and obstetric reasons rather than psychosocial. Higher stress levels in the antenatal period were demonstrated for women who did not complete EREC; additional research into the antenatal stress experiences of eligible EREC women is needed to best inform targeted supports.

Educational background moderates the effect of a computer-based brief intervention to reduce alcohol consumption: Findings from a randomized controlled trial

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Background: The alcohol-attributable burden is high among socially disadvantaged individuals. The aim was to test the moderating role of educational background on the efficacy of a computer-based brief intervention to reduce alcohol drinking in a general population sample.
Methods: A total of 1,646 adults reporting alcohol use in the past year were randomized to intervention or assessment-only (participation rate: 67%). The intervention group received three individualized feedback letters (baseline, month 3 and 6). Latent growth curve modeling was applied for moderation analysis with change in alcoholic drinks per week as the main outcome, moderated by educational background (less than 12 years of school education vs. 12 years or more).
Results: The intervention effect after 12 months was moderated by educational background (Incidence Rate Ratio, IRR = 0.73, 95% CI = 0.57-0.93). Individuals with less than 12 years of school education increased their weekly alcohol use to a lesser extent when they received the intervention compared to assessment-only (IRR = 0.77, 95% CI = 0.62-0.95). No difference was found between experimental conditions (IRR = 1.06, 95% CI = 0.94-1.19) among individuals with 12 or more years of school education.
Conclusions: A computer-based brief alcohol intervention showed differential effects depending on educational background. Alcohol users with less than 12 years of school education benefitted, whereas those with 12 or more years did not. Although the effects were small in magnitude, the intervention approach may have social impact in the population at large if people with low or medium education can be reached.

Impact of increasing the relative availability of meat-free options on food selection: A natural field experiment and an experimental online study

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Background. Increasing the availability of meat-free meals may promote more sustainable purchasing. We report two studies, both examining the impact of altering the availability of meat-free meals on meal selection.
Methods. Study 1 (a natural experiment in one of 12 university cafeterias) used an interrupted time-series analysis to examine the impact of altering the ratio of meat-free meals (one meat-free and two meat, to two meat-free, one meat) during one term on weekly sales of meat-based meals. Study 2 (an online study of 2205 UK adults) compared meal selections when participants were randomised to (a) two meat-free, two meat, vs. (b) one meat-free, three meat options, or (c) three meat-free, one meat.
Results. Study 1 suggested a significant decrease in the proportion of sales of meat options when the availability of meat-free options increased (-20.1 percentage points; 95%CIs:-25.3,-14.8). There was no evidence of changes to meat-based meal sales in the other cafeterias during the same period. Study 2 suggested reducing meat-free options from 50% to 25% reduced participants' selection of meat-free options (odds ratio 0.35; 95%CIs: 0.26, 0.46), while increasing meat-free options from 50% to 75% increased meat-free selections (odds ratio 2.43; 95%CIs: 1.94, 3.04). There was no evidence for moderation of these effects by gender, socioeconomic status or usual meat consumption.
Conclusions and implications. Increasing the availability of meat-free options is effective at reducing meat selection and purchasing, with no evidence of differences by demographic groups. Greater provision of meat-free dishes is a promising approach to reduce meat consumption.

Physical Activity among Midlife Women with Elevated Risk for Cardiovascular Disease: Changes Across Pre-COVID-19, Stay-at-Home, and Initial Reopening Periods

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Background: The gender gap in physical activity (PA) that exists across the lifespan widens during midlife (ages 40-60) and contributes to women's risk for cardiovascular disease (CVD). Midlife women cite lack of time due to work/family responsibilities and lack of motivation as barriers to PA, and the precautions against COVID-19 may have exacerbated these barriers.
Methods: This study captured midlife women's PA determinants across 3 time points: pre-COVID (2019), during stay-at-home orders (May-June 2020), and during initial reopening (August 2020). Participants (N=35, MAge =51 years, MBMI=32.2 kg/m2) completed 5 days of accelerometer wear and 5 surveys per day via smartphone at each time point.
Results: During stay-at-home orders, 56% of women reported working from home with children in the house and 31% provided care for someone other than children; these figures decreased only slightly during initial reopening (to 46% and 24%, respectively). The majority of women (74%) perceived decreases in their PA engagement from pre-COVID-19 to the stay-at-home period. At reopening, 46% indicated that their PA had remained lower than it was pre-COVID. Prior to COVID-19, women set exercise intentions at 73% of momentary surveys; this frequency dropped to 60% during stay-at-home orders and 34% during reopening. Although PA motivation was slightly higher after the onset of COVID-19 (vs. before), neither PA motivation nor setting an exercise intention was associated with PA engagement over the following 3 hours (ps > 0.25). **Conclusions:** Findings indicate that midlife women's PA was negatively impacted by the COVID-19 pandemic, which may further increase their risk for CVD.

Preschool children's emotional wellbeing during covid-19 restrictions: A qualitative examination

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Background: The Covid-19 pandemic is an unprecedented event with significant challenges for families living with young children. Between March – May 2020, English early years settings were closed except to children whose parents were key workers and vulnerable children, and there were substantial restrictions on movement and social contact. This study explored the impact of Covid-19 restrictions on preschool children's social and emotional wellbeing, and parents' attempts to mitigate these impacts.

Methods: Twenty parents (16 mothers; 4 fathers) of children due to begin primary school in September 2020 participated in a semi-structured interview about their families' experiences of Covid-19 restrictions. Parents were recruited via early years settings and social media in England. Half of participants were white British, and half lived in the most deprived areas of the country. Interviews were conducted remotely and recorded and transcribed verbatim. Transcripts were coded thematically in NVIVO12, and codes analysed using a nurture framework.

Results: Disruption to routines was an overarching theme that connected to three sub-themes. These were 1) parents worked hard to explain events to their children in a developmentally appropriate manner; 2) children's behaviour changed and parents sought to understand it in the context of the pandemic. 3) Parents expressed concern surrounding their child's school transition within the context of extreme uncertainty. Parents managed disruption by focusing on the time-bounded nature of it.

Conclusions/Implications: Parents sought to nurture their children through challenging circumstances. Given the ongoing nature of the pandemic, some parents and children are likely to need future support.

Active arts engagement and depression in older adults in the United States: Longitudinal evidence from the Health and Retirement Study

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Background/purpose: Arts engagement is an innate human behaviour that activates psychological, biological, social, and behavioural mechanisms associated with changes in mental health. Receptive cultural engagement (e.g. going to concerts and museums) has been shown to reduce depression in older adults. However, whether more active forms of arts engagement are associated with lower rates of depression at a population level remains unknown.

Methods: Using longitudinal data from 19,183 older adults in the Health and Retirement Study, we tested whether active arts engagement was associated with concurrent and subsequent depression. A score of three or more on the Center for Epidemiologic Studies Depression Scale indicated depression. Arts engagement was recorded every four years, and depression every two years, in 2008-2016. We fitted population-averaged panel data models using generalized estimating equations with a logit link.

Results: Engaging in clubs, hobbies, and baking/cooking was associated with reduced depression, independent of confounders. Concurrently, spending time on hobbies monthly (OR=0.80, 95% CI=0.72-0.89) or weekly (OR=0.81, 95% CI=0.73-0.89) and clubs monthly (OR=0.85, 95% CI=0.77-0.94) or weekly (OR=0.78, 95% CI=0.69-0.89) was associated with lower odds of depression versus not engaging. Longitudinally, the odds of depression two years later were reduced by weekly baking/cooking (OR=0.84, 95% CI=0.75-0.95), hobbies (OR=0.80, 95% CI=0.71-0.91), and club attendance (OR=0.81, 95% CI=0.71-0.94). Writing, reading, sewing, and attending non-religious organizations were not associated with depression.

Conclusions: Active arts engagement is associated with reduced odds of depression. We should consider how older adults can be supported to actively engage in the arts as a health-promoting behaviour.

Mental health during the COVID-19 pandemic: The influence of positive health behaviours

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Background/purpose: The COVID-19 pandemic has been linked to increased depression, anxiety, and other adverse mental health outcomes. Understanding the behaviours that positively influence mental health is important for the development of strategies to maintain and improve well-being.

Methods: The COVID-19 Defence Team survey was administered in April-May 2020. The current study focused on the state of mental health of civilian government employees (N=7487), the use of positive health behaviours, and the extent to which such behaviours were associated with anxiety, depression, and self-reported change in mental health compared to before the pandemic.

Results: Anxiety and depression were experienced by 23% and 17% of the sample, respectively, while almost half reported that their mental health had gotten worse since the pandemic started. The most common behaviours respondents reported engaging in to maintain or improve health were connecting with loved ones, exercising outdoors, and eating healthy. Logistic regression analyses indicated that although most behaviours were associated with better mental health, meditation showed an inverse relationship, while connecting with loved ones either showed an inverse or no association with the mental health measures.

Conclusions and implications: Engaging in behaviours to maintain or improve health was generally associated with better mental health outcomes. Unexpected relationships of meditation and connecting with loved ones are discussed in terms of past research on meditation as a coping strategy and impacts of the pandemic and physical distancing on social connections. The findings have implications for strategies to promote healthy behaviours and mental health during the pandemic.

General Associations between Clusters of Lifestyle Risk Behaviours and Psychopathology in Australian Adolescents

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Background : Physical inactivity, sugar sweetened beverage (SSB) consumption, alcohol use, smoking, poor sleep and excessive recreational screen time (the "Big 6" lifestyle risk behaviours) cluster together and are key risk factors for mental ill-health. However, links between clusters of the Big 6 and mental health have not been explored among adolescents, particularly within the Hierarchical Taxonomy of Psychopathology (HiTOP) framework.

Methods: Students (n=6640; Mage=12.7 years) responded to a questionnaire as part of the Health4Life study. Latent Class Analysis (LCA) was conducted to identify homogeneous clusters of the Big 6. Item Factor Analyses (IFA) were used to estimate the higher order factor structure of psychopathology. Structural equation models (SEM) were used to examine associations between indicators of psychopathology and behaviour clusters.

Results: Three distinct classes emerged: 'Relatively low risk' (Class 1; 28%), 'Sedentary behaviour' (Class 2; 68%); and 'Alcohol/tobacco use' (Class 3; 4%). The SEM revealed students in Class 2 and 3 exhibited 0.24 (99% CI=0.15, 0.34) and 0.62 (99% CI=0.41, 0.83) standard deviations higher on internalizing and 0.26 (99% CI=0.16, 0.35) and 0.76 (99% CI=0.53, 0.98) standard deviations higher on externalizing compared to students in Class 1, and students in Class 3 generated significantly higher scores on both internalizing (B=0.34, 99% CI=0.16, 0.52) and externalizing (B=0.34, 99% CI=0.19, 0.49) compared to Class 2.

Conclusions and implications: Clusters of the Big 6 risk behaviours relate to varying levels of psychopathology among adolescents, highlighting the importance of multiple health behaviour change approaches for wellbeing and suggesting targeted preventive interventions may be valuable.

Canteen manager feedback reports and online menu-labelling for encouraging healthier student lunch orders: a pilot cluster randomised controlled trial in NSW primary school canteens

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Background: School canteen nutrition policies can improve student dietary behaviours, but successful implementation is challenging. Evidence suggests menu audit and feedback can improve canteen menu compliance with nutrition policies, but has limited effect on student purchasing. Online canteen lunch ordering systems may offer a unique opportunity to support the implementation of school canteen nutrition polices, while delivering behavioural interventions directly to consumers to influence healthy student purchasing.

Methods: This cluster RCT in 10 NSW primary schools, aimed to test the effect of a menu-audit and feedback report (audited against the NSW Canteen policy) (control) compared to a menu-audit and feedback report combined with online canteen menu labels (intervention) on the healthiness of student purchases.

Results: Compared to control students, intervention students had a significantly greater odds of purchasing healthy (“Everyday”) items [OR: 1.19; p=0.019], and lower odds of having less healthy (“Occasional” and “Should not be sold”) items purchased [OR: 0.86; p=0.048; and OR: 0.52; p<0.001, respectively]. Student lunch orders at intervention schools were significantly lower in energy (-95.11 kJ; p<0.001), saturated fat (-0.73g; p<0.001), sodium (-34.69 mg; p=0.004) and sugar (-1.14 g; p=0.016) content relative to lunch orders from control students.

Conclusions and implications: Combined online menu labels and menu audit and feedback resulted in a higher proportion of healthy items being purchased compared to menu audit and feedback in isolation. There may be a greater role for online menu labelling as part of a suite of strategies to improve public health nutrition in schools.

Strategies to promote health behaviours in parents with small children – a systematic review and realist synthesis of behavioural interventions

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Background: Parents with small children have poorer health behaviours than non-parents, e.g. decreased physical activity and unhealthy diet warranting a need to identify new strategies for health promotion. A systematic review and realist synthesis investigated context and mechanisms of existing interventions that may inform new strategies for improved health behaviours in parents with small children.

Methods: A systematic search was conducted in MEDLINE, Embase, CINAHL and PsycINFO in February 2020. Included interventions should target parents with at least one child (0-3 years) and assess and report on outcomes of physical activity and diet. Reporting followed the PRISMA guidelines. Data was extracted on intervention context, delivery and outcomes and behaviour change techniques were coded. Realist synthesis included program theory development and identification of three Context-Mechanism-Outcome configurations.

Results: In total, 15 interventions (25 studies, 17 effectiveness studies, 8 protocols) were included. Seven interventions showed small but significant improvements in diet (four), physical activity (one) or both (two) in mothers. Realist synthesis (ten interventions) revealed three strategies combining context and mechanisms to improve health behaviours in parent(s). Important contextual factors were; targeting parent groups and/or the family setting through home-based activities and flexible components; mechanism involved role modelling, emotional and practical support.

Conclusions and implications: This review provides key insights into contexts and mechanisms to inform practitioners and researchers designing evidence-based interventions targeting parents with small children.

Which profiles exist among people experiencing PTG during the COVID-19 pandemic?

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Background/purpose: The COVID-19 pandemic may have negative consequences, such as for our work, social activities, and our health, including uncertainty regarding infection or infecting others. Additionally, people may perceive positive changes in such a period, such as a better appreciation of life. Such positive change after experiencing difficult or traumatic events, has been called post-traumatic growth (PTG). The study examined whether there are distinct profiles of individuals experiencing PTG, based on differences in the way they appraise and cope with the COVID-19 pandemic.

Methods:. For this cross-sectional study, through convenience sampling 975 participants of the general population filled in an online questionnaire, including appraisal (SAI), positive reappraisal and rumination (CERC), and coping flexibility (COFLEX). From the total sample, 438 individuals were selected that reported PTG related to COVID-19 (i.e., reporting at least 2 of the 10 positive changes of the Post-Traumatic Growth Inventory-Short Form to a moderate degree).

Results: Latent profile analysis identified two profiles reporting PTG: 1) a group reporting higher levels of secondary appraisal (i.e., confidence to cope with the impact of COVID-19), greater coping flexibility and more use of positive reappraisal, and 2) a group reporting higher levels of stress appraisal and primary appraisal (i.e., greater perceived impact of COVID-19), and more use of rumination.

Conclusion and implications: There seems to be different profiles of people experiencing post-traumatic growth in the way they appraise and cope with the COVID-19 pandemic. Future research should consider that there are different profiles of people experiencing high levels of post-traumatic growth.

A cluster randomised controlled trial of a consumer behaviour intervention to improve the nutritional content of food purchases from online canteens: Subgroup Analyses by frequency of use and student grade

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Background: Online canteens, where students pay for their lunch online, are increasingly common and provide opportunities to deliver interventions to encourage healthy purchasing. Evidence suggests that healthy purchasing may be influenced by the frequency of canteen use and student age. As such, the aim of this study was to examine experimental group interactions between frequency of canteen use and student grade.
Methods: Ten NSW primary schools (2,714 students) using an online canteen were recruited to a cluster RCT conducted over an 8-week period. Intervention schools received a consumer behaviour intervention integrated into their online canteen vs control (standard online ordering). Data were assessed using separate linear mixed models under an ITT framework with multiple imputation. Subgroups analyses were performed to examine interactions between the experimental group allocation and i) frequency of canteen use and ii) student grade
Results: The results were in the intended direction for all subgroups. Significant group interactions by frequency of use suggested that the effects of the intervention may be greatest in individuals who less frequently used the online canteen (mean energy P=0.007; mean sodium P=0.01). There were no significant subgroup interactions for student grade.
Conclusions: Purchasing behaviors of frequent users may be more habitual and resilient to consumer behavior strategies. Further research is required to test this hypothesis, nonetheless, significant improvements in the purchase of healthier foods were observed by intervention students across all subgroups, suggesting that, although the magnitude of effect may differ, the intervention has a broad beneficial impact across these population groups.

An international comparison of movement behaviours and body composition outcomes in two economically diverse communities.

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Background: In older adults, physical activity (PA) promotes healthy ageing. Current WHO guidance states that older adults should engage in 150 minutes of moderate-to-vigorous PA (MVPA) weekly, and limit sedentary behaviours (SB). There is little data describing differences in movement behaviours in older adults from economically diverse communities, and it is not known how they associate with body composition and obesity. Using compositional analysis, we investigated the associations of movement behaviours (PA, SB, and sleep) with body composition variables including body mass index (BMI), waist circumference (WC), and fat mass in two economically diverse communities.
Method: Representative samples of older adults aged 60-85 years from high-income Scottish (n=150) and low-income South African (n=138) communities were recruited for this cross-sectional study. Participants' anthropometry was measured; fat mass was determined using DXA. Movement behaviours were measured using accelerometers.
Results: Scottish participants spent more time in MVPA and SB, but less time sleeping and in light-intensity PA, compared to the South Africans. In the Scottish participants, greater MVPA levels were associated with lower BMI (p=0.002), WC (p=0.011), and fat mass (p=0.002). In the South African participants, less time in SB was associated with lower BMI (p=0.019), WC (p=0.003), and fat mass (p=0.015); longer sleep duration was associated with lower BMI (p=0.025), WC (p=0.007) and fat mass (p=0.011).
Conclusions: Association between body composition and movement behaviours differed between the economically diverse communities, highlighting that future interventions and policies involving movement behaviour(s) to enhance health in older adults should consider economic diversity in populations.

TEC-19: Teenagers' experiences of COVID-19 in the UK

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Background/purpose: In March 2020, the UK Government imposed a national lockdown to prevent the spread of COVID-19. This study followed young people throughout the year that followed to explore how government restrictions impacted young people and how they dealt with them, to provide feedback on the views and experiences of young people to key stakeholders in the COVID-19 response.
Methods: This study used both cross-sectional and longitudinal qualitative methods. A total of 80 young people (10 friendship groups) were recruited to participate in seven 'rounds' of online focus groups between March 2020 and March 2021. Thematic analysis was conducted on the first 'round' of discussions and will be the focus of this presentation. The remaining data will be analysed using longitudinal qualitative methods.
Results: The sudden onset of lockdown left young people feeling confused and ignored by government and the media. Despite this, they felt motivated to adhere to government advice in the hope that life would soon return to normal. They wanted to be involved in the pandemic response and wanted to be productive with their time, but felt there were few opportunities to volunteer.
Conclusions and Implications: Young people want to be listened to and feel they have a part to play in responding to a crisis such as COVID-19. To reduce the likelihood of disenfranchising the next generation, government and the media should focus on developing opportunities for young people to become involved in responses to future crises. Our presentation will suggest ways this might be achieved.

Adaption of a face-to-face group behaviour change intervention (surgery school) in response to COVID19

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Background: Preoperative group education (Fit-for-Surgery School) supports patients to prepare physically and psychologically for surgery.

Until March 2020, our surgery school was delivered face-to-face in hospital. Following the COVID19 pandemic and subsequent safety concerns regarding face-to-face contact, the school was rapidly adapted to be delivered online.

Methods: The virtual school lasts 1 hour and is delivered by a nurse, physiologist and a dietitian, via Microsoft Teams. The content includes expectation setting for treatment and recovery, improving nutrition and fitness, and alcohol and tobacco cessation integrated with established behaviour change techniques. After attending patients were invited to complete an anonymous evaluation survey. Results were compared with those of a pre-COVID face-to-face group (n=492).

Results: Between June 2020 February 2021, 228 patients were invited to the virtual school, 157 (69%) attended, 12% higher than that of face-to-face school at 57%. Attendees were 61% (n=95) male, median age of 62 (range 18-88). Forty six percent (n=73) responded to the survey; 95% stated that the session was good or very good. Seventy nine percent said they planned to change their behaviour (most commonly increasing physical activity); intention to change behaviour was 19% higher than the pre-COVID group. Respondents found the virtual school convenient, informative, and confidence boosting. A need for supportive written information was identified.

Conclusion: Virtual surgery school is acceptable to patients of all ages and may be more effective in initiating intention to change behaviour than face-to-face schools. Further study of the impact on actual behaviour change and surgical outcomes is planned.

Low self-efficacy and avoidance impede the adjustment of people with progressive multiple sclerosis

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Background/purpose: Being diagnosed with a progressive type of multiple sclerosis (MS) has been associated with poor psychological outcomes. Previous studies of adjustment to MS have primarily focused on relapsing-remitting type MS, and most have used select variables rather than a model of adjustment. We developed a model of adjustment through longitudinal qualitative studies. This study was designed to quantify the size of the relationships of the key constructs in the model with a broad range of adjustment outcomes.

Methods: We conducted a multicenter cross-sectional survey of 195 people newly diagnosed with progressive MS. The data were analysed using latent variable modelling methods. The questionnaires that measure psychological distress, positive affect, perceived stress, life satisfaction and self-concept gave an overall psychological adjustment variable.

Results: People who were older (b=0.17(0.07), p=0.02), in employment (b=0.40 (0.17), p=0.01), with lower illness severity (b=-0.24 (0.08), p=0.001) showed better adjustment. Based on a Lasso regression, the most important psychological and demographic variables associated with lower adjustment (out-of-sample cross-validation R2=62.6%) were low MS self-efficacy and higher avoidance, cognitive vulnerability, embarrassment avoidance, conflict, helplessness, and secondary progressive MS type.

Conclusions and implications: Low self-efficacy, avoidance of coping and conflict in relationships affect how people adjust to progressive MS. Further, people with secondary progressive MS might be at higher risk of facing psychological difficulties. Helping people develop active coping skills and confidence in managing the illness and addressing relationship issues are key areas to be addressed in psychological interventions for people with progressive multiple sclerosis.

Factors associated with mask-wearing among civil servant defence personnel early in the COVID-19 pandemic

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Background: Without widespread vaccination, personal protective measures (PPMs) remain the most effective means of preventing the spread of COVID-19. Past research has shown that whether or not individuals engage in PPMs against a disease is associated with psychosocial factors, including their concerns about the health risk the disease poses and perceived efficacy of PPMs. This study examined the prevalence and psychosocial correlates of mask-wearing among civil servants in the Canadian Department of National Defence.

Methods: Analyses were performed on data from the COVID-19 Defence Team Survey – a cross-sectional survey administered to military and civilian members of the Canadian Defence Team in April-May, 2020 (n = 7,487 civil servants).

Results: Only 25% of civil servants indicated that they frequently/almost always wore a mask outside of the home. A logistic regression analysis showed that civil servants with stronger beliefs that their actions could reduce the spread of COVID-19 and greater concern about contracting COVID-19 had close to 50% greater odds of frequently/almost always wearing a mask outside of the home. However, no association was found between mask-wearing and concern about a loved one contracting COVID-19.

Conclusions and Implications: Mask-wearing was the least common PPM taken by civilian members of the Defence Team early in the pandemic, and was primarily associated with their personal concerns about contracting COVID-19 and perceived efficacy of PPMs against COVID-19. Health promotion approaches emphasizing personal health risk and the efficacy of mask-wearing may bolster adherence to public health guidelines regarding the use of face masks.

Does disordered eating behaviour differ in adults with successful weight loss compared to those with obesity?

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Background: Disordered Eating behaviour (DEB) plays a crucial role in obesity (OB) and successful weight loss (SWL). Binge eating, dietary restraint, among others, are associated with greater difficulty in weight loss maintenance. Individuals seeking obesity treatment are at higher risk of disordered eating (23-55%) than the general population (2-3%). This study aimed to explore whether there is a difference in DEB between adults who have OB and those who have had SWL.

Methods: A total of 120 Portuguese adults – 35 males and 85 females, aged 20 to 70 years – 63 with OB (i.e., BMI≥30 kg/m2) and 57 who have achieved a SWL (i.e., lost at least 7% of the initial body weight and maintained it for at least 12 months) completed the Binge Eating Scale, and the Dutch Eating Behaviour Questionnaire.

Results: The group comparison showed a statistically significant difference regarding binge eating (OB: M=14.33, SD=9.88; SWL: M=4.64, SD=3.62; p<.001), emotional eating (OB: M=2.68, SD=1.06; SWL: M=1.96, SD=.73; p<.001), and external eating (OB: M=2.84, SD=.74; SWL: M=2.54, SD=.52; p<.05). No differences were found in restrained eating.

Conclusions: Although binge eating is a recurring behaviour in individuals seeking to lose or maintain weight, the OB group had a more severe binge eating and more frequent emotional and external eating behaviour than the SWL group. Although these significant differences were expected, it was interesting to notice the absence of differences in restrained eating. Besides OB, it is important to explore DEB in people who recently have achieved a SWL in order to prevent weight regain.

A national hybrid type II effectiveness-implementation trial: UV4me2 intervention costs and impact on young adult skin cancer risk behaviors

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Background: Young adults engage in risky ultraviolet radiation (UV) exposure, both solar and artificial, and minimal sun protection. Melanoma is one of the most common cancers among young adults, particularly women. We developed UV4me, which is an online sun safety intervention for at-risk individuals 18-25 years old.
Methods: After establishing initial efficacy, we have since completed a hybrid type II effectiveness-implementation trial. Participants for the hybrid trial were recruited primarily using paid ads on social media. 1691 participants completed baseline surveys and were randomized to one of three intervention conditions: the original UV4me, enhanced UV4me2 with more interactive and engaging features, or e-pamphlet education control.
Results: UV4me2 demonstrated better outcomes than the e-pamphlet for wearing facial sunscreen at 12 weeks, overall sun protection weeks 12-52, habitual (automatic) sun protection at 12-24 weeks, and skin self-examination at 52 weeks (70% retention). UV4me2 performed better than the e-pamphlet for overall UV exposure at 24 weeks, but this trend was not significant (p = 0.056). Significant differences were not found comparing UV4me2 to UV4me. When considering implementation costs after initial “sunk costs” for intervention development, and estimating costs for larger samples (e.g., >1000 individuals), costs are similar across the intervention conditions (USD$12-16 per person). Additional analyses will focus on intervention engagement, satisfaction, and cost-effectiveness.
Conclusions: These results are some of the first outcomes reported for a dissemination trial for a skin cancer prevention intervention. Successful behavioral interventions for young adults may lead to future reduction in their risks of and morbidity from skin cancer.

Uptake and engagement with the Programme on Adherence to Medication App. A randomised pilot study

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Introduction: Adherence to prescribed medications can help people with hypertension reduce the risk of all-cause mortality, however many patients are non-adherent and current interventions are ineffective. This trial aimed to research the uptake of and engagement with the PAM app, a highly tailored app to support medication adherence.
Methods. A randomised controlled trial: intervention group (n=15) allocated to the PAM app in addition to usual care, and control group (n=15) received usual care only. Attitudes toward using apps in adjunct to usual care, self-reported medication adherence, blood pressure and quality of life were obtained at baseline and one month follow up. Uptake and patterns of app usage was analysed by log files obtained from the app.
Results: The majority of the participants had positive attitudes towards the use of mobile technologies in receiving advice for healthcare and medication adherence. All intervention participants installed the app during the registration with the intervention. Most (85%) engaged with the app and reported behaviour within 1 hour from notifications and many (30.1%) enabled the sensing data. Most engaged with the app in the morning (between 07:00- 11:00) and some in the evening (between 20:00-22:00).
Conclusions: Future trial will investigate the feasibility of the PAM app to support medication adherence and blood pressure in patients with high blood pressure in primary care.

The Effects of the Families Improving Together (FIT) for Weight Loss Trial on Physical Activity Outcomes in African American Families

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Background/Purpose: The Families Improving Together (FIT) for Weight Loss trial was a randomized group cohort trial testing the efficacy of a cultural tailored, positive parenting, and motivational intervention for weight loss in overweight African American (AA) adolescents.
Methods: Adolescents and their caregivers (N=241) participated in an 8-week face-to-face group randomized program comparing a motivation plus family weight loss program (M+FWL) to a comprehensive health education program (CHE) and were re-randomized to either an 8-week on-lined tailored program or control on-line program for improving body mass index (BMI), physical activity (PA via accelerometry; moderate-to-vigorous (MV)PA, light (L)PA) and diet.
Results: There were no significant effects for BMI or diet. At 8 weeks there was a marginal interaction between the group-based M+FWL intervention and time on parent LPA (B=17.44, SE=10.12, p=.085). Among parents in the group-based M+FWL intervention there was an increase in LPA from baseline to post-group, whereas for those in the CHE group, LPA decreased. At 16 weeks, there was a significant interaction between the group-based M+FWL intervention and time for parent LPA (B=33.02, SE=13.12, p=.012). Among parents in the M+FWL there was an increase in LPA from baseline to post-online, whereas for those in the control group, LPA decreased. Complier average causal analyses showed a significant treatment effect at 16-weeks for parents on MVPA and a similar trend for adolescents.
Conclusions: These findings underscore the importance of positive parenting and parents as agents of change for AA adolescents in promoting positive health outcomes such as increasing PA.

"I am not comfortable with my weight..." Barriers and enablers associated with weight control in Nairobi, Kenya: A qualitative study.

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Background: Type 2 diabetes prevalence is increasing in Kenya and prevention strategies such as weight control are needed. Understanding local contexts and factors influencing weight control is important for developing interventions. The aim of this qualitative study was therefore to explore the barriers and enablers of weight control in two contrasting communities in Nairobi, Kenya.

Methods: Participants were recruited from one low-income community (n=15, 7 female) and one middle-income community (n=14, 6 female). In-depth interviews were audio recorded and transcribed verbatim. Thematic analysis using the capability, opportunity, motivation, and behaviour (COM-B) model was used to identify barriers (-) and enablers (+) of weight control.

Results: Capability barriers included: limited knowledge on healthy weight limits and limited weight control skills. Motivation barriers and enablers included: perceived causes and consequences of excess weight (+), and low prioritization of weight control (-). Opportunity barriers and enablers included: societal influences on weight control (+/-), availability and affordability of physical activity facilities (+), accessibility to weight monitoring (+), and (mainly in the middle-income community) availability and affordability of unhealthy diets (-).

Conclusions and implications: Interventions to promote weight control should provide information on healthy weight limits, increase understanding of causes and consequences of excess weight and train people on weight control. Further, there is need to intervene to model weight control in the community, increase accessibility to weight monitoring, and increase availability and affordability of physical activity facilities. Finally, restricting availability and affordability of unhealthy diets in the middle-income community may promote weight control.

What are the mechanisms by which adolescents chose to smoke or vape? A qualitative study in Bogotaá and Northern Ireland

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Background/purpose: Adolescent smoking is associated with health and social risks. Studies have assessed the effectiveness of theory-based interventions, like ASSIST and Dead Cool, to prevent adolescent smoking. However, the evidence is limited for how complex interventions work in different settings.

Methods: By engaging with pupils from schools in Northern Ireland and Bogota, we used a Realist approach and conducted a comparative qualitative analysis to explore the mechanisms by which ASSIST and Dead Cool change participants' reasoning about smoking. We conducted 29 focus groups in 12 schools (192 pupils), using a Theoretical Domains Framework to conduct a thematic analysis with two-cycle coding.

Results: We found several differences in the contextual resources affecting behavioural reasoning. In Northern Ireland, participants identified previous information about tobacco and accessibility to (purchase) e-cigarettes through social media. In Bogotá, participants identified accessibility to (purchase) cigarettes and other (misused) substances in the neighbourhood. The latter issue illustrates the risk of nicotine being a gateway to other substance misuse. Changes in behaviour domains are embedded within a multi-layered cascade of processes emanating from such contextual differences, leading to changes affecting intention to smoke. A further "spill-over" outcome of the programs was that families and older peers were encouraged to not smoke by the participants.

Conclusions and implications: Our findings highlight the importance of including the context as a key element in the assessment of smoking prevention program mechanisms. Qualitative research allowed us to establish both individual and contextual characteristics that are related to smoking behaviour among adolescents.

Homophily and peer influence effects for spreading adolescent smoking and vaping norms, and other smoking outcomes, in schools: The MECHANISMS study.

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Background/purpose: The MECHANISMS study targets smoking prevention for 12-13 year olds in Northern Ireland and Bogotá, and investigates the mechanisms through which social norms for smoking and vaping are transmitted through school social networks. We aimed to provide a broad overview of homophily and peer influence effects for norms and other smoking outcomes.

Methods: Pre- and post- intervention, participants completed online behavioral economics experiments eliciting social norms for smoking and vaping. Pupils also completed self-report surveys capturing their friendship networks, self-report smoking norms, self-report smoking behavior, intentions, knowledge, attitudes, and psycho-social antecedents. Homophily was examined using logistic regressions with dummy variables indicating friend nominations as outcome variables, and absolute differences between focal participants and potential friends on smoking outcomes as predictors. Peer influence from friends, school classes, and school year groups, was examined using ordinary least square regressions with focal participants' follow-up scores as outcome variables, and average peer scores as predictors.

Results: Twelve schools participated (1344 pupils). Our results provide evidence demonstrating homophily and peer influence effects from average peer responses for the experimental norms (homophily: odds ratios [ORs]=0.94-0.98; peer influence: standardized regression coefficients [βs]=0.08-0.19), self-report norms (homophily: ORs=0.95-0.99; peer influence: βs=0.07-0.19), other self-report smoking outcomes (homophily: ORs=0,95-0.99; peer influence: βs=0.07-0.23), and objectively measured smoking behavior (homophily: ORs=0.87-0.90; peer influence: βs=0.26-0.55; $p \leq 0.01$).

Conclusions/implications: These findings support using social norms strategies in adolescent smoking prevention interventions. Future research should consider homophily and social influence processes jointly, and investigate whether these findings translate to other settings with varying culture and norms.

Languageless animated gifs to communicate COVID-19 preventive behaviours to adults in guatemala: Development and evaluation of efficacy

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Background/purpose: Effective communication about Covid-19 that does not rely on language is essential in Guatemala where 25 official languages are spoken. Guatemala is predominantly poor with some of the worst health issues globally, and the Covid-19 pandemic has placed additional pressures on already weak health systems and food insecurity. This study aimed to develop and evaluate languageless visual health messages about Covid-19 preventive behaviours in Guatemala.
Methods: Views of existing Covid-19 health communication were sought in 14 semi-structured interviews and testimonials of health professionals in Guatemala. Existing visual health communication was reviewed to identify communication strategies. These data informed a process of evidence-based, intervention co-design with stakeholders, resulting in 4 animated GIFs about Covid-19 preventive behaviours. Opinions and efficacy of the GIFs, in terms of cognitions towards engaging in preventive behaviours, were explored in an online survey of 308 Guatemalan adults.
Results: There was a need for clear, culturally relevant visual messages that come from a credible source and invoke a sense of social responsibility. The 4 GIFs targeted either families or young people, and in either rural or urban settings. The GIFs use visual storytelling to promote the correct wearing of a mask, handwashing and physical distancing. Full survey results will be available. Preliminary analyses suggest the GIFs are clear, liked and successfully target key determinants of preventive behaviours.
Conclusions and implications: Languageless, visual messages can help reduce the transmission of Covid-19 in a multilingual country like Guatemala and can be disseminated widely through social media and television channels.

Alcohol packaging as a promotional tool: A focus group study with young adult drinkers in Scotland

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Background/purpose: Alcohol packaging can play a key role in younger people's drinking behaviour by influencing appeal, product trial and choice, and may influence purchase and consumption among adults. However, the use of alcohol packaging as a promotional tool and how it is perceived by consumers has received minimal attention.
Methods: To explore young adults' perceptions of alcohol packaging as a promotional tool, eight focus groups with current drinkers (n=50) were conducted in September 2019 in Glasgow (Scotland), segmented by age (18–24, 25–35), gender (female, male) and social grade (ABC1, C2DE). Participants were shown, allowed to handle, and asked about, a range of alcoholic products. The data were analysed thematically using an inductive approach.
Results: Four main themes emerged from the data. First, exposure to alcohol packaging was high, with most seeing alcohol packaging in retailers, drinking venues and via marketing. Second, alcohol packaging was viewed as appealing and attention-grabbing, influencing shelf-standout and product choice. Third, alcohol packaging can shape perceptions of user profiles, product-consumer targeting and suitability (e.g. age, gender). Fourth, the appearance of packaging influenced perceptions of the product and drinking experience.
Conclusions and implications: Whereas the packaging of other potentially harmful products, such as tobacco, has received considerable attention, there is a dearth of research on alcohol packaging. This study suggests that alcohol packaging is a key form of marketing, which can create appeal, increase shelf-standout, and help shape perceptions of the user, product and drinking experience. Packaging regulation could reduce this means of brand promotion.

Early Life Stress and Cardiovascular Recovery in Response to Peer Rejection Among Adolescent Girls

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Background: Women are more likely than men to experience at least four adverse childhood events, or early life stress (ELS), placing them at higher risk for cardiovascular diseases. Cardiovascular reactivity and recovery to social rejection during adolescence may be an important mechanism. We hypothesized high ELS will be associated with greater cardiovascular reactivity and slower recovery to peer rejection among adolescent girls.
Methods: Girls (n=92) completed self-report measures, a physical exam, and the Psychosocial Schedule to assess for ELS. Low ELS was defined as three or fewer stressors and high ELS was defined as four or more. In a subsequent visit, blood pressure and heart rate were measured during the Yale Interpersonal Stressor, a peer rejection paradigm involving gradual exclusion during a series of three conversations with two confederates.
Results: Consistent with our hypothesis, linear mixed models revealed that high ELS girls demonstrated delayed diastolic blood pressure recovery to repeated exposure of peer rejection compared to low ELS girls following the second conversation (difference=2.53 mm Hg, p<.05) and third conversation (difference=2.29 mm Hg, p<.05). Counter to our hypothesis, low ELS girls had slower heart rate recovery during the final recovery period (difference=2.37 bpm, p<.05). There were no significant differences by ELS group in systolic blood pressure during any recovery period or cardiovascular reactivity during any stressor period.
Conclusions and implications: History of high ELS may contribute to a prolonged stress response to peer rejection among adolescent girls, which in turn may elevate cardiovascular health risk over time.

The moderating effect of biological sex, race, and ethnicity on the association between mental health symptoms and opioid misuse among patients on long-term opioid therapy

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Background/Purpose: Men and racial/ethnic minorities are at greatest risk of opioid-related adverse events such as overdose and death, but contributors to this disparity are poorly described. This study examined the differential associations of mental health symptoms with opioid misuse across biological sex and race/ethnicity.
Methods: We identified all patients receiving long-term opioid therapy through the U.S. Department of Veterans Affairs in 2019 and used stratified random sampling to form a nationally representative cohort of 1,368 patients, oversampling women and racial/ethnic minorities. Patients in this prospective cohort study complete surveys at baseline and every 6 months for two years. The current study used baseline data, including well-validated measures of depression (Patient Health Questionnaire Depression Scale; PHQ-9), anxiety (Generalized Anxiety Disorder Scale; GAD-7), trauma (PTSD Checklist; PCL-5), and opioid misuse (Current Opioid Misuse Measure; COMM).

Results: The study sample was well-balanced across sex and race/ethnicity (49% female, 52% racial or ethnic minority). Depression, anxiety, and trauma symptomatology were strongly correlated with opioid misuse (r's = .50 to .54, all p's <0.01). Multivariable linear regression moderation analyses indicated that the relationship between anxiety and opioid misuse was most pronounced in racial/ethnic minority patients (interaction b=0.16, p=0.01), while the relationship between trauma and opioid misuse was most pronounced in males (interaction b=0.04, p<0.01) and racial/ethnic minority patients (interaction b=0.04, p=0.02).
Conclusion and Implications: Anxiety and trauma in racial/ethnic minorities and men may represent important treatment targets for reducing opioid-related health inequities.

University students' psychosocial status during the COVID-19 pandemic

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Background: According to U.S. News & World Report, 96% of American colleges or universities reported the cancellation of in-person classes or shift to online instruction during the pandemic, impacting at least 26 million students. Students experienced a disruption in education and food and housing insecurity. Though the negative impact of COVID-19 on students is established, factors related to poor psychosocial status have received less attention.
Methods: Students (N = 208) of the College of Pharmacy and Health Sciences at St. John's University in Queens, New York completed an online survey during the Fall 2020 semester including psychosocial measures of worry, loneliness, stress, depression and anxiety. We used an independent sample t-test to compare undergraduate students to graduate students, and a one-way Analysis of Variance to compare students of different racial/ethnic backgrounds (Asian, Black, Hispanic, White and More than one Race) on psychosocial measures.
Results: Compared to undergraduate students, graduate students were more depressed (M = 1.82 versus M = 2.38, p = .047) and more anxious (M = 2.31 versus M = 2.96, p = .04). We found that Black students performed the worst on measures of worry, loneliness, stress, and depression (p < .05), as well as on anxiety, though the difference only approached significance, p = .06.
Conclusion: Undergraduate and Black students represent sub-groups in need of psychosocial support to decrease their levels of worry, loneliness, stress, depression and anxiety during and after the pandemic. Future surveys will be conducted to continue to monitor our students' psychosocial health

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General and specific associations between personality risk profiles and transdiagnostic psychopathology in adolescents

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Background/purpose: Hierarchical models of psychopathology have gained increasing attention over the last decade and depict a general factor of psychopathology at the apex of a hierarchy, underneath which sits specific factors, such as internalizing and externalizing factors. However, as yet, there is no clear preferred statistical method for studying causes and correlates of the hierarchy of dimensions. Furthermore, little is understood about the link between personality and general and specific factors of psychopathology among adolescents. This study examines the relationships between dimensions of psychopathology and personality risk profiles by evaluating the validity and replicability of hierarchical models of psychopathology among adolescents across samples and statistical models, with a focus on comparing bifactor and higher-order models.
Methods: A series of confirmatory factor analyses will be run in two large randomised-controlled trials of Australia adolescents (Sample 1: n=2,268; Sample 2: n=6,386; Total N = 8,654, mean age = 13.01 years, 52% female). Structural validity will be evaluated by comparing fit and reliability indices, and replicability across samples will be examined through measurement invariance testing. Patterns of association between factors of psychopathology and personality profiles will also be examined.
Results: Analyses are currently underway and results will be available in May 2021.
Conclusions and implications: Findings from the present study will contribute to the ongoing debate around statistical approaches for studying hierarchical models of psychopathology and will advance knowledge on the links between personality and psychopathology among adolescents.

Prevalence and correlates of atypical symptom presentation in older adults hospitalized for COVID-19

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Introduction: Typical symptom presentation of patients with COVID-19 has been characterized by fever, cough and shortness of breath; however, emerging literature suggests that older adults may present with atypical symptoms. This study identifies: 1) the frequency of atypical symptom presentation; and 2) compare demographic and outcomes variables between older adults who present with typical versus atypical symptoms.
Method: All data was extracted from inpatient medical records of patients aged 65+, who were admitted to the hospital between March 1st, and April 20th, 2020, and had a diagnosis of COVID-19. A natural language processing tool was used to capture and code symptom presentation. Typical symptoms included fever, cough, shortness of breath. Atypical symptoms included altered mental status and failure to thrive.
Results: In total, 4,961 patients were included. Upon arriving to the hospital, the most commonly endorsed symptoms or signs were: respiratory (50.3%), fever or chills (37.7%), cough (26.5%), failure to thrive (24.9%), altered mental status (11.3%), and gastrointestinal (8.9%). About one-third of patients (35.7%) died while in the hospital. Patients with atypical symptoms were more likely to be older, female, non-Hispanic and with a higher comorbidity index. Patients with atypical symptoms were more likely to have dementia and diabetes. Lastly, atypical symptoms were associated with decreased hospital mortality.
Conclusions: Atypical symptoms are common in older adults and increase with older age. Our findings highlight the need to consider atypical symptoms when considering testing and containment efforts.

Relationship between psychosocial factors and hospital stay in emergency department patients

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Background/purpose: Previous studies have established the relationship between hospital stay and the mental health of emergency department (ED) patients, which is associated with increased risk of morbidity and mortality. In this study we sought to identify the relationship between anxious and depressive symptomatology and suicidal risk with the length of stay in an emergency department in Mexico.
Methods: The study was observational and cross-sectional, conducted during the period of April 2017- June 2019. A total of 234 ED patients were assessed using the Hospital Anxiety and Depression Scale (HADS) and the Mini International Neuropsychiatric Interview's Suicide risk Subscale (MINI), the results were analyzed with Spearman coefficient using R 4.0.3. This study was approved by the research ethics committee (Registration No.: 27-152-2017).
Results: Results indicated that 61% of patients were male (n=141), with an average age of 46 years (SD=16), with 3 days of stay (SD=3) and no readmissions (□=0.8, SD=1). Age and anxiety showed weak but statistically significant correlations with length of hospital stay (rs=0.13, p=0.03; rs=-0.14, p=0.02, respectively). Regarding the number of readmissions, a weak, non-statistically significant correlation was identified with level of educational level (rs=0.14, p=0.07) and suicidal risk (rs=-0.13, p=0.08).
Conclusions and implications: The study findings differ from the research literature describing the relationship between the mental health of ED patients and their hospital stay. Factors that could explain these findings will be discussed.

Exploring the feasibility and implementation of mindfulness-based interventions in COPD patients following acute exacerbations – An interview study

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Background/Purpose: Patients with acute exacerbations of chronic obstructive pulmonary disease (COPD) do not only suffer from physical symptoms but also from psychological distress and stress. As pharmacological interventions show only limited effectiveness in targeting the latter, a need for additional treatments emerges. In other chronic conditions, mindfulness-based interventions (MBIs) are effective in reducing psychological distress and stress. Despite first promising results of MBIs in COPD outpatients, research on adapted MBIs for hospitalised patients following exacerbations is lacking. Therefore, the present study explored whether a) MBIs would be feasible for COPD patients following exacerbations, and b) how MBIs could be implemented and adapted for this patient group.
Methods: In a qualitative and explorative study, semi-structured interviews were conducted with 20 COPD patients (65% women; M=70.85 ±7.53 years) hospitalised after an exacerbation. Data were analysed using thematic analysis and a mixed methods approach.
Results: The analyses revealed 5 main findings: (1) Most patients (70%) think of MBIs as potentially helpful and show interest in participating in MBIs. (2) MBIs are difficult to differentiate from other mind-body interventions (e.g. yoga). (3) Implementation conditions (e.g. brief exercises) are crucial for patients' interest. (4) Patients' limitations (e.g. impaired mobility) must be considered. (5) Not interested patients differ from interested ones (e.g. by showing less self-reported impairment).
Conclusions/Implications: Most hospitalised COPD patients following exacerbations were interested in MBIs and rated them as potentially helpful and feasible. Future studies investigating MBIs in COPD are needed and should carefully consider implementation conditions, patients' needs and physical limitations.

A pilot randomized controlled trial to examine the feasibility and effectiveness of a brief digital mindfulness-based intervention for COPD patients following exacerbations

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Background/Purpose: Patients with acute exacerbations of chronic obstructive pulmonary disease (COPD) do not only suffer from physical symptoms but also from psychological distress and stress. In other chronic conditions, mindfulness-based interventions (MBIs) are effective in reducing the latter. However, research on MBIs in COPD patients following exacerbations is scarce. Due to physical limitations and impaired mobility, digital MBIs seem particularly promising for these patients. Building on that, this pilot randomized controlled trial aims to examine a) the feasibility of a brief digital MBI in COPD patients following exacerbations and b) its effects on psychological distress and stress.
Methods: 30 COPD patients, hospitalized after an exacerbation, will be randomly assigned to the MBI or waitlist control group. Patients in the MBI condition will conduct one of 4 brief audio-guided mindfulness exercises (10-15min) daily for 8 weeks, delivered on their smartphones. Psychological and respiratory variables (e.g. subjective stress, dyspnoea) will be assessed before and after each exercise. Primary (psychological distress) and secondary outcomes (e.g. fatigue) will be measured at baseline, discharge, 4 weeks, 8 weeks, and follow-up, including questionnaires and assessments of biological stress markers (hair cortisol, heart rate variability, electrodermal activity).
Results: The study protocol and single-case analyses will be ready for the congress.
Conclusions/Implications: This is the first study examining the feasibility and effectiveness of a digital MBI in COPD patients following exacerbations. The results could serve as basis for following large-scale clinical trials and promote the implementation of digital MBIs as add-on treatment in the clinical practice.

An experimental examination of physiological pain regulation and the buffering effect of social support in patients with chronic pain

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Background/Purpose: Chronic pain is one of the most prevalent long-term health conditions. Moreover, chronic pain leads to alteration in the cardiac system, associated with further medical conditions. Previous research has found associations of chronic pain with elevated blood pressure and decreased heart rate variability. Findings also suggested that patients with chronic pain show impaired cardiovascular regulation in response to acute pain. So far, meta-analytic findings indicated that social support during acute pain stimulation decreases pain intensity and related physiological arousal in healthy participants. In this study, we seek to investigate cardiovascular changes and cardiovascular reactivity in response to acute pain and the buffering effect of social support in patients with chronic pain compared to healthy controls.
Methods: We aim to include 80 participants with chronic pain and 80 healthy control participants. Participants will be randomly assigned to either the experimental group (social support) or the control group (no support). Social support will be given by a confederate during acute pain stimulation. Pain will be induced using the cold pressor task. During this task, pain intensity will be measured with visual analog scales. Cardiovascular measures (blood pressure, heart rate, heart rate variability) will be measured during rest, in response to pain stimulation, and during recovery.
Results: Results will be available by the time of presentation.
Conclusions/Implications: A better understanding of the underlying mechanisms and moderating factors of cardiovascular changes as a consequence of chronic pain could help improve patients' treatment and consequently their pain management and general health status.

The effect of listening to music for relaxing purposes on stress recovery in a lab-based study

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Background/Purpose: Studies have suggested that music can reduce psychological and biological responses to a stressor, but it is unclear whether music has the same effect on stress recovery. Field studies indicate that it is very common for individuals to use music in daily life for the purpose of relaxation. In a lab-based study, we wanted to explore whether people who generally use music for relaxation purposes would indeed show improved recovery from an acute stressor.
Methods: Sixty-two healthy male participants (Mage = 24.03, SDage = 3.20) were separated into two groups, based on their general use of music. Group 1 (N = 20) indicated frequent use of music for relaxation purposes, whereas Group 2 (N = 42) did not. All subjects underwent the Trier Social Stress Test for Groups, and saliva samples were collected 9 times during the whole process of stress induction and recovery. The levels of cortisol and saliva alpha-amylase (sAA) were analyzed from saliva samples.
Results: Findings indicated that during recovery, sAA levels in Group 1 were significantly higher than those in Group 2 (t(57.76) = 2.37, p = .021, d = 0.55), whereas there were no differences in cortisol levels. Further exploration showed that more use of music for relaxation purposes was associated with more chronic stress, as measured by the Perceived Stress Scale (r(61) = .234, p = .023).
Conclusions/Implications: Contrary to our expectations, our results indicate that listening to music for relaxation purposes does not result in improved recovery from a stressor.

Exploring the social ecology for appropriate antibiotic prescribing and stewardship in primary care: Presenting the VALUE driven model of practice derived from qualitative analysis of public and private care settings in Singapore

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Background/Purpose: Singapore allows both antibiotic prescribing and dispensing across public and private primary care settings, presenting an ideal context where dispensing is closely tied to diverse operational models and funding mechanisms. We explored processes underpinning decision-making for antibiotic prescribing by primary care doctors in Singapore.
Methods: Thirty interviews were conducted with 17 doctors from publicly funded clinics and 13 doctors from private clinics. Data were analysed using applied thematic analysis.
Results: Given the lack of National Guidelines for antibiotic prescribing, this practice is currently non-standardised in primary care. Themes contributing to best practice narratives relate to having independent funding sources and control over drug formulary, and valuing reduction in antimicrobial resistance (AMR). The existence of trusting patient-doctor relationships, and reasonable patient loads allowed joint decision-making that further enabled appropriate prescribing. The importance of monitoring and evaluation to inform practice underpinned all levels of optimal care delivery. A model for appropriate antibiotic prescribing-related interventions needs to prioritise addressing and shaping organisational and personal Valuing of AMR reduction. These values have to Align with wider systemic constraints experienced in publicly funded institutions, operational management of private clinics and interactions with patients. Overcoming such constraints and allowing time for patient Liaison and trust building will crystalise these earlier initiatives. Use of data to monitor and Evaluate antibiotic prescribing, informing optimal delivery systems should be routinely shared for transparency and to improve prescribing practices.
Conclusions/implications: The VALUE model summarises the dimensions for appropriate antibiotic prescribing and stewardship in primary care, which is recommended as transferable to diverse contexts.

Fear of infection and mental well-being among German university students during the COVID-19 pandemic

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Background/Purpose: The COVID-19 pandemic has significant psychological impact and fear of infection is one of the stressors involved. Existing evidence suggests that fear of infection with Sars-CoV-2 is associated with depression and anxiety. We examined fear of infection and the association with students' mental well-being during the acute COVID-19 outbreak among university students in Germany.
Methods: A cross-sectional online survey was conducted at four German universities in May 2020 (n=5.021, 69% female, mean age: 24 years) as part of the larger COVID-19 International Student Well-

being Study coordinated by Antwerp University. Sociodemographic factors and fear of infection were assessed using self-generated items. The sum score of the Center of Epidemiologic Studies Scale (CES-D-8) and the Roberts UCLA Loneliness Scale (RULS-8) scores was used to describe students' mental well-being. Associations between fear of infection (predictor variable) and mental well-being (dependent variable) were analyzed with linear regressions, controlling for sociodemographic confounders.

Results: 34% of the participants reported feeling worried about getting infected. Further, 75% reported that they worried about someone from their personal network getting infected and 78% feared that individuals close to them would get severely ill after an infection. In the linear regression, 10% of the variance of mental well-being could be explained by fear of infection ($p \leq 0,001$).

Conclusions/Implications: Our results indicate that fear of infection is associated with students' mental well-being. This should be considered in student counselling to prevent further deterioration to depressive or anxiety disorder in this population.

Relationships between self-compassion and attitudinal body image in Japanese women

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Background/Purpose: Although some researchers have suggested that cognitive behavioural therapy and self-compassion intervention could be used to treat attitudinal body image in Japanese women, it is unclear how and which components of self-compassion are associated with positive outcomes. This study examined the relationships between each component of self-compassion and attitudinal body image.

Methods: Japanese women completed an online survey ($n = 604$; mean age = 25.07 years, $SD = 5.14$).

Results: On structural equation modelling, self-compassion scores had direct positive effects on investment in one's physical appearance for self-evaluation ($\beta = -.37$, $p < .001$), body dissatisfaction ($\beta = -.22$, $p < .001$), affective distress regarding one's appearance ($\beta = -.23$, $p < .001$), and indirect positive effects on safety behaviours ($\beta = -.23$, $p < .001$) and avoidance behaviours ($\beta = -.24$, $p < .001$) regarding one's appearance, and abnormal eating ($\beta = -.14$, $p < .001$). On stepwise multiple regression analysis, scores of self-judgment, common humanity, isolation, and over-identification had negative effects on those of attitudinal body image ($\beta = .18 \sim 28$, $ps < .001$).

Conclusions/Implications: The findings of this study did not support the positive effects of self-kindness, common humanity, and mindfulness. However, the results confirm the negative effects of self-judgment, isolation, and over-identification with one's attitudinal body image, suggesting that a reduction in self-judgment, isolation, and over-identification was associated with a low negative attitude toward one's body in Japanese women.

Associations between salivary testosterone levels and cognitive function among 70-year-old Japanese elderly: A cross-sectional analysis of the SONIC study

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Background/Purpose: The study purpose was to investigate associations between salivary testosterone levels and cognitive function among older Japanese men and women.

Methods: This cross-sectional study included 197 community-dwelling people aged 69–71 years who participated in the prospective cohort study Septuagenarians, Octogenarians, Nonagenarians Investigation with Centenarians (SONIC). Participants consented to a salivary sample collection. Cognitive function was assessed using the Japanese version of the Montreal Cognitive Assessment (MoCA-J), a 10-item recall test and a 12-item recognition test. After excluding individuals with past history of stroke and diabetes mellitus, and those with glycated hemoglobin ≥8.5%, data for 180 (107 men and 73 women) individuals were analyzed. Multivariate logistic regression analyses were performed, adjusting for lifestyle factors (educational attainment, past history, body mass index) and analyzing data separately for men and women.

Results: MoCA-J scores showed that men with low testosterone had a significantly greater risk of low cognitive performance than those with high testosterone (crude odds ratio [OR]: 4.10, 95% confidence interval [CI]: 1.02–16.47, adjusted OR: 5.37, 95% CI: 1.14–25.26). No significant association was found for women. The 10-item recall test scores showed that higher testosterone was significantly associated with greater recall on the second trial in women (standardized beta = 0.23, $p = 0.040$), whereas no significant association was found for men.

Conclusions/Implications: Salivary testosterone may be associated with better cognitive performance among older men and women. Men and women showed significant associations for different tasks, suggesting important gender differences.

How to reduce the stigma associated with mental disorders? An intervention based on social norms

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Background/Purpose: Mental health problems are widespread throughout the world, yet it has been found that individuals do not receive treatment or ask for help due to the stigma associated with them. This study aims to design an intervention to reduce stigma among university students based on the theory of social norms (Bicchieri, 2016).

Methods: Based on the assessment of an ad-hoc questionnaire to measure stigma along with the Mental Health Stigma Scale for health professionals (Varas et al, 2012), an intervention was designed to educate people on mental illnesses, their prevalence and the myths surrounding them. The questionnaires were completed by 125 students. The intervention involved an online campaign through social media, discussion workshops and case presentations. Six participants were interviewed to measure the impact of the intervention.

Results: Results suggest a strong self-stigma presence related to personal beliefs about the social reactions of others. Pluralistic ignorance was found among how to behave when someone has a mental disorder due to beliefs about what mental disorders are. Depression and anxiety appear to be less stigmatized than bipolar disorder and schizophrenia. A stigma reduction was observed among the participants who were interviewed as the intervention assisted them in acknowledging and discussing the myths about mental health problems.

Conclusions/Implications: Providing information on prevalence and functionality of people with mental health problems as well as how individuals behave in the presence of those who are diagnosed with a mental illness facilitates changes in normative personal beliefs and social norms around mental health problems.

A biopsychosocial approach to characterising men with cognitive changes following hormone therapy for prostate cancer: A systematic scoping review

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Background/Purpose: Evidence around the impact of hormone therapy (HT) for prostate cancer on cognitive decline is inconsistent. These variations may be due to a subgroup of men with greater vulnerabilities to HT-induced cognitive change. Using the biopsychosocial framework, this systematic review aimed to delineate sociodemographic, medical, intrapersonal and interpersonal characteristics of men with prostate cancer experiencing cognitive changes following HT.

Methods: Applying PRISMA guidelines, a search of MEDLINE/Ovid, PsychINFO, PubMed, and Web of Knowledge/Science (in January 2020) using terms related to prostate cancer, HT, and cognitive outcomes was undertaken, yielding 250 unique abstracts comprising 52 included studies.

Results: Most studies (67.3%) reported impaired functioning in several cognitive domains or an increased risk of dementia among these patients. Sociodemographic and medical factors associated with cognitive impairments included medical comorbidities, advanced age, and lower education. The specific cognitive impacts of HT type, dose, and duration were unclear. Little is known about modifiable intrapersonal factors (e.g., lifestyle variables, social context, coping behaviours) with emerging evidence linking negative mood and appraisals of threat with impaired cognition. No data are available about the potential role of readily modifiable interpersonal factors (e.g., social support) on cognition.

Conclusions/Implications: Although several identified sociodemographic and medical factors characterise individuals at greater risk of cognitive changes, these factors are relatively difficult to modify. The paucity of research examining more readily modifiable intrapersonal and interpersonal factors points to the urgent need for further investigation to help inform the development of targeted interventions to mitigate cognitive impairment in these populations.

Resilience, procrastination, and mental health among Japanese and international students in a Japanese university: An examination using structural equation modelling

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Background/Purpose: Procrastination and resilience are potential factors affecting the mental health of college students; however, research on the relationship between both these factors and mental health has been scarce. This study aimed to examine the causal relationship between these variables and mental health, using structural equation modelling (SEM) comparing international students studying at a Japanese university with Japanese students.

Methods: The study assessed 566 students in a cross-sectional design, and 363 students agreed to the utilization of their complete data for research purposes. Measures were demographic status, psychological distress, the number of stressor types, procrastination, and positive future orientation (one component of resilience). In SEM, the causal paths passing from procrastination, positive future orientation, the number of stressor types, age, and sex to psychological distress were assumed in addition to correlations among procrastination, positive future orientation, and the number of stressor types.

Results: The causal paths from procrastination, positive future orientation, and the number of stressor types to psychological distress were statistically significant. The standardized coefficients from procrastination to psychological distress in Japanese students were larger than those in international students, while those from the number of stressor types were larger in international students than in Japanese students.

Conclusions/Implications: The results suggest that reduction of procrastination, and promotion of positive future orientation contribute positively to the mental health of both Japanese and international students in Japan. In future, the effectiveness and efficacy of intervention programs that include these variables should be verified.

Acute and chronic life stress predict worsening asthma symptoms in children

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Background/Purpose: Asthma is the most prevalent chronic childhood disease and is associated with morbidity, activity limitations, and economic costs. There is considerable variability in asthma's course; however little is known about its underlying factors. We consider whether acute and chronic stress are related to children's symptom profiles over time.

Methods: The study involved 308 children with physician-diagnosed asthma (mean age = 12.99 years; 44.8% female). Acute and chronic stress over the past six months were quantified using a semi-structured interview. Children reported asthma symptoms for 14 days afterward and repeated monitoring a year later. Hypotheses were tested from generalized linear models, where symptoms were predicted from age, gender, ethnicity, asthma severity, parental education, and stress.

Results: At study entry, chronic household stress was associated with more severe symptoms ($p = 0.017$), both during daytime ($p = 0.031$) and nighttime ($p = 0.014$). Acute stressors were unrelated to symptoms and did not interact with chronic stress. The interaction was predictive of changes over the year ($B = 0.051$, 95% CI [0.002, 0.100], $p = 0.041$), with symptoms worsening when a severe acute stressor occurred in the context of chronic household stress. This pattern was stronger during nighttime ($p = 0.024$) versus daytime ($p = 0.079$).

Conclusions/Implications: Acute stress is associated with worsening asthma symptoms when it occurs with chronic household stress. Families managing financial, health, or neighbourhood strains may lack resources to help children cope with acute stressors, prompting biobehavioural changes that worsen disease.

Implications of the COVID-19 pandemic for transition from military-to-civilian life

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Background/Purpose: The impacts of the COVID-19 pandemic may have implications for military members who are approaching transition to civilian life. This study examined the challenges of the pandemic experienced by Canadian Armed Forces (CAF) members as they near retirement, and the potential impacts of the pandemic on transition from military to civilian life and life after service.

Methods: The COVID-19 Defence Team (DT) survey was administered in April-May 2020. A sample of Regular Force respondents close to retirement was used for the analyses (N=2006). Variables of relevance to transition and life after service, including financial concerns, impacts of COVID-19 on spousal employment, concerns related to COVID-19, mental and physical health, and health-related behaviours, were examined.

Results: Around half reported worse physical health and increased stress levels compared to before the pandemic, while over a third reported worse mental health. Many reported an increase in negative health behaviours such as consumption of alcohol. While most indicated minimal financial or career impacts as a result of COVID, over half reported impacts on their spouse's employment. Few were concerned about delayed transition out of the CAF.

Conclusions/Implications: Respondents did not perceive major COVID-related impacts on their finances, careers or transition out of service. However, a significant minority were experiencing increased stress levels and decreased physical and mental health, and many reported an increase in negative health behaviours. These impacts could trigger or exacerbate health conditions which may continue to manifest post-release, increase the risk for medical release, and heighten transition challenges.

Coronavirus (COVID-19) and coping flexibility in Chile: Role of perceived stress and anxiety

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Background/Purpose: Coronavirus (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). As the COVID-19 pandemic and its far-reaching implications continue to unfold globally, it is normal for people to experience a wide range of feelings and psychological reactions such as stress and anxiety. There are many ways of coping with stress. Their effectiveness depends on the type of stressor, the individual, emotional disturbances, and the circumstances. However, there is not enough information about what makes a person use one strategy or another, especially during the COVID-19 pandemic. The study aims to evaluate the relationship between stress, anxiety (state and trait respectively), and flexible coping (forward-focus and trauma-focus) during the current COVID-19 pandemic.

Methods: The final sample included 65 Chileans between 22 and 68 years old (M= 27.85, SD = 8.90), recruited through an online survey.

Results: The results showed that both stress and anxiety are significantly and negatively related to coping flexibility. Only perceived stress was a significant predictor of forward-focus.

Conclusions/Implications: Results are discussed regarding the implications of future-oriented cognitive processing to further support recovery and mitigate the onset of stress during the COVID-19 pandemic.

Covid-19, student isolation and academic performance

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Background/Purpose: Given the ongoing status of the Covid-19 pandemic, there is a lack of studies concerning the effects of strict regulations on college students' wellbeing. Diehl and colleagues (2018) state that social and emotional loneliness are associated with feelings of depression and anxiety. The pandemic regulations and lack of social support may lead to higher anxiety, loneliness, & sense of isolation, and poorer academic performance which in turn worsens mental health conditions. Consistent with previous studies, it is hypothesized that a sense of social isolation, mental health and loneliness contribute to lower academic performance in university students due to the pandemic.

Methods: Participants (n=323) were recruited from students at a U.S. university who had completed at least one semester of courses prior to the pandemic. Participants answered questions concerning demographics, mental health, academic performance, social support, and sense of isolation. Students were asked to provide their GPA scores before and after the pandemic.

Results: Results support the proposed hypothesis that the Covid-19 pandemic negatively impacted students. Overall reported GPA was lower following the pandemic and social restrictions (t=3.49, p=0.001). Anxiety predicted GPA change, such that individuals with greater reported anxiety experienced greater declines in GPA (F(1, 297)=11.49, p=0.001). While analysis did not show a significant relationship between loneliness, isolation, and academic performance, it did show that loneliness, isolation, and social support played a major role in students' anxiety (F(3, 303)=60.14, p<0.001).

Conclusions/Implications: Higher levels of anxiety, isolation, and loneliness greatly impacted students' GPA and academic performance during the pandemic.

Perceptions on antimicrobial resistance among different healthcare professionals across healthcare settings

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Background/Purpose: Antimicrobial resistance (AMR) is a significant public health threat. Therefore, it is crucial to explore the perceptions on AMR of healthcare professionals (HCPs) across professional groups and practice settings, to better align values on AMR to improve antibiotic use nationally.

Methods: 131 interviews (30 primary care physicians; 101 hospital physicians) and 27 focus groups (12 and 15 respectively among pharmacists and nurses working in hospitals) were conducted in Singapore. Participants were purposively recruited with maximum variation in seniority levels and clinical specialties. Data were analyzed using framework analysis and organized with the Health Belief Model.

Results: HCPs acknowledged AMR as a public health threat and were aware of its burden on the healthcare system. HCPs perceived that they had optimized their professional capacities to use antibiotics appropriately within their immediate areas of practice and attributed the progression of AMR to HCPs from other settings. Primary care physicians were found to have limited updates on the AMR patterns in the community, whereas hospital physicians were often guided in their antibiotic decisions by the hospital's guidelines. Nurses and pharmacists were concerned that their limited antibiotics knowledge and clinical experience might impede the control of AMR.

Conclusions/Implications: Whilst HCPs were aware of the threat of AMR, they lack joint ownership of the problem. Information and knowledge gaps in non-hospital settings and non-physician HCPs need to be addressed for more concerted efforts towards AMR control. Mutual understanding and alignment of values on improving AMR amongst HCPs is crucial, to optimize antibiotic use nationally.

Associations of workplace measures against COVID-19 with workers' sleep disturbance

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Background/Purpose: To investigate associations of workplace measures against COVID-19 with workers' sleep disturbance.

Methods: From October 2020 to February 2021, in a cross-sectional study with employees of Japanese organizations including manufacturing companies, healthcare or welfare facilities, transportation facilities, and a financial institution, 1304 workers answered a self-administered paper questionnaire (response rate = 72.4%). Workplace measures against COVID-19 were assessed using the original items: Measure A "The ventilation of your workplace is enough," and Measure B "You can get the space between the persons sufficiently at your workplace." Responses were scored along a 5-point Likert-type scale. Higher scores indicate more adequate measures. A participant was categorized as having sleep disturbance when his/her Pittsburgh Sleep Quality Index global score was more than five. Psychological distress was assessed using the K6. Logistic regression analyses were used. The study was approved by the institutional review board (No. 2020U019).

Results: Each measure was significantly ($p < 0.05$) negatively associated with sleep disturbance univariately, after adjustment for age, sex, smoking, alcohol consumption, and exercise, and after additional adjustment for psychological distress. The change in the odds ratio for sleep disturbance associated with a 1-point increase in the Measure A or Measure B score was 0.848 (95% CI = 0.761, 0.944) or 0.893 (95% CI = 0.803, 0.994) after full adjustment, respectively. Subgroup analyses were also employed.

Conclusions/Implications: Measures A and B were negatively associated with sleep disturbance independently of psychological distress. More adequate workplace measures against COVID-19 can bring better sleep to workers.

The distinctiveness of boredom at work, workaholism, and work engagement among Japanese employees

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Background/Purpose: Boredom at work (BD) is a state of low activity and dissatisfaction resulting from an unstimulating work environment and is related to poor well-being. The aims of the present study were to demonstrate the empirical distinctiveness of BD (displeasure-deactivation (of arousal)), workaholism (WH: displeasure-activation), and work engagement (WE: pleasure-activation) and to examine their relationship to ill-health (psychological distress and physical complaints) and job performance among Japanese employees.

Methods: A cross-sectional online survey was conducted with the panel of a Japanese survey company. Data from 1,358 respondents (employed full-time and under 60 years of age) were analyzed. Respondents consisted of 692 males and 666 females with a mean age of 41.0 years (SD = 10.35). Hypotheses were tested using structural equation modelling (Amos 24J).

Results: Results indicated that the proposed model adequately fit the data (CFI=.947, RMSEA=.096). BD was inversely correlated with WE ($r = -.12$) but was not correlated with WH ($r = .08$). BD and WH were positively related to ill-health ($\beta = .33$ and $= .60$) and negatively related to job performance ($\beta = -.17$ and $-.20$). However, WE was negatively related to ill-health ($\beta = -.32$) and positively related to job performance ($\beta = .46$).

Conclusions/Implications: Results suggested the empirical distinctiveness of BD, WH, and WE in terms of their relationship to ill-health and job performance. Future research should clarify the distinctiveness of BD and WH in more detail by considering their relationship to antecedents.

Maternal occupation and infant mortality in Japan: Insights from the Vital Statistics (Occupational and Industrial Aspects)

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Background/Purpose: To examine mother's occupation in relation to: (1) the risk of stillbirth at or after 12 completed weeks of gestation, and (2) the risk of infant death under 1 year of age after livebirth.

Methods: We analyzed birth data for fiscal years (FYs) 1995, 2000, 2005, 2010, and 2015, and infant death data for FYs 1995–96, 2000–01, 2005–06, 2010–11, and 2015–16 from the national Vital Statistics: Occupational and Industrial Aspects. Odds ratios (ORs) were estimated for: (1) stillbirth and (2) infant death by mother's occupation using logistic regression. Population attributable risk (PAR) for stillbirth attributed to mother's occupation among employed mothers was also calculated.

Results: There were 61,147 (1.2%) stillbirths among 5,298,731 births and 12,561 (0.2%) infant deaths among 5,237,584 live births. Compared to managers/specialist/technical workers, the adjusted ORs (95% confidence interval) for stillbirth among clerical, sales, service, and blue collar workers and not employed women were 1.24 (1.20–1.29), 1.49 (1.42–1.57), 1.77 (1.70–1.84), 1.55 (1.48–1.63), and 0.96 (0.93–0.98), respectively. There was no association between mother's occupation and infant deaths. PAR for stillbirth among employed mothers attributed to being clerical workers, and service workers were 7.4%, and 12.5%.

Conclusions/Implications: The risk of stillbirth differed by mother's occupation, but not the risk of infant deaths. The association found between mother's occupation and the risk of stillbirth implied mothers' occupation was one of the important factors for birth outcome in Japan.

Interaction effects of psychosocial work environment and living a calling on psychological distress

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Background/Purpose: The term 'calling' originated from the religious belief that God has ordained them to their jobs. However, the use of this term is currently widespread all fields. The purpose of this study was to confirm stress-buffering effects of living a calling (LC) in workers.

Methods: In a cross-sectional study of all workers at 15 Japanese organizations, 2,549 answered a self-administered paper questionnaire (response rate = 82.8%). LC was evaluated using the Living Calling Scale. Psychosocial work environment (extrinsic effort, extrinsic reward,

financial remuneration, esteem, and career opportunities) was evaluated using the Effort–Reward Imbalance Questionnaire. Psychological distress was measured using the K6. Psychometric properties of these scales have been confirmed to be adequate in Japan. Interaction effects of psychosocial work environment and LC on psychological distress were tested using hierarchical linear regression analyses. This study was approved by the Ethics Committees of Department of Nursing, Okayama University Graduate School of Health Sciences (No. D17-04) and Sanyo Gakuen University (No. 2020U019).
Results: Regression lines and predicted values illustrating significant ($p < 0.05$) interactions showed that increase of psychological distress accompanied by increase of extrinsic effort, decrease of extrinsic reward, decrease of financial remuneration, or decrease of career opportunities, was buffered by LC.
Conclusions/Implications: The results demonstrated stress-buffering effects of LC in workers. Enhancing LC can improve workers' mental health.

Effectiveness of a school-based universal prevention program for enhancing autonomous self-esteem: Utilizing an implicit association test as an assessment tool

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Background/Purpose: Self-esteem is divided into two types: autonomous and heteronomous. The former is healthy and adaptive, while the latter is unhealthy and nonadaptive. Moreover, a school-based universal program that cultivates autonomous self-esteem and decreases heteronomous self-esteem has been developed. The current study aimed to examine the efficacy of the program using a reliable and valid implicit association test as a nonconscious assessment tool.
Methods: Participants were 55 and 60 5th-grade children for the intervention and control groups, respectively. The program was conducted for 45 minutes once a week for four successive weeks. The test was the Autonomous and Heteronomous Self-Esteem Implicit Association Test for Children. The children in the intervention group completed the test twice, before and after the implementation of the program. Similar time periods were utilized for the control group.
Results: Results by 2 (intervention and control groups) x 2 (pe-intervention and post-intervention periods) x 2 (boys and girls; or high and low groups) analyses of variance showed that the program intervention significantly increased autonomous self-esteem and decreased heteronomous self-esteem compared with the control group. Moreover, the effectiveness of this program was similar regardless of sex and the level of autonomous self-esteem before the intervention.
Conclusions/Implications: The school-based universal program was found to be effective in cultivating autonomous self-esteem and decreasing heteronomous self-esteem, when a nonconscious assessment tool of the implicit association test was utilized. Hereafter, the program is expected to be conducted at schools as an effective method to cultivate healthy and adaptive self-esteem.

Could Implicit Relational Assessment Procedure (IRAP) be useful as recidivism prevention assessment for offenders?

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Background/Purpose: Regarding risk assessment for recidivism prevention measures, it is highlighted that self-report assessment procedures include bias from low introspective abilities or fake answers for assessment outcomes. In recent years, the use of the Implicit Relational Assessment Procedure (IRAP) implicit measure, a non-introspective methodology, has become widespread (Schmidt et al., 2015). However, we presumed that it is necessary to devise experimental IRAP procedures for offenders because it is relatively difficult to achieve. Therefore, this study aimed to examine the device of experimental IRAP procedures for clinical samples.
Methods: Fifteen studies that were considered to include clinical samples were extracted using the "PsycINFO," "Web of Science," and "PubMed" online databases.
Results and Conclusions: Consequently, we found two types of devices for the experimental IRAP procedure for clinical samples affected by mental illness or medication and with low levels of intellectual or cognitive ability. The first is the simplification of rules such as the reduction of target stimulus word standards from six to three. The second lies in easing the restriction of achievement, such as an extension of response time limit standards from 3000ms to 5000ms. Specifically, it has been reported that 2000ms has higher validity than the 3000ms standard, and 5000ms is longer than the standard procedure. Therefore, it is assumed that the response time of the clinical sample is slower than that of the healthy sample because of the low intellectual ability level.

Dental anxiety among Japanese university students using the Modified Dental Anxiety Scale

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Background/Purpose: Dental anxiety is a problem in the field of behavioural medicine characterized by excessive fear and avoidance of dental procedures (King & Humphris, 2010). The Modified Dental Anxiety Scale (MDAS) has been used as an assessment tool to measure the symptoms of dental anxiety, and recent studies have shown that some university students have symptoms of dental anxiety (Storjord et al., 2014). The purpose of this study was to investigate the symptoms of dental anxiety in Japanese university students.
Methods: A total of 302 university students were asked to complete a questionnaire consisting of the Japanese version of the MDAS. Exploratory factor analysis was used to examine the factor structure, and effect size (Cohen's d) and 95% confidence intervals (95% CI) were calculated for comparison with previous studies in other countries. In addition, the percentage of subjects with a cut-off score (>19) was calculated.
Results: 281 participants gave complete responses. Exploratory factor analysis revealed that the Japanese version of the MDAS has a one-factor structure (factor loadings: 0.92-0.65). The mean score was 12.2 ($SD = 5.0$), and no difference from previous studies in other countries was detected ($d = 0.11$; 95% CI: -0.03, 0.26). The percentage of participants who exceeded the cut-off score was 10.6%.
Conclusions/Implications: The results of this study revealed that the degree of symptoms of dental anxiety among Japanese university students is comparable to that of other countries. Further research should clarify the factors that intensify the symptoms of dental anxiety among Japanese university students.

Pandemic-related fear and emotional eating during COVID-19 predict weight change

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Background/Purpose: Governmental and public health measures during COVID-19 have resulted in restrictions on daily living. The possible consequences of these restrictions on mental health and health behaviours are yet unclear. The aim of this study was to assess the influence of pandemic-related fear, anxiety/depression, and emotional eating on weight change.

Methods: A German sample (N = 1050) was surveyed through an online questionnaire in June 2020, a few months into the pandemic. A multinomial logistic regression was conducted to test our hypotheses that pandemic-related fear, anxiety and depression, and emotional eating will predict whether individuals gained weight or lost weight during the COVID-19 pandemic.

Results: Majorly in line with our hypotheses, pandemic-related fear $x^2(2) = 9.11$, $p < .01$ and emotional eating $x^2(2) = 89.14$, $p < .001$ was a significant predictor in the model, however, anxiety/depression was not. Furthermore, pandemic-related fear ($b = 0.47$, Wald $x^2(1) = 9.05$, $p < .01$) and emotional eating ($b = 1.39$, Wald $x^2 2(1) = 72.18$, $p < .001$) were significant positive predictors of weight gain. However, these findings did not hold for weight loss.

Conclusions/Implications: Overall, engaging in emotional eating and experiencing higher levels of pandemic-related fear led to increases in body weight in the German population. Failure to manage emotional eating and fear related to the pandemic may have harmful and long-lasting impacts on individuals' weight trajectories. Interventions and resources towards better fear management and promoting healthy eating habits for weight gain prevention during the pandemic is warranted.

Applying the Reasoned Action Approach to understanding intention to vaccinate against COVID-19 as a function of seasonal influenza vaccination status

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Background/Purpose: The COVID-19 pandemic remains a global health crisis, and preventive health behaviours are encouraged to attenuate spread. Vaccination is a key factor in herd immunity and return to "normalcy." The present study used the Reasoned Action Approach to examine intention to vaccinate against COVID-19 and assess differences in model fit by seasonal influenza vaccination behaviour.

Methods: Adults (n=979) residing in the U.S. were recruited online. Following consent, participants completed measures assessing demographic information, influenza vaccine receipt, hazard-specific risk perception, experiential and instrumental attitudes, descriptive and injunctive norms, capacity, autonomy, and intention, related to getting a COVID-19 vaccine. Model fit and direct effects were tested using WarpPLS.

Results: Participants were on average 40.5 years old (SD=13.4), primarily identified as female (58%, n=569) and White (72.6%, n=712) with a Bachelor's degree or higher (62.4%). Model fit indicators ranged from acceptable to ideal for both groups. For those who had not yet been vaccinated against seasonal influenza (n=616), the model accounted for 84% variability in intention to vaccinate against COVID-19. Instrumental attitudes ($\beta=0.47$, $p<0.01$), experiential attitudes ($\beta=0.12$, $p<0.01$), descriptive norms ($\beta=0.17$, $p<0.01$), injunctive norms ($\beta=0.14$, $p<0.01$), and capacity ($\beta=0.11$, $p<0.01$) predicted intention. Similarly, for those who had been vaccinated against seasonal influenza (n=367), the model accounted for 87% variability in intention to vaccinate against COVID-19. Instrumental attitudes ($\beta=0.37$, $p<0.01$), descriptive norms ($\beta=0.28$, $p<0.01$), injunctive norms ($\beta=0.11$, $p=0.02$), and capacity ($\beta=0.30$, $p<0.01$) predicted intention.

Conclusions/Implications: Consistent with recent research predicting other health behaviours to reduce the spread of COVID-19, the Reasoned Action Approach provides a strong model for understanding intention to vaccinate against COVID-19.

Coping strategies for menopausal women with urinary incontinence: Validation of the Coping Strategies Instrument

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Background/Purpose: Urinary Incontinence (UI) is a public health problem of high prevalence among peri- and post-menopausal women, and UI dysfunctional coping may result in symptoms worsening. This study aimed to establish evidence of the validity and reliability of the Coping Strategies Instrument (CSI) - a scale designed to access functional and dysfunctional coping strategies in women with UI (CSI-UI), based on the work of Diokno et al. (2016).

Methods: Overall, 1,326 women with UI (aged 40-65 years old), who confirmed having urine loss occasionally or frequently, completed the original 16-item questionnaire suggested by the authors. In the present study, and differently from the original, a Likert scale from 1 (Never) to 5 (Always) was used.

Results: Confirmatory Factor Analysis (CFA) indicated a hierarchical structure with one second-order factor and two first-order factors (Hiding and Defensive Coping). Regarding factorial validity, the model fit was considered good (CFI=.937; TLI=.916; RMSEA = .098; SRMR=.045); items 10, 15, and 16 were removed since they showed high kurtosis ($|ku|>17.95$), as well as item 11, which showed a low factorial weight (.19). CSI-UI also showed evidence of convergent and discriminant validity, and consequently, construct validity. Moreover, CSI-UI presented external validity, composite reliability, and the benefit of taking a short time to administer.

Conclusions/Implications: The CSI-UI is a reliable and valid brief measure that will facilitate the understanding of functional and dysfunctional coping strategies used by middle-aged women to manage UI, which will enable researchers and practitioners to improve the efficacy of health-care interventions.

The effects of sensitivity to punishment and cognitive fusion on psychological stress processes

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Background/Purpose: In cognitive-behavioural stress management (CBSM), an effective technique for coping with stress (Richardson et al., 2008), the goal of support is to encourage positive reinforcement (Shimada & Tanaka, 2018). It is also assumed that CBSM may not be effective for those who have a high level of sensitivity to punishment, as the behavioural inhibition system (BIS) typically triggers avoidance behaviour. Understanding this concept from a relational frame theory, it is possible that those with high activity of the BIS are more likely to experience cognitive fusion because of their tendency to derive verbal stimuli. Therefore, the present study examined the relationship between the BIS and cognitive fusion.

Methods: Participants: 100 Japanese undergraduate and graduate students (63 females and 37 males with a mean age of 21.5 ± 0.9 years). Measurements: (a) State Cognitive Fusion Questionnaire (Bolderston et al., 2019), (b) BIS/BAS scale (Takahashi et al., 2007), (c) Cognitive Appraisal Scale (Suzuki et al., 1998), (d) Tri-Axial Coping scale (Kamimura et al., 1995), (e) Psychological Stress Response Scale (Suzuki et al., 1997); ethics approval number: 2019-368.

Results: The path analysis using structural equation modelling (GFI = .98, AGFI = .91, RMSEA = .04, CFI = .98) showed that the BIS had a significant negative effect on cognitive fusion. Further, the BIS and cognitive fusion had a significant negative effect on the stress response ($p < .01$).

Conclusions/Implications: Interventional studies are needed because the results suggest that CBSM with defusion exercises may be effective for those with high activity of the BIS

Challenges faced by ward pharmacists in antibiotic stewardship: A qualitative analysis

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Background/Purpose: Antibiotic resistance (AMR) is a serious public health threat. With antibiotic stewardship programmes (ASPs) in hospitals led by a handful of ASP pharmacists, non-ASP ward pharmacists are untapped resources for antibiotic stewardship. A qualitative study was conducted to explore the facilitators and barriers to ward pharmacists' involvement in antibiotic stewardship.

Methods: Focus group discussions (FGDs) were conducted with 74 ward pharmacists, purposively sampled, with maximum variation in seniority, from the three largest acute-care public hospitals in Singapore. Data were analysed using applied thematic analysis and further interpreted with the Social-Ecological Model.

Results: At the intrapersonal level, ward pharmacists identified themselves as reviewers for drug safety before dispensing, confining themselves to a restricted advisory role. Furthermore, they felt that their lack of clinical knowledge and experience had hindered them from contributing actively to physicians' decisions on antibiotic prescribing. At the interpersonal level, pharmacists communicated frequently with physicians but often experienced difficulties conveying their opinions and recommendations on antibiotic choices and doses to physicians. Nonetheless, ward pharmacists were actively involved in educating patients and caregivers on essential knowledge for antibiotics use. At the organizational level, inhouse antibiotic guidelines were found to be useful by ward pharmacists in supporting their antibiotic recommendations to physicians. Finally, at the community level, pharmacists observed that there was generally low public awareness and knowledge on antibiotic use and AMR.

Conclusions/Implications: These findings provide important insights into the gaps to be addressed to harness the untapped potential of ward pharmacists and fully engage them in antibiotic stewardship.

Support systems for Japanese high school students suffering from mental health problems

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Background/Purpose: To clarify the support systems for Japanese high school students suffering from mental health problems, we carried out a self-administered anonymous questionnaire.

Methods: Subjects were 971 high school nurses in Japan. The questionnaires included the types of mental disorders among students and characteristics of the support systems for high school students. Informed consent was obtained from all participants. A total of 168 school nurses returned completed questionnaires, and their data were analyzed. The research protocol was approved by an ethics committee.

Results: Students' mental disorders included developmental disorders (95.8%), sleep disorders (57.7%), depression (54.8%), and eating disorders (44.1%). Direct support for students included psychological care such as counselling (89.9%), individual learning environment support (68.5%), career support such as entering further education and finding employment (47.6%), learning interpersonal relationship skills (41.7%), facilitating self-understanding (38.7%), and others (data not shown). Regarding support systems in the high schools, school staff, such as principals/vice principals, school counsellors, school social workers, and school nurses, regularly shared the students' information during meetings, and collaborated to support the students (48.2%). Some schools also created an environment that allowed school staff to identify the early signs of mental health problems in students (9.5%).

Conclusions/Implications: The findings of this study suggest that Japanese high school students have a variety of mental disorders, and various support systems are provided.

How do Japanese high school students obtain knowledge about mental health problems and find out how to get a medical examination?

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Background/Purpose: The purpose of this study was to clarify how Japanese high school students obtain knowledge about mental health problems and find out how to get a medical examination.

Methods: We conducted a self-administered anonymous questionnaire on 971 high school nurses. The questionnaire included items related to the behaviours of students suffering from mental health problems and their parents. A total of 168 school nurses returned completed questionnaires, and their data were analyzed. Informed consent was obtained from all participants. The research protocol was approved by an ethics committee.

Results: Students obtained knowledge from the Internet (75.6%), friends (35.7%), unknown (26.8%), books (11.9%), doctors/clinics (9.5%), workshops (7.7%), lectures at their schools (3.6%), and others (data not shown). Parents obtained knowledge from the Internet (51.2%), unknown (44.6%), books (21.4%), other families (19.0%), doctors/clinics (13.7%), workshops (10.1%), friends (4.8%), and others (data not shown). Students consulted a general practitioner and/or medical specialist before entering their high schools (84.5%), and also consulted them after talking with their families (78.6%).

Conclusions/Implications: The findings of this study suggest that many Japanese high school students suffering from mental health problems obtained information from the Internet and consulted a general practitioner and/or medical specialist before entering high school.

Effect of Attention Bias Modification on Internet Gaming Disorder

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Background/Purpose: Internet Gaming Disorder (IGD) was newly included as "a condition for further study" in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition. Attention bias has been considered as a factor in maintaining IGD. This study aimed to examine the effect of Attention Bias Modification (ABM) on IGD.
Methods: We adopted a single case study method and screened for two subjects who presented IGD-related tendencies (Internet Gaming Disorder Scale Japanese version score $\geqq 3$, the Japanese version of the Adult Attention-Deficit Hyperactivity Disorder Self-Report Scale part A score < 4). The protocol of this study comprised 3 days of baseline, followed by 7 days of ABM intervention and 1 day was post-test, totalling 11 days. Each session included 124 ABM trials and intervention was 3 times per day via tablet device. This study compared pre-post data for addiction to internet games, craving for internet game stimuli, Reaction Times (RT) of ABM tasks which measure attention bias and other reported outcomes (depression and anxiety).
Results: Through ABM intervention, addiction to internet games and craving for internet game stimuli tended to decrease. Furthermore, RT tended to be faster. It should be noted that state anxiety and depression also tended to decrease through ABM intervention.
Conclusions/Implications: ABM interventions on individuals presenting with IGD tendencies decreased addiction to internet games as well as state anxiety and depression. Although this study focused on preventive intervention, our results may contribute to the growing body of evidence supporting new intervention methods for IGD.

Dancing happily, thinking uniquely: An examination of the effect of online dance on creativity in working adults

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Background/Purpose: Dance has been widely shown to evoke various emotions. Recent studies have also demonstrated that emotions of happiness enhance creativity. Similarly, in the research field of embodied cognition, fluent body movements have been shown to enhance creativity. Based on these findings, this study examined the effects of dance on creativity in people working at home during the pandemic.
Methods: Thirty-six working adults were asked to participate in an online experiment. Participants were instructed to perform three dances that evoked either happiness, anger, or no emotion. The order in which each dance was performed was counter-balanced. After each dance, the Unusual Uses Test (UUT) was performed within eight minutes to measure the effect of each dance on various aspects of creativity, including fluency, flexibility, and originality.
Results: An analysis of variance of the scores on the per-minute indices for the three dances demonstrated a significant interaction in fluency ($F(12, 420)=2.55$, $p<.01$, $\eta p2=.07$) and uniqueness ($F(12, 420)=2.36$, $p<.01$, $\eta p2=.06$). Results also revealed that, in the first minute after the dance, the happiness dance increased fluency and uniqueness more than the anger and none-emotional dances.
Conclusions/Implications: Even online, the results indicated that creativity was improved by dance, depending on the emotion expressed in the dance. For adults working at home, dance may contribute to the activation of creativity, which is often lost in pandemics.

Pain willingness and activity engagement mediate the relationship between depression and headache-related disability

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Background/Purpose: Migraine is a common, disabling disease. Comorbid depression is associated with migraine-related disability. Pain acceptance may mediate this relationship.
Methods: This is a planned secondary analysis of baseline data from a randomized clinical trial of a mindfulness-based therapy for migraine. Participants ($N=60$) completed the Headache Disability Inventory (HDI), Patient Reported Outcome Measurement System Depression (PROMIS-D), and the Chronic Pain Acceptance Questionnaire (CPAQ). The CPAQ includes two subscales: pain willingness (CPAQ-PW) and activity engagement (CPAQ-AE).
Results: Study participants were primarily white (81.7%), non-Hispanic (83.3%), women (91.7%). Participants reported subclinical depressive symptoms on the PROMIS-D ($M=53.55$, $SD=6.76$), and moderate headache-related disability on the HDI ($M=51.69$, $SD=11.66$). Unadjusted bivariate correlations found that higher CPAQ-PW and CPAQ-AE were associated with lower PROMIS-D ($r = -.277$, $p = .032$; $r = -.484$, $p < .001$) and HDI ($r = -.619$, $p < .001$; $r = -.635$, $p < .001$). The CPAQ-PW and CPAQ-AE serially mediated the relationship between the PROMIS-D and HDI (total effect: estimate = -1.492, $p < .001$; direct effect: estimate = .850 =, $p = .004$; indirect effect: estimate = .231, 95% CI = .087, .3901), such that higher PROMIS-D scores were associated with lower CPAQ-PW scores (estimate = -.339, $p = .032$), which were associated with higher CPAQ-AE scores (estimate = -.577, $p = .001$), which were associated with lower disability (estimate = .431, $p = .038$).
Conclusions/Implications: Results indicate that pain willingness and activity engagement may explain some of the relationship between depressive symptoms and headache-related disability.

A protocol for a randomized controlled trial: Web-based Interpersonal PsychoTherapy (IPT) program (HIPCom) for Japanese mothers to improve their well-being and mental health

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Background/Purpose: For women who are raising children, better relationship with others is associated with their better psychological well-being (PWB) and mental health. Interpersonal psychotherapy (IPT) is an evidence-based psychotherapy for mental disorders such as mood disorders, at the same time it has been suggested its strategies and ideas are applicable to healthy people as well. Therefore, the purpose of this study is to develop a multimedia, IPT-based program named HIPCom (Healthy, interpersonal communication) to improve PWB for child-rearing women without mental illness, and to examine its effectiveness in a randomized controlled trial (RCT).
Methods: The subjects of the RCT are recruited from general offices, flyers, local governments, NPOs and SNS. The inclusion criteria were (1) women raising children of 20 years old or younger, (2) not currently hospitalized for mental illness. The required number of participants, based on the effect size of previous studies, was 200 in each group. Those who met the eligibility criteria were randomly assigned to the case and control groups, and the intervention group was given 4 weeks to learn the newly developed multimedia program, including 19 videos in 4 Modules, based on the concept of IPT. Six components of PWB were used as the primary outcome, along with the psychological distress.

Conclusions/Implications: This study will contribute to the development of an internet-based, better interpersonal relationship program that is effective, feasible, and accessible to improve mothers' well-being and mental health.

Effects of previous bullying experiences on current bullying recognition and life satisfaction in university students

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Background/Purpose: In recent years, bullying at schools has been gradually recognized as a serious problem in China. However, the level of recognition of bullying is low. Although bullying has been observed also in universities, students' levels of recognition of bullying are still low. The purpose of the current study was to examine the effects of previous bullying experiences in the first and second year of universities on current (i.e., the third and fourth year) bullying recognition and life satisfaction.
Methods: Participants were third- and fourth-year undergraduates in China. The final sample was 361 students. The questionnaires were the Bullying Scales for Chinese University Students (Jing, 2019) for measuring experiences of bullies and victims in the first and second year of universities and current recognition of bullying, and the Chinese version of the Satisfaction with Life Scale (Yuen, 2002) for assessing life satisfaction.
Results: The correlation analyses showed that more experiences of bullies and victims on the internet were associated with lower current bullying recognition on the internet, and that more experiences of victims in real life were associated with lower life satisfaction. Also, the results by structural equation modelling showed that more experiences of bullies on the internet were associated with lower current bullying recognition on the internet ($\beta = -.56$, $p < .05$).
Conclusions/Implications: Past experiences of bullying influence later bullying recognition and decrease life satisfaction, which suggests the necessity of considering past bullying experiences for bullying recognition and mental health at present.

Weight management strategies in middle aged women: Validation of the OXFAB Taxonomy in a Portuguese sample

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Background/Purpose: Obesity incidence is higher in women, and specifically in middle-aged women who are at increased risk of developing obesity-related disease. Weight control behaviours are crucial, and they can result in more successful weight maintenance. The Oxford Food and Activity Behaviours Taxonomy (OxFAB) systematizes the cognitive-behavioural strategies adopted by individuals to manage their weight. This study sought to (1) develop an OxFAB-based tool in Portuguese, (2) assess its psychometric properties, and (3) evaluate the OxFAB tool in a specific risk population.
Methods: 1,921 Portuguese middle-aged women aged 45-65 (M=52.21, SD=5.118) completed a socio-demographic questionnaire and the OxFAB tool. Descriptive statistics and Confirmatory Factor Analysis (CFA) were performed to evaluate the factor structure using R-Lavaan software.
Results: CFA demonstrated acceptable model fit (CFI=.905; TLI=.891; RMSEA=.071; SRMR=.046). Since there were five domains with 1 item, these were grouped in other domains. Domains "Weight management aids", "Restraint", and "Support: motivational" were removed, as such as items 32, 37, 11, and 15. In addition, some domains were merged (e.g., regulation - restrictions and regulation - rule setting). OxFAB also showed convergent validity (AVE: between 0.42 and 0.81) and discriminant validity, construct validity, external validity, and composite reliability (Cronbach's alphas: between 0.66 and 0.93; CR: between 0.62 and 0.90).
Conclusions/Implications: The OxFAB questionnaire is a valid and reliable item tool for determining weight management strategies in middle-aged women, useful in both research and health-care contexts.

Early DNR: Prevalence and associated patient characteristics in older adults hospitalized with COVID-19

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Background/Purpose: Timely documentation of life-sustaining treatment preferences is crucial during pandemic surges. Early DNR prevalence and associated patient characteristics for older adults (OAs) hospitalized with COVID-19 during peak pandemic surge in the New York metropolitan area is unknown.
Methods: Retrospective cohort study of OAs, age 65+, hospitalized with COVID-19 at a health system in NY, USA March-April 2020. Early DNR orders were written within 24 hours of admission. Patient demographics, baseline characteristics, and severity of illness data were collected.
Results: Of 4961 subjects, 283 (5.7%) had an early DNR, 1557 (31.4%) had a late DNR, and 3121 (62.9%) had no DNR. Compared to non-early DNR patients, the early DNR group tended to be older (average age 85.0 vs. 77.0, p<0.001), female (51.2% vs. 43.6%, p=0.0118), and White (7.06%) as opposed to Black, Asian, or Other (3.10%, 6.03%, 5.11%, p=.0002). Early DNR patients tended to come from a non-home facility (13.4% vs. 3.65%, p<0.001), have dementia (13.29% vs. 4.57%, p<0.001), and a higher Charlson Comorbidity Index (3.88 vs. 3.36, p<0.001).
Conclusions/Implications: Early DNR order prevalence for older adults was low, with pandemic early DNR patients resembling those pre-pandemic, an intriguing observation given high peak pandemic mortality. Timely documentation of life-sustaining treatment preferences is crucial during pandemic surges. Further study is needed to understand the role of early DNR in receiving preference-congruent care.

A moderation effect of the positive metacognitive beliefs about maladaptive coping behaviour between attention ability and clinical symptoms

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Background/Purpose: Metacognitive therapy (MCT) aims to achieve detached mindfulness (DM), a state in which unpleasant thoughts and feelings are observed without being eliminated. Studies have reported that beliefs about the "benefits of coping" (BOC) moderate the association between attention ability and DM (Fujishima et al., 2019). However,

the effect of BOC on the relationship between attention ability and clinical symptoms has not been clarified. Therefore, in this study, we assessed the relationship between attention ability, clinical symptoms, and BOC.
Methods: An online survey was conducted and data from 255 subjects (99 men, 156 women, age 40.30±12.18) were analyzed. The survey was comprised of the following instruments: (1) VACS (Imai et al., 2015); (2) BDI-II (Kojima et al., 2003); (3) GAD-7 (Muramatsu et al., 2014); (4) OCI-R (Koike et al., 2020); and (5) MBCS (Fujishima et al., 2020).
Results: Hierarchical multiple regression analysis was conducted. Results showed that the interaction between attention ability and BOC to clinical symptoms was significant or tended to be significant. When BOC was high, the effect of attention ability on clinical symptoms was significant or not significant (High: $\beta = -.18\sim-.04$, $p = .01\sim.91$; Low: $\beta = -.11\sim-.32$, $p < .01$).
Conclusions/Implications: Results of this study revealed that BOC had a moderation effect on the relationship between attention ability and clinical symptoms. In MCT, the attention training technique (ATT) is used to improve attention ability. Therefore, it is necessary to reduce BOC through psychoeducation and intervention before implementing ATT.

Meeting again, starting again: A longitudinal study on the effect of career reflection through communication with weak ties on social networking sites

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Background/Purpose: Previous research has shown that reflecting on one's long-term vocational career from a positive perspective has the effect of increasing one's positive attitude towards the job. Although many studies have examined the influence of close relationships as a factor that promotes reflection, the influence of estranged relationships and relationships on the Internet has not been examined. In this study, we examined the hypothesis that reflection on one's career was also facilitated by interactions with weak ties on Social Networking Sites (SNS).
Methods: A three-wave longitudinal web-based panel survey was conducted on 572 employees aged 20 to 65 years from Japan. Of those who responded to all three rounds of the survey, data from 94 respondents who interacted with weak ties during the survey period were included in the analysis. The questionnaire assessed their work engagement, the content of their conversations with weak ties on SNS, and their positive reflection on their career to date.
Results: Analysis of the covariance structure revealed that the process of discussing past work performance and future expectations with weak ties promoted positive reflection on one's career and ultimately enhanced work engagement in the current job. The goodness of fit of the model was satisfactory ($\chi2 = 1064.43$, df =609, p<.01, CFI=.90, RMSEA=.08).
Conclusions/Implications: This result supports the hypothesis that interaction with weak ties on social networking sites also promotes reflection on one's career. We proposed a new model that suggests the importance of SNS in promoting autonomous career development.

The longitudinal relationship between self-compassion and happiness among Japanese employees during covid-19 pandemic.

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Background/Purpose: Self-compassion involves being open to and moved by one's own suffering, experiencing feelings of caring and kindness toward oneself, taking an understanding, non-judgmental attitude toward one's inadequacies and failures, and recognizing that one's own experience is part of the common human experience (Neff, 2003). The aim of this study is to examine the longitudinal relationship between self-compassion and happiness among Japanese employees during the COVID-19 pandemic.
Methods: A two-wave longitudinal online survey was conducted on Japanese employees with a three-month interval. Participants were recruited via an industry group, Japan Facility Management Association. Responses from 175 employees working for 13 companies (101 men and 74 women; mean age = 42.8, SD=11.3) were analyzed. A hierarchical multiple regression analysis was conducted on happiness (T2). The independent variables were entered into the equations in the following order: demographic variables (gender and age) at T1 for Step 1, happiness at T1 for Step 2, job characteristics (job demands, job control, and workplace support) at T1 for Step 3, and self-compassion at T1 for Step 4.
Results: After adjusting for demographic variables, happiness and job characteristics at T1, self-compassion at T1 was positively associated with happiness at T2.
Conclusions/Implications: Self-compassion was positively and longitudinally associated with happiness even after adjusting for covariates at baseline, suggesting that self-compassion can contribute to improvement of happiness during the COVID-19 pandemic. Further research is needed to clarify the underlying mechanisms and individual differences in the relationship between self-compassion and happiness.

Designing a smoking cessation intervention for people with HIV in China

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Background/Purpose: A higher percentage of people with HIV (PWH) smoke compared to their counterparts, with more vulnerability to the adverse effects of tobacco. Currently, no smoking cessation interventions specifically target Chinese PWH and their unique needs. Therefore, the study objective is to explore smoking behaviours and preferences for a planned mHealth plus behavioural counselling smoking cessation intervention targeted to PWH in China.
Methods: Participants who were current and former smokers were recruited from the HIV clinic of a large public hospital in Nanning District, Guangxi, China. Semi-structured small group discussions and individual interviews were conducted in Mandarin Chinese on: rationale for smoking or quitting, perceived consequences on health and HIV, and intervention acceptability, dose, and timing. Recordings were transcribed and translated into English, then were thematically coded.
Results: Participants (n=3) were male, Han ethnicity, age range 25-50 years, with two current and one former smokers. Participants reported smoking because of social pressure and their tobacco dependence. They have low awareness of, but high interest in trying, useful interventions. Participants understood potential associations between smoking and HIV and welcomed messages with further explanations. Participants perceived integration of cessation programs within the HIV clinic setting as motivating and convenient. Qualitative data collection is ongoing; full results (n=24) will be available at time of presentation.
Conclusions/Implications: Smoking cessation programs using patient-centred mHealth messages and counselling guides have the potential to encourage smoking cessation among Chinese PWH. We will evaluate this in an upcoming pilot trial within China's HIV treatment system setting.

Telepsychology group Cognitive Behavioural Stress Management intervention in ME/CFS: Stress management skills and post-exertional malaise

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Background/Purpose: The COVID-19 pandemic has hastened the uptake of telepsychology, and many individuals with "long" COVID have been found to meet Myalgic Encephalomyelitis/Chronic Fatigue Syndrome (ME/CFS) criteria. To explore the efficacy of telepsychology-delivered Cognitive Behavioural Stress Management (CBSM) for ME/CFS patients, we conducted secondary analyses of data from a randomized controlled trial comparing two 10-week telepsychology-delivered treatments: group CBSM (n=64) versus active Health Information control (HI, n=63).
Methods: We tested CBSM-targeted perceived stress management skills (PSMS) mediating CBSM effects on sickness impact, perceived stress, ME/CFS symptoms, perceived study benefit, and depression at 5-month follow-up in a regression framework. We considered the moderating role of baseline post-exertional malaise (hiPEM, n=61; loPEM, n=63), a debilitating and cardinal symptom of ME/CFS not required for CFS diagnosis. Analyses controlled for age, gender, race/ethnicity, and baseline scores on outcomes (p's<.050 unless noted).
Results: PSMS indirectly mediated CBSM effects on sickness impact, with moderated mediation strongest in hiPEM patients (indirect effect=-0.478). PSMS (B=-0.334) and a PSMS-by-PEM interaction (B=-0.120) demonstrated effects on perceived stress, with hiPEM patients indicating more PSMS-associated benefit. CBSM and hiPEM patient groups experienced greater ME/CFS symptom reduction (CBSM-by-PEM: B=-6.745; simple slopes: B=-13.071 and B=-9.572, p=.059). Patients who received CBSM (B=1.147) and those who identified as Hispanic (B=1.524) reported greater perceived study benefit. PEM (B=1.525) and PEM-by-CBSM interaction effects (B=-1.492, p's<.080) suggest hiPEM patients experienced more, and the HI group less, depressive symptom reduction.
Conclusions/Implications: Telepsychology-delivered CBSM interventions may benefit patients with ME/CFS, and other post-viral syndromes, who present with elevated PEM.

First round accepted oral and posters abstracts
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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 11th July, 2019
By: , (Not registered)

Can priests alter the choice and preference of sugar-sweetened beverages? A cluster randomized controlled trial in catholic parishes

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Background/purpose: Evaluating the potential of faith-based interventions by assessing the immediate and short-term impact of a one-off sermon given by priests during a morning service on the choice and preference of sugar-sweetened beverages.
Methods: A pragmatic, cluster-randomized trial, was conducted in Chimbote, Peru. Catholic parishes, paired by number of attendees, were randomly assigned to intervention or control. The intervention, delivered by a priest during the mass, was a short message about the importance of protecting one's health. The primary outcome was the proportion of individuals that choose a bottle of soda instead of a bottle of water immediately after the service. Cluster-level estimates were used to compare primary and secondary outcomes between intervention and control groups utilizing non-parametric tests.
Results: Six parishes were allocated to control and 6 to the intervention group. The proportion of soda selection at baseline was ~60% in the intervention and control groups, and ranged from 56.3% to 63.8% in week 1, and from 62.7% to 68.2% in week 3. Accounting for baseline values, the proportion of mass attendees choosing soda at week 1 after baseline was, on average, 8.2% lower in the intervention group compared to the control group (p=0.03). At 3 weeks after baseline the difference between intervention and control group was 6.2% (p=0.15).
Conclusions and implications: In Catholic churches, a single low-intensity short-duration one-off sermon given by a priest has an immediate effect and a weak short term effect in reducing the choice of sugar-sweetened beverages over water.

Submission ID: 21
Symposium ID and title if part of symposium:
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Last updated: 15th July, 2019
By: anacalz2002@gmail.com, MD Ana Agustina Calzada-Reyes

QEEG and LORETA in teenagers with conduct disorder and psychopathic traits

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Background/purpose: Few studies have investigated the impact of psychopathic traits on the EEG of teenagers with conduct disorder (CD). To date, there is no other research studying low-resolution brain electromagnetic tomography (LORETA) technique using quantitative EEG (QEEG) analysis in adolescents with CD and psychopathic traits. The aim is to find electrophysiological differences specifically related to psychopathic traits. The current investigation compares the QEEG and the current source density measures between adolescents with CD with and without psychopathic traits.
Methods: The resting EEG activity and LORETA for the EEG fast spectral bands were evaluated in 42 teenagers with CD, 25 with and 17 without psychopathic traits according to the Antisocial Process Screening Device. All adolescents were assessed using the *DSM-IV-TR* criteria. The EEG visual inspection characteristics and the use of frequency domain quantitative analysis techniques (narrow band spectral parameters) are described.
Results: QEEG analysis showed a pattern of beta activity excess on the bilateral frontal-temporal regions and decreases of alpha band power on the left central-temporal and right frontal-central-temporal regions in the psychopathic traits group. Current source density calculated at 17.18 Hz showed an increase within fronto-temporo-striatal regions in the psychopathic relative to the nonpsychopathic traits group.
Conclusions and implications: These findings indicate that QEEG analysis and techniques of source localization may reveal differences in brain electrical activity among teenagers with CD and psychopathic traits, which was not obvious to visual inspection. Taken together, these results suggest that abnormalities in a fronto-temporo-striatal network play a relevant role in the neurobiological basis of psychopathic traits.

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Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 26th July, 2019
By: claudiaruth.pischke@med.uni-duesseldorf.de, Prof. Claudia Pischke

Results of a cluster controlled trial examining the effects of a health promotion program targeting pre-schoolers at 62 daycare facilities

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Background/purpose: The purpose of this study was to examine the effects of a multi-component health promotion program designed to promote physical activity, healthy eating, and mental wellbeing among 3- to 6-year-old preschoolers.

Methods: In a cluster controlled trial, 62 daycare facilities (DFs) were recruited nationwide (31 intervention, 31 control DFs). Outcomes included children's health, psychosocial behavior and quality of life assessed via parental questionnaires and body composition measured by study nurses at baseline and 12 months. Implementation of individual intervention components at DFs was tracked with implementation calendars during the intervention period. Linear mixed models were used to investigate effects for survey, group and their interaction at the individual level, while accounting for clustering.

Results: Samples of 831 (baseline) and 641 (12 months) children aged 4.3 ± 0.8 and 5.2 ± 0.8 years were analysed. No significant intervention effects were found for health behavior, quality of life, and body composition. Compared to control DFs, psychological problems (β=-1.87; 95% CI: (-3.34; -0.41)) significantly decreased in children at intervention DFs reporting ≥ 50% adherence to the mental well-being program component.

Conclusions and implications: Due to a lack of implementation during the first year of this 3-year program which DFs could implement with great flexibility, program participation led to no major improvements in health outcomes and psychosocial behavior. There is some indication that if individual components are implemented with a >50% dose in the future, intervention effects will become increasingly visible. Long-term surveillance of intervention dose and effects at DFs is necessary.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 12th August, 2019
By: e.s.cowley@ljmu.ac.uk, Miss Emma Cowley

The development of a home-based hiit intervention for "inactive" adolescent girls from low socio-economic areas

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Background/purpose: 81% of female adolescents in the UK are not meeting the daily physical activity (PA) guidelines (60 minutes per day) (WHO, 2018) and are therefore at an increased risk of multiple health issues. Furthermore, adolescents from low socioeconomic groups are shown to have poorer health habits than their counterparts from higher socio-economic status (SES) areas (Love *et al.,* 2019).

Methods: A qualitative research design will be used in this study. The study aims to collect data from 45 adolescent girls who perceive themselves to be inactive and are between the ages of 13-18years. Schools and youth clubs from low SES areas will be recruited. Semi-structured focus groups will be conducted and the interview guide will be based on the Youth Physical Activity Promotion model to investigate participants perceptions, beliefs and attitudes towards exercise, and specific feedback on a proposed HOME-based high intensity interval training exercise protocol. Low SES secondary schools and youth clubs in Liverpool and Dublin will be used as recruitment sites for this study. Focus groups will be transcribed verbatim and analysed using thematic analysis to identify key themes.

Results: The majority of adolescent exercise interventions are created solely by exercise scientists and are not successful in long-term adherence and lack follow-up.

Conclusions and implications: We hope that by listening to the feedback and opinions of adolescent girls we can co-create an exercise intervention that is feasible, enjoyable and something that they can stick to for life, thereby decreasing the associated health risks of inactivity.

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By: faustin.armel.etindele.sosso@umontreal.ca, Dr FA Etindele Sosso

Influence of socioeconomic status and stress over quality of sleep: A systematic review

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Background/purpose: Sleep disorders (SD) have a complex etiology and socioeconomic status (SES) as determined by income and education plays an important role in their development. SES also influences allostatic load caused by chronic accumulation of stress throughout life. Environmental and psychological stressors have a direct effect on SD, and they are modulated by SES, in combination with comorbidities like obesity and cardiovascular disease. This systematic review explores the recent theories about the influence of SES on the development of SD in the general population, and focusses on the interplay between socioeconomic status, circadian rhythms, aging and clinical outcomes like metabolic diseases and cancer.

Methods: Using PRISMA protocol, 19 articles where selected and analyzed.

Results: SES can induce allostatic load through daily stressors, SD and mood disorders. SD can be a consequence of mood disorders but may also be indicators of high levels of stress. Circadian rhythms and circadian cycle are affected by SES and their influences vary from one individual to another inside the same community. SES and circadian disruption are associated with metabolic diseases such as diabetes and cancer. SES

has almost no effect on SD in the normal aging population but increase SD symptoms of older people suffering from neurodegenerative diseases.
Conclusions: The most widely correlated measures of SES related to SD are social class, discrimination, ethnicity, low-income, occupation, education, obesity, neurodevelopmental and motor disabilities and households.

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Last updated: 12th September, 2019
By: acoroiu@hsph.harvard.edu, Dr. Adina Coroiu

Operationalization of skin self-examination in randomized controlled trials with individuals at increased risk for melanoma: A systematic review

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Background/purpose: To investigate how skin self-examination (SSE) was operationalized in randomized controlled trials (RCTs) testing interventions that promote SSE among individuals at increased risk for melanoma.
Methods: Several scientific databases such as Medline, EMBASE, CINAHL, PsycINFO, Web of Science (Conference Proceedings), ProQuest Dissertations and Theses Global, PubMed, and the Cochrane Central Register of Controlled Trials and trial registries were searched from inception through April 2, 2019. Three reviewers carried out the selection of relevant trials and conducted data extraction.
Results: The review (PROSPERO CRD42016033765) identified 13 unique RCT's. As per instructions reported in 6/13 trials, SSEs were conceptualized as periodically checking the skin of the entire body, individually or with partners/mirrors, with or without tracking or monitoring tools, and using the ABCDE criteria to identify early signs of melanoma. There was variability in how SSE behavior was measured across trials, in terms of item content (exam performed or not; frequency or recency of the (last) exam; comprehensiveness of the exam), number of items (1-17), response format, and scoring of the outcome variable (continuous or binary). Timeframe of assessment also varied from "last 2 months" to "last 12 months" across trials. No validity evidence and minimal reliability evidence for SSE measures were identified.
Conclusions and implications: Future studies are needed to establish the psychometric properties of SSE assessment tools, which would improve the interpretability of empirical results from melanoma prevention studies.

Submission ID: 29
Symposium ID and title if part of symposium:
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Last updated: 19th September, 2019
By: pv181@sph.rutgers.edu, Dr. Pamela Valera

Group-based smoking cessation treatment for incarcerated smokers: A multi-site study

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Background/purpose: Approximately 2,162,400 individuals are incarcerated in the United States, with 50-80% of incarcerated individuals reporting that they are smokers, versus only 14% in the United States adult population. Although smoking products are banned in United States federal prison facilities, smoking is still permitted in many state prisons.
Methods: We conducted a single-arm 6-week group-based smoking cessation treatment multi-site parallel study from May 2019 – August 2019 at eight prison sites. Eligibility criteria included: $\geq$18 years of age; (2) able to speak, read, and write in English well enough to understand the informed consent procedures and complete the study; (3) smoked at least 5 cigarettes per day over the past 7 days, as confirmed by carbon monoxide monitoring (4) demonstrate a readiness to quit; (5) reside in the prison's general population section; (6) able to provide informed consent; and 7) medically eligible to use nicotine replacement therapy, patches. The primary outcome was exhaled carbon monoxide monitoring (CO)-confirmed at 7-day point abstinence (no smoking over a period of 7 days) at 1-month follow up.
Result: 172 completed the 6-week group-based smoking cessation treatment program. Sixty-two percent were Caucasian, and 28% were African American, 96% identified as male, and 4% identified as transgender females. The average number of cigarettes smoked per day was 17.34 and 8.7% of the participants reported current e-cigarette use.
Conclusions and implications: In this 6-week group-based smoking cessation treatment multi-site study, quitting smoking and reducing the number of cigarettes smoked were both possible and confirmed at 1-month follow up.

Submission ID: 30
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Last updated: 21st September, 2019
By: kgriffit@bu.edu, Mr. Kevin Griffith

Predicting 5- and 10-year mortality risk in older adults with diabetes mellitus

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Background/purpose: Several diabetes clinical practice guidelines suggest that treatment goals may be modified in older adults based on life expectancy. The long-term benefits of treatment intensification may not outweigh short-term risks for patients with limited life expectancy. Our objective was to develop and validate prognostic mortality indexes for patients with diabetes, using only data that is routinely collected in most electronic health records.
Methods: We used a prevalence sample of patients with diabetes who were aged ≥65 years on January 1, 2006 (n=275,190). Administrative data for a two-year baseline period (2004-2005) were queried for potential predictors including demographics, comorbidities, procedures, labs, anthropomorphic measurements, medications, and service utilization. Logistic least absolute shrinkage and selection operator (LASSO) regressions identified variables independently associated with survival at the end of five years (December 31, 2011) or ten years (December 31, 2015).
Results: Thirty-three mortality predictors were identified: four demographics, insulin or sulfonylureas prescriptions, five biomarkers, previous outpatient/inpatient utilization, and twenty comorbidities/procedures. The resulting odds ratios were weighted to create prognostic mortality indexes, which were strongly associated with observed mortality risk. These indexes showed good discrimination, with c-statistics of 0.74 and 0.76 for 5 and 10-year mortality, respectively.

Conclusions and implications: Prognostic indexes calculated using administrative data can predict mortality in older adults with diabetes. These indexes have high predictive validity and demonstrate the importance of several individual characteristics. Such a tool may inform clinicians about patients' life expectancy, and help them develop individualized goals that balance risks and benefits of treatment intensification or deintensification.

Submission ID: 31
Symposium ID and title if part of symposium: 8

Novel interventions for treating comorbid substance use and mental health problems

Decision: Accepted, Symposium
Last updated: 23rd September, 2019
By: ejg39@bath.ac.uk, Dr Emma Griffith

A teachable moment/window of opportunity: qualitative analysis from a pilot randomised trial of a brief intervention for co-occurring severe mental health and substance use problems.

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Background/purpose: Many of the patients admitted to psychiatric inpatient units with severe mental health problems also use alcohol and/or drugs. As acute symptoms reduce, a "window" of increased insight into/reflection on factors contributing to becoming unwell, that preceded the hospital admission may present; thus, the admission has been proposed as a ‘teachable moment’, with this research evaluating the feasibility/acceptability of delivering a brief integrated motivational intervention (BIMI) to inpatients.
Methods: Qualitative interviews with 21 inpatients experiencing co-occurring severe mental health and substance use problems who received the BIMI were completed and 12 inpatient staff members also completing either an individual interviews or a focus group.
Results: Four themes emerged from the service user interviews; "openness/readiness to talk about substance use, feeling valued, understanding substance use and helpful skills and processes"; all with related subthemes. The BIMI appeared to be experienced as useful; however, some participants did not always have the “headspace” to process the intervention. Staff data had one core theme; "the acceptability of the approach for inpatient ward staff", that included four subthemes; "training in the intervention; delivering the intervention; joint working; and feasibility".
Conclusions and implications: Staff found the "targeted style" of the BIMI useful and outlined considerations for delivery, including the “timing” and "competing ward duties". It is suggested the psychiatric hospital admission represents a "natural window of opportunity" for staff to engage with inpatients about their substance use.

Submission ID: 33
Symposium ID and title if part of symposium: 10

International progress in behavioural ontologies: advancing evidence integration and interpretation

Decision: Accepted, Offered Orals
Last updated: 30th September, 2019
By: hunterchristine@nih.gov, Dr. Christine Hunter

Progress on behavioral ontologies at the national institutes of health

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The complexity of describing and measuring dynamic human behaviors and social interactions has resulted in a proliferation of terms, constructs, measures and theories in the behavioral and social sciences. For example, it is not uncommon to find the same terms used for different constructs or different terms used for identical or similar constructs. This complexity, combined with the rapidly increasing volume of available data, presents challenges for categorizing, reporting, integrating, and understanding the inter-relationships among variables of interest. This presentation will highlight the efforts of the NIH’s Behavioral Ontology Development Working Group to address some of these challenges and to advance ontology creation and use across multiple domains in the behavioral sciences. Dr. Hunter will describe complementary approaches to ontology development, including two use cases in which natural language processing tools were used to capture existing relationships between constructs and measures in PubMed for the domains of self-regulation and resilience. She will describe NIH efforts to enhance behavioral and social science categorization in Medical Subject Headings (MeSH), the hierarchically-organized terminology for indexing and cataloging articles in PubMed. Finally, she will describe NIH efforts to build partnerships between behavioral and social science subject matter experts and knowledge representation scientists to accelerate knowledge accumulation in the behavioral sciences.

Submission ID: 34
Symposium ID and title if part of symposium:
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Last updated: 4th October, 2019
By: lei_feng@nuhs.edu.sg, FENG Lei

Choral singing and structured health education for the promotion of brain health in aging: A community-based study in Singapore

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Background/purpose: To examine the efficacy of choral singing and structured health education in promoting brain health in aging.
Methods: The design is a parallel-group randomized controlled trial. Participants are 93 community-living older people who are at high risk of future dementia: 47 were assigned to a choral singing intervention (CSI) and 46 were assigned to a health education program (HEP). Interventions are weekly one-hour choral singing for two years, or weekly one-hour health education for two years. Main outcome measures are change on depression and anxiety score . Change in cognitive function measured by the composite cognitive test score (CCTS).
Results: The average age of participants was 70 (SD 5.5) years and 73/93 (79%) were female. The choral singing group showed faster improvement in mental health after 6-months, as indicated by repeated scores from the Geriatric Depression Scale (GDS) and the Geriatric Anxiety Inventory (GAI). For cognitive function, the absolute change of CCTS from baseline to 24 months was 0.05 (SD 0.36) among participants in the CSI group and -0.1 (SD 0.32) among participants in the HEP group. The between group difference was statistically significant (point estimate 0.15, 95% confidence interval 0.01 to 0.3, P=0.042) but became smaller (point estimate 0.12, 95% confidence interval -0.02 to 0.26, P=0.09) when adjusted

for baseline CCTS. We did not find between-group difference on brain MRI based metrics such as total brain volume, cerebral gray matter volume, cerebral white mater volume.
Conclusions and implications: Choral singing improves brain health in ageing without changing global brain structures.

Submission ID: 35
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 4th October, 2019
By: robinson.anna24@gmail.com, Anna Robinson

Using 'digital health technologies' to support behaviour change in surgical patients: Evaluating effectiveness and improving patient outcomes

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Background/purpose: Digital Health Technologies (DHTs), including smartphone applications, telemedicine, and wearable trackers are being increasingly integrated within healthcare settings. DHTs can promote patient empowerment and education to motivate health behaviour change (HBC). Elective surgical patients may be amenable to benefits of supported pre- and post-operative HBC, with the potential for improved outcomes. The aim is to evaluate the effectiveness of DHTs in elective surgical patients to support HBC, focusing on physical activity (PA), weight, and dietary intake.
Methods: This systematic review (PROSPERO: CRD42019127972) was conducted according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Medline, Embase, CINAHL, PsycInfo, Web of Science, and Scopus databases were searched in March 2019. Studies evaluating DHT-interventions for surgical patients were included. Quality assessment was conducted using Joanna Briggs Critical Appraisal tools.
Results: Seventeen studies from 7 different countries, published between 2011-2019, were included. We identified 3 factors effective for supporting HBC, specifically: intervention delivery, initiation, and theoretical-underpinning. Internet-based e-platforms demonstrated HBC ($p \leq 0.05$) in 75% of studies. HBCs were found in 100% of studies implementing DHTs across the entire pre- and post-operative period, compared to 40% and 62.5% of those targeting the pre-operative and post-operative periods, respectively. Eight studies included HBC theories in their design: 75% (n=6) produced HBC ($p \leq 0.05$) relating to increased PA and improved diet.
Conclusions and implications: Digital Healthcare is a rapidly evolving area. DHTs can support HBC in surgical patients; we now need to determine how best to integrate these technologies into practice, ensuring best outcomes for patients.

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Last updated: 7th October, 2019
By: lei_feng@nuhs.edu.sg, FENG Lei

Vegetables, fruits and cognitive health in aging: Findings from two asian cohorts

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Background/purpose: Eating behaviors affects health but their role on cognitive health in aging is not well studied. The objective is to assess the contributions of vegetables and fruits on cognitive function among elderly Chinese in China and Singapore.
Methods: We studied 8094 elderly Chinese aged 65 to 105 years who participated in the 2008 wave of the Chinese Longitudinal Healthy Longevity Survey (CLHLS) and obtained a Mini Mental State Examination (MMSE) score of 24 or greater. We then analyzed data from 675 participants (aged 60 years and above) of the Diet and Healthy Aging (DaHA) study in Singapore to examine the relations in greater details. DaHA collected rich information on the consumption of all commonly consumed vegetables and fruits in Singapore and diagnosed mild cognitive impairment (MCI) through thorough cognitive assessments and consensus panel discussions.
Results: In the CLHLS cohort, daily consumption of vegetables and fruits were independently associated with better cognitive function. In the DaHA cohort, both quantity and variety of vegetables and fruits were associated with reduced odds of having MCI.
Conclusions and implications: Consumption of vegetables and fruits is associated with better cognitive health. Further research should examine types and patterns of consumption, as well as phytonutrients and biological mechanisms.

Submission ID: 37
Symposium ID and title if part of symposium: 10

International progress in behavioural ontologies: advancing evidence integration and interpretation

Decision: Accepted, Offered Orals
Last updated: 9th October, 2019
By: s.michie@ucl.ac.uk, Professor Susan Michie

The behavior change intervention ontology: Vision and development

Prof Susan Michie[1], Prof Marie Johnston[2], Prof Robert West[1], Prof Mike Kelly[3], Dr Alison Wright[1], Dr Emma Norris[1], Dr Ailbhe Finnerty[1], Miss Candice Moore[1], Miss Emily Hayes[1], Miss Silje Zink[1]
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Evidence about behavioral interventions is currently produced on a vast but fragmented scale and more rapidly than humans can synthesize and access. This presentation will explain the usefulness of ontologies in organizing large volumes of complex knowledge about behavioral interventions to synthesize evidence at scale about what works and how to generate new hypotheses about behavior change. It will present the Behavior Change Intervention Ontology developed by a large team of behavioral scientists in collaboration with computer scientists and system architects as part of the Human Behaviour-Change Project (HBCP; www.humanbehaviourchange.org). The HBCP is building a prototype of an Artificial Intelligence system to scan the world literature evaluating behavioral interventions to extract key information and use this to answer queries and generate new insights about behavior change.
Development of the Behavior Change Intervention Ontology was developed in five iterative stages, as described at https://osf.io/86m75/. It comprises a BCI Plan, a BCI Scenario and a BCI Comparison (the evaluation methodology). The upper-level of the BCI Scenario currently has 11 interlinked entities: Intervention Content (Behavior Change Techniques and Dose), Delivery (Mode, Source, Schedule), Reach and Engagement, Mechanisms of Action, Context (Setting and Population) and Outcome Behavior. Each entity has its own ontology and once finalised will be posted

on [https://github.com/HumanBehaviourChangeProject, https://www.humanbehaviourchange.org/].

Submission ID: 38
Symposium ID and title if part of symposium: 10

International progress in behavioural ontologies: Advancing evidence integration and interpretation

Decision: Accepted, Offered Orals
Last updated: 9th October, 2019
By: aonghusa@ie.ibm.com, Dr Pól Mac Aonghusa

Ontologies meet Artificial Intelligence

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As applications of artificial intelligence (AI) technology becomes increasingly ubiquitous in our personal and professional lives it is easy to forget how complex and opaque the underlying technologies and processes are. In the behavior change domain, where recommendations from algorithms have real-life consequences for practitioners and patients, the need for transparency and trust in AI systems is particularly apparent. Ontologies are helpful as an organizing framework to represent subtle, and sometimes non-obvious, statistical patterns and relationships encountered in AI systems in ways that a human can interpret. This presentation will discuss the successes, challenges and potential opportunities of using ontologies to build interpretable AI systems using the Human Behaviour Change Project (HBCP) as a relevant example. This presentation will also touch on larger questions of trust, transparency, fairness and bias that will become increasingly topical as a topic for interdisciplinary research.

Submission ID: 39
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 9th October, 2019
By: jf_sara@yahoo.com, Miss Sara JalaliFarahani

Association of leisure and occupational physical activities and health-related quality of life: Tehran Lipid and Glucose Study (TLGS)

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Submitter email: jf_sara@yahoo.com

Background/purpose: This study investigated the association between various types of physical activity (PA) and health-related quality of life (HRQoL) in Tehranian men and women.
Methods: This cross-sectional study was conducted using data from the Tehran Lipid and Glucose Study. Data was collected from 7800 adults on their PA habits and HRQoL using the Modifiable Activity Questionnaire(MAQ) and Short-Form 12-Item Health Survey version-2(SF-12v2). Poor HRQoL was defined as the first quartile of HRQoL scores and logistic regression analysis was used to assess the association between PA levels and poor HRQoL.
Results: The mean age of participants was 46.4±14.9 years and 45.6% of them were male. Levels of PA were significantly associated with most subscales of HRQoL in both men and women (p<0.05). In both sexes, leisure time PA was significantly correlated to all subscales of HRQoL (p<0.05) except for bodily pain in both sexes and for social functioning and role emotional in men. In adjusted models, men with both moderate (OR=1.55, 95%CI:1.18-2.04; p=0.002) and low (OR=1.46, 95%CI:1.11-1.91; p=0.007) levels of PA had a significantly higher chance of reporting poor mental component summary compared to their counterparts with high levels of PA. Furthermore, women with low levels of PA had a significantly higher chance of reporting poor physical component summary (OR=2.39, 95%CI:1.63-3.49; p<0.001) compared to those with high levels of PA.
Conclusion and implications: The findings show an association between PA and both domains of HRQoL in men and mostly the physical domain in women, implying a sex-specific pattern for this association.

Submission ID: 41
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 16th October, 2019
By: parisaamiri@yahoo.com, Dr Parisa Amiri

Does motivational interviewing improve the weight management process in adolescents? A systematic review and meta-analysis

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Submitter email: parisaamiri@yahoo.com

Background/purpose: The current systematic review and meta-analysis aimed to address unanswered questions regarding effect of motivational interviewing(MI) trials on weight management process in adolescents in different sub-groups.
Methods: Electronic databases i.e Medline, Elsevier, Elsevier, ISI, Cochrane Central Register of Controlled Trials(Clinical Trials), PsycINFO and subject-related key journals were searched for randomized controlled trials that have been investigated the effect of MI-based interventions on weight management in overweight/obese adolescents. Primary outcomes were body mass index(BMI), BMI z-score and waist circumference(WC) and secondary outcomes were weight-related behavioral outcomes and cognitive abilities. Overall 3673 studies were screened for eligibility, of which 283 studies were reviewed. Finally 19 studies met the inclusion criteria and 18 studies were entered in the meta-analysis.
Results: MI-based interventions had no effect on BMI, BMI z-score and WC, however, they significantly reduced sugar-sweetened beverage intakes in adolescents (SMD=-0.47). Results of subgroup analysis on primary outcomes showed significant effect of MI on reducing BMI (SMD=-0.28, 95%CI:-0.54 to -0.02) and WC (SMD=-0.32, 95%CI:–0.62 to -0.02) in adolescents aged ≥14y and girls respectively. Different characteristics of participants (age, sex, weight status) and interventions (family involvement, study duration, fidelity assessment, nature of the interventions) affect related primary and secondary outcomes in this age group.
Conclusions and implications: Although MI-based interventions could not generally affect general and central obesity in adolescents, they improved SSB intakes. Targeting participants in late adolescence, involving families, conducting long-term interventions with high fidelity may result in more efficient lifestyle modification and weight management in adolescents.

Submission ID: 42
Symposium ID and title if part of symposium: 13

Behavioural aspects of cardiac rehabilitation - unresolved problems and new solutions

Decision: Accepted, Symposium
Last updated: 17th October, 2019
By: christian.albus@uk-koeln.de, Prof. Dr. Christian Albus

Psychological interventions in cardiac rehab: Do they really matter?

Prof. Christian Albus[1], Prof. Christoph Herrmann-Lingen[2], Dr. Katrin Jensen[3], Mr. Matthes Hackbusch[3], Mr. Maurizio Grilli[4], Prof. Bernhard Schwaab[5], Prof. Bernhard Rauch[6]
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Background/purpose: Exercise-based cardiac rehabilitation (ebCR) often includes various psychological interventions for lifestyle change or distress management. However, the additional benefit of specific psychological interventions on depression, anxiety, quality of life, cardiac morbidity and cardiovascular or total mortality is not well investigated.
Methods: For the systematic review and meta-analysis (PROSPERO: CRD42015025920), randomised controlled trials and controlled cohort trials published between January 1995 and October 2017 comparing ebCR with or without pre-specified psychosocial interventions were selected and evaluated on the basis of predefined inclusion and outcome criteria.
Results: Out of 15,373 records, 20 studies were identified, including 4,450 patients with coronary artery disease (88.5%) or congestive heart failure (11.5%), respectively. Studies were of low to moderate quality and methodological heterogeneity was high. As compared with ebCR alone, additional psychological interventions for lifestyle change or distress management showed a trend to reduce depressive symptoms (standardized mean difference (SMD) - 0.13, 95%-confidence interval (CI) [-0.30; 0.05]). Furthermore, during a follow-up of 5 years, distress management was associated with a trend to reduce cardiac morbidity (risk ratio (RR) 0.74, 95%-CI [0.51; 1.07]). There was no evidence for an additional impact of either psychological lifestyle change interventions or distress management on anxiety, quality of life, cardiovascular or total mortality.
Conclusions and implications: Specific psychological interventions offered during ebCR may contribute to a reduction of depressive symptoms and cardiac morbidity, but there remains considerable uncertainty under which conditions these interventions exert their optimal effects.

Submission ID: 44
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 17th October, 2019
By: saoribp@gmail.com, Ms Janina Bazalar

Combination of cardiovascular risk factors and mortality: 10-year results of the peru migrant study

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Background/purpose: To estimate the association between the aggregation of selected cardiovascular risk factors (CVRF) and the pair-wise combination of these CVRF with 10-year all-cause mortality.
Methods: 10-year all-cause mortality was determined for participants originally enrolled in the PERU MIGRANT Study (baseline in 2007) through the National Registry of Identification and Civil Status. The CVRF included hypertension, type 2 diabetes, hypercholesterolemia, and overweight/obesity defined by body mass index. Exposures were composed of both the aggregation of the selected CVRF (one, two, and three or more CVRF) and pair-wise combinations of two CVRF. Cox regression models were used to calculate hazard ratios (HR) and 95% confidence intervals (95% CI).
Results: Of the 989 participants evaluated at baseline, 976 (98.8%) had information about vital status at 10 years of follow-up (9,992.63 person-years), and 63 deaths were recorded. In the multivariable model, adjusting for sociodemographic and lifestyle variables, participants with two CVRF (HR: 3.47, 95% CI: 1.39-8.65), and those with three or more CVRF (HR: 4.73, 95% CI: 1.41-15.86) had higher all-cause mortality risk, compared to those without any CVRF. The pair-wise combinations with the highest associated risk of mortality, compared to those without such comorbidities were hypertension-type 2 diabetes (HR: 10.51, 95% CI: 3.37-32.74) and hypertension-overweight/obesity (HR: 3.65, 95% CI: 1.37-9.72).
Conclusions and implications: The aggregation of two or more CVRF and the combination of hypertension with type 2 diabetes or overweight/obesity was associated with an increased risk of 10-year all-cause mortality.

Submission ID: 46
Symposium ID and title if part of symposium: 14

Human behaviour-change project: Novel tools for cross-disciplinary working in behavioural medicine

Decision: Accepted, Symposium
Last updated: 21st October, 2019
By: alison.j.wright@ucl.ac.uk, Dr Alison Wright

Specifying intervention settings and populations

Dr Alison Wright[1], Dr Emma Norris[1], Dr Ailbhe Finnerty[1], Dr Marta M Marques[2], Prof Marie Johnston[3], Prof Robert West[1], Prof Mike Kelly[4], Prof Susan Michie[1]
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Submitter email: alison.j.wright@ucl.ac.uk

Background/purpose: Contextual factors are key to understanding how behaviour change interventions have their effects. This talk will outline the development of ontological tools to specify intervention context, comprising the intervention's target *population* (who receives an intervention) and their *setting* (where an intervention is delivered). These are important potential modifiers of the relationship between an intervention and its effect.
Methods: Development of the lower-level ontologies within the Behaviour Change Intervention Ontology was by five iterative stages:

1. Identification of key entities and preliminary definitions by searching for relevant terms from existing ontologies and typologies that can be appropriately reused 2. Refinement of the Ontology (through annotating published intervention evaluation reports), 3. International stakeholder review and feedback on comprehensiveness and clarity, 4. Inter-rater reliability testing of assignment of text to ontology categories, and 5. Finalising and specifying relationships within the Ontology. https://osf.io/86m75/.
Results: The Population Ontology currently has 289 entities across six levels with six upper-level entities: sociodemographics, social & economic attributes, health status, medication use status, behaviour and psychological attributes. Inter-rater reliability was found to be 0.79 (good) for those familiar with the ontology. The Setting Ontology has 70 entities structured hierarchically with three upper-level classes: Geographical location, Attribute of location (including area social and economic, population and resource density sub-levels) and Intervention Site (including facility, transportation and outdoor environment sub-levels). Inter-rater reliability was found to be 0.73 (good) for those familiar with the ontology and 0.61 (acceptable) for those unfamiliar with it.

Submission ID: 47
Symposium ID and title if part of symposium: 14

Human behaviour-change project: Novel tools for cross-disciplinary working in behavioural medicine

Decision: Accepted, Symposium
Last updated: 21st October, 2019
By: robertwest100@gmail.com, Professor Robert West

A new tool for specifying behavioural interventions: The behaviour change intervention ontology

Professor Robert West[1], Dr Ailbhe Finnerty[1], Dr Emma Norris[1], Dr Alison Wright[1], Dr Marta M Marques[2], Professor Marie Johnston[3], Professor Mike Kelly[4], Dr Janna Hastings[1], Professor Susan Michie[1]
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Submitter email: robertwest100@gmail.com

Background/purpose: Ontologies are data structures allowing the specification of knowledge in a given domain that provide a set of: i) unique and unambiguous identifiers representing classes of entity (objects and processes together with their attributes), ii) labels and definitions corresponding to these identifiers, and iii) specified relationships between the entities. The Behaviour Change Intervention Ontology (BCIO) is a precise representation of classes of objects, processes and attributes involved in behavior change interventions (BCIs) and their evaluation. This presentation sets out the main BCIO classes and relationships relating to interventions and their contexts, as well as evaluation studies and their findings.
Methods: The BCIO upper-level was developed through a process of: 1) initial drafting of a causal model, 2) reviewing existing ontologies related to behaviour change, and 3) iterative amendment development using feedback from experts, success at classifying terms used in studies and comparison with related ontologies.
Results: The upper-level of the BCIO includes entities relating to the ‘BCI Scenario’ and ‘BCI Evaluation Study’. The BCI Scenario involves entities such as: BCI Scenario Plan, BCI Content, BCI Delivery (including BCI Mode of Delivery, BCI Source, and BCI Schedule), BCI Engagement, BCI Mechanisms of Action, BCI Setting, BCI Population, and BCI Outcome Behaviour. The BCI Evaluation study involves entities such as, BCI Evaluation Study Plan, BCI Outcome Estimate, BCI Evaluation Study Method, BCI Evaluation Study Finding, and BCI Study Risk of Bias or Error.
Conclusions and implications: The upper-level and the ontologies relating to its component entities will be posted on Github [https://github.com/HumanBehaviourChangeProject, https://www.humanbehaviourchange.org/].

Submission ID: 48
Symposium ID and title if part of symposium: 14

Human behaviour-change project: Novel tools for cross-disciplinary working in behavioural medicine

Decision: Accepted, Symposium
Last updated: 21st October, 2019
By: emma.norris@ucl.ac.uk, Dr Emma Norris

Specifying intervention delivery and content

Dr Emma Norris[1], Dr Ailbhe Finnerty[1], Dr Alison Wright[1], Dr Marta Marques[2], Prof Marie Johnston[3], Prof Robert West[1], Prof Michael Kelly[4], Dr Janna Hastings[1], Prof Susan Michie[1]
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Background/purpose: This talk will outline tools within the Behaviour Change Intervention Ontology to specify intervention delivery (how an intervention is delivered) and content (what an intervention contains).
Methods: Intervention Delivery comprises three lower-level ontologies: *Mode* I.e how an intervention is delivered, *Source* I.e who delivers interventions and *Schedule* I.e how often an intervention is delivered.
Results: The Mode of Delivery Ontology has 86 entities distinguishing informational (e.g. through face to face interaction) from somatic mode of delivery (e.g. through injection); individual, dyadic and group delivery; synchronicity, reciprocity; push-pull (recipient passively receives intervention vs actively acquires it); format (e.g. audio); delivery through gamification and ‘art’ features. The Source Ontology has 196 entities structured hierarchically with two upper levels: Person Source and Organisational Source. Person Source features 11 lower-level sections, such as Occupational Role, Sociodemographics of Source and Expertise of Source. The Schedule Ontology, currently under development has 23 entities including temporal features of interventions such as Number of phases’ and ‘Total contact duration’. Intervention Content is specified by the Behaviour Change Techniques Taxonomy (BCTTv1), comprising 93 ‘active ingredients’ of interventions such as ‘Goal Setting’ and ‘Restructuring the physical environment’ organised into 16 groupings.

Submission ID: 49
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 22nd October, 2019
By: parisaamiri@yahoo.com, Dr Parisa Amiri

The effects of a community-based healthy lifestyle intervention on smoking habits in adolescents: Tehran lipid and glucose study

Dr. Parisa Amiri[1], Dr. Marjan Rezaei[1], Dr. Mehrdad Karimi[1], Miss Sara Jalali-Farahani[1], Dr. Amirabbas Momenan[2], Dr. Fereidoun Azizi[3]

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Submitter email: parisaamiri@yahoo.com

Background/purpose: To determine the effects of a community-based healthy lifestyle intervention targeting smoking habits in adolescents during a 12-year follow-up.
Methods: This study was conducted in the framework of Tehran Lipid and Glucose Study (TLGS) on 1064 adolescents. The intervention was mainly implemented in schools aimed at increasing smoking related knowledge and establishing anti-smoking policies. Peer teaching and parents' involvement were among strategies applied to positively influence smoking habits in adolescents. Using two-step cluster analysis, adolescents were classified in low and high risk parental groups considering their parents age, education, employment status and smoking habits. All measurements were repeated every 3 years for up to 12 years. Generalized estimating equation models were used to analyze data.
Results: Mean age of adolescents was 15.21±1.95 years. Considering main effect of intervention and time, the intervention significantly decreased the odds of cigarette- (OR=0.65, 95%CI=0.48-0.90) and hookah smoking (OR=0.76, 95%CI=0.61-0.94). Compared to baseline, the intervention group had significantly lower odds of being passive smoker than controls in the first (OR=0.58, 95%CI=0.37-0.53), second (OR=0.47, 95%CI=0.24-0.37), third (OR=0.52, 95%CI=0.14-0.24) and forth (OR=0.28, 95%CI=0.06-0.12) follow-ups. In all smoking patterns, odds of being a smoker was higher in high risk families. While odds of cigarette and hookah smoking were higher among boys, they were less likely to be passive smokers than girls.
Conclusions and implications: The current intervention reduced prevalence of cigarette, hookah and passive smoking over short- and long-term periods among adolescents. It is recommended that future interventions consider the important role of family characteristics in this context.

Submission ID: 50
Symposium ID and title if part of symposium: 16

Open science in behavioral medicine: International perspectives and provocative questions

Decision: Accepted, Symposium
Last updated: 24th October, 2019
By: d.b.oconnor@leeds.ac.uk, Prof Daryl O'Connor

Open science in Europe: Some trials, tribulations and exciting ways forward

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It is an exciting time for science generally and behavioural medicine specifically. There is a real opportunity for behavioural medicine research to improve reproducibility, openness and collaboration. I will discuss potential solutions offered by Open Science as well as provide an overview of recent developments in Europe with a particular focus on the barriers and facilitators to the uptake of Registered Reports and the importance of seeing science as behaviour (see psyarxiv.com/tch4w/).

Submission ID: 51
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 25th October, 2019
By: ms@mrc.soton.ac.uk, Mr Martin Stevens

Work-based factors in the decision to retire in english older workers: Qualitative findings from the heaf first study

Mr Martin Stevens[1,2], Professor Mary Barker[2], Professor Elaine Dennison[2], Dr Catherine Linaker[1,2], Dr Clare Harris[1,2], Professor Karen Walker-Bone[1,2]
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Background/purpose: Population ageing throughout Europe has created an imbalance in workforce demographics with increasing numbers of retirees supported by a smaller proportion of workers. Policy-makers and employers are seeking to extend working lives and increase retirement ages.**H**ealth and **E**mployment **A**fter **F**ifty, **F**actors **I**nfluencing **R**etirement **St**udy **(HEAF FIRST)** explores the determinants of retirement decisions, focussing on potentially-modifiable, work-based factors.
Methods: Semi-structured telephone interviews were conducted with retirees exploring reasons for retirement. Participants were purposively sampled on socio-economic status and gender. Questions focused on the role of workplace factors in retirement decisions. Interviews continued to data saturation, and were transcribed and analysed thematically.
Results: 17 interviews were conducted with retirees from a range of employment backgrounds. Data were organised into 5 themes. Three themes described factors that encouraged retirement and were named 'I had my reasons,' 'It's not you it's me,' and 'Work was pushing me'. The theme 'Work was pushing me' was divided into 4 sub-themes called 'You've changed', 'I've got no time', 'This hurts' and 'Grinding me down.' These described work-based factors that were perceived negatively and motivated participants to retire. A fourth theme, 'But work also pulled me back', described factors such as autonomy and appreciation that encouraged people to stay in work and not retire. A fifth theme, 'Now I'm free,' described life in retirement.
Conclusions and implications: Work-based factors played an important role in the decision to retire which presents opportunities for employers and policy makers to retain older workers.

Submission ID: 53
Symposium ID and title if part of symposium: 16

Open science in behavioral medicine: International perspectives and provocative questions

Decision: Accepted, Symposium
Last updated: 28th October, 2019
By: scsege0@uky.edu, Professor Suzanne Segerstrom

You broke it, you bought it: Open science in north america

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The United States has over 7,000 tenure-track faculty members in psychology (APA, 2018). Although notorious cases of scientific misconduct have come from European countries, it is likely that the large population of scientists in North American contributed significantly to the prevalence of less egregious problems such as p-hacking and HARKing. As such, it seems fair that North America hosts the Open Science Framework (OSF), a resource for preregistration and sharing research materials such as data and code. Common myths about open science include "it's all or nothing", "it constrains exploratory analysis", and "I can't do open science with proprietary/sensitive/archival data". Dr. Segerstrom will provide examples of a range of open science approaches from different projects that dispel these myths, using OSF resources.

Submission ID: 54
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 28th October, 2019
By: lwisk@mednet.ucla.edu, Assistant Professor Lauren Wisk

Understanding and addressing behavioral risks with medically vulnerable youth: Current gaps and opportunities to promote health and well-being

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Background/purpose: We sought to describe medically vulnerable adolescents/young adults' (AYA) experience discussing age 'typical' risk behaviors (i.e., sexual/reproductive, substance use) with their providers.
Methods: We recruited 52 AYA (ages 16-34 years) with any pediatric-onset condition across the US and Canada. Qualitative analysis of semi-structured interviews assessed the frequency, content, and perceptions of their behavioral health discussions with care providers; a triangulation model was used to compare survey constructs by qualitative themes.
Results: Respondents were predominantly female (78%), white non-Hispanic (86%), and had one condition (54%). Most reported these topics were only broached as basic screening questions ("*We never kept going further*") or when being told not to do something ("*all I knew was the I couldn't get pregnant on that medication…I was never told if I was healthy enough to even have sex*"). Those having these conversations often said they were positive but sometimes incomplete ("*I was unaware that you could catch STD from unprotected oral sex*") or wanted more disease-specific information ("*I don't know but I assume, if anybody drinks their labs are gonna be high*"). Overall, sex was less frequently discussed than substance use (27% vs 38%), and 100% of those having a positive discussion highly rated provider communication vs 64% for those having negative/no discussion (p=0.03).
Conclusions and implications: The extent that medically vulnerable AYA engage in any discussion around risk behaviors is highly variable. Improving the frequency and content of these discussions may help build a stronger safety net for this medically vulnerable population.

Submission ID: 55
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 28th October, 2019
By: lwisk@mednet.ucla.edu, Assistant Professor Lauren Wisk

A comparative effectiveness trial for students with type 1 diabetes to reduce alcohol use at university

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Background/purpose: Youth with Type 1 Diabetes (T1D) use alcohol at rates similar to their healthy peers; novel prevention is needed. We sought to develop and test competing versions of an educational intervention targeting alcohol avoidance for youth with T1D in a comparative effectiveness pilot trial.
Methods: We recruited 138 university students (ages 17-25) with T1D from the US and Canada via social media & delivered a brief electronic intervention, with participants randomly assigned to receive identical content narrated either by a peer (student with T1D) or provider (endocrinologist), and evaluated effects on behavior at immediate and 2-weeks post-intervention.
Results: Of 138 enrolled, 122 completed follow-up; youth were 20.5 years, 80.3% female, 82.8% used a pump, mean last HbA1c of 7.7, with 85.2% lifetime alcohol use. Sociodemographics were largely balanced across peer (N=63) and provider (N=59) arms. Despite high baseline knowledge, both arms saw significant gains in knowledge items at immediate follow-up that were sustained at 2-week follow-up. Both arms saw significant improvements at immediate follow-up in attitudes and concerns about alcohol use (ie, pro-responsible use/ greater caution). Provider intervention recipients were more likely to rate their spokesperson as knowledgeable and trustworthy. All participants reported significant decreases in binge drinking in the 2-weeks after the intervention (21.3%) compared to the 2-weeks prior (35.2%, OR 0.49, 95%CI 0.33-0.73). Changes in binge drinking post-intervention were partially mediated by changes in concerns about alcohol use.
Conclusions and implications: This scalable intervention was successful at affecting knowledge, attitudes/concerns, and binge drinking and could be implemented broadly.

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Symposium ID and title if part of symposium:
Decision: Accepted, Short Oral
Last updated: 28th October, 2019
By: lwisk@mednet.ucla.edu, Assistant Professor Lauren Wisk

Self-management and psychosocial predictors of glycemic control trajectories among adolescents/young adults with Type 1 diabetes

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Background/purpose: We sought to examine trajectories in glycemic control across the transition from adolescence into early adulthood and identify contributions from co-occurring psychosocial and behavioral changes that could merit intervention.
Methods: The cohort included 48,137 HbA1c values for 10,174 participants (ages 13-25) with T1D (49% female; 51% pump users) enrolled in the T1D Exchange registry (spanning 67 clinical sites across the US). Multivariate mixed effects models were used to identify HbA1c trajectories; interactions between age and predictors were used to quantify how each predictor moderated trajectory shape.

Results: Mean HbA1c for the cohort was high (8.66), with only 14.0% meeting the adult target of <7.0%. HbA1c rose through adolescence then slowly declined. Key indicators of self-management, including frequency of daily blood sugar testing & testing before administering insulin, declined steadily into early adulthood while diabetes distress peaked in early 20s; in adjusted analyses, these factors strongly influenced the shape of HbA1c trajectories (6.8%, 4.1%, 7.0% variance explained, respectively) whereby increases in HbA1c were exacerbated with suboptimal self-management/distress. These psychosocial and self-management indicators were more influential than treatment regimen (e.g., 3.2% and 0.4% variance explained by pump or continuous glucose monitor use, respectively) for predicting glycemic control.
Conclusions and implications: Consistent with prior studies, we identified that glycemic control worsens during adolescence/young adulthood; we further find that the extent of worsening control is strongly influenced by similar trends in self-management and diabetes distress. Late adolescence/early adulthood are periods of distinct vulnerability that warrant additional behaviorally-focused supports to improve disease control.

Submission ID: 57
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 29th October, 2019
By: yamazaki@hm.tokoha-u.ac.jp, Dr Hideo Yamazaki

Screening test for semi-health state of susceptibility phase based on the natural history of disease in preventive medicine

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Background/purpose: Non-communicable diseases such as circulatory diseases and metabolic syndrome are called life-style related diseases (LSRDs) in Japan. LSRDs are a global epidemic among many developed countries and not only serious causes of death but also risk factors of broken health. Furthermore, they have been steadily increasing. One of the most effective ways to prevent LSRDs will be taken an early detection and prompt treatment. The purpose of this study was to examine the validity of a screening test of the semi-health state, a state in susceptibility phase based on the natural history of disease, for the primary prevention on preventive medicine among the community-dwelling elderly.
Methods: A self-rated questionnaire consisted of 54 items included the semi-health state questions was administered to 1,809 the community-dwelling elderly in Japan between 2016 and 2018.
Results: A principal component analysis was applied to the valid data from 1,732 samples in order to extract the multidimensional indices of the semi-health state. By this analysis, four principal components were extracted and the first principal component was interpreted as a quantitative index regarding the semi-health state. Then a distribution of the elderly with the semi-health state was determined by using this index. As a result of screening test, the prevalence (14.0%), sensitivity (83.1%) and specificity (84.2%) were calculated.
Conclusions and implications: It is likely that the screening test is able to recognize a good distinction regarding the semi-health state among the community-dwelling elderly. Therefore, this test is likely to be applicable to health promotion activities.

Submission ID: 58
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 29th October, 2019
By: j.a.terpstra@fsw.leidenuniv.nl, Mrs Jessy Terpstra

Guided internet-based cognitive-behavioral therapy for patients with rheumatic conditions: A systematic review

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Background/purpose: Rheumatic conditions are complex and generally characterized by pain, stiffness, and fatigue. Consequently, many individuals suffering from these conditions experience adjustment problems, such as anxiety, depression, and sleep problems. Internet-based cognitive-behavioral therapy (iCBT) has shown to support patients with somatic conditions in coping with their disease in daily life. However, the efficacy of iCBT for rheumatic conditions specifically has not been systematically reviewed yet. The objective of our review was to evaluate guided iCBT for rheumatic conditions, by examining psychological, physical, and impact on daily life outcomes.
Methods: PubMed, PsycINFO, and Embase were searched, combining search terms indicative of rheumatic conditions, the internet, and cognitive-behavioral therapy. Studies were included if they met the following criteria: patients ≥18 years old with a rheumatic condition, randomized controlled trial, accessible full-text English article, original data, inclusion of psychological, physical and/or impact outcomes, therapist-guided iCBT intervention. Study and sample characteristics, and clinical variables were extracted.
Results: A systematic search identified 4695 studies, of which 8 trials were included. Significant between-group effects were found for psychological outcomes (in seven out of seven studies that included these outcomes), for physical outcomes (in four out of seven studies), and impact on daily life outcomes (in four out of six studies). Effect sizes were in the medium to large range.
Conclusions and implications: Findings suggested that guided iCBT for rheumatic conditions can be effective, particularly regarding psychological outcomes. The potential of iCBT to improve physical and daily life outcomes in rheumatic conditions needs to be further examined.

Submission ID: 59
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 29th October, 2019
By: christine.rini@northwestern.edu, Professor Christine Rini

Changes in identification of possible pain coping strategies by people with osteoarthritis who complete web-based pain coping skills training

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Background/purpose: Delivering cognitive-behavioral pain coping skills training (PCST) via the Internet expands access to this evidence-based therapy. Our automated (self-completed) PCST program is efficacious, but mechanisms of our program and others like it remain unclear. We investigated effects of web-based PCST on participants' reactions to hypothetical situations likely to increase their pain.

Methods: 107 people with symptomatic hip/knee osteoarthritis enrolled in a trial that randomized them to web-based PCST or standard care control. At baseline and post-intervention, they completed measures of pain severity and impairment and a task in which they reported how they would cope with pain in four hypothetical situations likely to increase their pain. For each situation, they also rated their perceived risk for pain and self-efficacy for controlling pain. We coded their reported coping responses into discrete mentions of behavioral and cognitive coping strategies, then categorized these strategies into three categories: adaptive behavioral, adaptive cognitive, and maladaptive behavioral strategies.

Results: We conducted multivariate analyses predicting each category of coping strategy, controlling for its baseline level and evaluating effects of group assignment. Compared to the control condition, web-based PCST increased the number of adaptive behavioral coping strategies reported ($p=0.006$), the likelihood of reporting at least one adaptive cognitive strategy ($p=0.01$), and self-efficacy ($p<0.001$). It decreased the number of maladaptive behavioral coping strategies reported ($p=0.002$) and perceived risk ($p=.03$). Several of these changes were correlated with better pain outcomes ($ps=0.001$-0.02).

Conclusions and implications: Findings reveal mechanisms through which automated web-based PCST may improve pain outcomes in people with osteoarthritis.

Submission ID: 60
Symposium ID and title if part of symposium: 18

The work of treatment and self-care: Exploring treatment burden in those managing chronic health conditions

Decision: Accepted, Symposium
Last updated: 29th October, 2019
By: eton.david@mayo.edu, Professor of Health Services Research David Eton

Treatment burden: Conceptualizing a construct, defining its measurement, and characterizing its expression

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Background/purpose: Treatment burden is a patient's perceived workload of treatment and self-care and its impact on functioning and wellbeing. Since 2012 we have developed, validated and used the Patient Experience with Treatment and Self-management (PETS), a multi-domain measure of treatment burden. We summarize insights about treatment burden using evidence from qualitative and quantitative studies of over 800 persons with multiple chronic conditions (MCC).

Methods: Data from three studies are featured: a qualitative study of 75 adults, a cross-sectional survey of 332 adults from two medical centers, and a prospective survey of 439 community-dwelling adults.

Results: A conceptual framework of treatment burden featuring three overarching themes (work of self-care, stressors that exacerbate burden, and impacts of self-care) was derived from patient interviews (50) and focus groups (4) and served as foundation for the PETS measure. Construct validity and responsiveness of the multi-domain PETS has been supported in people with MCC. Treatment burden is associated with lower health literacy, lower health-related quality of life, and poorer adherence to medications ($Ps < .01$). Trajectory analyses of longitudinal treatment burden scores reveal several distinct patterns ranging from consistently low to consistently high burden. Demographic (e.g., age, income) and psychosocial factors (e.g., self-efficacy, health literacy, and interpersonal challenges) predict these patterns (Ps < .001).

Conclusions/implications: Treatment burden is multi-faceted and complex, but can be validly assessed. Future research should target ways of alleviating treatment burden in those with chronic conditions, including alerting healthcare providers to patients with high treatment burden and informing patient-provider conversations.

Submission ID: 61
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 29th October, 2019
By: yshi7693@uni.sydney.edu.au, Ms Yumeng Shi

Unique food and nutrition behaviours of international students attending tertiary education institutions

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Background/purpose: The number of international students, who leave their home country to pursue higher education degrees in a foreign country, is experiencing a steady increase globally. Adjustment to a new environment can be stressful and may negatively impact wellbeing, including dietary quality. This scoping review aims to synthesise current evidence about changes in dietary habits of these international students and their food security status after arriving in the host country.

Methods: The five-step process of Arksey and O'Malley for a scoping review was followed. Electronic databases, including MEDLINE, CINAHL, ERIC, Global Health, CENTRAL and PsycINFO, were searched for both quantitative and qualitative studies that investigated dietary changes and food insecurity among international students within tertiary education facilities in any country.

Results: For most international students, this was their first experience of living outside the parental home and taking responsibility for food shopping and preparation. Lack of nutritional knowledge, cooking skills, social support and time to cook often made it difficult for them to maintain a healthy diet. Limited availability, inauthenticity and less accessibility of their traditional foods in the local and new food environment strongly influenced their food choices. Financial barriers contributed to poorer diet quality. Furthermore, international students were discovered to be more likely to experience food insecurity compared with domestic students.

Conclusions and implications: More food and nutrition education and nutrition assistance programs should be specifically designed and implemented for international students to facilitate healthy eating when studying abroad.

Submission ID: 62
Symposium ID and title if part of symposium: 18

The work of treatment and self-care: Exploring treatment burden in those managing chronic health conditions

Decision: Accepted, Symposium
Last updated: 30th October, 2019
By: polly.duncan@bristol.ac.uk, Dr Polly Duncan

Factors associated with high treatment burden: Findings from a population-based survey in the Central Denmark Region

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Background/purpose: Exploring treatment burden at a population level can provide evidence of the types of patients who might benefit from interventions. We aimed to determine factors associated with high perceived treatment burden in a population-based survey of adults living in the Central Denmark Region (23% of the Danish population).
Methods: The Danish Multimorbidity Treatment Burden Questionnaire (MTBQ) was included in the 2017 Danish population health survey. 28,627 individuals aged 25 years or over participated (64% response rate). Individuals who reported having one or more medical conditions or attending regular health check-ups were asked to complete the MTBQ.
Results: 13,407 individuals completed the Danish MTBQ (mean age 59 years). Treatment burden was negatively associated with self-related health (r_s = -0.45, P<0.0001), health-related quality of life (r_s = -0.46/-0.51, P<0.0001) and positively associated with the number of long-term conditions (r_s = 0.26, P<0.0001) and perceived stress (r_s = -0.44, P<0.0001). Higher treatment burden was associated with young age, male gender, high educational level, unemployment, not living with a spouse/cohabitant, living with child(ren); and specific conditions, including heart disease, stroke, diabetes and mental illness. Amongst adults with cardiovascular disease, individuals with both low health literacy levels and high number of long-term conditions reported highest treatment burden.
Conclusions and implications: This is the first known population-based study of treatment burden. The findings could be explained by high workload (e.g. due to having lots of conditions) and low capacity to manage the work (e.g. due to mental illness, unemployment, poor social support or parenting responsibilities).

Submission ID: 63
Symposium ID and title if part of symposium: 7

Acceptance and decline of psychosocial support in patients with cancer

Decision: Accepted, Symposium
Last updated: 31st October, 2019
By: chris.paul@newcastle.edu.au, Prof Christine Paul

Use of support services among patients and carers with cancer who contacted cancer council support services: Uptake of and reasons for non-use of services

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Background/purpose: In many countries non-government organisations offer telephone-based support to people affected by cancer. In Australia, this service is provided by the Cancer Council. The study explored the proportion of people affected by cancer who used various forms of psychological support via the Cancer Council.
Methods: Participants were patients or carers who telephoned Australia's Cancer Council 13 11 20 Service in New South Wales and Victoria and scored of 4 or more on the Distress Thermometer (DT). Participants were provided with information, support and referrals during inbound calls. Participants were contacted three months later regarding the types of referrals offered, referral uptake, perceived helpfulness, and reasons for non-use. Participant characteristics included sociodemographic characteristics, disease status, distress level, and emotional reactivity were assessed.
Results: Data from 238 participants was analysed (65% response). On average, participants were patients (60%), female (72%), and held an undergraduate or trade qualification (55%). The majority (65%) scored ≥4 on the DT. Common service referrals were face to face support groups (52%), practical support (36%), telephone support groups (32%), and psychologists (31%). High proportions of non-use were reported (72% face to face support groups; 80% telephone support; 67% psychologists; 45% practical support). Use was not associated with a DT score of ≥4. Open-ended feedback exploring reasons for non-use will be provided.
Conclusions and implications: A wide variety of referrals were offered, but seldom actioned by this help-seeking sample. Despite meeting caseness for distress on a brief screen, referral uptake was not associated with emotional wellbeing.

Submission ID: 64
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 31st October, 2019
By: chris.paul@newcastle.edu.au, Prof Christine Paul

Online and Phone Assistance for Lung Cancer Patients (OPAL): Uptake and outcomes for telephone versus online support in a randomised controlled trial

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Background/purpose: Lung cancer patients often experience more severe physical effects and more pronounced psychosocial distress than patients with other major cancers. However, lung cancer patients are under-represented among support service users. The OPAL trial aimed to compare the relative effectiveness of telephone, online and printed information in reducing distress.
Methods: A randomised controlled trial was conducted where people recently diagnosed with lung cancer were randomly allocated to receive: 1) a booklet, 2) Proactive Telephone Delivered Support; or 3) Proactive Online Delivered Support (email and on-line chat). Psychosocial wellbeing was assessed at 3 and 6 months post-recruitment using the General Health Questionnaire-12 (GHQ-12).
Results: The trial recruited 388 participants, of which 304 completed baseline surveys and 157 completed the 6-month follow surveys, with attrition primarily due to illness and death. The telephone support was used by 74% of those allocated to the telephone arm, while 10% of those allocated to the online arm used the online support. There were no significant differences between the three study groups on GHQ scores at 6 months. Within the group who received telephone support, the telephone contact was associated with GHQ scores at 6 month follow-up.

Conclusions and implications: The implementation of online assistance in the context of a telephone-based support service raises some practical and conceptual challenges. The lack of effect may be due to the low number of participants completing 6 month follow-up. The acceptability of online approaches for the provision of emotional support is also of concern among this patient group

Submission ID: 65
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 31st October, 2019
By: vincent.gosselin.boucher@gmail.com, Vincent Gosselin Boucher

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Understanding vaccine hesitancy among patients with rheumatoid arthritis

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Background/purpose: Patients with rheumatoid arthritis (RA) are twice as likely get severe respiratory infections than the general population. Despite being targeted as a high priority group for vaccination, vaccination rates in the RA population are suboptimal. This study aims to summarize the literature on various stakeholders' (e.g., patients, physicians/rheumatologists [Rh], healthcare providers [HCPs]) perspectives about the determinants of vaccination hesitancy among patients with RA.
Methods: This review was conducted following PRISMA guidelines. Three bibliographic databases (PUBMED, PsychINFO, SCOPUS) were systematically searched to identify all studies addressing stakeholders' perspectives on vaccination hesitancy in RA patients published up to July 2019. Included studies were published in peer-reviewed journals, written in English or French, and had at least one qualitative (e.g., focus group, questionnaire) and/or quantitative (vaccination proof or administrative data) measure of vaccine hesitancy.
Results: The search yielded a total of 783 records. Of those, 23 articles met inclusion criteria. Most studies (78%; totaling 134,787 patients), examined barriers from the perspective of patients with RA, and a minority from the perspective of Rh (13%; totaling 114 Rh). Based on the SAGE model of determinants of vaccine hesitancy, eleven subthemes were identified from three principal themes: 1) Contextual influences; 2) Vaccine and vaccination-specific issues; 3) Individual/social group influences.
Conclusions and implications: Our findings suggest that vaccination hesitancy involves factors related to both patients and many levels of the healthcare system. Eleven major barriers related to vaccination hesitancy were identified among the different RA stakeholders.

Submission ID: 66
Symposium ID and title if part of symposium: 8

Novel interventions for treating comorbid substance use and mental health problems.

Decision: Accepted, Symposium
Last updated: 31st October, 2019
By: t.p.freeman@bath.ac.uk, Dr Tom Freeman

Cannabidiol for the treatment of cannabis use disorder: Phase IIa double-blind placebo-controlled randomised adaptive Bayesian dose-finding trial.

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Background/purpose: There is a substantial clinical need for the treatment of cannabis use disorders with no recommended pharmacotherapies. Cannabidiol (CBD) shows promising treatment effects in experimental models of addiction.
Methods: Participants with a DSM-5 cannabis use disorder were randomised to four-week treatment with oral CBD at 200mg, 400mg, 800mg or placebo. All received a standard psychological intervention of motivational interviewing. The primary objective was to identify the Most Effective Dose (MED) of CBD for reducing cannabis use, evidenced by Bayesian posterior probabilities exceeding P_U= 0.9. Co-primary outcomes were cannabis use during treatment measured by urinary THC:COOH/creatinine (biological) and days abstinent from cannabis (self-report). Tobacco use was also measured by urine and self-report.
Results: At interim analysis (n=12 per group) 200mg CBD was eliminated as an ineffective dose. Randomisation continued to 400mg CBD (n=24), 800mg CBD (n=23) and placebo (n=23) for final analysis. Both 400mg and 800mg achieved MED criteria for both co-primary outcomes. For urinary THC:COOH/creatinine the probability of being the MED was 0.9995 for 400mg CBD, a 45% reduction compared to placebo, and 0.9965 for 800mg CBD, a 37% reduction. For days abstinent the probability was 0.9966 for 400mg CBD, increasing 2.24-fold, and 0.9247 for 800mg CBD, increasing 1.85-fold. At 400mg and 800mg, CBD reduced tobacco use according to both urinary and self-report measures.
Conclusions and implications: In the first randomised trial of CBD for cannabis use disorder, 400mg and 800mg CBD were more effective than placebo at reducing cannabis and tobacco use.

Submission ID: 67
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 1st November, 2019
By: chris.paul@newcastle.edu.au, Prof Christine Paul

Anti-tobacco Aadvertising and lung cancer stigma: A qualitative study of the experiences of people with a lung cancer diagnosis.

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Background/purpose: Stigma is often experienced by people affected by lung cancer due to the known links to smoking. Anti-tobacco campaigns focus on decreasing lung cancer incidence by 'de-normalising' smoking, which may contribute to such stigma. The aims of the current study were to examine how people diagnosed with lung cancer recall anti-tobacco advertisements and their emotional responses to anti-tobacco advertisements post-diagnosis.
Methods: People with a diagnosis of lung cancer were identified from a clinical cancer registry in one region of Australia. Potential participants were invited via mail and telephone to complete a qualitative telephone interview. The interview followed a semi-structured interview guide. Interviews were audio-recorded, transcribed and comparatively coded by two authors using NVivo software.

Results: Sixteen participants completed an interview. Advertisements which had been prominent for the general population (e.g. “Sponge”) were similarly prominent for the participants. Some avoidance of anti-tobacco advertisements was reported. A wide array of emotional responses to the advertisements were reported, including discomfort, fear, guilt, relief, resignation, sadness, stupidness (for having smoked), fear for others, disinterest and no response. Participants were not however, opposed to the broadcasting of anti-tobacco advertisements. Rather, the advertisements were perceived as appropriate and necessary.
Conclusions and implications: Although people diagnosed with lung cancer reported experiencing some negative emotional responses to anti-tobacco advertising, they were supportive of its continuance. Consideration should be given to how future advertising might be framed or supplemented in a manner that minimises the psychological distress and stigma experienced by this group.

Submission ID: 68
Symposium ID and title if part of symposium: 8

Novel interventions for treating comorbid substance use and mental health problems.

Decision: Accepted, Symposium
Last updated: 1st November, 2019
By: sonja.pohlman@newcastle.edu.au, Ms Sonja Pohlman

Investigating reasons for alcohol use among young people living with severe mental ill-health

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Background/purpose: Young people with severe mental ill-health (SMI) report high rates of hazardous alcohol consumption. Knowledge of drinking motivations in this group is based on evidence from older cohorts or other substances. Increasing understanding of how this group use alcohol can facilitate development of more effective evidence-based treatments.
Methods: In this study, participants aged 16-25 (N=229, mean age=19 yrs) who identified with a mental health diagnosis were recruited through social media to complete an online survey including demographic questions, quantitative and qualitative measures of alcohol and other substance use, metacognitions, drinking motives and depression. SMI was defined as endorsing a diagnosis of a psychotic or bipolar disorder. Independent samples t-tests were conducted to compare responses between SMI and non-SMI groups.
Results: Participants with a SMI reported significantly higher alcohol use on the Alcohol Use Disorders Identification Test (M=16.34, SD=9.60) compared to those without a SMI (M=11.39, SD=9.46); t(139)=2.81, p=0.01, 95% CI: -8.4, -1.5, d=0.52). The SMI group more strongly endorsed using alcohol to cope (p=0.01) and to manage mental health symptoms (p=0.004). Those with a SMI also endorsed more beliefs about uncontrollability of drinking (p=0.04). There were high levels of depression (SMI 80%, non-SMI 68%) and tobacco use (SMI 55%, non-SMI 51%) in both groups (ns p=0.14, p=0.58).
Conclusions and implications: There may be factors specific to young people with SMI which are associated with different alcohol use patterns from other mental health diagnoses. Metacognitive interventions are worthy of investigation for addressing alcohol consumption in those with SMI.

Submission ID: 69
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 4th November, 2019
By: paul.aveyard@phc.ox.ac.uk, Prof Paul Aveyard

Tackling Statin Intolerance with N-of-1 trials in primary care (TaSINI): testing the feasibility of a GP delivered behavioural intervention to increase statin adherence.

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Introduction: Placebo-controlled n-of-1 studies can increase statin uptake in people with statin intolerance but are impractical in everyday clinical practice.
Methods: We enrolled patients who had stopped or refused statins. Physicians advised participants randomized to usual care to take statin therapy to prevent cardiovascular disease (CVD). In both n-of-1 trial arms, physicians delivered a behaviourally-informed intervention that endorsed experimenting with medication to assess whether it caused side-effects. In both intervention arms, participants alternated between 4 weeks of medication and no medication (unblinded) or randomly sorted active and placebo (blinded) and recorded symptoms and symptom attributions. After 6 months, physicians discussed participants’ symptom reports during active/inactive treatment periods and asked participants to resume statins if appropriate.
Results: Seventy-three were randomized to the treatment arms and 56 (77%) attempted the n-of-1 experiment; 28 (78%) in the unblinded arm and 28 (76%) in the blinded arm. Forty-three (77%) completed the 6-month experiment and received feedback from the physician; 20 (71%) in the unblinded arm and 23 (82%) in the blinded arm. Thirty-three (45%) people restarted statins in the treatment arms compared with 4 (20%) in the control arm, difference 24% (95%CI 5%, 43%, p=0.041). There was no evidence this differed between blinded and unblinded arms, difference 2% (95%CI -20%, 24%). Adverse events occurred at a similar rate on and off statin.
Conclusions and implications: In patients refusing or intolerant of statin, supporting experimentation with n-of-1 trials increases medication uptake compared with usual care. Alternating on-off medication is as effective as a blinded experiment.

Submission ID: 70
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 5th November, 2019
By: j.dekker@amsterdamumc.nl, Professor Joost Dekker

Setting meaningful goals in rehabilitation: a practical tool.

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Background/purpose: Goal setting is a key characteristic of modern rehabilitation. However, goals need to be meaningful and of importance to the client. We have developed a practical tool that facilitates the setting of meaningful rehabilitation goals. We describe this practical tool.
Methods: We reviewed literature supporting the importance of a hierarchy of goals: one or more overall goals which clients find personally meaningful; and specific goals that are related to the overall goals. We also reviewed literature suggesting that the client's global meaning (i.e., fundamental beliefs, goals and attitudes) need to be explored before setting any rehabilitation goal. These fundamental beliefs, goals and attitudes can serve as the point of departure for setting rehabilitation goals.
Results: We set out a three stage process to set goals: (i) exploring the client's global meaning (i.e., fundamental beliefs, goals and attitudes), (ii) deriving a meaningful overall rehabilitation goal from the client's global meaning, and (iii) setting specific rehabilitation goals that serve to achieve the meaningful overall rehabilitation goal.
Conclusions and implications: This is an extension of current practice in many rehabilitation teams which may help counter the drive towards exclusively functional goals based around independence.

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Last updated: 5th November, 2019
By: j.dekker@amsterdamumc.nl, Professor Joost Dekker

Management of emotions in patients with cancer: Introducing a new care paradigm 'emotional support and case finding'.

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Background/purpose: The current paradigm for the management of emotional distress in patients with cancer is 'distress screening and referral for the provision of psychosocial care'. However, as no evidence supports the effectiveness of the current paradigm, we argue that there is a need for a paradigm shift and a fundamental reconceptualization of the management of distress in patients with cancer. We describe the rationale and characteristics of a new paradigm, called 'emotional support and case finding'.
Methods: Review of literature on the uptake of psychological interventions, on screening for psychological distress, on the nature of emotions, and on tailoring of interventions to care needs in patients with cancer.
Results: The new care paradigm has two main features. (1) Emotional support: (a) The treating team, consisting of doctors, nurses, and allied health staff, is responsive to the emotional needs of patients with cancer and provides emotional support. (b) The treating team provides information on external sources of emotional support. (2) Case finding: The treating team identifies patients in need of mental health care by means of case finding and provides a referral to mental health care as indicated.
Conclusions and implications: We are confident that our new care paradigm 'emotional support and case finding' will seamlessly integrate into current clinical practice. Future research should focus on optimization of current clinical practice as directed by the new care paradigm.

Submission ID: 72
Symposium ID and title if part of symposium: 19

The importance of preventative care and behavioural medicine in preconception.

Decision: Accepted, Symposium
Last updated: 5th November, 2019
By: ruth.walker@monash.edu, Ruth Walker

Virtual patient advocates and promoting behaviour change during the preconception period.

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Background/purpose: Virtual Patient Advocates (VPAs) use online platforms to communicate health messages. A preconception VPA called Gabby was effective in decreasing risky preconception lifestyle behaviours in African-American women in the United States. Aims of this research were to explore the acceptability of Gabby to a range of women living in other contexts.
Methods: Utilising qualitative methods, females aged 18 to 45 years (mean age 25.9±6.5 years) were recruited from metropolitan (n=21) and regional (n=10) Australia. Participants were given 50 minutes to interact with Gabby before providing verbal feedback in focus groups that were audio-recorded and transcribed verbatim. An inductive process of thematic analysis was applied. (Monash University Human Research Ethics Committee: 20341)
Results: 6 interrelated themes and 12 sub-themes were identified. The concept of VPAs was acceptable to participants with desirable VPA characteristics being trustworthiness, ability to connect emotionally, continuity of care and easy navigation. Modifications to increase the appeal of the Gabby system related to technological advancements that would facilitate ease of access. Ongoing maintenance of the Gabby system was also considered important so that the information provided remains current. Despite participants acknowledging that preconception health is important, they reported that they would require reminders, goal-setting tasks and incentives to support behaviour change and maintain ongoing interaction.
Conclusions and implications: Preconception advice provided by a VPA was acceptable to participants and has the potential to increase access to preconception behaviour-change support. Relevant and trustworthy information, emotional connection and easy navigation were considered most important to women in Australia.

Submission ID: 74
Symposium ID and title if part of symposium: 19

The importance of preventative care and behavioural medicine in preconception.

Decision: Accepted, Symposium
Last updated: 6th November, 2019
By: briony.hill@monash.edu, Dr Briony Hill

International preconception research priorities for maternal obesity prevention.

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Background/purpose: The preconception period is a key opportunity for behavioural medicine to contribute to obesity prevention. However, there is an absence of established priorities to guide research and translation activities. Here, we describe the process of developing international preconception priorities to guide research activities for maternal obesity prevention.
Methods: Stakeholders of international standing in preconception and pregnancy health were invited to form the multidisciplinary Health in Preconception, Pregnancy, and Postpartum (HiPPP) Global Alliance; five continents were represented. The Alliance undertook a Modified Delphi and Nominal Group technique priority setting process to determine key research areas. Initial priority areas for ranking were based on international and national clinical practice guidelines, World Health Organization recommendations, and consumer and expert input from HiPPP members. During three rounds of priority ranking and facilitated group discussion, preconception priorities, as well as key research gaps, were identified in the preconception health evidence-base.
Results: Consensus on five preconception research priorities was achieved: healthy diet and nutrition; weight management; physical activity; planned pregnancy; and physical, mental and psychosocial health. Four overarching principles were also identified: operating in the context of broader preconception/antenatal priorities; social determinants; family health; and cultural considerations. Research gaps included evidence synthesis, co-designed interventions, and real world implementation research.
Conclusions and implications: The priorities provide a road map to progress research and translation activities across psychosocial and behavioural aspects of preconception health and contribute to maternal obesity prevention. Opportunities include comprehensive endeavours to remove multidisciplinary barriers, reduce duplication, and promote efficient, collaborative, strategic, prioritised research.

Submission ID: 76
Symposium ID and title if part of symposium: 20

Multi-level Considerations for Implementing Precision Population-Based Breast Cancer Screening in International Contexts.

Decision: Accepted, Symposium
Last updated: 6th November, 2019
By: yue.guan@emory.edu, Research Assistant Professor Yue Guan

Testing theory-based persuasive communication strategies to foster women's willingness to de-adopt unwarranted mammography screening.

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Background/purpose: Evidence-based guidelines endorse using genetics-informed assessments to stratify populations on cancer risk. De-adoption of annual mammography among the large average risk population is essential to improve healthcare quality, lower health care costs and show the promise of precision public health. We evaluated theory-based communication strategies to persuade women at average breast cancer risk to de-adopt unwarranted mammography.
Methods: We conducted an experiment with an online population-based sample of U.S. women aged 40-49 (N=383) who screened to be at low risk for hereditary breast and ovarian cancer syndrome (HBOC). Women were randomized to one of three arms: 1) Risks of annual mammography in the 40's (n=124); 2) Risks plus family history based risk feedback for HBOC (n=120); and 3) Risks, risk feedback for HBOC, and behavioral alternatives to reduce breast cancer risk (n=139). The primary outcome was willingness to delay mammograms until age 50. Arm differences were examined using a regression-based model, where women who were already guideline compliant (n=21) were excluded.
Results: Most participants were annual screeners (60%) and believed that average risk women should start mammograms before age 50 (81%) at baseline. Women in Arm 3 showed greater willingness (M=3.18) to delay screening mammography until age 50 than women in Arm 1 (M=2.81) ($p<0.01$). Willingness to delay was not statistically significantly different between women in Arm 1 and Arm 2 (M=2.92).
Conclusions and implications: These findings suggest that the addition of personal genetic risk and effective preventive behaviors may be effective in persuading women to de-adopt unwarranted mammography.

Submission ID: 77
Symposium ID and title if part of symposium: 20

Multi-level Considerations for Implementing Precision Population-Based Breast Cancer Screening in International Contexts.

Decision: Accepted, Symposium
Last updated: 6th November, 2019
By: calle27@emory.edu, Ms Caitlin Allen

Exploring the Roles of CHWs in Improving Uptake of Family Cancer History Assessment for Improved Risk-Stratified Cancer Screening.

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Background/purpose: The global community health worker (CHW) workforce is recognized for creating community-clinical linkages and serving as a bridge between patients and healthcare systems. CHWs are well-positioned to address dissemination challenges in promoting public adoption of family cancer history (FCH) collection, a key component of risk-stratified cancer prevention, particularly in underserved and under-resourced settings.
Methods: We conducted 30 semi-structured interviews with CHWs in Georgia, USA. The specific research questions included: "How are CHWs currently engaged in FCH collection?" and "What training is needed to provide opportunities for CHWs to incorporate FCH into their role?" Once complete, all interviews were double coded in MAXQDA using a codebook developed, adapted, and agreed upon by the research team.
Results: Findings demonstrate that CHWs have little to no experience collecting FCH either as part of their job or from their own family members. However, CHWs felt FCH is valuable and that they might be well suited to gather basic FCH information. CHWs believed training would be helpful in building their self-efficacy and should address their concerns about the potential for community members to be resistant to providing health information, CHWs lack of medical knowledge to address questions from clients about genetics, and the complexity of information needed to complete FCH.

Conclusions and implications: Future efforts to expand CHWs roles to incorporate FCH gathering should build from their enthusiasm about FCH and address challenges they expressed related to this new role. Incorporating FCH gathering into CHWs' work could help improve healthcare delivery by promoting shared-decision making and risk-stratified cancer screening.

Submission ID: 78
Symposium ID and title if part of symposium: 20

Multi-level Considerations for Implementing Precision Population-Based Breast Cancer Screening in International Contexts.

Decision: Accepted, Symposium
Last updated: 7th November, 2019
By: linda.rainey@radboudumc.nl, Dr. Linda Rainey

Exploring women's acceptability of risk-stratified breast cancer screening and primary prevention: a European focus group study.

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Background/purpose: Tailoring screening policy to breast cancer risk may increase the (cost)effectiveness of screening. It also introduces new opportunities for breast cancer prevention. However, successful implementation relies on women's participation. Therefore, the acceptability of this new paradigm needs to be explored from the perspective of potential participants.
Methods: We performed focus groups with 143 women eligible for breast cancer screening in the Netherlands, United Kingdom, and Sweden. Using hypothetical risk scenarios, we explored women's willingness to, e.g., alter screening intensity and/or modality based on risk, and engage in lifestyle changes or medication use to lower risk. Data were transcribed verbatim and thematically analysed by two independent researchers.
Results: Five themes illustrate women's acceptability. 'Impact of knowledge' describes women's concern of not being able to forget their risk, perceiving it as either a motivator for change or a burden which may lead to stigma. 'Belief in science' illustrates women's need to trust the science behind the risk assessment and subsequent care pathways. 'Emotional impact' explores, women's perceived anxiety and (false) reassurance which may result from risk feedback. 'Decision-making' highlights cultural differences in shared versus individual decision-making. Finally, 'attitude to medication' explores the controversial topic of offering preventative medication for breast cancer risk reduction.
Conclusions and implications: Women's perceptions of risk-stratified breast cancer screening and prevention are informed by cultural norms, common emotional concerns, and a lack of knowledge. This highlights the importance of tailored educational materials and risk counselling to aid either shared or individual informed decision-making.

Submission ID: 79
Symposium ID and title if part of symposium: 22

Comparators in behavioral trials: from trial design to evidence synthesis.

Decision: Accepted, Symposium
Last updated: 7th November, 2019
By: freedlak@wustl.edu, Dr. Kenneth Freedland

The Pragmatic Model for Comparator Selection in Health-Related Behavioral Trials.

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Background/purpose: Controversies, disagreements, and uncertainties about comparator choices have been problematic for researchers who plan, design, or review randomized controlled trials of health-related behavioral interventions. Guidance is needed to improve the comparator selection process.
Methods: The U.S. National Institutes of Health Office of Behavioral and Social Sciences Research convened a multidisciplinary expert panel to review existing approaches and controversies, identify general principles for evaluating comparators, and develop a framework to guide comparator selection.
Results: The panel developed the Pragmatic Model for Comparator Selection in Health-Related Behavioral Trials. According to this model, the optimal comparator for a behavioral trial is the one that best serves the primary purpose of the trial. The limitations of the optimal comparator and barriers to its use must be considered, but they are less important than the primary purpose of the trial in the comparator selection process. Alternative approaches in which barriers and limitations are given primacy over purpose lead to poor choices of comparators for behavioral trials.
Conclusions and implications: The Pragmatic Model provides an efficient, step-by-step approach to selecting comparators for behavioral trials. It is applicable to a wide range of comparators and trial designs, and it addresses the key sources of disagreements and uncertainties about comparator choices. Use of the Pragmatic Model can improve the behavioral trial planning process and help to resolve disagreements about comparator choices.

Submission ID: 80
Symposium ID and title if part of symposium: 21

Getting the most out of clinical trials: moderators, mechanisms and comparators.

Decision: Accepted, Symposium
Last updated: 7th November, 2019
By: s.michie@ucl.ac.uk, Professor Susan Michie

Theory and Techniques in Developing and Evaluating Behavioural Interventions.

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Background/purpose: Theory is helpful in reducing waste in research by guiding intervention development and evaluation and in synthesizing evidence of effectiveness. However, this is predicated on using good theory and being able to link theoretical constructs to behaviour change techniques. However, there is a need to make theory more useful and useable to intervention designers and researchers including trial methodologists and evidence reviewers.

Methods & Results: Three studies, collaborations between behavioural scientists and computer scientists, will be briefly presented generating the following open-access online resources:

1. An integration of >1770 constructs of 76 theories of behaviour change identified through a systematic review to generate a limited set of canonical theories. This required specifying all theories in computer-readable format.

As part of the Human Behaviour-Change Project,

2. An ontology of behaviour change interventions that specifies key entities (content, delivery, engagement, context, mechanisms) and relationships between them, to generate an automated Knowledge System.
3. A tool linking techniques of behaviour change with their mechanisms of action, based on a literature analysis and expert consensus.

Conclusions and implications: These resources can be used when developing theory-based interventions and in interpreting the likely mechanisms of action of interventions not explicitly based on theory. The resources are designed to be widely used and support rigorous research and collaborative working in behavioural trials.

Submission ID: 81
Symposium ID and title if part of symposium: 21

Getting the most out of clinical trials: moderators, mechanisms and comparators.

Decision: Accepted, Symposium
Last updated: 7th November, 2019
By: freedlak@wustl.edu, Dr. Kenneth Freedland

Comparator Formidability and the Efficacy of Behavioral Interventions

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Background/purpose: The efficacy of a behavioral intervention is defined by the size of the difference between the intervention and comparator arms of a randomized controlled trial (RCT). Thus, efficacy is determined not only by the intervention itself, but also by the alternative to which it is compared. Different comparators may have different effects on outcomes (i.e., they may differ in “formidability”). This raises the question of whether different trials of the same behavioral intervention may yield different efficacy estimates, depending upon the choice of the comparator.

Methods: We used published meta-analyses and meta-regressions to determine whether the efficacy of an intervention systematically differs depending upon the comparator that is used in an RCT. Network meta-analyses can also be used to compare the formidability of different comparators to one another.

Results: Relevant meta-analyses have been conducted on behavioral interventions for depression, social anxiety, and other problems. These analyses reveal significant differences in the formidability of different comparators (e.g., wait lists vs. placebo control conditions), and they show that intervention efficacy depends on the formidability of the comparator.

Conclusions and implications: The choice of the comparator for an RCT of a health-related behavioral intervention is consequential for multiple reasons. One of the most important consequences is that the efficacy effect size depends in part on the formidability of the comparator. Reasons for choosing a more or less formidable comparator should be carefully weighed when designing a behavioral trial.

Submission ID: 82
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 7th November, 2019
By: comerfod@gmail.com, David Comerford

The Effect of a Concerns-and-Tips Card on Breastfeeding Duration: Evidence from a Pilot Study.

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Submitter email: comerfod@gmail.com

Background/purpose: Many mothers report having stopped breastfeeding sooner than they would have liked. A flashcard listing common obstructions to breastfeeding and steps to overcome them might help mums-to-be prepare for breastfeeding and thereby increase breastfeeding duration.

Methods: We recruited 81 women who were at least 36 weeks pregnant at antenatal classes and via discussion boards in Lothian, Scotland. By random assignment, participants received no card; a common-solutions card, which details common breastfeeding problems and their solutions; or an enhanced common-solutions card, which was a common-solutions card that featured an implementations intentions prompt on its reverse side.

Results: Rates of breastfeeding on discharge from hospital were similar across all three groups. By 10-14 day follow-up, the two card groups were significantly more likely than the control group to be breastfeeding and to be exclusively breastfeeding.

Conclusions and implications: We conclude that the cards merit further research as a low-cost means to achieve reductions in breastfeeding drop-off.

Submission ID: 83
Symposium ID and title if part of symposium: 22

Comparators in behavioral trials: from trial design to evidence synthesis.

Decision: Accepted, Symposium
Last updated: 8th November, 2019
By: marijn.debruin@radboudumc.nl, prof dr Marijn de Bruin

Underreporting of comparators in behavioural intervention trials: A systematic review and meta-analysis of randomized trials of smoking cessation interventions.

Prof Marijn de Bruin[1,2], dr Nicola Black[3], ms Neza Javornik[2], dr Wolfgang Viechtbauer[4], Dr Maarten Eisma[5], Dr Jamie Hartman-Boyce[6], Prof Robert West[7], Prof Susan Michie[7], Prof Marie Johnston[2]
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Background/purpose. Underreporting of comparators in published literature can affect our ability to interpret, compare and generalise trial results. Comparator reporting has not been previously examined for behaviour change trials. We assessed completeness and variability in comparator reporting in 142 randomised controlled trials (RCTs) of behavioural smoking cessation interventions.

Methods. Two coders reliably identified the characteristics of comparators, including their potential active components (i.e., intervention activities targeting behaviours key to smoking cessation and qualifying as behaviour change techniques) in published and in unpublished materials obtained from study authors directly.

Results. Unpublished materials were obtained for 93/142 (65%) comparator groups. Comparator mode of delivery, treatment time, and providers' profession were commonly reported in published materials (89.8%, 83.1%, and 81.4% respectively), while providers' generic and specific training were less consistently reported (59.8% and 41.2% respectively). With regards to comparator content, only 26% (491/1891) of the potential active components could be identified in published materials. Reporting quality (#published/#total active content) varied considerably between trials. Experimental (vs. comparator) interventions were better reported (*B(SE)*=0.34(0.11),*p*<.001). Unpublished materials were more often obtained from trial authors for recent studies (*B(SE)*=0.093 (0.03), *p*=.003) published in behavioural (vs. medical) journals (*B(SE)*=1.03 (0.41), *p*=.012).

Conclusions and implications and implications. The extent and variability in underreporting of comparators may compromise reader's ability to interpret the effects of individual trials, compare and explain intervention effects in evidence syntheses, and estimate the additional benefit of an experimental intervention in other settings.

Submission ID: 84
Symposium ID and title if part of symposium: 18

The work of treatment and self care: exploring treatment burden in those managing chronic health conditions.

Decision: Accepted, Symposium
Last updated: 8th November, 2019
By: katie.gallacher@glasgow.ac.uk, Dr Katie Gallacher

An exploration of treatment burden in stroke survivors.

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Background/purpose: Stroke survivors are at risk of feeling overburdened by their treatments due to the arduous nature of rehabilitation, lifelong secondary preventative measures, and the cognitive, psychological and physical sequalae of stroke that diminish capacity to manage health. We aimed to examine treatment burden in stroke and the reasons behind burdensome healthcare provision.

Methods: A qualitative systematic review (n=69 studies) and interviews with stroke survivors (n=29) were conducted to examine the stroke survivor experience of treatment burden. Interviews with stroke health professionals (n=21) explored the factors that influence the provision of low-burden healthcare.

Results: Treatment burden has four components: sense making, interacting with others, enacting treatments and reflecting on progress. It occurs because of increased healthcare workload e.g. multiple healthcare appointments, or care deficiencies e.g. poor communication between health professionals. Treatment burden is influenced by ability to manage health, which is affected by: personal skills and attributes; physical and cognitive abilities; social support; financial status; life priorities and environment. Five factors influence the provision of low burden healthcare: *healthcare system structure*, e.g. autonomous working; *resources* e.g. availability of psychologists; *knowledge and awareness* e.g. adequate time for optimal information delivery; *availability of social care* e.g. home adaptations; and *patient complexity* e.g. multimorbidity.

Conclusions and implications: Stroke survivors describe considerable treatment burden that is amenable to change through alterations in healthcare provision. Stroke health professionals report barriers to providing low-burden healthcare imposed by the systems they operate in. Findings can inform the design of interventions aimed at minimising treatment burden after stroke.

Submission ID: 86
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 8th November, 2019
By: alagreca@miami.edu, Professor Annette La Greca

Before the Storm: Evacuation Stress as a Significant Predictor of Youths' Posttraumatic Stress and Somatic Symptoms.

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Background/purpose: Climate-related disasters are on the rise worldwide. Exposure to disasters can adversely affect youths' physical and mental health, leading to posttraumatic stress symptoms (PTSS) and somatic problems. However, little is known about the impact of pre-disaster evacuation stressors on youth. Hurricane Irma (2017, USA) led to the pre-storm evacuation of 6 million families in Florida and provided an opportunity to examine the impact of evacuation stressors on youths' physical and mental health.

Methods: Three-months after Irma, mothers of children 7-17 years (*N*=226; 48% girls; 45% minority; *M* age=9.76) residing in South Florida counties where Irma was projected to strike completed measures evaluating pre-storm evacuation experiences and hurricane exposure during and after Irma; mothers also reported on their child's PTSS and somatic symptoms. Structural equation modeling (SEM) assessed relationships between evacuation stressors and hurricane exposure during and after Irma, and youths' PTSS. Hurricane-related PTSS also was evaluated as a predictor of youths' somatic symptoms.

Results: SEM demonstrated good model fit ($\chi^2(3)=1.70$, *p*=.64; RMSEA=.00, 90% CI [.00-.09]; CFI=1.0; SRMR=.01). With all variables controlled, greater "before the storm" evacuation stress (*p*<.001), life-threat during the storm (*p*<.001), and loss/disruption after the storm (*p*<.001) each were directly associated with youths' PTSS; in turn, PTSS predicted youths' somatic symptoms (*p*< .001).

Conclusions and implications: Exposure to disasters is stressful for youth and families. Stressors occurring even before a disaster may impact youths' PTSS and somatic symptoms. Findings highlight the need for better disaster preparation efforts, especially for youth and families in disaster-prone areas.

Submission ID: 87
Symposium ID and title if part of symposium: 21

Getting the most out of clinical trials: moderators, mechanisms and comparators.

Decision: Accepted, Symposium
Last updated: 8th November, 2019
By: kdavidson2@northwell.edu, SVP of Research Karina Davidson

Understanding the mechanisms of action in developing behavioral interventions.

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Background/purpose: Behavioral change science is created in disparate fields, with an inadequate translation of knowledge between basic behavioral scientists and behavioral clinical trialists. Advances in these disparate fields will be accelerated with common methods, values, and models.
Methods & Results: The purpose and methods of engaging and testing a mechanism of action across different stages to further behavior change intervention research will be described. The National Institutes of Health has created the Science of Behavior Change and the Stage Model for Behavioral Trials Development. These two models propose common methods and values to accelerate programs of research focused on advancing behavior change interventions. Experimental engagement and influence of mechanisms of action can advance our understanding, and then can inform earliest stage behavioral intervention trials. The Stage model considers how to incorporate mechanisms of action into every stage of intervention development and will be presented for later stage intervention designs.
Conclusions and implications: Ultimately, knowledge from basic behavioral and clinical trialist scientists can inform the development of more efficient and effective interventions that target and engage mechanisms of action. Knowledge of the engagement of mechanisms and, ultimately, the resulting behavior change can inform estimation of treatment effect sizes and identification of when behavioral interventions are ready for evaluation in an adequately powered trial.

Submission ID: 88
Symposium ID and title if part of symposium: 23

Cardiovascular Disease Self-Care.

Decision: Accepted, Symposium
Last updated: 8th November, 2019
By: freedlak@wustl.edu, Dr. Kenneth Freedland

Psychosocial Factors in Self-Care of Heart Failure.

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Background/purpose: Patient self-care plays an important role in course of chronic heart failure (HF), and inadequate self-care can necessitate hospitalization for acute HF. Previous studies have shown that depression affects HF self-care but little is known about the effects of other psychosocial factors.
Methods: Hospitalized patients with HF were enrolled in an observational study of predictors of rehospitalization; complete data on psychosocial factors and self-care were obtained at baseline from n=349 patients. In a series of multivariable models, the Maintenance, Management, and Confidence subscales of the Self-Care of Heart Failure Index (SCHFI) were regressed on demographic factors, indicators of the severity of HF, medical comorbidities, and psychosocial measures including the PHQ-9 (depression), GAD-7 (anxiety), PSS (perceived stress), and ESSI (social support).
Results: In fully-adjusted models, self-care Maintenance was associated with race (F= 6.97; p=.009), first HF hospitalization (F=3.78, p=0.05), renal disease (F=4.97, p=.027), depression (F=9.62, p=.002), and social support (F=6.83, p=.009); self-care Management was associated with age (F=9.24, p=.003), HFrEF/HFpEF status (F=11.03, p=.001), renal disease (F=16.54, p<.0001), depression (F=9.90, p=.002), anxiety (F=4.47, p=.0354), and social support (F=4.30, p=.04); and self-care Confidence was associated with age (F=20.72, p<.0001), education (F=8.11, p=.005), depression (F=21.59, p<.0001), and social support (F=14.04, p=.0002).
Conclusions and implications: HF self-care is adversely affected not only by depression, but also by anxiety and inadequate social support. Research is needed on tailored interventions for multiple psychosocial factors that may interfere with self-care of heart failure.

Submission ID: 89
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 9th November, 2019
By: koteles.ferenc@ppk.elte.hu, Prof Ferenc Koteles

Rubber hand illusion and symptom reporting are positively associated.

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Background/purpose: Body illusions such as the rubber hand illusion are considered side effects of erroneous integration of visual and tactile stimuli. Certain somatic symptoms can also be regarded as visceral illusions, i. e., sensory percepts without physiological Background/purpose. Empirical findings on the associations between malleability to body illusions and visceral illusions are equivocal.
Methods: The rubber hand illusion was evoked in 63 participants (mean age: 20.4±1.55 yrs; 55.6% female). Somatic symptom distress was assessed using the Patient Health Questionnaire Somatic Symptom Scale (PHQ-15).
Results: Repeated measures analyses of variance (synchronous vs asynchronous stimulation) with the PHQ-15 score as covariant were carried out for three outcome variables of the rubber hand illusion. The PHQ-15 score was a significant covariant for proprioceptive drift (F(1,61) = 5,783, p = 0.019, partial eta squared = 0.087) and marginally significant for the feeling of ownership (F(1,59) = 3.225, p = 0.078, partial eta squared = 0.052) and disownership (F(1,59) = 3.468, p = 0.068, partial eta squared = 0.056). Higher PHQ-15 scores were associated with higher level of the rubber hand illusion for each variable.
Conclusions and implications: Malleability to the rubber hand illusion is positively associated with proneness to symptom reports in healthy individuals.

Submission ID: 90
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 9th November, 2019
By: angela_chow@ttsh.com.sg, Dr Angela Chow

Influenza vaccination in the tropics: Who are more likely to take it up?

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Background/purpose: Influenza circulates year-round in tropical Singapore, with excess hospitalization and mortality corresponding to the bi-modal peaks in activity in the middle and end of the year. However, the uptake of influenza vaccination has remained low, in spite of high vaccine availability. We sought to understand the demographic, epidemiological, and clinical factors associated with influenza vaccination in adults.

Methods: We included a cohort of 717 adults attending the busiest emergency department in Singapore for uncomplicated upper respiratory tract infection, from June 2016 to Nov 2018. Histories of influenza vaccination, travel, and prior medical consultation were obtained from a questionnaire survey, and demographic and clinical data from medical records. To assess for independent factors associated with influenza vaccination, multivariable logistic regression models were constructed.
Results: The participants were predominantly male (61%), young (95% aged<=65years), and healthy (68% without co-morbidity). Almost one-in-five (18.4%) received influenza vaccination in the past 12 months, with a significantly higher proportion of highly-educated (diploma and degree holders) (22.6%) than less well-educated (15.5%) having been vaccinated (P=0.016). After adjusting for age>65 and prior medical consultation in the preceding 14 days, females (aOR2.00, 95%CI 1.34-2.97), the highly-educated (aOR1.77, 95%CI 1.16-2.70), those with co-morbidities (aOR2.08, 95%CI 1.36-3.19), ethnic Malays (aOR2.16, 95%CI 1.04-4.51) and recent travelers (aOR1.72, 95%CI 1.04-2.86) were more likely to have received influenza vaccination in the past 12 months.
Conclusions and implications: This study provided useful insights into sub-populations to be targeted for influenza vaccination: the less well-educated, males, non-Malays, and the healthy general population with no travel plans.

Submission ID: 91
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 9th November, 2019
By: angela_chow@ttsh.com.sg, Dr Angela Chow

Understanding reasons for medical attendances at the emergency department for acute upper respiratory tract infections: a mixed methods approach.

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Background/purpose: Emergency departments (EDs) worldwide are often medically attended for non-emergency conditions, including acute upper respiratory tract infection(URTI). Despite accessible and affordable primary care services in Singapore, many attend the ED for URTI. This study seeks to understand the reasons for this, using a mixed-methods approach.
Methods: We administered a questionnaire survey on 717 consecutive URTI patients discharged from the busiest adult ED in Singapore, June 2016-Nov 2018. Structured questions on whether they expected laboratory test, X-ray, injection, or hospitalization, and an open-ended question on the top reason for the ED visit were included. Multivariable logistic regression models were constructed to assess for independent factors associated with expectations of laboratory test/X-ray, and thematic analysis conducted on reported reasons.
Results: Participants were young (median age 36 [IQR28-51] years) and healthy (68% had no comorbidities). Majority (64%) expected a laboratory test or X-ray, 15% expected an injection and 11% hospitalization. After adjusting for age>65, comorbidities, and illness severity, the highly-educated (aOR 1.48, 95%CI 1.07-2.06), females (aOR 1.40, 95%CI 1.01-1.94), those with illness duration>7 days (aOR 1.67, 95%CI 1.13-2.46) and prior medical consultation (aOR 1.41, 95%CI 1.03-1.93) were more likely to expect laboratory test/X-ray. Five themes explained the top reasons for ED visits: medical (32.8%), confidence in care (25.1%), financing/administrative (25.0%), convenience/accessibility (12.7%), and. recommendations of family/friends (4.1%).
Conclusions and implications: This study provided insights into patients' expectations for ED visits for URTI. Education on where to access laboratory test/X-ray in primary-care settings could reduce inappropriate ED visits.

Submission ID: 93
Symposium ID and title if part of symposium: 22

Comparators in behavioral trials: from trial design to evidence synthesis.

Decision: Accepted, Symposium
Last updated: 9th November, 2019
By: stefan.gold@charite.de, Prof. Dr. Stefan Gold

Determinants of control group choice in clinical trials.

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Background/purpose: Comparative analyses of therapeutic options in psychiatry and the aggregation of data from clinical trials across different therapeutic approaches play an important role in clinical decision making, treatment guidelines, and health policy. This approach assumes that trials of pharmacological and behavioural therapies generally produce the same level of evidence when properly designed. However, the designs of behavioural intervention trials have some unique characteristics and their control groups vary widely, which strongly influence the effects observed in any given trial.
Methods: Systematic literature review and expert opinion.
Results: While guidelines for choosing appropriate control groups for clinical trials are provided by regulatory bodies for pharmaceuticals (FDA, EMA etc), these are not all directly applicable to behavioural intervention trials. The wide variety of control conditions typically used in behavioural medicine have a considerable impact on the internal validity and expected effect size in a trial. Based on these considerations, selection criteria can be integrated into a decision framework for choosing a control condition depending on the risk of the patient population ("participation risk") and the stage of development of the therapeutic intervention.
Conclusions and implications: The effect of control group choice on treatment effects needs to taken into account, particularly when comparing behavioural and pharmacological therapies.

Submission ID: 94
Symposium ID and title if part of symposium: 23

Cardiovascular Disease Self-Care.

Decision: Accepted, Symposium
Last updated: 9th November, 2019
By: voils@surgery.wisc.edu, Dr. Corrine Voils

Measuring the Multiple Dimensions of Medication Adherence.

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Background/purpose: Medication adherence involves multiple behaviors that may be measured by different measurement approaches. We sought to achieve expert consensus on defining medication nonadherence behaviors and identifying suitable and optimal measurement approaches for each.
Methods: Thirty medication adherence experts were invited to participate in a Delphi panel involving two sequential online surveys. Survey 1 (n = 24) sought to identify and define nonadherence behaviors and associated measurement approaches. Survey 2 (n = 22) sought to assess the suitability of each approach and the optimal approach for each behavior.
Results: Across both surveys, respondents agreed with the specification and definition of eight of nine proposed behaviors: not filling the initial prescription, not taking the first pill, missing doses, taking extra doses, refilling medication late or not at all, improperly administering medications, and discontinuing medications early. Respondents agreed with the specification and definition of seven of eight measurement approaches: patient report, prescription refill, dose or pill count, electronic drug monitoring, drug or drug metabolite level, ingestible sensor, and direct observation. They also suggested the addition of proxy report. Survey 2 revealed consensus that multiple approaches were at least somewhat suitable for measuring each behavior. Consensus on an optimal approach was reached for not refilling the initial prescription and filling it late, both via prescription refill records. Self-report was rated suitable for measuring all behaviors but optimal for none.
Conclusions and implications: This framework can be used to guide selection of measurement approaches and highlights the availability of valid measures for assessing distinct nonadherence behaviors.

Submission ID: 95
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 10th November, 2019
By: ronie.walters@uhi.ac.uk, Mrs Ronie Walters

Health literacy interventions can improve health behaviours: a systematic review.

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Background/purpose: To evaluate the effect of health literacy (HL) interventions on HL in adults, and the impact on health behaviours (smoking, nutrition, alcohol, physical activity and screening).
Methods: This systematic review included eligible studies up to May 2019. Studies were eligible if they included an intervention in adults and a pre/post measure of health literacy. Risk of bias was assessed regarding randomisation, allocation sequence concealment, blinding, incomplete outcome data, selective outcome reporting and other biases. Intervention reporting quality was assessed using TIDieR to include rationale, details of how, when, where, and how much, planned and actual fidelity and tailoring or modifications.
Results: A total of 2593 papers were assessed, and 33 full-text papers screened to give 15 unique datasets in 16 papers including 10,052 participants in six countries. All studies occurred in the last 5 years. Eight of the studies (n=1130 participants) reported on behavioural outcomes. HL interventions resulted in improved HL in 10/15 cases (n=9601 participants) and improved behavioural outcomes in 7/8 cases (n=1071 participants). All studies were at high risk of bias, with poor reporting of intervention content and little explication of the theoretical basis for the interventions.
Conclusions and implications: As a modifiable determinant of health, HL offers a way to improve behavioural outcomes for populations most at risk of health inequalities. As a field, it is still developing with very few interventions using clear theoretical frameworks. Closer links between HL and behaviour change theories and frameworks could result in higher quality and more effective interventions.

Submission ID: 96
Symposium ID and title if part of symposium: 13

Behavioural aspects of cardiac rehabilitation - Unresolved problems and new solutions.

Decision: Accepted, Symposium
Last updated: 10th November, 2019
By: freedlak@wustl.edu, Dr. Kenneth Freedland

Promotion of Physical Activity in Patients with Heart Failure and Comorbid Depression.

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Background/purpose: Reduced exercise capacity is a debilitating effect of heart failure (HF). Cardiac rehabilitation is recommended for patients who have heart failure with reduced ejection fraction (HFrEF), to improve exercise as well as other outcomes. For a variety of reasons, however, relatively few patients with HFrEF participate in cardiac rehabilitation. In addition, physical activity and mild-moderate aerobic exercise are important components of HF self-care, but adherence to physical activity and exercise is poor in many cases. Trials of interventions to increase physical activity and exercise in patients with HF have had mixed success. Depression plays an important role both in physical inactivity and in resistance to interventions to increase physical activity and exercise.
Methods: This presentation will review evidence, including from cardiac rehabilitation trials and from the HF-ACTION trial, regarding the challenges, risks, and benefits of increasing aerobic exercise in patients with HF. It will also review research on treatment of depression as a means to improve receptivity and adherence to exercise and to cardiac rehabilitation in patients with heart failure.
Results: In our initial trial, we provided simultaneous intervention for depression and physical inactivity. The intervention was efficacious for depression but not for physical inactivity. A sequential alternative is being tested in our ongoing trial. In this approach, depression treatment is initiated before the start of an HF self-care program.
Conclusions and implications: More effective interventions are needed to increase uptake of cardiac rehabilitation and to encourage physical activity and exercise in patients with heart failure.

Submission ID: 97
Symposium ID and title if part of symposium: 22

Comparators in behavioral trials: from trial design to evidence synthesis.

Decision: Accepted, Symposium
Last updated: 10th November, 2019
By: nicoladblack@gmail.com, Dr Nicola Black

Variability and effectiveness of control group interventions in smoking cessation trials: A systematic review and meta-analysis.

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Background/purpose: We aimed to examine variability and effectiveness of interventions provided to comparator groups in smoking cessation trials.
Methods: We conducted a systematic review of randomised controlled trials (RCTs) of behavioural interventions for smoking cessation amongst adults, with or without stop-smoking medication (registration: CRD42015025251 and https://osf.io/24pzj/). We searched the Cochrane Tobacco Addiction Group Specialized Register for RCTs, published between 1/1996-11/2015, with objective outcomes measured at ≥6 months. Study authors were contacted to obtain comprehensive descriptions of their comparators. Meta-regression analyses examined the relationships of smoking cessation rates with stop-smoking medication and behaviour change techniques (BCTs).
Results: 104 of 142 eligible comparator groups (*N*=23706) had complete data and were included in analyses. There was considerable variability in the number of BCTs delivered (*M*=15.97, *SD*=13.54, range:0-45) and the provision of smoking cessation medication (43% of groups received medication) across comparator groups and within categories of comparator groups (e.g., usual care, brief advice). Higher smoking cessation rates were predicted by provision of medication (*B*=0.334, 95%CI: 0.030-0.638, *p*=.031) and number of BCTs included (*B*=0.020, 95%CI: 0.008-0.032, *p*<.001). Modelled cessation rates in comparator groups that received the most intensive support were 15 percentage points higher than those that received the least (23 versus 8%).
Conclusions and implications: Interventions delivered to comparator groups in smoking cessation trials vary considerably in content, and cessation rates are strongly predicted by stop-smoking medication and number of behaviour change techniques delivered. This should be considered when synthesising and interpreting the results of such trials.

Submission ID: 98
Symposium ID and title if part of symposium: 23
Cardiovascular Disease Self-Care
Decision: Accepted, Symposium
Last updated: 11th November, 2019
By: peter.b.johansson@liu.se, Professor Peter Johansson

Cardiovascular disease and internet-cognitive behavioral therapy - impact on depression and self-care behaviours.

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Background/purpose: To explore if internet-cognitive behavioral therapy (iCBT) targeting depression can improve self-care behaviours in patients with cardiovascular diseases (CVD) and heart failure (HF)
Methods: Secondary analyses of data from two randomised controlled trials evaluating the effect of iCBT on depression in patients with HF (n=50) and CVD (n=144). Questionnaires was used to measure depression, self-care behaviours and physical activity.
Results: An improvement in depression was associated with an improvement in autonomy-based self-care behaviours (r=0.34, p=0.03) such as daily weighing and physical activity. iCBT was superior compared to an on-line discussion group to improve depression (p<.001) and physical activity (p=0.019). Only in the iCBT-group, changes in depression correlated with changes in physical activity (r = -.39, p =.002), i.e. the larger reductions in depression the larger increases in physical activity. Depression was a mediating factor between iCBT and physical activity. Indicating that iCBT-treatment decreases depression, and that decreases, in its turn, give increases in physical activity.
Conclusions and implications: A decrease in depression needs to precede an increase in self-care behaviours such as physical activity. Therefore, to improve self-care behaviours in depressed CVD patients interventions such as CBT or iCBT primarily aimed at decreasing depression are needed.

Submission ID: 99
Symposium ID and title if part of symposium: 7

Acceptance and decline of psychosocial support in patients with cancer.

Decision: Accepted, Symposium
Last updated: 11th November, 2019
By: sarah.doking@radboudumc.nl, MSc S Doking

Reasons for Non-Participation in a Psychological Intervention Trial for Distress in Colorectal Cancer Survivors

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Background/purpose: High psychological distress is reported by one third of colorectal cancer survivors (CRCS). However, intervention studies for CRCS have reported low participation rates. In this study, reasons for non-participation and low uptake in a psychological intervention trial were investigated.
Methods: CRCS were recruited for a randomized clinical trial on the efficacy of treatment for psychological distress via databases (retrospectively), follow-up consultations (prospectively) and advertisements (self-referral). The recruitment flow and reasons for non-interest were analyzed for patients recruited between 2016 and 2019. Sub-groups were compared based on demographic, clinical and screening data. High distress, a study entry criterion, was measured with the Distress Thermometer (DT≥5).
Results: Of the 3053 patients assessed via databases, 1090 (36%) were medically eligible for study invitation; following distress screening 3% (32/1090) participated. In all three recruitment methods together, 724 patients responded to the invitation letter. 31% (222/724) were interested in study participation. Of the non-interested CRCS, 54% reported having no problems. Two hundred and six CRCS were screened with the DT, of which 101 (49%) had high distress. Fifty CRCS (50%) expressed a need for help and were included. Younger age, female sex, shorter time since diagnosis and more DT (emotional) problems were positively related to participation.
Conclusions and implications: In this study fewer CRCS experienced high distress than reported in previous studies and a low participation rate was found. Only half of highly distressed CRCS had a need for help. Recruitment in and uptake of psychological interventions in CRCS will be discussed.

Submission ID: 100
Symposium ID and title if part of symposium: 18

The work of treatment and self care: exploring treatment burden in those managing chronic health conditions.

Decision: Accepted, Symposium
Last updated: 11th November, 2019
By: rtanders@virginia.edu, Prof. Roger Anderson

Modeling the effect of self-care behaviors on treatment burden in cancer survivors.

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Background/purpose: Advances in cancer control, with population aging, have resulted in many survivors living in the community with self-care needs for both cancer and other health care conditions. We modeled the effects of self-care on perceived task difficulty and treatment burden in 2 pre-existing research samples of cancer survivors with multiple chronic conditions, recruited from 4 healthcare institutions, to identify those in need of behavioral support due to self-care burden.
Methods: Sample 1 (N=183) comprised survivors of breast, cervical, ovarian, or endometrial/uterine cancer treated 6 months to 3 years prior. Sample 2 (N=91) comprised multi-morbid patients with a previous or current diagnosis of any cancer. Data were collected on cancer treatment history, previous comorbid conditions, health literacy, and financial security. Treatment burden was assessed using the Patient Experience with Treatment and Self-Management (PETS) assessing self-care task, difficulty and impact.
Results: After adjusting for age, race, marital status, health literacy and cancer type, we found that higher treatment burden in both survivor samples was associated with multiple comorbidities and depression. In Sample 1, the risk for self-care behaviors to become difficult was statistically moderated by CESD depression status (p=0.008) and comorbidity level (p=0.005). This finding was replicated in Sample 2 using history of depression and comorbidity index (p=0.045).
Conclusions and implications: This is one of the first studies to examine predictors of self-care difficulty in patients with major illness. We found that cancer survivors with multiple comorbidity and a history of depression are at risk for high treatment burden, through self-care difficulty.

Submission ID: 103
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 12th November, 2019
By: lynn.williams@strath.ac.uk, Dr Lynn Williams

Seasonal influenza vaccine hesitancy in adults with chronic respiratory conditions: sociodemographic and psychological factors.

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Background/purpose: The importance of vaccine hesitancy has come into sharp focus during the COVID-19 pandemic. But the problem of vaccine hesitancy for other vaccines, including the annual seasonal influenza vaccine is long established. Influenza vaccination is recommended for adults with long-term medical conditions, such as those with chronic respiratory conditions, but uptake is suboptimal. We examined the sociodemographic and psychological factors associated with seasonal influenza vaccine uptake in adults with chronic respiratory conditions.
Methods: A sample of 429 adults (64% female), mean age of 41.8 years, with chronic respiratory conditions (81% asthmatic) provided sociodemographic information, and completed the 5C Scale (Betsch et al., 2018) which assesses confidence, complacency, constraints, calculation, and collective responsibility. Binary logistic regression analyses were used to determine the sociodemographic and psychological factors associated with receiving the influenza vaccine in the previous 12 months (44% had not been vaccinated).
Results: The multivariate binary logistic regression analysis showed that those who had not been vaccinated for seasonal influenza in the previous 12 months were younger, with higher levels of complacency and constraints, and lower levels of collective responsibility.
Conclusions and implications: Interventions designed to target psychological antecedents of vaccination, such as complacency, as well as social processes like collective responsibility, may be useful in tackling influenza vaccine hesitancy. Our data was collected prior to the COVID-19 pandemic and it is not yet known what long-term impacts the pandemic may have on vaccination beliefs and behaviour in general.

Submission ID: 104
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 12th November, 2019
By: emmaking100@gmail.com, Emma King

Promoting smoking cessation during pregnancy: a combined feasibility and pilot trial of a theory-based intervention using narrative, images and embedded behaviour change techniques, delivered via text-messaging: SKIP-IT

Dr Emma King[1], Dr Purva Abhyankar[1], Professor Helen Cheyne[1], Mr Andrew Elders[2], Dr Claire Jones[3], Dr Mary Steele[4], Professor Brian Williams[5], Professor Ronan O'Carroll[1], Professor Linda Bauld[6], Ms Margaret Winton[7], Ms Debbie Sigerson[8]
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Background/purpose: Smoking during pregnancy causes serious risks to the health of mothers and babies. SKIP-IT is a narrative and picture-based intervention aiming to help pregnant women stop smoking by sending text messages with embedded behaviour change techniques (BCTs). This study aimed to investigate the feasibility and likely success of this intervention.
Methods: The storyline and BCTs were developed with feedback from clinicians and women using smoking cessation services. The study took place in five NHS boards. We aimed to recruit 70 pregnant women who smoked. Randomisation was on a 1:1 basis to receive usual care ± text messages between antenatal booking and 6 weeks postnatal. Data collection involved five telephone questionnaires completed over approx. 40 weeks.
Results: 633 women were potentially eligible, 299 were approached (130 by post, 128 verbally), only 38 agreed to be contacted by the researchers and 28 participated. Engagement with follow-up was low but most women continued to receive texts until the end and reported that they were helpful and entertaining. More women in the intervention group stopped smoking but numbers were too small to draw conclusions about the likely effectiveness of the intervention.
Conclusion and implications: This intervention was acceptable to participants, but significant challenges were encountered during recruitment and data collection. Storytelling interventions could help women quit

smoking but our study methods were not feasible to test this in a larger trial. Engaging pregnant smokers is crucial but extremely difficult. Future research should prioritise identifying alternative methods for recruiting and retaining pregnant smokers.

Submission ID: 105
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 12th November, 2019
By: ncogan1@googlemail.com, nicola cogan

Facilitators and barriers to influenza vaccine uptake in adults with chronic respiratory conditions (CRC): A qualitative study.

Dr Nicola Cogan, Dr Lynn Williams, Dr Karen Deakin, Dr Susan Rasmussen, Ms Allyson Gallant, Dr David Young
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Background: Vaccination is the most effective means to prevent influenza infection among adults with chronic respiratory conditions (CRC). However, uptake of the vaccination is low, with less than half of adults with CRC choosing to be vaccinated. The purpose of the present study was to explore adults with CRC views of influenza vaccination, in order to better understand the barriers and facilitators to uptake among this 'high risk' group.
Methods: Fifty-nine adults with CRC aged 18-64 years old participated in one of eight focus groups (n= 38) or a semi-structured interview (n=21). The focus groups and interviews explored participants' experiences and views in relation to their decisions on influenza vaccination uptake. Data were recorded and transcribed verbatim, and transcripts were managed using NVIVO and analysed using Thematic Analysis. The qualitative analysis identified three themes that were identified as facilitators to influenza vaccination uptake among adults with CRC: '*Sense of feeling protected*', '*reduced vulnerability, fear and anxiety about getting ill*', and '*Acceptance of the advice to vaccination given 'at risk' status*'. Barriers to vaccination uptake were captured in three themes: '*Perceived adverse reactions or side-effects based on lived experiences*', '*Lack of rapport and trust in medical practitioners*', and '*Not knowing how or why vaccine work*'.
Conclusions and implications: These findings identify facilitators and barriers at the provider, interpersonal and practice level that need to be addressed in future efforts to increase vaccine uptake among adults with CRC. Implementation strategies that aim to improve facilitators and address multi-level barriers to vaccine uptake merit further investigation.

Submission ID: 107
Symposium ID and title if part of symposium:
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Last updated: 13th November, 2019
By: hakan.wall74@gmail.com, Håkan Wall

Evaluation of a Brief Online Self-help Program for Concerned Gamblers: A Feasibility Study

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Background: A brief online unguided self-help program was launched at the Swedish gambling helpline's webpage in 2015 for gamblers interested in changing their gambling habits. This presentation aims to describe program engagement, variables associated with retention and change in gambling behaviors over time.
Methods: The main outcome is retention in the program and secondary outcomes are money and time spent on gambling. The program consists of four modules with tasks based on Motivational interviewing and CBT, covering motivation to change, logging gambling behaviors, planning and implementing gambling-free activities, and managing risk situations. Support is extended up to 10 weeks through e-mails offering behavior change tips.
Results: Between 2015 and 2019, 4655 gamblers recruited via the helpline's webpage, 92% completed content in at least one module, and 23% were active in all four modules. Attrition was in general high, with only 10% retention in the gambling log for longer than 14 days. Gambling expenditures decreased for those who logged them for a shorter time period, whereas it increased for those who logged expenditures for a longer time period.
Conclusions: This study shows that it is relatively easy to recruit participants to an online program for concerned gamblers in the context of a gambling helpline. We suggest that focus should be put on increasing engagement in the different modules and to provide rationale on how and why to use the program modules all at once in order to increase retention.

Submission ID: 108
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 13th November, 2019
By: bgallagher@thechicagoschool.edu, Dr. Bobbie Gallagher

Visual Supports and Domains of SCARF® to Improve Gynecological Visits for Females With Autism Spectrum Disorder (ASD)

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Background: In order to close the gap between gynecological healthcare services received by females with autism spectrum disorder (ASD) and limited language (LL) and their non-ASD peers, this research was conducted to equip board-certified behavior analysts (BCBAs) to train medical professionals in the use of visual supports and the domains of SCARF®.
Methods: BCBAs participated in a randomized control-group pre/posttest study, where the experimental group was exposed to a behavioral-skills training (BST).
Results: Due to the high rate of sexual abuse or probability of trauma to females with ASD and LL, behaviors specific to SCARF® were incorporated into the mock routine examination along with the visual supports. Following the posttest, BCBAs in the experimental group had a mean score of 93.78% of the steps completed correctly with a mean gain from pretest of 91%. In comparison, the control group had a mean score of 1% and a gain from pretest of 0%. Social-validity measures indicated that the experimental group rated their confidence at a mean of 4.22 out of 5 following the training, and the control group's mean score was 1.25 out of 5. The inclusion of the domains of SCARF® was determined to be highly important by the experimental group with a social validity score of 4.67 out of 5.
Conclusions: Although direct training of OBGYN nurses would be preferred, use of BST to train BCBAs to train nurses proved to be effective based on the results of this study. BCBAs assisting females with ASD and LL during a gynecological visit may be needed initially.

Submission ID: 109
Symposium ID and title if part of symposium: 12

Challenges and solutions to developing and evaluating health behaviour change interventions for younger-onset type 2 diabetes: an international perspective.
Decision: Accepted, Symposium
Last updated: 14th November, 2019
By: alake@acbrd.org.au, Dr Amelia Lake

Challenges and solutions to conducting evaluations of clinical and health behavior change interventions for people with younger-onset type 2 diabetes.

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Background: Younger-onset type 2 diabetes (T2D) is a severe phenotype requiring aggressive, evidence-based psychological and pharmacological response if severe diabetes-related complications are to be avoided. Despite increasing incidence and awareness, there are a paucity of approved therapies and effective psycho-social interventions. Clinicians and mental health practitioners have increasingly called for strengthening of the evidence base across a range of services including pharmaceutical therapies and co-morbidity management, cardiovascular risk prevention, and self-management and psychological support. However, demographic, clinical and psycho-social factors have impeded successful conduct of clinical and behavioural trials. This presentation will outline the major challenges contributing to low study recruitment and completion rates, including small overall population size, cultural and linguistic barriers, low socio-economic status and psychological factors.
Methods and Results: Drawing on direct experience and the international literature, solutions to address identified challenges, which optimise generalisability and representativeness of clinical trials are presented. Key areas include: design of the intervention and trial to maximise flexibility and reach; use of digital technology to improve implementation, engagement and participant connection; involvement of key stakeholders and the study population with the research process/findings to maximise relevance; selection of appropriate recruitment strategies (e.g. within clinic and community centres) and retention strategies (e.g. cultural tailoring of interventions, research staff from similar ethnic background). Research designs that allow for testing of intervention effect for small samples will be discussed, as will non-randomised alternatives.
Conclusions: This presentation is intended to assist researchers and clinicians when designing and implementing future health behavior change programmes for people living with younger-onset T2D.

Submission ID: 110
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 14th November, 2019
By: sulinyidiana@163.com, Dr. Linyi Su

Performance and experience of workers with musculoskeletal disorder: Does labour relations climate matters?

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Background Within a sample of workers with musculoskeletal disorder (MSD), this study examined if labour relations climate was predictive to job satisfaction and job performance, and tested whether treatment control of illness perception mediated such predictions.
Methods: We recruited 558 workers with MSD. They completed a survey of the study variables, comprising Labour Relations Climate Questionnaire, The Revised Illness Perception Questionnaire, Job Satisfaction Questionnaire, and In-role Job Performance Questionnaire. Structural equation modelling was used to analyse parameter estimates of the models.
Results: The data fitted the mediation model acceptably well (CFI = .94, NNFI = .92, RMSEA = .07, SRMR = .08). Labour relations climate exerted significant positive direct effect on job satisfaction (β = .68, p< .05, R^2 = .46) and job performance (β = .51, p< .05, R^2 = .26), and the corresponding indirect effects via treatment control were positive and significant (p < .05, 95% CI = .06 - .08). Treatment control established significant positive relationship with job satisfaction (β = .68, p< .05) and job performance (β = .51, p< .05). The results supported treatment control as the mediator of the effects of labor relations climate on predictive to job satisfaction and job performance.
Conclusions and implications: Our findings showed that MSD workers who reported a positive labour relations climate were more likely to have better work performance and satisfaction. However, such effects could be impaired if they had poor treatment control toward their illness. Future intervention studies should investigate ways and the effectiveness of promoting treatment control among MSD workers.

Submission ID: 111
Symposium ID and title if part of symposium: 12
Challenges and solutions to developing and evaluating health behaviour change interventions for younger-onset type 2 diabetes: an international perspective.
Decision: Accepted, Symposium
Last updated: 14th November, 2019
By: annebo9@gmail.com, Anne Bo

Overview of clinical and psychosocial characteristics and quality of chronic care among people with younger-onset type 2 diabetes: a country specific example from Denmark

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Background/purpose: The adverse clinical profile of people with younger-onset type 2 diabetes (T2D) is well documented, with studies indicating that poor psychological well-being and life-stage specific stressors may be important unmet barriers to health. A comprehensive understanding of the characteristics and experiences of people with younger-onset T2D is the first step to developing targeted interventions.
Methods: Using data from the Danish Center for Strategic Research in Type 2 Diabetes cohort and a mixed-methods approach, we explored: clinical risk factors for diabetes-related complications; psychosocial problems and perceived quality of care, and T2D disclosure patterns among younger-onset persons.
Results: Of the 5115 persons with newly-diagnosed T2D (n=516 younger-onset, aged 18-45 years), we found a clear age gradient, with increasing prevalence of cardiovascular risk factors with younger age of T2D diagnosis. A survey of younger-adults (n=216, aged 20-45 years) identified higher levels of stress (46%) and depressive symptoms (41%), than of high diabetes distress (24%), and less than optimal care in several key areas of chronic care. For example, 65% did not feel supported to manage their diabetes "daily" or in "hard times". Finally, qualitative interviews

(n=15, aged 20-45 years) identified fear of T2D disclosure in both new and existing relationships, with consequent social isolation.
Conclusion and implications: Consistent with recommendations from the international literature, improvement in specialised psychosocial support may be an important adjunct to therapeutic intervention. Practical implications, which accommodate the real-world experiences of people with younger-onset T2D, include tailoring of services with greater attention to their contextual life stressors.

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Symposium ID and title if part of symposium:
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Last updated: 14th November, 2019
By: kelly.clemens@rockets.utoledo.edu, Doctoral Student Kelly Clemens

Using a cultural lens to explore the theory of planned behavior and sedentary lifestyle: Results from 10 unique cultural contexts

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Background: Research suggest increasing physical activity alone may not protect against detrimental health outcomes. People living sedentary lifestyles have a higher risk of cardiovascular disease (Young et al., 2016), even when engaging in physical activity. It has also been suggested that the Theory of Planned Behavior (TPB) can be used to predict sedentary behavior (Prapavessis et al., 2015), however there is little research addressing predictors of sedentary lifestyle across cultures. The present study explores the relationship between TPB constructs and sedentary behavior in different cultural contexts.
Methods: Data was collected from participants (N=2841) in 10 unique cultural contexts (e.g., Indonesia, Ghana, Germany). Participants completed measures of TPB constructs related to physical activity and self-reported physical activity and sedentariness. Multiple linear regressions were run for the data as a whole and for individual countries.
Results: Regression analyses included physical activity attitudes, norms, behavioral control, and intentions as predictors. A multiple regression including all countries revealed only behavioral control as a predictor of sitting time during an average week, $F(4, 2734)=4.83, p=.002, R=.08$. Regressions for individual cultures, however, tell a more complex story. Cultural differences emerged for the TPB constructs predicting sedentary behavior. Attitudes, behavioral control, and intentions appeared as sole predictors in some cultures, while four cultures had no significant predictors of sedentariness.
Conclusions: This study highlights the importance of considering cultural context when discussing determinants of health behaviors. While TPB may be useful in predicting sedentary behaviors, interventions for decreasing sedentary time should consider predictors specific to cultural context.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 14th November, 2019
By: kelly.baron@utah.edu, Kelly Baron

Predicting objective short sleep duration and response to sleep extension intervention

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Background: It is estimated that 30% of adults in the United States sleep less than the recommended 7 h per night, which increases risk for cardiometabolic, psychiatric disorders and diminished quality of life.However, little research has examined how to identify participants for sleep extension and provide interventions increase sleep duration. The goal of this project was to determine predictors of short sleep duration and the extent to which individual are able to increase their sleep duration when enrolled in a sleep extension intervention.
Methods: Participants included men and women without insomnia or sleep apnea, who volunteered for a technology-assisted sleep extension study.
Results: The screening sample included 57 participants (32 women, age m=44, SD= 9 years). Participants completed 7 days of actigraphy and questionnaires to assess sleep related attitudes and behaviors. The majority (74%) of participants with self-reported short sleep duration also demonstrated objective short sleep duration on actigraphy (<7 hrs). Participants with objective short sleep duration reported lower self-reported sleep duration (p<.02) and sleep need (p <.05). There were no differences in demographics or beliefs between those with and without objective short sleep. Among the 11 participants who were enrolled in the 6-week sleep extension intervention, the response was variable, ranging from 6.6 min to 1 hr 12 min. The average sleep extension was 38 minutes. No pre-treatment variables predicted response to intervention.
Conclusions: Results of this study demonstrate that adults without insomnia generally identify themselves correctly as having objective short sleep duration.

Submission ID: 114
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 14th November, 2019
By: daniel.jones@stir.ac.uk, Mr. Daniel Jones

Beyond labelling policy: Alcohol packaging is a promotional tool

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Background/purpose: Product packaging is a powerful, multifunctional marketing communications tool. The design of alcohol packaging is associated with awareness and use of products among younger people and adults. However, there is a surprising paucity of academic research on how alcohol packaging is used by alcohol producers.
Methods: The alcohol trade press, produced for retailers of alcohol products, offers a unique insight into how alcohol packaging is used as a promotional tool. Paper versions of four UK magazines spanning 10

years (2008-2017, *N*=696) were manually reviewed. All instances of alcohol packaging information (e.g. statements from producers, brand data, product images) were recorded for content analysis.
Results: Four key elements of alcohol packaging design were used to promote alcohol products: pack graphics (graphics, colour, origin and heritage); pack structure (shape, size, style of opening, materials, innovation); promotion (limited editions, prizes, gifts, sponsorship, price-marked packs); and green packaging. Alcohol producers use a combination of alcohol packaging design elements to increase shelf standout, refresh brands, differentiate products, target market segments, and increase sales.
Conclusions and implications: Alcohol packaging is an important marketing communications vehicle used to forge a strong connection between consumers and brands. The design of packaging for potentially harmful alcohol products is not only a means for companies to promote their brands, and therefore presents an opportunity for policymakers to look beyond labels to reduce or remove this means of brand promotion through packaging regulation.

Submission ID: 116
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 15th November, 2019
By: derwin@eduhk.hk, Dr Derwin King Chung Chan

Assessing children's swimming competence: From public health impact to scientific research

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Background and Purpose: Within a community learn-to-swim programme for over 18000 primary school students in Hong Kong, we conducted two large scale studies that led to the development of Swimming Competence Questionnaire (SCQ).
This project aims to examine the validity of the SCQ by a cross-sectional survey (Study 1) and a pre-post-test quasi-experiment (Study 2).
Methods: Study 1 was a brief survey, comprising the items of SCQ and swimming outcomes (i.e., self-efficacy, intention, swimming frequency). It was conducted as part of the need analysis of the community learn-to-swim programme, and participants were 4959 primary school children (age = 5 to 14) who did not participate in the programme. Using the survey of Study 1, Study 2 examined the swimming competence and swimming outcomes of 1609 primary school children (age = 5 to 9) before and after they took part in the learn-to-swim programme involving 20 free-of-charge swimming lessons.
Results: In Study 1, exploratory structural equation supported the factor structure and convergent validity of SCQ. The significant positive relationships between SCQ scores and the swimming outcomes supported SCQ's concurrent and criterion validity. The average variance extracted for the SCQ factors supported the discriminant validity of SCQ. In Study 2, the relationships and differences of SCQ scores, self-efficacy, intention, and swimming frequency between pre-test and pos-test supported SCQ's test-retest reliability, predictive validity, and ecological validity.
Conclusion and implications: We demonstrated that a comprehensive validation of a bebahvioural assessment could be conducted via a community health service programme.

Submission ID: 117
Symposium ID and title if part of symposium: 16
Open Science in Behavioral Medicine: International Perspectives and Provocative Questions
Decision: Accepted, Symposium
Last updated: 15th November, 2019
By: derwin@eduhk.hk, Dr Derwin King Chung Chan

Open science in behavioral medicine: Asia perspectives

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Open Science has received increasing amount of attention among researchers of behavioral medicine in Asia. Open Science has made it easier for researchers to share their study protocol, assessment tools, datasets, and scientific papers, so it is advantageous to behavioral medicine researchers in Asia for increasing the transparency, integrity, publicity of their research. According to the data by Scimago, between 1996 and 2018, research papers from Asia only account for 11.18% of all the papers, and 5.43% of all citations worldwide in the category of "Health (Social Science)". In other words, in the last two decades, majority of the knowledge and theories in behavioural medicine were developed or tested in Western countries. We hope that Open Science is not only able to promote the replication of research findings from the Western World to Asia, but it may also allow international researchers to gain more understanding and appreciation toward the indigenous psychological and behavioural findings and knowledge from Asia. Indeed, there has been some concerns and drawbacks over the use of Open Science platforms in Asia (e.g., language barriers, privacy and ownership of data, copyright and intellectual properties, ethical guidelines, and quality and safety of research materials). In this symposium organized by the International Journal of Behavioral Medicine, we will discuss about the importance and challenges of Open Science movement in Asia with other international panelists.

Submission ID: 118
Symposium ID and title if part of symposium: 7
Acceptance and decline of psychosocial support in patients with cancer
Decision: Accepted, Symposium
Last updated: 15th November, 2019
By: andreas.dinkel@mri.tum.de, Dr. Andreas Dinkel

Acceptance and decline of psychological interventions in hospitalized patients with cancer

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Background/Purpose: Distress screening procedures have been established in many cancer centers. However, it becomes increasingly clear that many patients who are identified by screening decline psychological support. Here, we report on two studies that investigated perceived need for support in hospitalized patients with cancer.
Methods: Two cross-sectional studies (N = 341; N = 925) were conducted with patients suffering from different diagnoses. Patients filled out questionaires on psychological characteristics and symptom burden. Clinical variables were extracted from the patient's record. Logistic regression was used to identify variables associated with perceived need.
Results: Mean age was 58 y (SD = 13) and 62 y (SD = 12), respectively. Patients were mainly suffering from gastrointestinal cancers (study 1) and breast or prostate cancer (study 2). 34.4 % (study 1) and 28.4 % (study 2) of the patients expressed a need for psychological support during their stay in the hospital. Anxiety (OR: 1.4; 95 % CI: 1.14-1.82) and bodily symptoms (OR: 1.1; CI: 1.04-1.19) were associated with a wish for

support in study 1. In study 2, male sex, low distress, low level of depressive symptoms, no previous psychological treatment, feeling well informed, and mainly perceived overload (OR: 3.4; CI: 2.19-5.20) were associated with decline of support. In both studies, clinical variables did not show a unique association.
Conclusions and implications: Perceived overload during hospital stay seems to be a relevant barrier for the acceptance of psychological support, suggesting that the timing of support offers needs to be tailored to the patient's situation.

Submission ID: 119
Symposium ID and title if part of symposium: 8

Novel interventions for treating comorbid substance use and mental health problems.

Decision: Accepted, Symposium
Last updated: 15th November, 2019
By: g.m.j.taylor@bath.ac.uk, Dr Gemma Taylor

intEgrating Smoking Cessation Treatment as part of usual Psychological care for dEpression and anxiety (ESCAPE): preliminary results for a randomised and controlled, multicentre, acceptability, feasibility and implementation trial

Dr Gemma Taylor[1], Prof Paul Aveyard[2], Dr Kate Bartlem[3], Miss Katherine Sawyer[4], Dr Ali Shaw[5], Prof Chris Metcalfe[6], Prof David Kessler[7], Prof Marcus Munafò[8]
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Background: People with depression/anxiety are twice as likely to smoke as are the general population. In England, people with depression/anxiety can access psychological services known as IAPT, which could offer smoking cessation treatment as part of usual care(UC) but currently do not. We aim to examine if it is possible to offer smoking cessation treatment alongside UC.
Methods: A randomised, controlled, multicentre acceptability and feasibility trial of smoking cessation treatment offered alongside UC, compared to UC alone (ISRCTN99531779). We included adult daily smokers with depression/anxiety, who were motivated to receive help to quit smoking. Follow-up was conducted at 3 and 6-months. The main feasibility outcome was retention in the trial at 3-month follow-up.
Results: As of November 2019, we have recruited 60/157 participants, final follow-up is due July 2020. In the treatment arm 6.7%(2/30) of participants have discontinued participation in the trial, and 3.3%(1/30) in the control arm have discontinued. Of those followed-up at 3-months, 25%(4/16) of participants in the treatment arm reported having quit smoking for ≥7-days and passed bio-verification (exhaled CO <10ppm), 0%(0/18) of participants in the control arm reported quitting smoking for ≥7 days. Interview data suggest that the intervention is acceptable to clinicians and participants. Data will be updated in August 2020.
Conclusions/Implications: Preliminary data suggest that the intervention and trial procedures are accepted and feasible. We will seek to conduct an RCT to examine whether the intervention increases smoking abstinence and improves depression/anxiety more than UC.

Submission ID: 123
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 15th November, 2019
By: goetze.rachel@mayo.edu, Dr. Rachel Goetze

Bariatric surgery and cannabis use: A need for development of practice guidelines

Dr. Rachel Goetze, Dr. Matthew Clark, Dr. Daniela Rakocevic, Dr. Terry Schneekloth, Dr. Maria Collazo-Clavell, Dr. Lisa Howell, Ms. Karen Graszer, Ms. Sarah Kalsy, Dr. Karen Grothe
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Background: Emergence and persistence of addictive behaviors following bariatric surgery is an area of increased inquiry. Little guidance exists regarding best practice in light of increasing social acceptability and legal status of cannabis in the U.S. This project's aim was to assess current cannabis evaluation procedures in a multidisciplinary bariatric surgery practice and support guideline development.
Methods: Literature review, consultation with addiction psychiatry, and survey data from local bariatric surgery psychologists were used to identify areas for bariatric surgery psychology practice growth and improvement.
Results: Studies have identified increased post-operative opioid and cannabis use in pre-surgical cannabis users, and increased disordered eating in post-operative cannabis users. Psychiatrists routinely guide patients towards cannabis abstinence prior to surgical procedures due to anesthesia and infection risk. A survey of bariatric psychology providers at our institution ($N = 6$) revealed that cannabis evaluation, referral and treatment processes were found to be unstandardized [$M = 3.0$; 0 (*not standardized*) – 10 (*completely*)], unsatisfactory (M_{range} 0.9 – 4.2), and providers lacked confidence in cannabis related protocols for patients seeking bariatric surgery ($M = 2.7$), and felt uninformed about national bariatric surgery cannabis practices ($M = 0.5$).
Conclusion: Without national guidelines, bariatric surgery providers do not feel confident or informed about best practice for patients using cannabis. This project has prompted steps to enhance practice standardization including extending the survey nationally, program development of a substance risk reduction group, and drafting clinical practice cannabis guidelines. Continued study is needed to refine practices as cannabis status continues to evolve.

Submission ID: 126
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 17th November, 2019
By: pltsai@mail.cgust.edu.tw, Dr. Pi-Lan Tsai

Construction of a Situation-Stimulated E-learning Platform for Training Communication Strategies with Elderly Dementia Patients and its Effectiveness:from the Perspective of " Three Principles and Six Communication Skills "

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Background: Long-term-care students need communication education with elderly dementia patients.

Methods: A nonequivalent control group pretest-posttest quasi-experimental research design was adopted. Purposive and convenience sampling was applied to enroll a total of 77 students from two classes of a two-year technical program at a science and technology university. The experimental group consisted of 40 students from the training department, for whom a scenario-simulation digital teaching method was implemented for a total of 10 hours, including 6 hours of digital teaching on topics such as "Techniques and Three Principles of Communication with Dementia Patients" and 4 hours of scenario-simulation teaching. The control group consisted of 37 students from the day class department, for whom a group scenario-simulation teaching method was implemented.
Results: Fisher's exact test and post-hoc comparison showed that the experimental group had higher values of "age, work experience, and care experience with dementia patients" and a higher proportion of them "had participated in relevant training." The study results showed that the implementation of the group scenario-simulation teaching method can improve scores on the Communication Knowledge Scale-Chinese version (CKS-C) and the Communication Competency Scale (CCS); after the scenario-simulation digital teaching method, scores on the CKS-C improved. A comparison of interventions with the two teaching methods found that the scenario-simulation digital teaching method was superior, with a significant difference in the CCS pre-test and post-test scores ($B = -27.51$, $p < .05$).
Conclusion: In future implementation the method, the materials should be enhanced and neglecting neither lectures nor practical simulations.
Submission ID: 127
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 17th November, 2019
By: rsjiang@mail.cgust.edu.tw, 如珊 姜

Explore the effectiveness of storytelling after first clinical practice

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Background: Nursing students' experiences of their first clinical practice is a complex situation. The meaning of an internship is not fully understood by the student nurses. Storytelling used in nursing education provides students the opportunity to develop useful ways of understanding others or even themselves. Using narrative within a familiar and comfortable group enables students to receive ideas and feedback from their peers. This study intended to investigate the effects for nursing students[m4] utilize the storytelling patient's story after the first time clinical practice.
Methods: Twenty seven women and 6 men divided into seven focus groups.Focus groups and qualitative data analysis were used to obtain students' opinion and experiences about their clinical practice.
Results: Six themes emerged from the focus group data: Explanation of their problem, Seeing the meaning in experience, The matter of empathy, The Classroom is not like the ward, Worry about assignment, and Suddenly grown up. These were considered as important factors in clinical experience.
Conclusion: This study has found the benefits of storytelling after a first internship within a group. The young student nurses can get the faculty and peers to help them find meaning in their internship. Storytelling promotes students to gain insight in low stress situations. Hope from finding meaning from a disorganized situation situation leads students to develop a caring vision and professional identity. Further research to discover the performance for those students in the next practice through storytelling discussions will follow.
Submission ID: 128
Symposium ID and title if part of symposium: 27

Second generation research on placebo/nocebo effects: Causal evidence for novel avenues for clinical translation

Decision: Accepted, Symposium
Last updated: 17th November, 2019
By: kelly.clemens@rockets.utoledo.edu, Doctoral Student Kelly Clemens

When do side-effect warnings cause nocebo effects?: An experimental examination of message complexity and cognitive processing level as moderators

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Background/purpose: Warnings about side-effects can cause nocebo effects. Conditions which determine when warning messages cause nocebo effects, however, are currently unclear. Extrapolating from established theories on belief change, this experiment tested the combined influence of (1) side-effect message complexity and (2) degree of message processing on nocebo effects.
Methods: Healthy individuals (N=124) were randomly assigned to condition in a 2(message complexity) X 2(processing level) between-subjects design, with the addition of a no side-effect warning control condition. All participants took part in sham transcranial direct current stimulation (tDCS). Participants in the control condition were not informed that headaches are a side-effect of tDCS. All other participants first received a headache warning message. Of the participants given the headache warning, half received a complex message explaining why tDCS causes headaches. The other half received a simple message explaining why tDCS causes headaches. Further, half of the headache warning participants were induced to extensively process the headache message, whereas the others were not. Finally, all participants completed a 10 min sham tDCS and reported their headache symptoms.
Results: Between-subject ANOVAs and simple effect tests indicated that nocebo headaches were most frequent ($p<.05, d=.39$) and of greatest magnitude ($p<.05, d=.41$) when both the side-effect message was complex and participants engaged in higher message processing.
Conclusions: The complexity of a side-effect message and processing level of the individuals combine to increase the frequency and magnitude of nocebo effects. Side-effect warnings can be specifically designed based on theories of belief change to reduce nocebo effects.

Submission ID: 129
Symposium ID and title if part of symposium: 28
Global Approaches to Prevent HIV in Vulnerable Populations
Decision: Accepted, Symposium
Last updated: 17th November, 2019
By: rcianelli@miami.edu, Dr. Rosina Cianelli

Bridging the gap for HIV prevention among minority black and hispanic older women living with HIV

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Purpose: CDC projects that adults 50+ will account for 71% of the HIV infected population by 2020 Of the 39,782 HIV diagnoses in the US in 2016, 6,812 (17%) were aged 50+, and 24% of them were women (1). 60% of older women diagnosed with HIV were minority group members (42% Black and 18% Hispanic) (2). Older minority women living with HIV (OMWH) represent a vulnerable population greatly impacted by health disparities, traditionally underrepresented in clinical trials (3, 4). There are currently no empirically-validated evidence-based, multi-strategy HIV interventions that are age and culturally appropriate for OMWH. The purpose of this study was to determine the salient factors for designing an HIV prevention intervention for OMWH
Method: One hundred thirty-eight minority older women aged 50+ living with HIV participated in this mix method design study conducted in South Florida, USA. Participants answered a structured computerized survey in Qualtrics and 28 participated in qualitative interviews.
Results: Salient factors to consider to design an HIV prevention intervention for MOWH were identified: Cultural factors (religion, fatalism, machismo, crianza); comorbidities (depression, pain, hypertension; fatigue); healthy behaviors (HIV testing, condom use, exercises) social interaction (stigma, isolation, social support, communication).
Conclusion: There is a compelling empirical need for rapid implementation of age and culturally tailored, holistic, low-cost, multi-strategy intervention for MOWH. This intervention should consider salient factors for more effective programming targeted to this group of women.

Submission ID: 130
Symposium ID and title if part of symposium: 27

Second generation research on placebo/nocebo effects: Causal evidence for novel avenues for clinical translation

Decision: Accepted, Symposium
Last updated: 18th November, 2019
By: k.faasse@unsw.edu.au, Kate Faasse

Choose wisely: how the number of treatment options impacts the nocebo effect

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Background/purpose: Evidence indicates that having some choice over treatment reduces the nocebo effect – the experience of unpleasant side effects caused by aspects of the treatment context rather than the treatment itself. Research into decision making indicates that an excess of options can lead to ‘choice overload’ – resulting in suboptimal decisions and reduced satisfaction. The current study aimed to test whether having excessive treatment options increases the nocebo effect.
Methods: 120 healthy participants completed the study ostensibly investigating benzodiazepines and anxiety. Participants were warned about four side effects: dizziness, headache, nausea, and drowsiness. Treatments were inert placebos. Participants were randomly assigned to one of four groups: no treatment control (*n*=30), no choice of treatment (*n*=30), choice of two (*n*=30), and choice of ten treatments (*n*=30). Participants completed questionnaires at baseline, 30-minutes post-treatment, and 24-hour follow-up, assessing their experience of the four warned side effect symptoms. ANCOVA analysis controlling for baseline scores was conducted.
Results: Participants in the no choice group experienced a nocebo effect, as evidenced by significantly higher side effect symptoms scores compared to the no treatment control group (*p*=.02, ηp2=.05). Two-choice eliminated the nocebo effect (*p*=.49, ηp2=.004), while ten-choice reinstated the nocebo effect (*p*=.01, ηp2=.07).
Conclusions/Implications: The results indicate that number of treatment options can impact the nocebo effect. Some choice appears to be beneficial, but more choice is not better. Presenting a smaller range of options or using strategies to support patients faced with complex treatment decisions may reduce the nocebo effect in clinical practice.

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Last updated: 18th November, 2019
By: szemerszky.renata@ppk.elte.hu, Dr Renáta Szemerszky

Associations between modern health worries, idiopathic environmental intolerance attributed to electromagnetic fields, and paranoia

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Background/purpose: Worries about harmful effects of modern technologies (modern health worries, MHWs) are associated with somatosensory amplification and conditions characterized by somatic symptom distress attributed to certain environmental factors, such as Idiopathic Environmental Intolerance attributed to electromagnetic fields (IEI-EMF). IEI-EMF is a self-diagnosed condition; interestingly, evidence shows that people sometimes apply this label to themselves in the absence of somatic symptoms. Both MHWs and IEI-EMF are assumed to be influenced by paranoid thinking.
Methods: Cross-sectional associations between these constructs were studied in a non-representative community sample (N = 463; mean age: 29.8±12.53 yrs; 67.4% female) after controlling for age, gender, and educational qualification. Participants completed the Modern Health Worries Scale, the Somatosensory Amplification Scale, the Symptom Checklist-90-R, and answered IEI-EMF related questions.
Bold: According to the results of regression analyses, (1) somatosensory amplification (β = 0.254, p < 0.001) and paranoid tendency (β = 0.157, p = 0.001) independently contributed to MHWs; (2) self-diagnosed IEI-EMF was associated with MHWs (Exp(B) = 1.180, p = 0.003) but not with somatosensory amplification and paranoia; however, (3) the presence of symptoms that are attributed to electromagnetic exposure and that impact daily life was related to MHWs (Exp(B) = 1.254, p < 0.001), somatosensory amplification (Exp(B) = 1.038, p = 0.097), and paranoia (Exp(B) = 1.080, p = 0.024).
Conclusions and implications: Paranoid tendencies are associated with MHWs and the perceived impact of electromagnetic exposure on everyday functioning, including somatic symptom distress. Self-stated IEI-EMF is not related to paranoid thinking.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 18th November, 2019
By: huangsj@ntnu.edu.tw, Professor Sheu-jen Huang

Developing the scale of health literacy of weight management in children

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Background: Childhood obesity has been one of the most important threats to public health and all countries generate a great amount of resources for prevention. Health literacy is an emerging concept necessary to understand health behaviors and health outcomes and warranted further exploration, especially the influence from the parents. This project aims to develop a set of the scale of heath literacy of weight management for children.
Methods: Scale development consisted of 10 steps: (1) systematic review of the literature, (2) constructing framework, (3) consultation with health care and psychometric experts, (4) generation of an item pool, (5) Delphi expert survey, (6) research ethics approval, (7) field-test, (8) assessment of psychometric properties, (9) revising the scale and questionnaire, and (10) conducting a nationwide survey.
Multi-level stratification proportional random sampling method. In total, 1,898 students and their care-takers from 50 schools comprising the valid sample with the response rate of 89.4%. Internal consistency was used for reliability and Cronbach's alpha was calculated. Criterion related validity and predictive validity were used for validity construction.
Results and Conclusion: The result shows that the scale we developed which was composed of both social skills to get access to information and cognitive skills to understand, analyze and use information was proved to be a useful screening tool with legitimate reliability and validity.

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Symposium ID and title if part of symposium:
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Last updated: 18th November, 2019
By: stephanie.a.hooker@healthpartners.com, Dr Stephanie Hooker

Meaning in life is associated with body composition, but not physical fitness, in previously inactive exercise initiates

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Background: Individuals with a greater sense of meaning in life (MIL) experience improved cardiovascular health and longevity, but the mechanisms are unclear. Some evidence suggests that individuals with greater MIL engage in healthier behaviors, and therefore may also have a healthier body composition and improved physical fitness. This study examined the association of MIL with body composition (body mass index [BMI] and waist circumference) and physical fitness.
Methods: Previously inactive adults ($N = 160$) joining a fitness center completed assessments at baseline and 12 weeks. Patients self-reported demographics, MIL, and depressive symptoms. In-person assessments included measures of BMI, waist circumference, strength (grip test), aerobic fitness (YMCA 3-minute step test), and flexibility (sit and reach). Correlation and regression analyses were used to analyze hypothesized associations.
Results: Participants with greater MIL at baseline had lower BMI (r=-.30, p<.001) and smaller waist circumference (r=-.29, p<.05) at week 12; however, MIL was not associated with any of the physical fitness measures at baseline or week 12 (all ps>.08). Controlling for demographics and depressive symptoms, participants with greater MIL at baseline had lower BMI (β=-.30, p<.01) and smaller waist circumference (β=-.28, p<.01) at week 12.
Conclusions: Results suggest that previously inactive exercise initiates with greater MIL have a healthier body composition, but not better physical fitness. Having a healthier body composition may be one factor that contributes to those with greater MIL experiencing better cardiovascular health. Future research examining MIL, body composition, and fitness in larger, more diverse samples is needed.

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Symposium ID and title if part of symposium:
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Last updated: 19th November, 2019
By: gill.hubbard@uhi.ac.uk, Prof Gill Hubbard

A physical activity intervention to improve the quality of life of patients with a stoma: A feasibility study

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Aim: We hypothesise that a physical activity (PA) intervention will improve the QoL of people with a stoma. Before embarking on a full trial, we developed a manualised PA intervention and assessed the feasibility and acceptability of implementing the intervention and study procedures for the future main trial.
Background: Physical activity (PA) has been identified by patients with a stoma as a research priority in relation to their QoL.
Methods: Participants received a weekly PA consultation for 12 weeks with a PA instructor who prescribed physical activities and supported participants by addressing stoma-related concerns and using behaviour change techniques. A feasibility study of the intervention and trial parameters was conducted in three UK sites using mixed methods.
Results: The number of eligible patients consenting to the study was 30 out of 174 (17%). 73% had an ileostomy and 27% a colostomy; mean time since diagnosis was 6 months. Results show an improvement on all scales measuring QoL and disease-specific fatigue. Participants reported completing 75% or more of the prescribed PA each week. Eight stoma-related themes were identified from qualitative interviews: fear of hernia, bending down, fatigue, pain, prolapse, surgical wounds, stoma appliance and stigma. The intervention appeared to address these issues.
Conclusion: This feasibility study demonstrated that a novel manualised PA intervention for people with a stoma is safe, feasible, acceptable, and shows promise for improving outcomes. However, difficulties with recruitment will need to be carefully considered to ensure the success of future studies in this area.

Submission ID: 137
Symposium ID and title if part of symposium: 27

Second generation research on placebo/nocebo effects: Causal evidence for novel avenues for clinical translation

Decision: Accepted, Symposium
Last updated: 19th November, 2019
By: ben.colagiuri@sydney.edu.au, A/Prof Ben Colagiuri

Can we use positive framing to inhibit nocebo side effects?

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Background/Purpose: Side effect warnings are essential for informed consent, yet recent research indicates that these warnings directly increase

side effects via the nocebo effect. The current study tested whether positive framing could be used to reduce nocebo side effects whilst maintaining the principles of informed consent.
Methods: Across a series of experiments healthy volunteers received placebo treatment accompanied with either negatively framed side effect information (e.g. 3 in 10 people *will* experience nausea, standard approach) or positively framed side effect information (e.g. 7 in 10 people will *not* experience nausea). Critically, both frames involved statistically equivalent information about the risk of side effects, thus maintaining informed consent. This was assessed in experimental models of headache, nausea, and general adverse symptoms.
Results: When the absolute risk of side effects presented was low (e.g. 3 in 10 people will experience nausea (7 in 10 people will *not* experience nausea), positive framing significantly reduced nocebo side effects relative to negative framing, $_{p}^{2}$ =.07, p=.01. When the absolute risk of side effects presented was high (e.g. 7 in 10 people will experience nausea / 3 in 10 people will *not* experience nausea), there was no effect of positive framing relative to negative framing, $_{p}^{2}$ <.01, p=.67.
Conclusions and Implications: Positively framing side effect warnings reduces nocebo-side effects when the absolute risk of side effects is low. Positive framing may therefore be a cost-effective method of reducing some of the significant burden that side effects cause patients whilst maintaining informed consent.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 19th November, 2019
By: r.tank.1@research.gla.ac.uk, Miss Rachana Tank

Associations between cardiometabolic comorbidities and brain MRI metrics in UK Biobank

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Background and Purpose: Epidemiological studies indicate overlap between cardiometabolic conditions and decreased brain health. Cardiometabolic conditions are often comorbid, however, health outcomes of comorbidity are not well studied. The present study investigates associations between cardiometabolic condition comorbidities and brain MRI in 10, 302 UK Biobank participants. the study aimed to investigate associations between number and type of cardiometabolic comorbidity and structural brain phenotypes measured with MRI.
Methods: This cross-sectional study used MRI data including whole brain volume, grey matter (GM) volume and white matter hyperintensity (WMH) volume and self-reported type 2 diabetes, hypertension and coronary artery disease. Regression models examined eight mutually exclusive cardiometabolic groupings, ranging from zero to three conditions for each MRI metric adjusted for age, BMI, sex and ethnicity, and fully adjusted additionally for education and social deprivation.
Results: Individuals with no conditions presented with lowest WMH, and highest values for GM and whole brain volume. Individuals with two cardiometabolic conditions were associated with worse MRI measures for WMH (standardised beta = 0.197, confidence intervals 0.027 to 0.368, P<0.01), GM (standardised beta = -0.007, confidence intervals -0.011 to -0.003, P<0.001) and whole brain volume (standardised beta = -0.01, confidence intervals -0.017 to -0.001, P<0.01).
Conclusion: This study found preliminary evidence for differential influence of comorbidity on brain health within UK Biobank. Lack of trends suggest grouping by number of conditions may be more useful than condition-specific groupings. Additionally, seven associations were no longer significantly associated with worse brain metrics when fully adjusted, suggesting the interaction of external factors on brain health.

Submission ID: 139
Symposium ID and title if part of symposium: 12

Challenges and solutions to developing and evaluating health behaviour change interventions for younger-onset type 2 diabetes: an international perspective.

Decision: Accepted, Symposium
Last updated: 19th November, 2019
By: mh333@le.ac.uk, Dr Michelle Hadjiconstantinou

Development of an Education Programme for Children and Teenagers living with Type 2 Diabetes (iCAN)

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Background: Children and teenagers with T2D present with an extreme phenotype and develop diabetes-related complications more aggressively than their peers with type 1 diabetes. In Leicester, bespoke educational programmes are not available for this population despite audit data suggesting increasing incidence and unmet need. The aim of this project was to develop and deliver a structured education programme for children and teenagers (aged < 18 years) with T2D.
Methods: A multi-disciplinary and co-design approach was adopted to inform development and implementation of the 'iCAN live well with diabetes programme' comprising: four 2-hour workshops around food, activity, emotional well-being; materials to promote patient activation and discussions with diabetes team. Biomedical data were collected before and after (weight, HbA1c). **Results:** Twenty-three children and teenagers were identified and invited to participate; five agreed and parental consent was provided. Three (one aged 8 years, two aged 15 years) attended all workshops (two accompanied by parents). In those accompanied by parents, weight loss and a reduction in HbA1c were observed. Key learning points include: recruitment challenging; emotional well-being sessions were positively accepted; alternate delivery modes may be required to improve recruitment and retention and consideration of cultural factors is essential throughout.
Conclusions: To our knowledge the iCAN programme is the first bespoke psychoeducational programme in the UK, culturally tailored to children and teenagers with T2D that meets national diabetes guidelines and the paediatric diabetes best practice tariff. This presentation will assist researchers and clinicians in developing structured education programmes for children and teenagers with T2D.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 19th November, 2019
By: tiffany.powell@nih.gov, Dr Tiffany Powell-Wiley

Using wearable technology to evaluate physical activity (PA) among urban African American women: Two methods to classify wear time intervals

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Background: Wearable technology may deliver low-cost PA interventions, but there is no established method for processing data from commercially-available PA trackers.
Methods: Sixteen overweight/obese African American women were recruited from Washington D.C. and instructed to wear the Fitbit Charge2 for 20 days. Two methods assessed wear time based on minute-by-minute data. Method 1 (M1) defined a valid day as ≥10 hours wear time, as determined only by heart rate (HR) data. Method 2 (M2) was based on 1) removing minutes without HR data; 2) removing minutes with HR≤ mean-2 standard deviations (SDs) below mean and ≤2 steps; 3)removing nighttime (11pm-5am); and 4)defining valid day as ≥10 hours wear time. Linear-regression modeling examined mean steps/day/week change.
Results: Mean age was 62.1 years, mean BMI was 35.5 kg/m^2, and 63% had at least an undergraduate degree. Using M1 (n=292 person-days), participants had 20.5(SD=4.3) hours wear time per day, compared to 16.3 (SD=2.2) hours using M2 (n=282 person-days) (p<0.0001). With M1, participants took on average 7436 (SD=3543) steps/day, compared to 7298 (SD=3501) with M2 (p=0.64). After adjusting for age, BMI, and socioeconomic status, both methods showed a borderline significant step increase during week 2 (M1 step increase=679, p=0.06; M2 step increase=703, p=0.05) and no significant step increase in week 3.
Conclusions/Implications: There is a growing need for standardized methods to classify wear time in commercially-available activity trackers. Given the significant difference in wear time, the proposed method may improve accuracy of datasets generated by larger studies.

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Decision: Accepted, Oral
Last updated: 19th November, 2019
By: hrer@hvl.no, professor Hege R. Eriksen

The level of physical activity among high school students is related to stress mindset, coping, helplessness, and hopelessness.

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Background/purpose: Many of today's adolescents experience high levels of school stress. Previous research indicates that regular physical activity may act as a stress buffer, improve the individual's ability to handle demands and stress, and thus have a protective effect in psychosocial stress. The aim of this study was to investigate relationships between students' self-reported stress levels, stress mindset, pressure, and coping, and if level of physical activity was related to these variables.
Method: 171 high school students participated in a cross-sectional survey about health, physical activity, stress, stress mindset, coping, hopelessness, and helplessness.
Results: Students with the most positive stress mindset, reported less pressure, higher coping, and lower scores on helplessness and hopelessness. There were no significant differences between participants with low, moderate and high levels of physical activity on reported levels of stress. However, participants with low levels of physical activity had more negative understandings of stress and a significantly lower score on coping and higher scores on helplessness and hopelessness compared to those with moderate or high activity levels.
Conclusions: There were no differences in reported stress levels between participants with low, moderate or high physical activity levels, but those with high levels of physical activity had more positive stress mindsets, scored higher on coping, and reported less helplessness and hopelessness. Although this is a cross-sectional study, it can be speculated that physical activity does not affect the amount of perceived stress but can act as a buffer and help young people manage and master stress better.

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Global Approaches to Prevent HIV in Vulnerable Populations
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Last updated: 19th November, 2019
By: nvillegasr@miami.edu, Dr Natalia Villegas

Innovations in hiv prevention for young latinas

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Purpose: Technology-based interventions have the potential to increase interest and participation in HIV prevention and have shown favorable preventive behavior outcomes (1). These interventions can reduce barriers associated with transportation, the costs of a place to meet, and the fear of embarrassment to discuss sensitive topics in front of others (2,3). The purpose of this presentation is to analyze the development and pilot testing of two technology-based HIV prevention interventions targeting young Latina women and to discuss their future implementation.
Methods: An Internet-based HIV prevention intervention (I-STIPI) was developed for young Chilean women 18-24 years old. The I-STIPI consisted of four modules in Spanish. For a more diverse population of young Latina farmworkers (18 to 35 years old) living in South Florida, a soap opera intervention called “Love Infection” was designed to address their HIV prevention needs. The intervention consisted of 4 episodes of 10 minutes each in Spanish.
Results: Both interventions were culturally tailored for young Latina women considering their access and familiarity with technology, literacy, and specific HIV risk factors. Several innovations were incorporated in their development: 1) I-STIPI was designed by a panel of experts and it was implemented in a password protected website with high quality technology, and 2) “Love Infection” was designed by a multidisciplinary team of researchers, young Latinas, actors, and a producer, and a strong theoretical framework.
Conclusions: These interventions were feasible and acceptable for participants. Future studies will address their effectiveness to prevent HIV, reduce barriers and increasing participation in prevention programs.

Submission ID: 143
Symposium ID and title if part of symposium: 27

Second generation research on placebo/nocebo effects: Causal evidence for novel avenues for clinical translation

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Last updated: 20th November, 2019
By: maria.kleinstaeuber@otago.ac.nz, Dr. Maria Kleinstäuber

Increasing trust as acting mechanism of an educational intervention to improve the pain–relieving effect of generic medicines

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Background/purposes: Generic medicines have been associated with less efficacy compared to innovator products. The central aim of the current study was to examine if educational video interventions can

improve the pain relieving effect of a generic medicine by increasing trust in the process in which medicines are released.
Methods: Participants with frequent tension headaches were randomly assigned to watching a video explaining either the process of approval and release of generic medicines (n=34), similarities between innovator and generic drugs (n=35) or types or epidemiology of headaches (control group: n=34). After watching the video, participants took an innovator and a generic pain medication in a randomized order to treat their next consecutive headaches. Pain severity was measured before and 1 hour after taking the medication.
Results: Compared to individuals in the control video group, participants who watched one of the videos educating about generic medicines showed a higher pain relief after taking a generic painkiller (b=-.20, p=.040). This effect was significantly mediated by an increase in the trust in the process in which a medication is tested before its release. This group effect on pain relief as well as the mediation effect could not be demonstrated when participants took the innovator product.
Conclusions/Implications: Results of this study show that education about generic medicines can improve the pain-relieving effect of a generic pain killer. Future research should focus on integrating strategies of increasing patient's trust in medicines in the education about generic medication.

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Symposium ID and title if part of symposium: 28
Global Approaches to Prevent HIV in Vulnerable Populations
Decision: Accepted, Symposium
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By: npm@email.unc.edu, Dr. Nilda Peragallo Montano

The dissemination of an hiv prevention intervention to reduce health disparities and hiv risk among diverse latino communities

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Background and purpose: It is estimated that globally 37.9 million people live with HIV, with an estimated 1.7 million new cases in 2018. The feminization of HIV infection have led to a call for the development and evaluation of culturally-specific HIV prevention interventions. The purpose of this presentation is to analyze the impact of SEPA intervention (Salud/Health, Educación/Education, Promoción/Promotion, y/and Autocuidado/self-care), a culturally-specific intervention for HIV prevention, and to discuss its successful implementation in different settings and diverse Hispanic communities.
Methods: SEPA is an evidenced-based HIV risk reduction intervention initially designed for Mexican and Puerto Rican women in Chicago. SEPA intervention consisted of six weekly sessions, two hours long. After its implementation, SEPA was identified by CDC as an evidence based intervention and since then it has been adapted and disseminated among different Latino communities.
Results: SEPA intervention was effective increasing several HIV preventive behaviors such as condom use, knowledge, partner communication, among others. Several studies have been conducted to adapt SEPA and test its efficacy: HIV prevention initiative for women and men in Chile (MANO A MANO), and other areas (South Carolina, Colorado, Puerto Rico, Guatemala), prevention among Latinos in Florida (DYVA, VIDA, SEPA II), older adults (SEPA-O), mixed groups, SEPA for young women in Mexico. Additionally, an effectiveness trial (SEPA III) was implemented to reduce the gap between research and practice.
Conclusion: SEPA has contributed to decrease HIV related risky behaviors in different settings and communities. Future studies will continue addressing its effectiveness in diverse Latino communities.

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Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 20th November, 2019
By: neha.nutri01@gmail.com, Dr Neha Rathi

Physical activity in urban indians: A qualitative inquiry to explore barriers and facilitators

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Background: The mounting prevalence of overweight and obesity and its associated chronic degenerative diseases among urban Indians can be partly attributed to increasing levels of physical inactivity. The present investigation was designed to explore the barriers and facilitators likely to influence physical activity levels of Indians, in order to develop culturally appropriate sustainable interventions.
Methods: A convenience sample of 26 men and 29 women (aged: 20-60 years) were recruited from the Mumbai Metropolitan Area, India between February and November 2019. Informed by the developmental life course framework, nine focus group discussions (FGDs) were conducted in Hindi as well as English. The FGDs were audio-recorded, transcribed verbatim, and translated. Thematic analysis was employed to cluster responses, classify themes, and build an explanation from the discussions. Simultaneously, content analysis was applied to compute frequencies of various facilitators and barriers.
Results: All the respondents acknowledged the importance of engaging in physical activity as it was related to positive health outcomes. The participants discussed participating in a range of physical activities including yoga, walking, and running. Mental and physical health benefits, physical appearance, and habit strength were viewed as key contributors to engaging in physical activity. Lack of time due to household chores/work/commuting, lack of support from family, peer group, laziness, engagement with mobile phones, and poor health status emerged as significant barriers to physical activity.
Conclusions and implications: These findings can inform the development of successful age-specific, gender-specific behaviour change interventions aiming to improve the physical activity levels of urban Indians.

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Last updated: 20th November, 2019
By: d.fancourt@ucl.ac.uk, Dr Daisy Fancourt

Loneliness, social isolation and admittance to hospital: Evidence from the english longitudinal study of ageing linked to hospital episodes statistics

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Background: Both loneliness and isolation are longitudinally associated with mental illness, non-communicable diseases such as cardiovascular disease (CVD), neurological disorders such as dementia, and premature mortality. However, it remains under-researched whether these social

factors affect healthcare utilisation relating to different conditions. This study focused on the relationship between loneliness, social isolation and hospital admissions as a result of falls, hospital admissions as a result of CVD, and A&E visits amongst older adults.
Methods: We used data from the English Longitudinal Study of Ageing (ELSA) linked with administrative data from Hospital Episode Statistics (HES). Sample sizes for the three analyses ranged from 5,850-9,407. Analyses involved Cox regression for survival analysis and negative binomial regression models with baseline data collected in 2008/09, followed-up up to 9.6 years. Analyses were adjusted for all identified demographic, socio-economic, health and behavioural confounders.
Results: Social isolation but not loneliness was related to hospital admissions for falls (living alone HR: 1.20, 95% CI: 1.08 to 1.34; low social contact HR: 1.04, 95% CI: 1.02 to 1.07). Conversely, loneliness but not social isolation was related to CVD admissions (HR: 1.12, 95% CI: 1.04-1.20) and A&E visits (IRR 1.11 95% CI: 1.05-1.17). Our findings were robust to multiple model specifications and sensitivity analyses.
Conclusion: The relationship between loneliness, social isolation and hospital admissions appears to vary depending on the cause of visits to hospital. A number of mechanisms could underlie these differences, including psychobiological pathways relating to mental health and behavioural pathways relating to care and support available at home.

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Health promotion through cultural activities
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By: d.fancourt@ucl.ac.uk, Dr Daisy Fancourt

Could social prescribing support mental health in older adults? Fixed effects analyses of time-varying associations between hobbies and depression in a longitudinal cohort study

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Background: Pilot studies of schemes referring patients from primary care to community activities that promote the development of hobbies for mental health (e.g. "social prescribing") have shown promising results. But large-scale longitudinal evidence is lacking.
Methods: Data from 8,780 adults aged 50+ were used from the English Longitudinal Study of Ageing, with biennial measures from 2004/5 to 2016/17. Using fixed effects models we explored time-varying associations between having hobbies and depression (using the Centre for Epidemiological Studies Depression scale).
Results: When controlling for all identified demographic, health-related and social confounders, having a hobby was associated with fewer depressive symptoms (coef -0.34, 95%CI -0.34 to -0.23), and a 30% lower odds of experiencing depression over the 12-year follow-up (OR 0.70, 95%CI 0.64 to 0.76). Amongst those who did not have depression at baseline and did not have a hobby, taking up a hobby was associated with a 32% lower odds of developing depression. Amongst those who had depression at baseline and did not have a hobby, taking up a hobby was associated with a 272% higher odds of recovery from depression. Analyses were robust to sensitivity analyses considering lagged analyses to explore direction of association, alternative thresholds for depression and self-reported physician diagnoses of mental illness.
Conclusions: Having a hobby later in life is associated with lower depressive symptoms while taking up a hobby has protective associations against developing depression and increases the odds of recovery from depression. Results suggest the potential value of social prescribing for individuals with or at risk of mental illness.

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Last updated: 20th November, 2019
By: brigitte.voisard.derome@gmail.com, Brigitte Voisard

Perceptions of Health Risk Behaviours Among Canadian Physicians

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Background/Purpose: Non-communicable chronic diseases (NCD's) linked to poor lifestyle factors represent a major health issue worldwide. However, purely 'advice-giving' strategies used by physicians to encourage patients to adopt a healthy lifestyle have shown limited effectiveness. Consequently, interest in providing physicians behaviour change counselling (BCC) training is growing. To inform the development of a BCC training program for physicians, this study aimed to conduct a needs assessment to determine the perceived importance of addressing health risk behaviors and current BCC skill levels, among Canadian physicians.
Methods: An integrated knowledge translation (iKT) approach was used to survey physicians who routinely treat NCD's. Physicians completed an online questionnaire (LimeSurvey) where they were asked about (1) the prevalence and importance of frequently observed behaviours, (2) their confidence in their BCC skills, and (3) interest in receiving BCC training.
Results: 80 physicians (22 cardiologists, 22 respirologists, 15 internists, 21 GP's) from 6 provinces completed the survey. The 3 most *prevalent* health risk behaviors were physical inactivity (58%), unhealthy diet (47%) and poor stress management (45%). Smoking, medication non-adherence and physical inactivity were perceived as the most *important* health risk behaviors and addressing them was ranked as very important (9.1/10). However, physicians were only moderately confident (5.3/10) in their BCC skills and moderately interested (6.3/10) in receiving in BCC training.
Conclusions/Implications: Results highlight a gap between physicians' perceived importance of addressing health risk behaviors and their willingness to acquire BCC skills. Data will inform the design of a BCC training program for physicians.

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Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 21st November, 2019
By: margo.ketels@ugent.be, Margo Ketels

Can psychosocial job resources buffer the relation between physical work behaviours and need for recovery?

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Background and Purpose: This study aims to investigate the buffering effects of job control and social support at work on the relation between different physical work behaviours and need for recovery (NFR) among employees with physically demanding professions.
Methods: Our results are based on a sample of 331 workers from the cross-sectional FEPA (Flemish Employees' Physical Activity) study. The

Job Content Questionnaire was used to assess job control and social support. Physical work behaviours were measured by using two Axivity AX3 accelerometers for 2 to 4 consecutive working days. The NFR Scale (0-11) was used to assess NFR. Multiple linear regression analyses and the PROCESS package were used to analyse the data.
Results: After adjusting for possible confounding factors, sitting at work turned out to be negatively associated with NFR, whereas physical work demands were positively associated with NFR. The results showed a significant interaction effect of job control on the relation between sitting, standing, and physical work demands with NFR. No interaction effects were found for social support.
Conclusion: These findings, based on technical measurements, showed that workers with low levels of sitting and high levels of demanding tasks during work have difficulties to recover adequately after a working day. Our results suggest that more job control at work might be a beneficial resource to reduce high need for recovery and eventually help to reduce early drop-out and high sickness absence numbers. Further research is needed to confirm this moderating role of job control and to investigate the underlying mechanisms.

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Symposium ID and title if part of symposium:
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Last updated: 21st November, 2019
By: arigo@rowan.edu, Dr. Danielle Arigo

Daily social influences on physical activity among midlife women with cvd risk: An ecological momentary assessment study

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Background: Midlife women with elevated cardiovascular risk experience specific social influences on physical activity (PA), including perceptions of social interactions and social comparisons. Existing work describes differences between individuals, which masks within-person change and temporal relations between social perceptions and PA.
Method: To address this gap, 40 midlife women with elevated cardiovascular risk (e.g., hypertension; M_{AGE}=51, M_{BMI}=34.4 kg/m^2) engaged in ecological momentary assessment (EMA) for 10 days. Social perceptions were assessed via 5 electronic surveys per day and PA was assessed via waistband accelerometer. Daily summaries were calculated for the number of social interactions, number/type of social comparisons, and minutes spend in sedentary, light, and moderate-to-vigorous activity (MVPA).
Results: EMA compliance was high and results showed significant variability in social experiences and PA ($p < 0.001$). An increase in positive interactions was associated with more sedentary time and less light PA each day. Women engaged in 7 more minutes of light PA, 4 more minutes of MVPA, and 27 fewer minutes of sedentary time on days without (vs. with) comparisons. However, an increase of one downward comparison (i.e., comparing to someone “doing worse”) was associated with 4 more minutes of MVPA and 12 fewer minutes of sedentary time per day (all *ps*<0.05).
Conclusions: EMA reveals that certain social experiences may facilitate midlife women’s PA (downward comparisons), whereas others may present barriers (positive interactions). Further examination of time-sensitive relations between social perceptions and PA will identify optimal targets for PA interventions that are tailored to midlife women’s experiences.

Submission ID: 157
Symposium ID and title if part of symposium: 29
Behavioral Cancer Interventions: Identifying Psychological, Social, and Biological Influences and Outcomes Across the Translational Research Spectrum

Decision: Accepted, Symposium
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By: mhoyt44@gmail.com, Associate Professor Michael Hoyt

A Biobehavioral Goal-Focused Emotion-Regulation Intervention for Young Adults with Testicular Cancer

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Background: Testicular cancer can be distressing in the formative period of young adulthood. The majority of young survivors experience impairing, distressing, and modifiable adverse outcomes that can persist long-term. These include distress, impairment in pursuit of life goals, and biobehavioral burden (e.g., enhanced inflammation, dysregulated stress hormones). However, few targeted interventions exist to promote adjustment and none focus on reducing the burden of morbidity via biobehavioral mechanisms.
Method: Results from a randomized controlled biobehavioral trial designed to investigate the preliminary efficacy of a novel intervention, Goal-focused Emotion-Regulation Therapy (GET), aimed at improving distress symptoms, emotion regulation, goal navigation skills, and stress-sensitive biomarkers are presented.
Results: Participants [N=40; M age=28 years (SD=4.2)] were randomized to receive six sessions of GET or Individual Supportive Therapy (ISP). Primary (depressive symptoms) and secondary (emotion-regulation and goal navigation skills, career confusion) outcomes before, after, and 3-months later were measured. Stress (i.e., salivary stress markers) and proinflammatory biomarkers (i.e., sTNFαRII, IL-6, CRP, IL-Ira) were measured pre- and post-intervention.
Conclusions and implications: Those receiving GET had a 35% pre/post reduction in depressive symptoms, and reductions were maintained 3-months post intervention (Cohen’s d = .4). Depressive symptoms in the ISP did not change significantly. GET significantly increased goal navigation capacity and emotion-regulation skills; career confusion was reduced 35% with GET (vs. 17% in ISP). Reductions were observed for sTNFαRII (14.4% reduction), IL-6 (34.2% reduction), IL-1ra (6% reduction), and CRP (15.3% reduction) with GET. GET has potential to improve self-regulation across domains and improve overall cancer adjustment for young adults.

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Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 21st November, 2019
By: lee.westmaas@cancer.org, Scientific Director JOHANN WESTMAAS

Cannabis Use and Quitting Cigarette Smoking in the Cancer Prevention Study-3

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Background/purpose: Cannabis use is prevalent among cigarette smokers. Cigarette smoking causes 6 million deaths annually worldwide, and with increasing legalization and use of cannabis, questions about cannabis's effects on smoking cessation have arisen; however, studies conflict on whether cannabis use inhibits smoking cessation.
Methods: Participants were cigarette smokers enrolled in the Cancer Prevention Study 3 in 2009-2014 (n=4,531). A follow-up (2015-2017) questionnaire assessed cigarette smoking status and lifetime cannabis use. Logistic regression models examined cigarette smoking quit rates by baseline cannabis use status (never, former, recent), and, among recent cannabis users at baseline, by frequency of use [low: <3 days/month; moderate: 4-19 days/month; high: >20 days/month]. Models adjusted for sociodemographic variables, smoking-related variables [e.g., cigarettes per day (cpd)], length of follow-up interval, and medical variables. Cross-sectional analyses of current cigarette smokers at follow-up examined intention to quit cigarettes by cannabis use status, adjusted for cpd.
Results: Cigarette cessation rates did not differ by baseline cannabis use status (former 33.9%; recent 33.5%; vs. never users 36.3%; ORs<.89,p's=0.16), nor by frequency of cannabis use among baseline recent users (high 34.4%; moderate 36.7%; vs. low use 31.6%;ORs<1.29, p's>0.24). Intention to quit cigarettes was unrelated to cannabis use status (p=0.79): 12.2% never, 10.1% former, and 11.1% recent cannabis users intended to quit cigarettes in 30 days.
Conclusions and implications: Cannabis use does not appear to detract significantly from quitting cigarette smoking, suggesting that abstinence from cigarettes (vs. cannabis) can be the primary focus of smoking cessation interventions.

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Symposium ID and title if part of symposium: 28
Global Approaches to Prevent HIV in Vulnerable Populations
Decision: Accepted, Symposium
Last updated: 22nd November, 2019
By: marthamendez14@hotmail.com, Phd Martha Dalila Mendez Ruiz

Randomized controlled trial to reduce alcohol use and HIV-related risk factors in Mexican young women

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Background/purpose: The aim of this study was to identify the effects of the intervention Health, Education, Promotion and Self-care (Salud, Educación, Promoción y Autocuidado, SEPA-I) to reduce involvement with alcohol, and reduce risk factors for HIV infection in Mexican young women.
Methods: This was a randomized, single-blind clinical trial administered by nurses to 132 participants (experimental group = 66, control group = 66; age between 18-30) in a border city of northern Mexico. The instruments were the AUDIT questionnaire, HIV Risk Behavior Knowledge and the Condom Use Self-efficacy scale. Two-way ANOVA tests were performed in SPSS v.22.
Results: At the end of the study the intervention significantly decreased participant's involvement with alcohol (F(1,119) = 50.28, p <0.001, $\eta 2p$ = 0.297), increased HIV-related knowledge (F(1,130) = 34, 34, p <0.001, $\eta 2p$ = 0.209) and improved self-efficacy for condom use (F(1,129) = 27.20, p <0.001, $\eta 2p$ = 0.174). Likewise, fewer participants in the experimental group drank alcohol in the previous week (7.6%) compared to the control group (36.4%; $\chi 2$ = 15.95, p <0.001).
Conclusions and implications: SEPA-I may help young Mexican women to reduce alcohol use and to prevent risk factors for HIV infection (e.g. low HIV-related knowledge and low condom use self-efficacy). This is one of the few studies to administer this intervention in Hispanic woman living outside of the United States, although the findings are only representative of a single university population.

Submission ID: 160
Symposium ID and title if part of symposium:
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Last updated: 22nd November, 2019
By: jenny.olson@curtin.edu.au, Dr Jenny Olson

The Development of a Behaviour Change Intervention to Foster Physical Activity Participation among Migrant Women (SAMBA)

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Background/purpose: Culturally and linguistically diverse migrant women have an increased risk of ill health and are vulnerable to social exclusion. Physical activity offers an effective preventive health strategy and can foster feelings of social inclusion; however, many in this population are insufficiently active to realise these benefits. The aim of this research was to collaboratively design a culturally-sensitive, evidence-based intervention to increase physical activity participation.
Methods: The intervention design was guided by Michie and colleagues' behaviour change wheel. Three focus groups were conducted with migrant women (N = 14). Data were analysed by thematic analysis. Findings were synthesised with the relevant but limited literature. Intervention functions were identified to address shortfalls in capability, opportunity and motivation for physical activity; and appropriate behaviour change techniques (BCTs) selected. The women's preferences for mode of delivery were also embedded within the intervention design.
Results: Five intervention functions and 15 BCTs were selected to address shortfalls in capability (i.e., poor coordination, tiredness and physical limitations); opportunity (i.e., insufficient time, family and work commitments, religious constraints, and access to female-only venues); and motivation (i.e., amotivation towards physical activity, and the prioritisation of family needs over individual needs). The intervention will be conducted in accessible, culturally-appropriate locations, scheduled on weekends, and will include a variety of fun physical activities.
Conclusions and implications: A 10-week, evidence-based, behaviour change intervention was collaboratively and systematically designed. Feasibility and acceptability of the intervention will be tested in a pre-registered, pilot RCT with 60 women in early 2020.

Submission ID: 163
Symposium ID and title if part of symposium: 31
The role of psychological factors in kidney failure
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Last updated: 22nd November, 2019
By: federica.picariello@kcl.ac.uk, Federica Picariello

Development of a CBT-based intervention for renal fatigue (BReF intervention) and evaluation of its feasibility, acceptability, and potential benefits among haemodialysis (HD) patients.

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Background: Fatigue affects at least one in two patients who are on haemodialysis with considerable repercussions on their functioning, quality of life, and clinical outcomes. This study assessed the feasibility, acceptability, and potential benefits of a cognitive-behavioural therapy (CBT) intervention for fatigue (BReF) developed using theory, evidence, and involvement of all relevant stakeholders.
Methods: Prevalent haemodialysis patients experiencing clinical levels of fatigue were recruited into this feasibility randomised-controlled trial (RCT). Participants were individually randomised (1:1) to BReF or a wait-list control. Outcomes included recruitment, retention, and adherence rates. Exploratory change analyses were performed for: fatigue severity, fatigue-related functional impairment, depression, anxiety, and sleep quality. The statistician was blinded to allocation. Nested qualitative interviews were conducted post-intervention.
Results: It was necessary to approach 13 patients for screening for every 1 patient randomised. Twenty-four participants were randomised to BReF (N=12) or to the wait-list control (N=12). The rate of retention at follow-up was 75% (18 out of 24). Promising treatment effects were observed. Qualitative data indicated that the intervention is acceptable to patients.
Conclusion: There was promising evidence in support of the need and benefits of a CBT-based intervention for fatigue in haemodialysis. However, uptake was low, possibly as a result of the stigma associated with psychological therapies and an already high treatment burden in this setting. Further work is necessary to understand the context of delivery before a full-scale trial can be pursued.

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Last updated: 22nd November, 2019
By: beatrice.korwisi@staff.uni-marburg.de, MSc Beatrice Korwisi

Is the ICD-11 chronic pain classification clinically useful? First results from field testing in India

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Background: Chronic pain affects one in five people worldwide and up to every third person in low- and middle-income countries. The ICD-11 chronic pain classification aims to provide a clinically useful diagnostic system by defining clear and operationalized diagnostic criteria. The goal of the present study was to evaluate the clinical utility of the ICD-11 chronic pain classification in India.
Methods: Trained pain clinicians (k=11) assigned ICD-11 chronic pain diagnoses to chronic pain patients (n=109) in two pain treatment centres in India. Ratings (0 to 10 scale) were obtained for the following variables regarding the ICD-11 diagnoses: ease of use, diagnostic confidence, and clinical utility. The utility of the currently used textbook diagnoses was rated on the same scale. Mean values for clinical utility are reported. The utility of the ICD-11 codes was compared to the utility of the current diagnoses with a paired samples t-test.
Results: Clinicians rated the ICD-11 diagnoses as follows: clinical utility 8.03±0.84, ease of use 8.19±1.17, diagnostic confidence 8.14±1.11. The clinical utility of the ICD-11 diagnoses was rated significantly higher than the utility of the textbook diagnoses (t(141)=-3.12, p=.002).
Conclusions and implications: The high clinical utility of the ICD-11 chronic pain classification will facilitate its implementation and contribute to improved documentation, data collection, and treatment selection, among other impacts. The positive results from India are a first hint at global applicability.

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Symposium ID and title if part of symposium:
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Last updated: 22nd November, 2019
By: kjacoba@emory.edu, Executive Associate Dean for Academic Affairs Kimberly Jacob Arriola

Understanding the role of the social environment in inflammatory processes among african american chronic kidney disease patients

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Background/purpose: Chronic kidney disease (CKD) is a global public health problem. Elevated systemic inflammation may be related to poor kidney outcomes among African American CKD patients. A heuristic model developed by Bruce et al. (2015) theorizes that the social environment has an indirect effect on inflammatory processes via psychological factors. This pilot study tested the model by examining the experience of racial discrimination, as one aspect of African Americans' social environment. More specifically, this study tested the hypothesis that the experience of racial discrimination would be associated with depression, as one relevant psychological factor and that depression would be associated with soluble urokinase-type plasminogen activator receptor (SuPAR), which is a biomarker of systemic inflammation.
Methods: We recruited a clinical sample of African American stage 1-4 CKD patients (N=60) from a general nephrology clinic. Participants completed a computer assisted personal interview that included measures of Everyday Discrimination, Major Experiences of Discrimination, and the Beck Depression Inventory (BDI). Participants (age 32 to 66, M=54, 57% female) then visited a clinical research unit for a blood draw to measure SuPAR.
Results: Controlling for age, gender, and health insurance, greater self-reported Everyday Discrimination (B=.68, p<.00) and Major Experiences of Discrimination (B=.41, p<.05) were significantly associated with higher BDI scores. Additionally, there was a trend towards higher BDI scores being associated with greater SuPAR (B=.33, p=.06).
Conclusions and implications: This is among the first studies to explore how racial discrimination as one aspect of the social environment relates to health outcomes among African American CKD patients.

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Last updated: 22nd November, 2019
By: marybec.griffintomas@gmail.com, Marybec Griffin

Barriers to HPV vaccination by gender identity and sexual orientation in the United States among older millennials

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Background/purpose: In the United States, HPV vaccination has been recommended for individuals up to age 26. Although the vaccination is currently approved for all people up to the age of 45, current vaccination guidelines do not recommend catch-up vaccination for those who were excluded in the initial recommendation. This research sought to explore HPV vaccination disparities by gender identity and sexual orientation.
Methods: This study uses data from the 2018 Behavioral Risk Factor Surveillance System Core Module. Only data for individuals who reported their gender identity, sexual orientation, and HPV vaccination status were included in the sample (n=7330).
Results: Overall HPV vaccination rates were low as only 18.2% (n=1332) had received the HPV vaccination. These low rates of vaccination are similar across all sub-samples: cisgender men (9.8%, n=343), cisgender females (25.8%, n=985), heterosexuals (17.5%, n=1197), lesbians or gay men (20.8%, n=40), and bisexuals (30.8%, n=95). In multivariable logistic regression models, younger participants (18-34) were significantly more likely to report receiving the HPV vaccination across all sub-samples. Further modelling indicated several common factors associated with higher odds of vaccination: living in a metropolitan area, having insurance coverage, and having at least one provider.
Conclusions and implications: Understanding disparities and facilitators associated with HPV vaccination access is important to inform both policy and program efforts. This is especially important for older millennials (xennials) who were excluded from the initial vaccination recommendations but are vulnerable due to changing cultural norms including delayed marriage, non-monogamous long-term relationships, and the ending of long-term partnerships.

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By: gl2471@cumc.columbia.edu, M.S. Grace Liu

Vagus nerve activity and emotion recognition

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Background/purpose: Numerous studies have proposed that vagally-mediated heart rate variability (HRV) is related to human emotional experience. In this study, we test the hypothesis that the capacity to detect emotions in others is related to high frequency heart rate variability (HF-HRV), widely recognized to reflect cardiac vagal control, using data from MIDUS, a comprehensive national study of the role of behavior, psychological, and social factors in age-related well-being.
Method: HF-HRV during 11 minutes of quiet seated rest and response accuracy and latency from the CANTAB Emotion Recognition Task (ERT), which assesses the capacity to correctly identify six emotions (happiness, sadness, anger, disgust, fear, surprise) represented by computer-morphed images derived from facial features of real people, were collected in 138 people aged between 25 and 74. HF-HRV was tested as a predictor of ERT accuracy and latency in hierarchical regression models. Covariates included sex and race.
Results: In multivariate models, HF-HRV was unrelated to overall response accuracy, and of the six individual emotions, was significantly and marginally related to accurate identification of surprise (F(1,99)=4.15, p=0.04) and happiness (F(1,99)=3.69, p=0.06). HF-HRV was significantly and inversely related to latency for correct identification of sadness (F(1,104)=11.96, p<.001), disgust (F(1,103)=3.81, p=.05), and surprise (F(1,104)=8.67, p<.01) but not of happiness, anger, and fear. After Bonferroni adjustment, only latency for sadness remained significant.
Conclusions and implications: These data are inconsistent with the hypothesis that vagally-mediated HRV is associated with a general greater capacity to recognize emotions.

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By: shelby.langer@asu.edu, Dr. Shelby Langer

Objectively measured step counts among hematopoietic cell transplant recipients and family caregivers: a pilot study

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Background/Purpose: Hematopoietic cell transplantation is a demanding treatment with multiple sequelae including diminished physical function. Incoming patients must designate a full-time informal caregiver. Complete devotion to the patient negates caregivers' own health promotion. We examined physical activity (PA) among both patients and caregivers.
Methods: Twenty participants (10 dyads) completed a baseline measure of PA (Godin Leisure-Time Exercise Questionnaire) with respect to a typical week prior to transplant and then wore a Fitbit device during waking hours for 14 consecutive days, starting on average 3.5 days post-transplant.
Results: Demographic characteristics were M age = 60.7; 60% Caucasian; 5% Hispanic; 40% female patients and 80% female caregivers. Per Godin scoring, 20% of patients were sedentary during a typical week prior to transplant, 30% were moderately active, and 50% were active. Thirty percent of caregivers were sedentary, 40% were moderately active, and 30% were active. Using Fitbit data and cut-offs from Tudor-Locke et al. (2009), 9 patients were categorized as basal activity and 1 as limited activity. Among the 9 caregivers providing Fitbit data, 2 were categorized as limited activity, 4 as low active, 2 as somewhat active, and 1 as active.
Conclusions and implications: Using objective data, all patients were classified as sedentary during the initial post-transplant period which was a decline from self-reported activity. In addition, only one caregiver was active. Findings suggest the need for PA interventions for both patients and caregivers. A dyadic approach could leverage the patient-caregiver relationship to facilitate PA and, in turn, enhance functional status and well-being.

Submission ID: 169
Symposium ID and title if part of symposium: 16

Open science in behavioral medicine: International perspectives and provocative questions

Decision: Accepted, Symposium
Last updated: 23rd November, 2019
By: kyra.hamilton@griffith.edu.au, Kyra Hamilton

Open science in behavioural medicine: An Australian perspective

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Adoption of open science practices have been steadily increasing in Australia since around 2015, albeit slowly. Emerging data indicates that uptake of many practices such as open sharing of data and analysis scripts, pre-registration of research plans and methods, and open sharing of research materials are still low among psychology researchers. Furthermore, to date, it seems only a couple of universities are leading the way in the open science movement. A range of barriers may be hindering uptake of open science practices in Australia including lack of knowledge, existing beliefs and teachings about 'questionable' research practices, and structural issues which may include incentive structures or lack of top-down support. For example, fewer than half of Australian universities have a policy or statement on open access, and publications in Nature or Science are still weighted considerably in key university rankings. As behavioral medicine researchers, how can we work toward a consensus on the creation of incentive structures that encourage 'best' practice research without creating new problems? Lack of knowledge of open science practices is also a significant issue among Australian academics; thus, how can we address this knowledge gap in our undergraduate teachings and leadership roles so information can filter through to the next generation of researchers and create an institutional and societal shift in perceptions and practices toward open science? Currently, only some academics in Australia share information about open science through their undergraduate teaching, and this content does not form a key part of the curriculum in research methods.

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Symposium ID and title if part of symposium:
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Last updated: 23rd November, 2019
By: kyra.hamilton@griffith.edu.au, Kyra Hamilton

Social psychological predictors of sleep hygiene behaviors in Australian and Hong Kong university students

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Background/purpose: Sleep hygiene behaviors in undergraduate students are associated with night-time sleep duration and quality, fatigue, daytime sleepiness, and psychological distress. The current study aimed to identify the social psychological factors that impact on university students' sleep hygiene behaviors in two cultural groups.
Methods: Participants were undergraduate students from Australia (N=201) and Hong Kong (N=161). The study used a correlational-prospective design. Individuals self-reported their intention, attitude, subjective norm, perceived behavioural control, and past behaviour with respect to sleep hygiene behaviors. Four weeks later, the students self-reported their action plans and participation in sleep hygiene behaviors.
Results: Analysis indicated acceptable model fit to data for both the Australian and Hong Kong samples. Results showed significant direct effects of attitude, subjective norm, perceived behavioural control, and past behaviour on intention, and significant direct effects of action planning and past behaviour on prospectively measured sleep hygiene behaviour. There were also significant indirect effects of attitude, subjective norm (Hong Kong sample only), and perceived behavioural control on behaviour mediated by intention and action planning. Overall, the model predicted a large portion of the variance in sleep hygiene for both the Australian (R2= .524) and Hong Kong (R2= .483) samples. Schenker and Gentleman t-tests found no parameters significantly differed between samples (all p's > .011).
Conclusions and implications: Current results indicate that university students' sleep hygiene behaviors are a function of both motivational and volitional processes. This knowledge provides formative data to inform the development of behaviour change interventions to improve the sleep hygiene practices of university students.

Submission ID: 171
Symposium ID and title if part of symposium: 29
Behavioral Cancer Interventions: Identifying Psychological, Social, and Biological Influences and Outcomes Across the Translational Research Spectrum
Decision: Accepted, Symposium
Last updated: 23rd November, 2019
By: kerry.sherman@mq.edu.au, Professor Kerry Sherman

Continuing decisional process benefits post-implementation for BRECONDA, an online decision support intervention in the breast cancer context

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Background/Purpose: Prior randomised controlled trials support the efficacy of BRECONDA, an online decision support intervention for women considering breast reconstruction following mastectomy, in reducing decisional conflict and improving information satisfaction. This study reports on outcomes 2.5 years following national-level implementation. We aimed to determine whether benefits are sustained as the intervention moved from efficacy trials into real-world use.
Methods: Since implementation, 2544 women seeking breast reconstruction decisional support registered as users, and completed general characteristics and assessments of decisional conflict (SURE, scored 0–4) and information satisfaction (scored 0-3). Two-months post-registration, a subset of users (N=453) completed an online survey assessing decisional conflict, information satisfaction, and satisfaction with different aspects of the website. Pre-post data were compared (repeated measures ANOVA) for decisional conflict and information satisfaction.
Results: At registration, 88% of users reported decisional conflict (Mean=2.61) and at follow-up only 43% (Mean=0.95) reported any decisional conflict (F(1,341) = 422.35, p<.0005, d=2.22). Satisfaction with information also improved from registration (Mean=1.19) to follow-up (Mean=2.26; F(1,452) = 336.39, p<.0005, d =1.73). After accessing BRECONDA, rural/regional users were equally as satisfied with information as urban users, despite initially having lower information satisfaction at registration. User satisfaction with the intervention was high, with all content modules endorsed by 80% to 94% of users as being moderately to very helpful.
Conclusions and Implications: These data indicate that decisional process benefits of BRECONDA identified in efficacy trials are being sustained for the target audience of women considering breast reconstruction following national-level implementation of this intervention.

Submission ID: 172
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 23rd November, 2019
By: philofranc@gmail.com, Francis s

Tobacco use pattern, oral cancer awareness and behavioral change after counselling among seafarers in VOC Port, Tuticorin, TamilNadu, India.

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Background: Seafaring is an exploratory profession with little research having been done to identify conditions that may explain seafarer general health and their oral health. Seafarers are also frequently exposed to difficult working conditions and particular occupational risks. Past research has shown prevalent use of tobacco and drug abuse among this population. The aim of this research is to assess tobacco use, awareness of oral cancer and behavioral change after counselling among seafarers in VOC port, Tamilnadu, India.
Methods: A cross-sectional descriptive study was conducted to assess tobacco use, cancer awareness and oral health status among seafarers in VOC port, Tamilnadu, India. Data was collected using a pretested questionnaire, which included demographic data, tobacco habits, frequency of use, and an oral examination was conducted, after which individual anti-tobacco counselling was rendered. The data collected was analysed using SPSS version15.
Results: A total of 360 subjects participated in the survey. Adverse habits were frond in 69.2% of the study population. The percentage of oral mucosal lesions observed were as follows: 29% leukoplakia, 35% ulceration and 3% malignant tumor. Twenty seven percent of the study populations had other abnormal conditions like candidiasis and OSMF. Prevalence of oral mucosal lesions in the study population was due to tobacco usage and alcohol consumption.
Conclusions and implications: The findings of the present study suggest that the oral health condition of this seafarer community was relatively poor and were characterized by a lack of awareness about oral health. Individual counselling and follow up may aid better results in their behavior.

Submission ID: 175
Symposium ID and title if part of symposium: 30

Core Outcome Sets (COS) for Alcohol Brief Intervention (ABI) trials: Applications in implementation, criminal justice and health economics research

Decision: Accepted, Symposium
Last updated: 23rd November, 2019
By: jwbray@uncg.edu, Professor Jeremy Bray

Developing a COS for health economic research on alcohol brief interventions

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Background/purpose: Systematic reviews suggest that cost-effectiveness evidence for alcohol brief interventions (ABIs) in emergency care and hospital settings is scarce and that the cost-effectiveness evidence for primary care is not based on a consistent set of economic outcomes. In this presentation, we present a preliminary methodology to establish a core outcome set (COS) for economic evaluations of ABI. We present a rapid review of the ABI economic evaluation literature as a first step towards developing an ABI economic COS.
Methods: Our review began by first mining the existing Outcome Reporting in Brief Intervention Trials: Alcohol (ORBITAL) systematic review database to assess outcomes use in previous economic evaluations of ABI trials. We then supplemented the ORBITAL review with a rapid review specifically designed to identify any gaps in our literature database.
Results: We found that ABI economic evaluations seldom use consistent measures, but an increasing number of studies report quality adjusted life years (QALYs) in addition to measures of social costs. Studies suggest that the RMS-SIG should consider measures of: health state utility as derived from health-related quality of life; health care use; injuries and accidents, including motor vehicle accidents; crime and criminal justice involvement; employment, workplace productivity, and absenteeism; and, for adolescent studies, educational outcomes such as school attendance and matriculation.
Conclusions and implications: To support the development of a rigorous evidence base for the economic benefits of ABI, the RMS-SIG should develop a core set of economic outcome measures that build on the ORBITAL COS.

Submission ID: 176
Symposium ID and title if part of symposium: 31
The role of psychological factors in kidney failure
Decision: Accepted, Offered Poster
Last updated: 24th November, 2019
By: konstadina.griva@ntu.edu.sg, Associate Professor Konstadina Griva

Health literacy in Chronic Kidney Disease– latent profile and network analyses to identify critical at-risk sub-groups and domains for interventions

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Background/purpose: Health literacy encompasses a broad skill-set linked to patients' self-management abilities and the complexity of their healthcare environments. Although health literacy interventions should ideally target particular health literacy strengths and difficulties of the target population, little research has examined which groups of individuals or which domains of health literacy should be prioritised as targets of these interventions.
Methods: To address these questions, the present study examined health literacy profiles and networks in multi-morbid patients with diabetes and end-stage renal disease and their associations with patient outcomes. A total of 221 patients completed the Health Literacy Questionnaire, Beck Hopelessness Inventory and Hospital Anxiety and Depression Scale.
Results: Latent Profile Analysis identified three distinct HL profiles: low (16%), moderate (63%) and high (21%) (Log-Likelihood Difference = 370.73, p < .001). Low HL was associated with Chinese ethnicity (p <.001), lower education (p <.001), hopelessness (p <.001), anxiety and depression (ps <.001). Adherence markers were not consistently associated with HL profiles. Network Analysis identified “ability to find information” (CS = 1.12; ZCS = 1.14), “ability to engage with providers” CS = 1.05; ZCS = 0.84) and “health-system navigation” (CS = 1.00; ZCS = 0.61).as the most central domains whose activation is likely to activate other domains/skills.
Conclusions and implications: Study findings indicate that when developing interventions to improve HL in patients with DM-ESRD, the lower education patient segments and the skills related to finding information, engaging with health care providers and health system navigation should be prioritised. Such directed focus, might make these interventions more cost-effective and yield broad benefits.

Submission ID: 177
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 24th November, 2019
By: cgas770@aucklanduni.ac.nz, Miss Chiara Gasteiger

Which characteristics are associated with negative perceptions towards transitioning to a Biosimilar?

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Background: Patient acceptance of biosimilars is important for their adoption and the reduction of healthcare costs. However, many patients hold negative perceptions towards biosimilars. Whilst research has identified that patients' characteristics influence negative perceptions towards generics, little research has explored biosimilar acceptance. This study examines which demographic and psychological characteristics are associated with safety perceptions and concerns about transitioning to biosimilars.
Methods: Ninety-six rheumatology patients taking bio-originators in New Zealand completed questionnaires assessing demographic factors, illness perceptions, beliefs about medicines, perceived sensitivity to medicines, information-seeking behaviors, concerns about changing to biosimilars, and safety perceptions. Pearson's correlations and hierarchical linear regressions were conducted.
Results: Perceiving biosimilars to be unsafe was significantly associated with being female, short-term bio-originator use, seeking health information online, illness beliefs, high perceived sensitivity to medicines, and negative beliefs about medicines. Only being female (β= 0.24, P= .02) were independently associated. Being female, illness beliefs, high perceived sensitivity to medicines, information-seeking behaviors, and preferring branded medicines were associated with more concerns about transitioning to the biosimilar. Seeking health information online (β= 0.20, P= .04), preferring branded medicines (β= 0.29, P= .004), and stronger emotional responses (β= 0.26, P= .01) were independently associated. Perceived bio-originator effectiveness was inversely associated with preferring biosimilars (rs= –0.33, P<.001).
Conclusions: Educational interventions should focus on patients taking bio-originators who are female, seek health information online, have strong emotional responses to their condition, and prefer branded medicines, to improve biosimilar acceptance.

Submission ID: 178
Symposium ID and title if part of symposium: 19

The importance of preventative care and behavioural medicine in preconception

Decision: Accepted, Symposium
Last updated: 24th November, 2019
By: meb@mrc.soton.ac.uk, Mary Barker

The UK Preconception Partnership: Improving preparation for pregnancy

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Background/purpose: Many men and women of reproductive age are not healthy or well-prepared for pregnancy. Maternal obesity, maternal undernutrition and related paternal factors at the time of conception, have enduring consequences and increase disease risk in the next generation. Investment in pre-conception health may be critical for long-term health across generations.
Methods: We propose a dual-focus intervention strategy. Primary Care should offer people planning pregnancy an opportunity to improve their health by normalising conversations about pregnancy planning. Simultaneously Public Health agencies should mount population-level, context-specific initiatives, using existing platforms for delivery, to reduce the determinants of pre-conception risks.
Conclusions and implications: Building on press and public interest in our Lancet series published April 2018, the Preconception Partnership is an advocacy coalition; aiming to create an alliance across academia, PHE and other government agencies, primary care, education and charities, and generate a new narrative about improving preconception health. We are developing an annually-published Lancet scorecard to synthesize existing knowledge and generate evidence-informed insights for policy to improve the state of preconception health.

Submission ID: 179
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 25th November, 2019
By: r-matsuo@okinawa-u.ac.jp, Risa Matsuo

Teachers training for child-care nurses on the island. ~Collaboration program between pediatric doctors and psychologists

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Background/purpose: In the study, we developed a teacher training program for child care nurses in an island area where regular training is difficult. The program was developed in collaboration with a pediatric doctor and a psychologist.
Methods: Participants in the study were originally twenty people who gathered with the program information. The contents of the program were based on applied behavior analysis. This program consisted of 10 sessions of 90 minutes each, which were held once every month.
Results: A sample of ten people were chosen from the twenty people. As for the effect of the program, the ten people's pre and post program data was analyzed. The average score on "the teacher's applied behavior analysis checklist" (Ozeki et.al.,2010) was 13.40(1.65) prior to the program, whereas the post program average score was 15.10(2.56); student's t-test showed a significant trend,(df=9, t=†, p=0.09). On the other hand, we conducted a "Self-checklist for protecting human rights for childcare that respects children (National nursery association,2018), and found that there were problems in daily childcare.
Conclusions and implications: The effectiveness of this program has been recognized because it is becoming possible to understand how much children are involved and how children are behaving and how to change the inappropriate behavior. It turned out that there are problems in understanding how to engage in consideration of the human rights of children; (i.e. inappropriate childcare and childcare abuse).

Submission ID: 180
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 25th November, 2019
By: anna.chisholm@liverpool.ac.uk, Dr Anna Chisholm

Current obesity management within primary school settings: A behaviour change communication perspective

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Background/Purpose: Child obesity is a major international public health concern and in the UK obesity doubles between the first and last years of primary school. Despite school being an ideal opportunity to intervene, and much ongoing work to modify school environments, less emphasis has been placed on the role of conversations about child weight that occur within school settings. Supporting individuals to change health behaviours is a complex and challenging task for professionals, yet we know little about how education professionals currently find these conversations.
Methods: This 2-phase project involved (1) a systematic review and meta-synthesis of primary school stakeholder conversations about child weight, (2) a qualitative study using semi-structured interviews to explore UK education professionals' current experiences of talking with parents and children about child weight.
Results: The systematic review identified 39 studies from 7 countries (total n=2,205) and uncovered four core themes across this database: (1) 'Conversation characteristics and consequences', (2) 'Missing components', (3) 'Avoiding stigma', and (4) 'School responsibilities'. An inductive thematic analysis of 15 interviews with UK educators identified three themes accounting for their experiences of child weight conversations: (1) 'Opportunistic delivery', (2) 'Avoidant behaviours', and (3) 'Talking within boundaries'.
Conclusions and implications: Together, findings reveal child weight conversations do occur in a varied and opportunistic manner within primary schools but educators find them difficult, complex, and lack the necessary skills to enable non-judgemental, consistent and tailored support that they desire. Schools also recognise the strong position they are in to provide positive influential messages about child weight.

Submission ID: 181
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 25th November, 2019
By: sarah.halliday@adelaide.edu.au, Sarah Halliday

Psychosocial outcomes associated with traditional and cyber bullying in early adolescence: A cross-sectional, population-based study

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Background/Purpose: Existing research into bullying victimization has overlooked the period of early adolescence, the most prevalent time for bullying occurrence. Accordingly, this study aims to explore victimization prevalence rates and outcomes during early adolescence (ages 10-12), determine outcome differences across all bullying types (physical, verbal, social, cyber), and explore victimization outcomes for both positive and negative aspects of mental health.
Methods: Using the 2016 Wellbeing and Engagement Collection dataset, collected by the South Australian Department for Education, a sample of 9,019 students, aged 10-12, completed a survey on their experiences of bullying and psychosocial wellbeing. Analyses were conducted to determine the prevalence rates of all types of bullying and whether victimization was associated with higher levels of negative outcomes (sadness, worries) and lower levels of positive outcomes (emotion regulation, happiness, life satisfaction) while taking into account personal and school level covariates.
Results: Verbal bullying was the most common type of victimization experienced by this sample (24.0%), followed by social (21.2%), physical (10.2%), and cyberbullying (7.2%). Males experienced significantly more physical and verbal bullying victimization than females. Those who experienced any type of bullying victimization had significantly lower scores across positive psychosocial outcomes (emotion regulation, happiness, life satisfaction) and significantly higher scores for negative psychosocial outcomes (sadness, worries), with the majority of these effects remaining significant after adjusting for covariates.
Conclusions and implications: Our findings suggest bullying victimization in early adolescence is associated with adverse outcomes for positive and negative aspects of mental health and can help inform comprehensive treatment and prevention approaches.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 25th November, 2019
By: ulla-sisko.lehto@thl.fi, Ph.D., Senior researcher Ulla-Sisko Lehto

Social networks and wellbeing of newly diagnosed cancer patients: Strong social ties associate with poorer wellbeing

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Background/Purpose: Social health resources may be investigated as social networks, which act as sources of social support and are origins of social capital. Social networks consist of social ties between individuals and groups. We explore newly diagnosed cancer patients' social networks and investigated their association with patient wellbeing.
Methods: In consecutive samples, we measured breast cancer (n=224) and prostate cancer (n=150) patients' social networks (existence and person numbers) in: spouse/partner; family; close relatives; friends; acquaintances; others with cancer; work community; health professionals; participation (religious, hobby, civic participation) at 2–5 months after diagnosis. We measured the patients' health-related quality of life and depressive symptoms, and investigated predictors of these with multivariate statistical analyses.
Results: The patients had usually multiple social relationships and had told them about the cancer. Contrary to what was expected the strongest ties: spouse/partner and adult children, in breast cancer also friends, were associated with poorer wellbeing. However, the weaker ties: spouses of adult children, partner's parents, more distant relatives, and extensive social contacts (in breast cancer incl. participation and in prostate cancer incl. friends) predicted better wellbeing.
Conclusions and implications: The association between social networks and wellbeing depended on the strength of the social subnetwork. Contrary to theories on social support, the strong ties predicted poorer wellbeing. Only weak ties acted as wellbeing resources. The cancer patients with strong social ties may be more burdened, because of acting as caregivers or worrying about wellbeing of their loved ones, and may thus need extra attention and care.

Submission ID: 184
Symposium ID and title if part of symposium: 33

Innovative remotely-delivered psychosocial interventions for cancer patients: Technological developments and study designs

Decision: Accepted, Symposium
Last updated: 25th November, 2019
By: mantoni@miami.edu, Professor Michael Antoni

Video-conferenced stress management and relaxation training (VSMART) for older women undergoing treatment for breast cancer

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Introduction/Purpose: Women undergoing breast cancer (BCa) treatment endure multiple challenges, which increase negative affect and decrease quality of life (QoL). Cognitive behavioral stress management (CBSM) decreases negative affect and inflammation and improves immune functioning and 11-yr survival outcomes. Since inflammation increases and immunity decreases with distress and aging, older distressed women may be vulnerable during BCa treatment, and benefit from CBSM, though in-person groups may be infeasible. We developed a videoconferenced stress management and relaxation training (VSMART) program delivered at home over a tablet-broadband connection.
Methods: VSMART delivers 10 weekly 90-min group CBSM sessions (split-screen display) including didactic-interactive activities. Between sessions, participants use a portal to download module summary videos, expert and demonstration videos, and access weekly resources and stress ratings. Post-surgical BCa patients aged 50+ are randomized to VSMART or 6-month wait-list control, and complete electronic questionnaires and provide saliva and blood samples across 12 months to test affect, QoL and immune effects.
Results: Exit surveys in 32 women (M=64yrs) showed nearly all were comfortable with technical requirements of attending sessions, and all said the tablet was easy to use. All women were able to share their feelings about BCa in sessions and felt better able to cope with stress. Lastly, 88% felt connected to the other group members during sessions, and half stayed in contact with members after the program ended.
Conclusions and implications: Results suggest acceptability of VSMART, a hybrid telehealth-self-enabled CBSM program during BCa treatment, which may utilize less resources and provide more accessibility during cancer treatment than in-person programs.

Submission ID: 185
Decision: Accepted: Poster
By h.e.makin@liverpool.ac.uk Ms Harriet Makin

Use of motivational interviewing to support weight-related behaviour change in obesity care: a systematic review and meta-analysis

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Background/purpose: Motivational Interviewing (MI) is a counselling approach to support behaviour change. This review systematically investigated use of MI within obesity management and evaluated effectiveness of interventions using MI. Additionally, it identified methods used within MI interventions and reported theoretical underpinnings.
Methods: Eight databases were searched from 2002 to 2020. Studies with adult participants living with obesity, interventions of MI aiming to reduce bodyweight or BMI, and a non-MI control group were eligible. Studies were assessed for risk of bias. Intervention and control descriptions were coded for Behaviour Change Techniques (BCTs) and MI techniques. Studies were summarised through extraction of methodological characteristics and outcomes. Random effects meta-analyses were conducted.
Results: No evidence of an overall pooled effect on body weight and BMI outcomes between intervention and control groups was identified in 12 studies (SMD=-0.01 (95%CI -0.13 to 0.12, p=.93). BCTs were similar across intervention and control groups. The most common in both groups were social support, goal setting (behaviour), and self-monitoring of behaviour. A range of methodologies are used, including remotely delivered MI to improve accessibility. Self-determination theory and stages of change were the most frequently reported theories.
Conclusions and implications: Motivational Interviewing interventions did not appear to reduce body weight or BMI significantly more than control interventions, however methodological limitations limit confidence in findings. Namely, poor intervention content reporting, risk of bias, and the possibility that intervention and control groups content did not substantially differ.

Submission ID: 186
Symposium ID and title if part of symposium: 33

Innovative remotely-delivered psychosocial interventions for cancer patients: Technological developments and study designs

Decision: Accepted, Symposium
Last updated: 25th November, 2019
By: hrer@hvl.no, professor Hege R. Eriksen

Developing and comparing different stress management apps for breast cancer survivors in Norway

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Background/purpose: Breast cancer (BCa) is the most common cancer in women. The psychological impact including emotional distress extends well beyond the initial treatment phase and can compromise the health-related quality of life (HRQoL) into survivorship. Cognitive-behavioral stress management (CBSM) and mindfulness-based interventions (MBI) show promising effects, but are costly, giving limited access for patients in remote areas and with low income. Digital technology opens new possibilities to improve access. Therefore, we wanted to test the acceptability of digital versions of CBSM and MBI in BCa patients.
Methods: Based on a grant from the Norwegian Cancer Society and the Breast Cancer Society, a digital stress management intervention (StressProffen (SP) (Børøsund et al, 2018; 2019) is being modified to create and test SP-CBSM vs SP-MBI based on existing CBSM and MBI, empirical studies in cancer patients and clinical and information technology expertise. Focus groups with BCa patients and related health care personnel are held during development and evaluation to optimize the interventions.
Results: The SP app was acceptable in cancer patients and health care personnel. Key procedures in the modification process of SP-CBSM and SP-MBI, as well as preliminary results from focus groups on the SP-CBSM and SP-MBI will be presented. We describe the planned

randomized trial comparing the impact of SP-CBSM vs SP-MBI on HRQoL and secondary outcomes in BCa patients.
Conclusions and implications: Digital stress management interventions aimed at improving HRQoL seem acceptable to BCa patients. The full-scale trial will reveal whether SP-CBSM or SP-MBI provides optimal results in this population.

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Symposium ID and title if part of symposium: 32

From offering to guiding: Digital health approaches to supporting addictive and compulsive behavior change

Decision: Accepted, Symposium
Last updated: 25th November, 2019
By: bhoeppner@mgh.harvard.edu, Dr. Bettina Hoeppner

Evaluating modifications made based on user feedback for a smartphone app to support smoking cessation in nondaily smokers

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Background/Purpose: Nondaily smoking is persistent, detrimental to health, and increasingly prevalent. We developed and refined a smartphone app, called Smiling-Instead-of-Smoking (SiS), to help nondaily smokers quit smoking using a positive psychology approach.
Methods: This is an iterative, multiphase 4-year project, currently reporting on using Study 1 results to inform the design of SiS-Version2. App usage measured as percent of participants using the app on a given day (PUAGD).
Results: Using quantitative and qualitative user feedback from SiS-Study1 (onboarded in-person, n=30 nondaily smokers), SiS-Version2 used shorter, more frequent behavioral challenges (every 2-3 days instead of weekly sessions), extended length of app support (7 instead of 3 weeks), and gamifications. Compared to SiS-Study1, SiS-Study2 (onboarded remotely, n=70 completed treatment to date; 93% retained) shows lower initial app uptake (77% vs. 93% PUAGD on day after onboarding), and lower engagement during weeks 1-3 (57% vs. 83% average PUAGD), but better sustained engagement during week 4-7 (44% vs. 35% average PUAGD). End-of-treatment surveys showed higher ratings in ease-of-use (t(98)=3.46,p=0.0008) and usefulness (t(98)=2.58,p=0.01) of delivering the smoking cessation content compared to SiS-Version1, an "A" rating (mean=81.0±15.0) on the System Usability Scale, and hypothesized within-person changes from baseline to treatment end (i.e., increased self-efficacy (ps<0.01)), decreased urge to smoke (p<0.0001), less positive perceptions of smoking (ps<0.001). Forty six percent of participants self-reported 30-day abstinence at treatment end (6 weeks post quit).
Conclusions and implications: Modifications appear to have improved ease-of-use and perceived usefulness of the app. App usage was substantial despite minimal staff-interaction.

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By: anne.martin@glasgow.ac.uk, Anne Martin

From the Glasgow Effect to the Scottish Paradox: Outdoor play and learning in early childhood for health and wellbeing

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Background/purpose: Outdoor play and learning in early childhood present a potentially effective strategy for preventing physical and mental illness and reducing inequalities. This study aimed to (1) explore parents' understanding of the role of outdoor play and learning for their child's health and wellbeing, and (2) examine how children spend their time in outdoor childcare.
Methods: Aim 1 was addressed by conducting qualitative interviews (n=10) and focus groups (n=2) with 21 parents of children attending five different nurseries with outdoor childcare in areas of high deprivation. Interviews/focus groups lasted between 15-60 minutes. Thematic analysis of transcripts was conducted. Aim 2 was addressed through direct observations of two routine outdoor childcare days in seven nurseries using a standardised observation schedule.
Results: Five main themes emerged from the interviews/focus groups: beliefs of benefits were influenced by parents' own childhood experiences; observed benefits in child's physical development; observed benefits for emotional wellbeing; child's ability to assess risks; and connectedness to nature. None of the parents reported risk of injuries, rainy weather and infections as causes for concern. Although the natural environment varied between childcare centres, across all nurseries, children were provided with opportunities for unstructured play allowing interaction with nature (e.g., climbing trees).
Conclusions and implications: Parents were supportive of outdoor childcare due to the observed benefits for children's health and wellbeing. Provision of outdoor childcare is possible in deprived areas and thus offers a potentially unique solution to reducing inequalities and improving health and wellbeing.

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By: anne.martin@glasgow.ac.uk, Anne Martin

Systematic literature review of the relationship between adolescents' screen time, sleep and mental health

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Background/purpose: Cross-sectional evidence suggests that excessive mobile device screen use is linked to poor sleep and mental ill-health in adolescents. The aims of this study were to systematically review experimental and longitudinal evidence on adolescent mobile device screen use and its association with (i) sleep and (ii) mental health with sleep as mediator.
Methods: In May 2019, nine databases were searched. Studies were included if the population was aged 10-19 years living in a high-income Western country with no diagnosed medical condition. Cross-sectional evidence and studies published before 2007 were excluded. Results were synthesised qualitatively categorised by type of mobile device screen exposure and outcome types.
Results: The search yielded 4,209 records of which 277 full-text articles were screened. Nine studies met the inclusion criteria: 2 experimental, 7 longitudinal. Sixteen unique screen use-sleep outcome relationships were assessed comprising 5 different types of screen use and 10 different sleep outcomes. Mobile phone use around bedtime and cybervictimisation, but not the overall time spent engaging in mobile phone activities, was linked to shorter sleep duration. There were eight unique screen use-sleep-mental health relationships across three eligible studies. Poor sleep quality played a role in the link between night-time mobile phone use and depressed mood, low self-esteem, poor coping skills and higher externalising behaviour.

Conclusions and implications: The body of evidence is incomplete with only one or two studies assessing each exposure/outcome relationship. Further research investigating the causal relationship between mobile device screen use, impaired sleep and mental health and wellbeing is need.

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Symposium ID and title if part of symposium:
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Last updated: 25th November, 2019
By: david.herdman@kcl.ac.uk, Mr David Herdman

Using an empirical approach to develop a cognitive behaviourally informed physiotherapy treatment for chronic dizziness

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Background/Purpose: Persistent dizziness is a common clinical symptom which is usually treated with physiotherapy exercises. However, there is significant psychological co-morbidity associated with the outcome. The aim of this study was to explore psychosocial predictors of dizziness handicap with the view to develop a cognitive behavioural therapy (CBT) informed physiotherapy approach to treatment.
Methods: Patients who were on the waiting list of a tertiary neuro-otology clinic were recruited and completed questionnaires before and three months after their initial consultation and diagnosis. The questionnaires assessed handicap, distress, illness perceptions, symptom cognitions, behaviours, psychological vulnerability and beliefs about emotions. All patients were clinically assessed and underwent comprehensive audio-vestibular investigations.
Results: Among 135 patients (mean [SD] age, 54.23 [17.53] years; 98 [73%] female) who responded to the questionnaire survey at follow up, the majority had a recognised vestibular condition. There was no difference in handicap or psychological profile across diagnoses or audio-vestibular test findings. Dizziness handicap at follow-up was associated with baseline anxiety, depression, symptom cognitions, all-or-nothing and illness perceptions relating to belief that the illness is chronic, has negative consequences and is emotionally burdensome. Depression, anxiety, all-or-nothing behaviour and chronic illness beliefs continued to predict dizziness handicap even after controlling for baseline handicap.
Conclusions and implications: Patients with vertigo and dizziness, regardless of diagnosis, frequently endorse negative illness perceptions and unhelpful cognitive and behavioural responses to symptoms which are associated with self-perceived disability. Discussion will focus on how these data are being combined with a systematic review to inform an integrated CBT/physiotherapy intervention.

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From offering to guiding: Digital health approaches to supporting addictive and compulsive behavior change
Decision: Accepted, Symposium
Last updated: 25th November, 2019
By: bhoeppner@mgh.harvard.edu, Dr. Bettina Hoeppner

Promoting the uptake of health promotion apps via electronic health records (OptiMine study)

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Background/purpose: Effective smartphone apps that support smoking cessation and reduced drinking offer timely support, privacy and scalability, but are not currently delivered as part of routine patient care. The aim of this mixed-method study is to explore the acceptability, feasibility and reach of using Electronic Health Records (EHRs) to identify adults who smoke tobacco and drink alcohol at risky levels, and send automated messages that promote the use of smartphone apps.
Methods: Focus groups with patients and staff at an acute hospital in the UK explored the acceptability of sending an SMS, email or secure message via a portal to Public Health England's Smokefree and Drink Free Days apps. Staff groups included senior IT managers, IT operational teams and healthcare professionals screening for health behaviours.
Results: Six focus groups were conducted between June-August 2019 with a total of 10 patients and 14 staff. Patients and staff felt an SMS was the most suitable format for the messages. Views on targeted vs. universal messaging were mixed, technical complications were discussed, pros and cons of messaging patients were explored, along with the offer of alternative resources.
Conclusions/implications: Findings from these focus groups have informed the selection of message format and helped create the content of the SMS. They have also informed the development of a quantitative acceptability survey, which will be sent to patients who receive the SMS. The feasibility of using the EHR for sending automated SMS is underway, and the SMS will be sent to patients next month.

Submission ID: 194
Symposium ID and title if part of symposium: 29

Behavioral cancer interventions: Identifying psychological, social, and biological influences and outcomes across the translational research spectrum

Decision: Accepted, Symposium
Last updated: 25th November, 2019
By: tracey.revenson@hunter.cuny.edu, Professor Tracey Revenson

Feasibility and acceptability of a dyadic Intervention for couples after prostate surgery

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Background/purpose: One in three men have a lifetime chance to be diagnosed with prostate cancer. Intimate partners are the primary

providers of care; however, surgical patients are often discharged without skills to manage post-surgery home care. Drawing on the ORBIT model of intervention development, this paper presents data from Phases I (design) and IIa (proof of concept) to develop a couples-based educational intervention to provide such skills.
Methods: Phase I: Interviews with 5 couples and 3 men. Phase IIa: One-group acceptability and feasibility study.
Results: Participants felt unprepared because of a lack of information at discharge about what to expect, especially about erectile dysfunction. Based on this, we developed a module that could be administered in the hospital before discharge by a health psychologist or nurse/practitioner, bolstered by a take-home booklet. Intervention components: Dyadic Preparedness – To increase couples' awareness of the medical, physical, and emotional challenges that lie ahead; Communication— To provide couples with communication skills; and Dyadic Coping – To provide couples with strategies to engage in joint problem-solving. The majority of participants reported that the information presented at discharge was very helpful, used the booklet 1-5 times at home, and found the booklet easy to understand. Feasibility was hampered by site-specific difficulties in recruiting couples; once recruited intervention was delivered as planned.
Conclusions: Couples were accepting of the intervention and rated it highly; Internet-based delivery methods might increase integration into clinical care. The efficacy of intervention modules needs to be established in a RCT.

Submission ID: 195
Symposium ID and title if part of symposium: 35

Targeting increased physical activity among patients with chronic illness: Innovative solutions to an old paradigm

Decision: Accepted, Symposium
Last updated: 25th November, 2019
By: rmillstein@gmail.com, Rachel Millstein

A proof of concept trial of a positive psychology and motivational interviewing group intervention to promote physical activity among people with metabolic syndrome

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Background/purpose: Physical activity interventions for metabolic syndrome can improve health outcomes. Increasing positive emotions in the context of a multilevel physical activity intervention may provide a novel way to help reduce the risk of developing chronic diseases.
Methods: Participants were adult primary care patients with metabolic syndrome and low physical activity. The 8-week group intervention included weekly physical activity goal-setting and self-monitoring using Fitbits, positive psychology activities, and neighborhood walks with assessment of the built environment. Before and after the intervention, participants wore an accelerometer and completed questionnaires. Participants rated feasibility (primary outcome; # sessions attended) and acceptability (ratings of ease and utility of the sessions (0-10)). Ratings were averaged to examine session acceptability. Pre-post changes were calculated using effect sizes (Cohen's d).
Results: Eight participants enrolled and seven finished. The median number of group sessions attended was 7/8. Participants rated the mean ease and usefulness of the activities as 7.0 (±0.5)/10 and 8.1 (±1.0)/10, respectively, indicating feasibility and acceptability. Average physical activity increased by 2066 steps/day (approximately 1 mile; d=.41) and 34.3 minutes of moderate-vigorous PA/week (d=.38). Pre-post scores on psychosocial measures showed reduced physical activity barriers (e.g., skill d=1.06, willpower d=.87), increased optimism (d=.72) and positive affect (d=.88), and improved depression (d=.62).
Conclusions and implications: This proof-of-concept trial demonstrated high feasibility and acceptability, with increased physical activity, optimism, and positive affect. It provides promising data from which to develop larger studies of this intervention which could help people at high risk for chronic diseases increase activity.

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From offering to guiding: Digital health approaches to supporting addictive and compulsive behavior change

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Last updated: 25th November, 2019
By: bhoeppner@mgh.harvard.edu, Dr. Bettina Hoeppner

Development of SURE Recovery: an app to help people who use substances self-monitor and track their recovery

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Background/purpose: Recovery is a widely used outcome within substance use treatment. In 2016, we published a validated measure of recovery called the Substance Use Recovery Evaluator (SURE). SURE was co-produced with people using substances and attracted international interest. Users of SURE soon reported that they wanted to access the measure in an app so they could self-monitor their own recovery and achieve personal goals. The aim of our next project was therefore to develop such an app.
Methods: In 2018/19, we employed a user-centred design process to identify content for, co-design, and build the app. This involved over 40 people with lived experience of addiction working collaboratively with qualitative researchers, statisticians, clinicians, and digital designers.
Results: The app (SURE Recovery) was published on the App Store and Google Play in October 2019. It comprises i. a recovery tracker, providing SURE scores with personalised feedback; ii. a sleep tracker, enabling people to assess their own sleep; iii. an artwork feature, allowing people to share their creations with the recovery community; iv. a diary feature, offering a safe space to record thoughts and feelings; v. information on the life-saving drug naloxone; and vi. free access to a book on recovery. The app also gives people opportunities to participate in further research.
Conclusions and implications: SURE Recovery is an engaging self-management tool developed with, and for, people using substances or in recovery. Future research will explore how it is used, how it can be improved, and whether using the app can itself change behaviours.

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From offering to guiding: Digital health approaches to supporting addictive and compulsive behavior change

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Last updated: 25th November, 2019
By: bhoeppner@mgh.harvard.edu, Dr. Bettina Hoeppner

Designing a randomized clinical trial to assess digital services for psychotherapy: A case study

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Background/ Purpose: The demand for mental healthcare is widespread and increasing worldwide. There are many barriers to accessing traditional mental health services, including limited availability of clinicians, shame and stigma associated with treatment, and cost. One solution may be referral to high-quality digital services (e.g., smartphone-based CBT with support) and apps that can provide low-cost, standardized treatments that are widely and quickly accessible. Major drawbacks of current apps and digital services are that few (<5%) have been tested for efficacy, many were designed without health care provider and patient input, and many raise major privacy concerns.
Methods: The design and testing of digital health services and apps involves numerous steps, decision points, and resources. The development and testing considerations include: (1) usability issues (e.g., user engagement, design); (2) efficacy (e.g., defining adequate controls and metrics); (3) user safety (e.g., suicidality); (4) user privacy (e.g., data storage and use); (5) scalability and accessibility (e.g., cost, clinician involvement); and (6) industry sponsorship.
Results: We elected to develop Perspectives as a digital service (with clinician support) rather than a stand-alone app, to use a collaborative, user-centered design process, and to collaborate with an industry sponsor. We are currently undergoing efficacy testing in a rigorous, randomized controlled trial. Using our experience as a case study, the pros, cons, and considerations of development and trial design are discussed.
Conclusions and implications: Rigorously tested digital services offer a credible approach to providing low-cost, safe, accessible, evidence-based treatment to meet the increasing demand for mental health services worldwide.

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Last updated: 25th November, 2019
By: esecinti@iupui.edu, MS Ekin Secinti

Health behaviors in a nationally representative US sample of family caregivers of people with chronic illness and non-caregivers

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Background/purpose: Many family caregivers neglect their health behaviors. Few studies have compared health behaviors of caregivers of different medical populations. Thus, we compared the health behaviors of caregivers of four chronic illness groups and non-caregivers.
Methods: We examined cross-sectional survey data from the 2015 and 2016 Behavioral Risk Factor Surveillance System. Examined groups included caregivers of people with cancer (n=3,116), dementia (n=3,699), diabetes (n=2,113), chronic obstructive pulmonary disease (COPD)/emphysema (n=1,471), and non-caregivers (n=145,385). The majority of caregivers were women (61%) and Caucasian (73%), with an average age of 49 years (SE=0.31). In contrast, non-caregivers were younger and more likely to be male. Regression analyses were used to examine group differences controlling for demographics.
Results: Many caregivers (40%) and non-caregivers (42%) did not meet aerobic and strengthening recommendations. Compared to non-caregivers, dementia and COPD/emphysema caregivers were more likely to meet aerobic recommendations (OR=1.19-1.27, p<.05), whereas dementia and cancer caregivers were more likely to meet strengthening recommendations (ORs=1.23-1.34, p<.05). Caregivers' daily eating habits (Mfruits=1.34, SE=0.03; Mvegetables=1.94, SE=0.03) did not differ from those of non-caregivers (Mfruits=1.28, SE=0.01; Mvegetables=1.81, SE=0.01) with one exception. Diabetes caregivers reported eating more vegetables than non-caregivers (OR=1.08, p=.043). Regarding sleep, caregivers reported sleeping 6.84 hours per night (SE=0.05), whereas non-caregivers reported 7.02 hours (SE=0.01). Dementia, COPD/emphysema, and cancer caregivers reported sleeping less than non-caregivers (Bs=-0.36–0.17, p<.05).
Conclusions and implications: Caregivers and non-caregivers reported suboptimal health behaviors, with small differences between groups. Longitudinal research is needed to identify subgroups at risk for negative health behavior change.

Submission ID: 200
Symposium ID and title if part of symposium: 33

Innovative remotely-delivered psychosocial interventions for cancer patients: Technological developments and study designs

Decision: Accepted, Symposium
Last updated: 26th November, 2019
By: frank.penedo@miami.edu, Professor Frank Penedo

Effects of a mHealth psychosocial intervention on psychosocial and physiological adjustment in men with advanced prostate cancer

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Background/purpose: Men with advanced prostate cancer (APC) face psychosocial and physical challenges. This study evaluated a tablet-delivered, group-based psychosocial intervention delivered for improving HRQoL and reducing symptom burden and markers of inflammation.
Methods: Men with APC (N=192) were randomized to 10-week tablet-delivered stress management (CBSM) or health promotion (HP). Psychosocial measures (e.g., HRQoL, cancer distress), venous blood for CRP, IL-6, IL-8, IL-10, and TNF-α, and saliva to assess diurnal cortisol were collected at baseline, 6- and 12-months.
Results: Changes in HRQOL and symptom burden did not differ between groups. Both groups improved across several intervention targets; men in CBSM reported greater increases in ability to relax, and both conditions showed improvements in cancer-related anxiety, cancer-related distress, and feelings of cohesiveness with other participants. Mixed modeling analyses demonstrated that men in both CBSM and HP showed decreases in IL-10, IL-8, and TNF- α from baseline to 6 months (β=-3.85—5.04, p's=.004–<.001). However, these markers demonstrated a rebound from 6 to 12 months (β=1.91–4.06, p's=.06–<.001). There were no effects on CRP or IL-6. Men in HP also demonstrated a less steep diurnal cortisol slope only at 6 months versus men in CBSM (β=3.66, p<.001). Tablet-delivered CBSM and HP were both well-received. CBSM and HP improved psychological adjustment and reduced inflammation; however, benefits were not sustained at 12 months.
Conclusions and implications: CBSM may improve diurnal cortisol given its focus on cognitive behavioral approaches to stress management. More research is needed to understand what components of both CBSM and HP can favorably impact outcomes.

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Last updated: 28th November, 2019
By: qyliao11@hku.hk, Dr Qiuyan Liao

Testing the effect of affective priming on parental decisional conflict regarding children's seasonal influenza vaccination: a randomized control trial

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Background/purpose: Conventional risk communications mainly provide health risk statistics, information that requires considerable cognitive effort to process. Dual-process models of information processing highlight the importance of activating affective processes to facilitate the decision-making process. This study tested the effect of affective priming, changing individuals' affective state unconsciously with minimum stimulus, on decisional conflict using the example of parental decision-making for their children's seasonal influenza vaccination (SIV).
Methods: Parents with at least one young child were recruited from the Birth Registry Hong Kong and randomly allocated to one of the three condition: receiving no leaflet (Control, C); reading a leaflet presenting information on influenza risk for children, and the efficacy and safety of SIV (Information-Only, IO); or reading the same leaflet which included a picture of a mother holding her feverish baby with a worried expression on the leaflet cover (Information-with-Priming, IP). Immediately after the randomization and intervention, participants completed a questionnaire comprising the decisional conflict scale, health literacy and demographics. Multivariate linear regression tested intervention effects on decisional conflict.
Results: A total of 102 participants were allocated to C, IO and IP conditions, respectively. IP but not IO participants had significantly reduced decisional conflict regarding children's SIV compared with C participants (β= -0.12, 95%CI: -0.22- -0.01), adjusting for health literacy and demographics. Higher health literacy was also significantly associated with lower decisional conflict (β =-0.06, 95%CI: -0.12-0).
Conclusions and implications*:* Including an affective priming picture into a leaflet with risk information may improve decision-making confidence perhaps by facilitate information processing.

Submission ID: 258
Symposium ID and title if part of symposium: 13

Behavioural aspects of cardiac rehabilitation - Unresolved problems and new solutions

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: erik.olsson@kbh.uu.se, Dr Erik Olsson

Behavioural challenges after myocardial infarction

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Background/purpose: The last decades' improvements in cardiac care after myocardial infarction (MI) have not been as profound regarding cardiac rehabilitation (CR) where behavioural management of modifiable risk-factors is in focus. Population-wide national registries provide a unique opportunity to study CR on a large scale. This presentation summarizes some recent findings on why behavioural aspects of CR remain difficult targets.
Methods: Swedish population-based registry data of more than 190,000 MIs between 2006 and 2015 were utilized.
Results: Incidence of MI was shown to follow a temporal pattern corresponding to variations in probable psychosocial stress and thereby support the stress-triggering hypothesis. Shortly after an MI > 40% of the patients reported emotional distress. Patients with low socioeconomic status (SES) were at higher risk for emotional distress, and especially for persistent symptoms, which aligned with their pattern of worse prognosis regarding mortality. In addition to emotional distress, cognitive ability was found to be important for healthy lifestyle risk-factor management and prognosis. Educational CR programs can have substantial effects, but again these programs are visited less by patents with lower SES and multiple health problems.
Conclusions and implications: Adapting to health-promoting behaviours is crucial to CR. Emotional distress and low cognitive ability makes it more difficult to adhere to an effective CR. Low SES and multiple health problems are additional hindering factors. The so-called *Matthew effect,* suggesting that those already disadvantaged continue to suffer disproportionately, seems to be in multifactorial play also in CR.

Submission ID: 259
Symposium ID and title if part of symposium:
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Last updated: 28th November, 2019
By: nicole.andelic@abdn.ac.uk, Dr Nicole Andelic

Employment contracts and stress: An experimental study

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Background/purpose: Many workers have Performance Related Pay (PRP), a payment method which has been linked to poor health in several large surveys. However, it is not known whether PRP is the cause of poor health or if people with poor health are more likely to work in PRP jobs. An experimental pilot study found that participants who were randomly assigned to PRP contracts displayed higher levels of stress than those paid a fixed fee.
Methods: The current study extends this pilot study by employing a larger sample size (N = 100) and a cross-over design. Participants were randomly assigned to the PRP/non-PRP condition and then answered mathematical questions in a simulated work task for 10 minutes. PRP participants were paid £0.20 per correct answer, whereas participants in the non-PRP condition were paid a fixed rate of £5 for 10 successful answers. Stress was measured through self-report (before and after the task) and salivary cortisol (before and three times after the task). A week later subjects returned to complete the non-allocated condition in a cross-over design.
Results: Workers paid by PRP rated themselves as significantly more stressed (M=3.20) than those paid by non-PRP (M=2.71) after task completion, t(99)=3.04, p=.003, 95% CI [0.17, 0.81], d=0.49, an effect that remained even after controlling for order and other confounding effects. Cortisol results will be analysed in December 2019.
Conclusions and implications: These findings provide a foundation for future experiments investigating PRP and stress, and have implications for how to improve workers' health.

Submission ID: 261
Symposium ID and title if part of symposium: 45

Uncovering novel behavioural targets to alleviate the burden of persistent pain

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: stefaan.vandamme@ugent.be, Dr. Stefaan Van Damme

Pain and attention: somatosensory enhancement or suppression during movement?

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Background/purpose: Attention is believed to play a crucial role in the experience of pain. Theoretical accounts have proposed that top-down regulation of pain-related attention can lead to both facilitation and inhibition of somatosensory processing. Here we focus on the ability of movements to modulate top-down attention. In two studies we examined if (1) a movement signaling pain enhances somatosensory processing, and (2) pain perception is suppressed by pursuing a movement goal.
Methods: In study 1 participants (N=39) were cued to perform left or right arm movements, and one movement (threat) was occasionally followed by a painful stimulus whereas the other (neutral) was never. During movements, attention was assessed by means of somatosensory-evoked brain potentials (SEP). In study 2 participants (N=34) performed or refrained from right arm movements while receiving pairs of individually calibrated pain stimuli on both arms. They indicated on which arm pain was stronger, allowing assessing movement-induced sensory suppression.
Results: In study 1, the N120 SEP was significantly larger for threat than neutral movements ($t(38)=3.74$, $p<.01$). In study 2, moving the arm significantly reduced pain at the moving relative to the resting arm (29%; $t(33)=4.25$, $p<.001$).
Conclusion and implications: Whereas movements signaling pain enhanced cortical responses related to somatosensory attending, pain intensity was suppressed by focusing on a movement. These insights in the interactions between pain, movement and attention might have clinical implications, suggesting that in chronic pain treatments such as exposure therapy, the motivational characteristics of movements should be considered.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 28th November, 2019
By: claudiugabrielionescu@gmail.com, Claudiu Gabriel Ionescu

Sleep disorders and their correlation with psychiatric comorbidity in patients with somatic symptoms disorder: a cross-sectional study

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Background/purpose: The prevalence of sleep disorders in patients with somatic symptom disorder (SSD) is an insufficiently explored topic. This study examines the prevalence of sleep disorders in patients with SSD and explores the influence of comorbid depression and anxiety on their quality of sleep.
Methods: The design of the study was cross-sectional. 71 hospitalized SSD patients (mean age 53, SD = 12, 78.4% female) were administered the Pittsburgh Sleep Quality Index, the Hamilton Depression and Anxiety Scales, SSD-12 (for B-criteria symptoms of SSD), SOMS-2 and SOMS-7 (Somatoform disorders screening scales). The Shapiro-Wilk test was used to check data normality, the Student test to assess gender differences, and linear regression to evaluate the influence of depression and anxiety on quality of sleep.
Results: Reported sleep disorders were disturbances of sleep quality (78.3%), sleep latency (67.5%), sleep duration (81.2%), habitual sleep efficiency (68.8%) with women reporting much more frequently sleep duration disturbances than men (84.5% vs. 60.6%, $p< 0.05$). Sleep disorders were more frequent in patients suffering from SSD and comorbidities ($p<.05$). Quality of sleep disorders were significantly more frequent in SSD patients with psychiatric comorbidities than in SSD patients (67.4% vs 37.3%, $p<.04$). Anxiety and depression did not differ in what concerned their impact on sleep disorders in SSD patients.
Conclusions and implications: Sleep disorders in patients with SSD are common. Psychiatric comorbidity and gender play an important role in the reported quality of sleep of these patients. Taking in consideration these variables could potentially refine the management of SSD with sleep disorders.

Submission ID: 263
Symposium ID and title if part of symposium: 44

"What Matters to Whom?" – Online Screening and Personalised Treatment for Psychological and Physical Adjustment to Chronic Disease

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: joanna.hudson@kcl.ac.uk, Dr Joanna Hudson

The Development of COMPASS: Transdiagnostic Online Cognitive Behavioural Therapy (CBT) for Depression and/or Anxiety in Long-Term Conditions (LTCs)

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Background/purpose: Online CBT can effectively treat depression and anxiety. How to treat depression and/or anxiety using online CBT when co-morbid physical LTCs are present remains uncertain. This talk will describe how COMPASS online CBT was developed.
Methods: The Medical Research Council Complex Intervention Development Framework was adhered to. First, a theoretical model of psychological adjustment to LTCs was developed by performing a systematic review (k=19) and holding two expert consensus meetings. Second, CBT intervention techniques were mapped onto evidence-based factors identified in the model to inform the COMPASS online content. Third, the person-centred approach to intervention development was applied to improve the acceptability of COMPASS. This included stakeholder engagement, think-aloud methods, and qualitative interviews drawing on Normalisation Process Theory.
Results: The model of psychological adjustment to LTCs defined salient factors linked to poor psychological adjustment to LTCs. These included: holding unhelpful illness beliefs, having low levels of illness management self-efficacy, remaining preoccupied about illness uncertainty, and using unhelpful illness coping behaviours. These findings informed the development of 11 online CBT sessions. The person-centred approach identified that avoiding the labels "depression/anxiety" would facilitate engagement. Absent integrated care pathways are barriers to adoption of COMPASS by staff.

Conclusions and implications: This approach to COMPASS development provides a theoretical grounding to both its intervention components and its implementation context. It has the potential to improve the effectiveness and acceptability/implementation of COMPASS when tested in a randomised controlled trial.

Submission ID: 264
Symposium ID and title if part of symposium: 45

Uncovering novel behavioural targets to alleviate the burden of persistent pain

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: ben.colagiuri@sydney.edu.au, A/Prof Ben Colagiuri

Pre-exposing away nocebo-induced pain

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Background/purpose: Learning contributes significantly to both acute and chronic pain. Cues previously associated with pain come to elicit heightened expectancies that amplify pain – labelled the nocebo effect. Unfortunately, unlike most learned responses, nocebo effects appear resistant to extinction. This makes preventive strategies essential. The current study tested one such novel strategy, namely treatment pre-exposure.
Methods: Eighty healthy volunteers participated under the guise of a study of transcutaneous electrical nerve stimulation (TENS) for pain sensitivity, but all received sham treatment. In a training phase, three groups received identical nocebo conditioning while a fourth (control) received no training. The nocebo conditioning involved pairing the sham treatment with surreptitious increases in acute pain stimulation, relative to no treatment (16 trials each). The key manipulation in the nocebo groups was the amount of pre-exposure to the sham treatment prior to training – one group received 16 treatment alone trials (PreX-16), one received 8 (PreX-8), and one received none. In the test phase, all participants received treatment and no treatment trials at constant pain stimulation.
Results: Relative to controls, nocebo conditioning significantly increased treatment-evoked pain in participants who received no pre-exposure, $p<.001$, $\eta^2_p=.19$. Importantly, pre-exposure to the treatment successfully diminished nocebo-induced pain in the PreX-16 and PreX-8 groups relative to no pre-exposure in a dose dependent fashion, $p=.002$, $\eta^2_p=.12$.
Conclusions and implications: Pre-exposure inhibits nocebo-induced pain, with more pre-exposure producing the strongest effects. As such, pre-exposure may be a cheap and ethical way to diminish the burden of nocebo-induced pain in clinical settings.

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Symposium ID and title if part of symposium:
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Last updated: 28th November, 2019
By: s.h.meeuwis@fsw.leidenuniv.nl, drs. Stefanie Meeuwis

Eliciting placebo and nocebo effects with and without participants' awareness: effects of suggestions about a sham transdermal caffeine patch on itch

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Background/purpose: positive and negative expectancies can be elicited by the provision of information about inert treatment methods, and can influence sensations such as itch (i.e., placebo and nocebo effects). Accumulating evidence shows that such effects can also be evoked when individuals are aware that an inert treatment is provided (open-label).
Methods: A between-subjects randomized controlled trial was conducted, in which healthy volunteers (n=112) were randomized to 1) an open-label positive verbal suggestions group, 2) a closed-label (i.e., concealed) positive suggestions group, 3) an open-label negative verbal suggestions group, or 4) a closed-label negative suggestions group. Participants were told that a transdermal caffeine patch would be applied that positively influenced cognition (e.g., attention), but that as side effect would also influence itch (positively or negatively respectively). In the open-label groups, placebo and nocebo effects were additionally explained. Itch was evoked by histamine at baseline and following suggestions.
Results: Significant between-group differences (all $p < .008$) demonstrated that open-label and closed-label suggestions can both influence expectations and experienced itch. Within-group analyses of baseline-to-post-suggestions change showed significant itch reduction after positive suggestions (all $p<.001$) but no changes after negative suggestions (all $p>.22$). Physical skin response to histamine did not differ between groups (all $p>.23$).
Conclusions and implications: Study findings show that open-label suggestions may be a promising method for enhancing placebo effects in clinical practice, for example, by explaining their mechanisms. More research is needed to examine how open-label suggestions may be used for patient populations, and how varieties in instructions may influence their efficacy.

Submission ID: 201
Symposium ID and title if part of symposium: 35

Targeting increased physical activity among patients with chronic illness: Innovative solutions to an old paradigm

Decision: Accepted, Symposium
Last updated: 26th November, 2019
By: rmace@mgh.harvard.edu, Mr. Ryan Mace

Adapting a mind body physical activity pain management program for older adults with subjective cognitive decline; The Active Brains study

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Background/purpose: Chronic pain and cognitive decline often co-occur in older adults, which can reinforce a "disability spiral" of psychosocial dysfunction. There is a need to teach sustained, pain self-management habits before cognitive decline with aging. This presentation will introduce *Active Brains* as the first group mind-body physical activity program aimed at improving emotional, physical, and cognitive function in older adults with chronic pain and cognitive decline.
Methods: *Active Brains* was developed through a mixed methods data from older adults (N = 26) with chronic pain and cognitive decline who participated in semi-structured focus groups.

Results: Thematic analyses revealed four main themes to tailor *Active Brains* to patient needs: (1) challenges of living with chronic pain and cognitive decline; (2) increasing physical activity using a Fitbit; (3) mindfulness, pain reappraisals, behavioral reinforcement; and (4) barriers to *Active Brains* adherence. Physical activity levels for patients with chronic pain and cognitive decline fell below reference values for people with disabilities. Higher self-efficacy in managing pain was significantly ($ps < 0.001$) associated with decreased disability (r = -0.81), sleep disturbance (r = -0.75), depression (r = -0.70), anxiety (r = -0.72), cognitive complaints (r = -0.58), and loneliness (r = -0.52).
Conclusions/implications: Mixed-methods results suggest that an integrative approach, such as *Active Brains*, is needed to address chronic pain and cognitive impairment. Older participants were interested in combining mind-body skills with physical activity (via Fitbit) to improve psychosocial functioning and provided feedback to inform treatment adaptations. Future trials are warranted to determining the feasibility, acceptability, and efficacy of *Active Brains*.

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Last updated: 26th November, 2019
By: milkie.vu@emory.edu, Ms. Milkie Vu

A systematic review of practice-, provider-, and patient-level determinants impacting Asian-Americans' human papillomavirus vaccine acceptance and uptake

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Objective: To identify determinants of Asian-Americans' 1) human papillomavirus vaccine (HPVV) acceptance, willingness, or intention, and 2) HPVV uptake (i.e., initiation, completion). Our framework is the P3 model, which concomitantly addresses practice-, provider-, and patient-level determinants of health behaviors.
Methods: Systematic review of literature published in PubMed, CINAHL, PsycINFO, ProQuest, and EMBASE (1994–2019). We extracted practice-, provider- and patient-level determinants and study characteristics.
Results: Of the 26 included studies, most (n=14) assessed caregivers' HPVV acceptance and uptake for their children. Subgroups most frequently studied included Koreans (n=9), Chinese (n=6), and Cambodians (n=5). Uptake rates varied greatly (initiation: 14% to 67%; completion: 9% to 63%). Only 3 studies included measurements of practice-level determinants (e.g., clinic insurance policy; available language services). Nearly half (n=12) measured provider-level determinants. Providers' HPVV communication was assessed differently across studies. All studies measured patient-level determinants; influential determinants included healthcare delivery factors (e.g., access and use of services), predisposing factors (e.g., English fluency, trust in suitability of Western medicine, HPVV knowledge and awareness, perceived safety and effectiveness, and perceived relationship between HPVV and sexual activity), enabling factors (e.g., perceived costs), and reinforcing factors (e.g., family's/friends' influence).
Conclusions and implications: Researchers should include additional measurements of practice-level determinants, which can guide system-level interventions. Research should address how providers' HPVV communication is assessed (e.g., recommendation versus discussion/conversation). Data regarding patient-level determinants suggest that HPVV interventions for Asian-American populations can focus on providing educational information, reducing language and access-related barriers, and attending to cultural-specific influences or beliefs about HPVV.

Submission ID: 204
Symposium ID and title if part of symposium: 33

Innovative remotely-delivered psychosocial interventions for cancer patients: Technological developments and study designs

Decision: Accepted, Symposium
Last updated: 26th November, 2019
By: e.broadbent@auckland.ac.nz, Professor Elizabeth Broadbent

Using digital humans to deliver stress management to patients with cancer

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Background/purpose: There is a growing gap between the demand for psychological services and capacity to provide care in oncology settings. With evidence that cognitive behavioral stress management (CBSM) can improve health outcomes and quality of life in cancer patients, there is a need to develop more efficient delivery methods. We developed an embodied computer agent (digital human, DH) prototype to deliver CBSM to women with cancer.
Methods: Using training manuals, archived video recordings of CBSM sessions, and expert opinion we derived elements to use to program a DH prototype.
Results: Based on an analysis of these sources we determined that CBSM content be focused on relaxation instruction (deep breathing, muscle relaxation) and using CBT techniques (raising stress response awareness and cognitive restructuring). We employed DH facial and voice recognition features to allow perception of affective and cognitive responses during CBSM and developed simulated real-time graphics to depict underlying biobehavioral processes to enhance learning. We are comparing the DH prototype against human delivery of CBSM initially in a pilot sample of 60 healthy women to refine it for a larger scale trial with cancer patients.
Conclusions and implications: Embodied computer agents may increase the availability of psychosocial care to persons with cancer. One challenge is to create rapport using the right balance of humanlike characteristics and conversational functions, within the boundaries of the technology and to assess whether these technologies can reduce stress and impact health and wellbeing in the oncology setting.

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Last updated: 26th November, 2019
By: sakakibara@toyo.jp, 圭子 榊原

Longitudinal examination of the extended job demands-resources model among japanese workers using a new Burnout Assessment Tool (BAT-J)

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Background/purpose: The purpose of this study is to examine the longitudinal associations of job demands, job resources and personal resources with burnout and work engagement among Japanese workers based on the Job demands-resources (JD-R) model. It was assumed that job demands, job resources and personal resources at T1 predicted T1- T2 change in burnout and work engagement.
Methods: We conducted a two-wave longitudinal survey using survey monitors. We collected 1,420 responses on the first-wave online survey (May 2018). Out of these respondents, we invited 498 respondents to the second-wave survey and 485 answered the call (June 2018). For assessing burnout, we used a new instrument, the Japanese version of the Burnout Assessment Tool (BAT-J). Change scores in burnout and work engagement were estimated as residual scores obtained by regressing T2 scores on the corresponding T1 scores. The research model was tested by using structural equation modeling (SEM).
Results: Results of the structural equation modelling analyses showed that the hypothesized model fits adequately to the data. As expected, job demands were positively related to an increase in burnout (β=.21-.24; p=.000), whereas job resources and personal resources were positively related to an increase in work engagement (β=.21; p=.000, β=.10; p=.028, respectively).
Conclusions and implications: In general, this study confirmed the extended JD-R model by showing that job demands predict future burnout and job and personal resources predict future work engagement. Accordingly, further investigation is called for to illuminate a more detailed nexus between job and personal resources on one hand and work engagement on the other hand.

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Last updated: 26th November, 2019
By: eva.roos@folkhalsan.fi, Dr Eva Roos

Relationship between screen time and sleep habits among Finnish pre-school children: results from the DAGIS study

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Background/purpose: The aim of this study was to examine the associations between screen time (ST) and sleep habits among Finnish preschool children.
Methods: This cross-sectional study is a part of the DAGIS study carried out in 2015-16 on 736 Finnish preschool children aged 3-6 years. Parents reported in a 7-day diary the number and duration of times per day their child spent on ST (TV, DVDs, or videos and use of tablets, smartphones, or computers) and child's bedtimes and wake-up times. In addition, parents filled in a questionnaire about their child's sleep routines and sleep latency. Sleep duration was calculated from the reported child's bedtimes and wake-up times. Statistical analyses included t-tests, chi^2-tests and general linear model. The models were adjusted for the child's age, gender, hours spent in pre-school and the mother's education.
Results: Total ST was positively associated with later bedtimes (p<0.001) and negatively with sleep durations (p<0.001) on weekdays and weekend days. Watching TV/DVD were positively associated with later bedtimes (TV p=0.016,) and negatively with sleep duration (TV p=0.001). Computer use was positively associated with later bedtimes (p=0.026). Smartphone/tablet use was positively associated with later bedtimes (p=0.004), later wake-up times (p=0.020) and sleep latency (p=<0.001), and negatively associated with sleep routines score (p=0.033).
Conclusions and implications: The results show positive associations between ST and poorer sleep habits. The results indicate that ST may shorten sleep duration by shifting bedtime later among preschoolers. Attention should be paid to promoting adequate sleep and ST habits already in early life.

Submission ID: 210
Symposium ID and title if part of symposium: 35

Targeting increased physical activity among patients with chronic illness: Innovative solutions to an old paradigm

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Last updated: 26th November, 2019
By: avranceanu@mgh.harvard.edu, Associate Professor/Director/ICBM Tracks Co-Chair Ana-Maria Vranceanu

Improving physical activity among patients with chronic pain. The GetActive study

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Background/purpose: Physical activity (PA) is efficacious for chronic pain management, but engagement and adherence are low. Combining PA with mind body skills to improve pain coping, and with a Fitbit to track and reinforce activity, may help.
Methods: We iteratively developed *GetActive* and *GetActive with Fitbit*, 2 10-week mind body PA programs. We report on a pilot RCT of the 2 programs (N=65).
Results: Feasibility of recruitment, adherence to sessions, credibility, program satisfaction, and adherence to accelerometers were excellent and similar for the 2 programs. We found small to medium effect sizes (ES) for increases in Actigraph measured step-count (~800 steps, ES=.51 in Fitbit group; ~850 steps, ES=.37 in non-Fitbit group), large effects for increases in the 6-minute walking test (+53 meters, ES=.96 for Fitbit group; +42 meters, ES=.82 for non-Fitbit group), medium to large effects for improvements in self-reported PA (ES=.52 for Fitbit group, ES=.92 for non-Fitbit group), small to medium effects for improvements in emotional function (ES=.30-.44 for Fitbit group, ES=.40-.42 for non-Fitbit group), and medium to large effects for improvements in pain (ES=.70-.76 for Fitbit group, ES=.93-1 for non-Fitbit group), and coping (ES=.91 for Fitbit group; ES=.97 for non-Fitbit group).
Conclusions and implications: These data suggest that *GetActive* and *GetActive with Fitbit* are feasible, acceptable, and show promise in increasing physical activity. Results support a future fully powered RCT of *GetActive* vs *GetActive with Fitbit* vs an attention placebo control to ascertain efficacy and determine whether a Fitbit is a necessary addition to a mind body-PA program for chronic pain.

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Last updated: 26th November, 2019
By: hanna.muees@univie.ac.at, MSc Hanna Mües

Fatigue, tiredness, and sexual experience in everyday life – an ambulatory assessment study

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Background: While fatigue and sexual experience have been negatively associated, tiredness and sexual experience have been associated both positively and negatively in previous studies, with conflicting findings in men and women. This ambulatory assessment study aimed to examine the bidirectional associations between fatigue/tiredness and sexual experience (i.e., sexual desire and arousal) in the everyday lives of men and women.
Methods: Sixty heterosexual healthy individuals in a relationship (30 women, M_{age}=23.78, SD_{age}=2.93) were asked to complete data entries on a pre-programmed iPod 6 times a day for 14 consecutive days. Nested data were analyzed separately for men and women applying multilevel modelling in HLM.
Results: General and physical fatigue, tiredness, and intensity of sexual desire and arousal all differed significantly between men and women. General fatigue was significantly predictive of the intensity of sexual desire in men at the following measurement point (*UC*=-0.12, *p*=.005, *Pseudo* R^2=0.034). Intensity of sexual arousal was significantly predictive of physical fatigue in women at the following measurement point (*UC*=0.15, *p*=.037, *Pseudo* R^2=0.007).
Conclusions and implications: Higher general fatigue predicted a lower intensity of sexual desire in men. Hence, fatigue might play a role in individuals suffering from low sexual desire and might be addressed by appropriate treatment strategies. A higher intensity of sexual arousal predicted higher physical fatigue in women. The results show associations between fatigue and sexuality, but not between tiredness and sexuality, that differ between men and women. These findings should be considered appropriately in a clinical context.

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Last updated: 26th November, 2019
By: ygidron@univ.haifa.ac.il, Professor Yori Gidron

Stronger correlations between neurophysiological and peripheral disease biomarkers predict better prognosis in two severe diseases

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Background: 'Mind-body' debates assume that better brain-body associations are healthy. However, this assumption has been rarely tested in relation to most diseases. This study examined whether degree of association between a neurophysiological vagal nerve index and peripheral disease biomarkers, predict prognosis in pancreatic cancer (PC) and multiple sclerosis (MS).
Methods: Sample 1 included 272 patients with advanced PC. Sample 2 included 118 patients with MS. We measured the vagal nerve index heart rate variability (HRV) derived from ECG. We examined associations between HRV and patients' peripheral disease biomarkers: CA19-9 in PC and neurofilament light chain (NFL) in MS. Associations between HRV and each biomarker were examined separately in patients who survived versus died (in PC), and in those with and without relapse during 12 months (in MS).
Results: In PC, HRV was significantly inversely related to the tumor marker CA19-9 in patients who later survived ($r = -0.41$, $p < 0.05$) but not in those who died ($r = 0.11$, NS). In MS, HRV was significantly and inversely related to NFL only in those who did not relapse ($r = -0.25$, $p < .05$), but not in those who relapsed ($r = -0.05$, NS).
Conclusions: Degree of association between a neurophysiological vagal marker and peripheral disease biomarkers has prognostic value in two distinct diseases.

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Last updated: 26th November, 2019
By: ygidron@univ.haifa.ac.il, Professor Yori Gidron

Effects of Psychological Inoculation on condom use and barriers: An RCT with an automatised counselor-free system

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Background: Condom use prevents contraction of the Human Immunodeficiency Virus (HIV). Research shows limited effects of education on increasing condom use. Psychological inoculation (PI) exposes people to sentences reflecting their cognitive barriers and social pressures against adopting health behaviors, which they learn to systematically refute. PI was found to be more effective than health education in preventing smoking, reducing simulated traffic accidents, increasing physical activity and in increasing condom use tendencies. However its mechanism is unknown. This research examined the effects of PI versus education on condom use barriers and tendencies, and its relations with cognitive dissonance, a possible mechanism, using a fully automatized online system, without a counselor.
Methods: The study included 149 students from a German University who were randomly assigned to PI or control conditions. Main outcome measures included an indirect condom use test (I-CUTE), a condom use barriers questionnaire, and a cognitive dissonance estimation, all assessed at baseline and a month later.
Results: PI was found to significantly increase I- CUTE scores when participants *had* sexual relations. A significant increase in I-CUTE scores was found for controls without sexual relations. No changes in barriers were seen in either group. The cognitive dissonance tended to be significantly higher in the PI group than in controls after treatment.
Conclusions and implications: PI increases I-CUTE scores compare to controls (based on effect sizes), and significantly in those with sexual relations. The role of relationship status and the mechanisms of PI should be further examined.

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By: b.canady@marshall.edu, Dr. Brittany Canady

Health literacy and cognitive function: Outcomes on reported health conditions and medication use

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Background/purpose: Health literacy has been linked to a number of health concerns, such that individuals with lower health literacy tend to have poorer health outcomes. However, factors underlying health literacy are less clear. This study examined the relations between health literacy, cognitive functioning, age, and education in a community sample of older adults.
Methods: Participants (n = 114) were recruited from attendees at a health fair for senior adults. Participants completed a questionnaire and standardized measures for health literacy and cognitive functioning.
Results: Health literacy was associated with number of reported health conditions (r = -0.188, p = 0.047) and number of prescribed medications (r = -0.222, p = 0.018). Further, health literacy correlated with cognitive functioning (r = 0.388, p = 0.000) and years of education (r = 0.238, p = 0.011), though not age (r = -0.097, p = 0.307). Results of a linear regression (F = 6.906, p = 0.000) indicated that cognitive functioning (b = 0.354, t = 3.571, p = 0.001) was responsible for the greatest share of the variance of health literacy, with education not significant. However, neither education nor cognitive functioning related to health outcomes, in contrast to health literacy.
Conclusions and implications: These results suggest that while factors such as cognitive functioning and past education may influence health literacy in senior adults, health literacy is a distinct construct. As such, health literacy should be examined independently from these variables in future research, as health literacy may better explain clinical outcome differences.

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Symposium ID and title if part of symposium:
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Last updated: 26th November, 2019
By: b.canady@marshall.edu, Dr. Brittany Canady

Overconfidence in managing health concerns: The impact of the dunning-kruger effect on health literacy

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Background/purpose: The Dunning-Kruger effect is a cognitive bias in which individuals overestimate their knowledge or ability. Low health literacy has been linked to a number of poor health outcomes, but it is unclear how accurately individuals may assess their own health literacy. Consistent with the Dunning-Kruger effect, it is hypothesized that individuals will overestimate their own health literacy as evidenced by the confidence they express in their own health knowledge in contrast to an objective measure of health literacy.
Methods: Participants (n = 505) were recruited via Amazon Mechanical Turk to complete a series of questionnaires assessing various aspects of health literacy, health care utilization, and confidence in their knowledge base.
Results: Results support the presence of a Dunning-Kruger effect. There were no significant differences among individuals with varying levels of health literacy in reported confidence in their knowledge regarding health (F (2, 502) = 0.841, p = 0.432) or health behaviors (F (2, 500) = 2.321, p = 0.099), and the low health literacy group expressed the highest confidence in their knowledge about medical care (low M = 62.99, medium M = 55.07, high = 56.27; F (2, 502) = 4.324, p = 0.014).
Conclusions and implications: Consideration of cognitive bias in addition to assessment of objective health literacy could provide additional information regarding health care decisions and utilization. Particularly, presence of the Dunning-Kruger effect could result in lack of appropriate consultation with health care professionals and inappropriate treatment of health conditions.

Submission ID: 220
Symposium ID and title if part of symposium: 19

The importance of preventative care and behavioural medicine in preconception

Decision: Accepted, Symposium
Last updated: 26th November, 2019
By: briony.hill@monash.edu, Dr Briony Hill

Defining preconception: Exploring the concept of a preconception population

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Background/Purpose: Health prior to conception can significantly impact offspring health, however, a clear definition of the attributes of the preconception population is currently lacking. This study aimed to use existing literature to explore the concept and attributes of a preconception population by: (1) identifying characteristics and research recruitment methods; and (2) generating an attribute-based working definition of a preconception population.
Methods: A rapid review of current literature using CINAHL and the subject heading ‘pre-pregnancy care’ was conducted (Stage 1). Data extracted included definitions of preconception, participant inclusion/exclusion criteria, participant characteristics, and recruitment methods. Stage 2 involved a wider search of relevant publications (including grey literature) followed by a concept analysis of the phrase “preconception population” applying Walker and Avant’s framework (Stage 2).
Results: Twenty-three papers (19 studies) were included in Stage 1. “Preconception” was explicitly defined in only one study. Twelve studies specified participants must be planning a pregnancy. Stage 2 included 33 publications. Four key perspectives for the concept of the preconception population were derived: (1) intentional; (2) potential; (3) public health; and (4) life course. Each perspective was assigned unique defining attributes.
Conclusions and implications: Adopting these perspectives may allow researchers to accurately define, identify and recruit preconception populations and to develop interventions that are appropriately broad or tailored depending on population needs. We hope the definitions will facilitate behavioural medicine research with this population and subsequently improve the wellbeing of preconception men and women, which is essential to ensuring the health of future generations.

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Last updated: 26th November, 2019
By: hamiltoj@mskcc.org, Dr Jada Hamilton

Emotional outcomes in individuals with variant of uncertain significance results from cancer multiplex genetic testing

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Background: Multiplex genetic testing, the simultaneous analysis of multiple cancer susceptibility genes, provides valuable cancer prevention information but also reveals genetic variants of uncertain significance (VUS) that have unclear associations with cancer risks. Little is known about how people emotionally respond to receiving VUS from multiplex testing.
Methods: We recruited 661 participants from the online Prospective Registry of Multiplex Testing (PROMPT) with cancer susceptibility gene VUS to complete a survey including measures of *distress* (range=0-30), *uncertainty* (0-45), and *positive experiences* (0-20). We used generalized linear modeling to examine how demographics and level of cancer risks associated with the gene (high risk, HR; moderate/low risk, MLR; or limited evidence of risk, LER) related to emotional outcomes.
Results: Overall, participants reported low distress ($M \pm SD$=3.25±5.19), uncertainty (9.18±8.35) and positive experiences (7.83±5.98). Distress was significantly associated with younger age and less family cancer history; distress was higher among those with HR VUS than among those with VUS in genes of other risks (ps≤0.022). Uncertainty was associated with younger age, non-white race, and less education; uncertainty was higher among those with HR VUS than those with LER VUS (p=0.003). Fewer positive experiences were associated with more education and more family cancer history; those with HR VUS had fewer positive experiences than those with LER VUS (p=0.002).
Conclusions and implications: VUS are associated with modest emotional responses. Clinicians should consider the level of cancer risk to which individuals receiving these uncertain results are potentially susceptible, because this may influence their emotional adaptation.

Submission ID: 225
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Last updated: 27th November, 2019
By: roeline.kuijer@canterbury.ac.nz, Dr Roeline Kuijer

Self-compassion and ambivalence toward healthy and unhealthy food

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Background: Many people experience response conflict or ambivalence about food (e.g., broccoli is healthy, but boring; chocolate is tasty, but fattening). This research examines the role of self-compassion (self-kindness during adversity) and its relation to ambivalence. We expected people with higher levels of self-compassion to experience less ambivalence about food, which in turn should be related to healthier eating behaviour.
Methods: Ambivalence (degree and strength of opposing evaluations) was assessed in relation to images of healthy foods, unhealthy foods and non-food objects (Study 2 only). Study 1 (N = 206, MTurk) assessed ambivalence, self-compassion and self-reported eating behaviour cross-sectionally. Study 2 (N = 129, community sample) measured ambivalence and self-compassion at baseline and self-reported eating behaviour 3 weeks later. Regression analysis with bootstrapping was used to test for mediation. All analyses in Study 2 controlled for non-food object ambivalence.
Results: Unhealthy foods elicited more ambivalence than healthy foods in both studies (ps < .001). Greater self-compassion was related to lower healthy food ambivalence (r = -.29, p < .001; r = -.23, p < .01, respectively). Healthy food ambivalence mediated the relationship between self-compassion and eating behaviour over the past 2 weeks (both studies), healthy food consumption (both studies), unhealthy food consumption (Study 1), and hypothetical menu-choice (Study 2).
Conclusions and implications: As expected, greater self-compassion was related to lower ambivalence, but only in relation to healthy food. Healthy food ambivalence mediated the relationship between self-compassion and eating behaviour variables. Although unhealthy foods triggered more ambivalence, no relationships were found with self-compassion or eating behaviour.

Submission ID: 226
Symposium ID and title if part of symposium: 35

Targeting increased physical activity among patients with chronic illness: Innovative solutions to an old paradigm

Decision: Accepted, Symposium
Last updated: 27th November, 2019
By: camille.short@unimelb.edu.au, Dr Camille Short

Development, usability and safety testing of ExerciseGuide: A tailored web-based exercise prescription and behaviour change tool for men with metastatic prostate cancer.

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Background: Participating in regular exercise can help men with metastatic prostate cancer maintain physical functioning and quality of life. However, metastases in the bones, as well as psychosocial factors contribute to low exercise adoption. This program of work aimed to develop a technology-enabled model of exercise support for this patient group and explore acceptability and safety.
Methods: Intervention development was guided by the Intervention Mapping protocol and principles of person-centered design. This process included qualitative interviews with 18 men with metastatic prostate cancer to gain a deeper understanding of user needs. An intervention prototype, named ExeriseGuide was then developed in collaboration with four consumer representatives. The prototype was evaluated in a novel lab-based usability and safety test involving 11 men with metastatic prostate cancer. This involved talk-aloud usability testing and movement screen.
Results: The initial qualitative study (n = 18) suggested that a web-based tool providing both tailored exercise prescription and behaviour change support would have many potential benefits for men with metastatic prostate cancer. However, computer literacy, safety and adherence were noted as potential issues to be addressed. ExerciseGuide was co-designed with consumers over a 12 month period, with a focus on addressing potential issues and maximising benefits. Lab-based testing (n = 11) suggested that ExerciseGuide is usable (scored above industry standard), and that users can safely follow prescribed exercises.
Conclusions and implications: ExerciseGuide is potentially a safe, acceptable and effective way of supporting exercise adoption in this patient group. A pilot randomised control trial will commence in 2020.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 27th November, 2019
By: 1155101049@link.cuhk.edu.hk, Ms. YANQIU YU

Psychosocial determinants of comorbid depression in Chinese adolescents with Internet gaming disorder

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Background: Depression is a common comorbid condition in individuals with Internet gaming disorder (IGD). This study aims to investigate the prevalence and psychosocial correlates of comorbid depression among adolescents with Internet gaming disorder.
Methods: During October and December 2018, a cross-sectional study was conducted among junior middle school students in Chengdu and Guangzhou, China. Classroom surveys were conducted with self-administered questionnaires in the absence of teachers. IGD and depression were measured by using the DSM-5 checklist and PHQ-9, respectively.
Results: Among 507 students with IGD, 57.8% comorbid with depression (PHQ-9 scores $\geq$10). Those comorbid with depression showed significantly lower levels of self-esteem, resilience, social support, and life satisfaction and had a significantly higher level of loneliness than those without depression (all p<0.05). Multivariate logistic regression analyses showed that, after controlling for background variables, self-esteem (ORa=0.86, 95%CI: 0.82-0.90), resilience (ORa=0.97, 95%CI: 0.95-0.997), social support (ORa=0.97, 95%CI: 0.96-0.99), and life satisfaction (ORa=0.75, 95%CI: 0.63-0.88) were protective factors of comorbid depression, while loneliness (ORa=1.19, 95%CI: 1.13-1.25) was a risk factor of comorbid depression among adolescents with IGD.
Conclusions and implications: The prevalence of comorbid depression was alarmingly high in Chinese adolescents with IGD. Future intervention programs on the comorbidity of IGD and depression should pay more attention to psychosocial factors.

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Last updated: 27th November, 2019
By: s.hennemann@uni-mainz.de, Dr. Severin Hennemann

Internet-based CBT for somatic symptom distress (iSOMA) in emerging adults: results of a randomized controlled trial

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Background: Persistent somatic symptom distress is common in emerging adults and is associated with adverse health outcomes and significant impairment. Internet- and mobile-based interventions could help to prevent burden and chronicity and extend treatment options. This RCT tested the efficacy of a guided, cognitive-behavioral Internet intervention (iSOMA) for somatic symptom distress in university students at risk for somatic symptom disorder (SSD).
Methods: 156 participants (age: M = 24.53, SD 5.09; 83.3% female) with multiple physical symptoms were recruited among German-speaking universities and were randomly allocated to either receive the eight-week iSOMA intervention with asynchronous psychologist support or a waitlist group (WL), both with access to TAU. Primary outcomes were somatic symptom distress (PHQ-15) and psychobehavioral features of SSD (SSD-12), assessed at baseline and post-treatment. Secondary outcomes included psychological comorbidities of SSD, functional impairment, and attitudes towards psychotherapy.
Results: Participants in the iSOMA group showed significantly ($p < .01$) stronger improvements in primary (PHQ-15: $d_{between} = 0.65$ [0.33, 0.97]; SSD-12: $d_{between} = 0.64$ [0.32, 0.97]) and secondary outcomes ($d_{between} = 0.40 – 0.51$) at post-treatment compared to the WL, except for attitudes towards psychotherapy ($p = .747$). Satisfaction with iSOMA was high (91.0%), most participants adhered to the intervention protocol (72.8%) and negative treatment effects were infrequent (14.9%).
Conclusions and implications: Our intervention was acceptable and had a substantial positive impact on core features of SSD and associated mental health issues across a broad range of persistent physical symptoms in a vulnerable target group, which opens up promising possibilities for indicative prevention and blended care.

Submission ID: 232
Symposium ID and title if part of symposium:
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Last updated: 27th November, 2019
By: rachaelthorneloe@gmail.com, Rachael Thorneloe

Barriers and facilitators for healthcare professionals delivering brief physical activity interventions in primary care: A qualitative study using the Theoretical Domains Framework

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Background: Practitioners in primary care are encouraged to deliver brief physical activity (PA) interventions in routine consultations. We aimed to identify the factors affecting the delivery of brief PA interventions using the Theoretical Domains Framework (TDF).
Methods: Twelve semi-structured interviews were conducted with healthcare practitioners working in primary care. Framework analysis was used to code the data into TDF domains, and content analysis was used to code belief categories.
Results: Practitioners were aware of the benefits of brief PA interventions (knowledge), however there was variation in the strategies used (skills). Interventions were more likely to be delivered in response to disease or consultation-specific cues, and practitioners had no systems in place for monitoring their actual delivery or outcomes (behavioural regulation). Some questioned their abilities to deliver interventions and promote change in their patients (beliefs about capabilities). Judgements about patient readiness/engagement influenced the delivery of interventions, especially as they perceived PA to be a potentially sensitive topic (beliefs about consequences). Although practitioners believed it was important for them to advocate PA, some GPs believed nurses were better equipped to deliver interventions (social/professional role and identity). Although time constraints were commonly reported (environmental context and resources), practitioner's motivation to address PA influenced their prioritisation of competing demands.
Conclusions and implications: The development of interventions need to consider issues of capability, opportunity, and motivation. Using the Behaviour Change Wheel, interventions should target these barriers using appropriate intervention functions and behaviour change techniques. This work was commissioned by Public Health England.

Submission ID: 233
Symposium ID and title if part of symposium:
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Last updated: 27th November, 2019
By: s.fischer@psychologie.uzh.ch, Dr. Susanne Fischer

Early life social environment and thermoregulatory abnormalities in depression – findings from a population-based survey

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Background/purpose: Depressed individuals suffer from abnormalities in thermoregulation (e.g., increased core temperature). Animal research has shown a direct link between early maternal separation and deficits in thermoregulatory cooling. The aim of the present study was to investigate to what extent the thermoregulatory abnormalities in depression may be traced back to patients' early life social environment.
Methods: N=671 healthy individuals from the general population participated in a survey. The Patient Health Questionnaire (PHQ-8) was used to divide participants into non-depressed and depressed according to DSM criteria. Thermoregulation was assessed by the Experienced Temperature Sensitivity and Regulation Survey (ETSRS). The early life social environment was assessed by the Childhood Trauma Questionnaire (CTQ) and the Parental Bonding Instrument (PBI).
Results: Controlling for age, sex, BMI, and physical activity, depressed vs. non-depressed individuals felt drowsier in warm environments (F(1,663)=4.981, p=.026) and after physical exertion (F(1,663)=4.470, p=.035) and stress (F(1,663)=28.065, p<.001). They also reported more pronounced physiological responses to physical exertion (F(1,663)=4.017, p=.045) and stress (F(1,663)=4.610, p=.032). Within the depressed group, physical neglect was associated with less drowsiness in warm environments (β=-0.117, p=.031). Moreover, parental overprotection was linked with slower behavioural responses to warmth (β=-0.046, p=.028), whereas parental care (β=0.051, p=.020) was linked with quicker behavioural responses.
Conclusions and implications: Depressed individuals report greater physical discomfort in response to warmth despite increased efforts of thermoregulatory cooling. These deficits appear to be only partly rooted in the early life social environment.

Submission ID: 234
Symposium ID and title if part of symposium: 37

Women's health during phases of hormone transition in the life course: On psychobiological predictors of psychopathology and resilience

Decision: Accepted, Symposium
Last updated: 27th November, 2019
By: s.fischer@psychologie.uzh.ch, Dr. Susanne Fischer

Sex hormones and related polymorphisms in reproductive mood disorders – systematic review and meta-analysis

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Background/purpose: Women have an increased risk of suffering from depression during reproductive transitions. Given that sex hormones are crucial regulators of mood and cognition the question arises as to whether hormonal alterations contribute to this phenomenon. A further question is to what extent polymorphisms within related genes are involved. To answer this question, a systematic review and meta-analysis of the literature comparing women with and without reproductive mood disorders was undertaken.
Methods: PubMed and PsycINFO were searched up to September 2020. Inclusion criteria were: 1) studies including women with premenstrual dysphoric disorder (PMDD), pregnancy/postpartum depression, or perimenopausal depression and healthy controls 2) assessment of sex hormones and/or related polymorphisms. Full-texts were reviewed and means and standard deviations were extracted.
Results: Forty-six studies were identified. A number of single nucleotide polymorphisms within the oestrogen receptor alpha encoding gene (*ESR1*) differed between women with PMDD and healthy controls. Furthermore, women with PMDD had comparably lower luteal oestradiol levels. There were no differences between women with pregnancy/postpartum or perimenopausal depression and controls.
Conclusions and implications: Women with PMDD appear to exhibit specific hormonal changes, which may contribute to mood disturbances. More fine-grained research into the role of sex hormones in reproductive transition phases which are characterised by more extreme endocrine changes is warranted.

Submission ID: 235
Symposium ID and title if part of symposium:
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Last updated: 27th November, 2019
By: caryn@ukm.edu.my, Caryn Mei Hsien Chan

The association of mood disorders with cancer recurrence and survival

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Background/ purpose: We aimed to determine whether the presence of comorbid mood disorders impacted survival among patients with cancer.
Methods: A prospective longitudinal cohort study was conducted with N=469 adult patients (aged ≥18 years). Patients with any cancer type were consecutively recruited within one month of diagnosis. All patients underwent face-to-face clinical interviews using the gold standard Structured Clinical Interview (SCID) for DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) at yearly intervals. Information on patient survival status were extracted from the national death registry. Kaplan-Meier plots were used to chart overall survival. Cox regression analyses were carried out separately for different mood psychopathology and adjusted for confounding variables.
Results: Complete data for 469 adult patients with cancer at 5 years follow-up were examined. Of these, up to 54.4% (n=255) met diagnostic criteria for depression, anxiety and/or posttraumatic stress disorder (PTSD) within 5 years following a cancer diagnosis. The presence of depression, anxiety and/or posttraumatic stress disorder was a predictor of poorer overall survival in patients with cancer (hazard ratio = 1.33, 95% CI: 1.20–1.48, p<0.001). New cases of depression, anxiety and PTSD diagnoses following a cancer diagnosis appeared better predictors of overall survival than a prior history of either.
Conclusions and implications: Findings suggest that cancer patients with comorbid mood disorders have poorer overall survival than their counterparts without mood disorders. Further work exploring the concordance of records within administrative health data with clinical diagnosis and cause-specific death within these patient groups is needed.

Submission ID: 236
Symposium ID and title if part of symposium: 46

Beliefs about stress - from psycho-biological mechanisms to interventions

Decision: Accepted, Symposium
Last updated: 27th November, 2019
By: s.fischer@psychologie.uzh.ch, Dr. Susanne Fischer

Changing Beliefs About Stress (C-BAS): Effects on emotional and physiological responses to acute psychosocial stress

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Background/purpose: Negative stress beliefs (e.g., "stress is dangerous") are an independent risk factor for morbidity and mortality. Experimental research suggests that the underlying mechanism may be maladaptive stress responses. This study aimed to investigate whether a brief intervention targeting stress beliefs is capable of a) reducing negative beliefs, and b) fostering more adaptive physiological and emotional responses to acute stress.
Methods: N=61 healthy male students were randomised to a control and an intervention condition (changing beliefs about stress; C-BAS). The C-BAS group received a five-minute psychoeducation about stress, whereas the control group received neutral information. All participants underwent the Trier Social Stress Test (TSST). Stress beliefs were measured before and after C-BAS/the control condition. Heart rate, blood pressure, and subjective stress were assessed before, during, and after the TSST.
Results: There was a decrease in negative stress beliefs (p<.001) and an increase in positive stress beliefs (p=.002) in participants receiving C-BAS, which was absent in participants receiving the neutral information. Groups did not differ in heart rate or blood pressure in response to the TSST (all p>.693). However, participants receiving C-BAS had more pronounced subjective stress responses while at the same time also showing more pronounced recoveries (p=.024).
Conclusions and implications: A newly designed intervention (C-BAS) was capable of modifying stress beliefs for the better. There were no effects on physiological aspects of the stress response, but the emotional results are promising and highlight the need for further research into interventions targeting stress beliefs.

Submission ID: 237
Symposium ID and title if part of symposium: 30

Core Outcome Sets (COS) for Alcohol Brief Intervention (ABI) trials: Applications in implementation, criminal justice and health economics research

Decision: Accepted, Symposium
Last updated: 27th November, 2019
By: g.shorter@qub.ac.uk, Dr Gillian Shorter

The Outcome Reporting in Alcohol Brief Intervention Trials (ORBITAL) core outcome set: Global consensus on key outcomes in efficacy and effectiveness trials of alcohol brief interventions

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Background: The evidence base to assess the efficacy and effectiveness of alcohol brief interventions (ABI) is weakened by variation in outcomes measured, and by inconsistent reporting. The 'Outcome Reporting in Brief Intervention Trials: Alcohol' (ORBITAL) project aimed to develop a core outcome set (COS) to prioritize key measures and provide reporting guidance. This session will explore COS development, recommendations for use, and applications of the methodology to other areas.
Methods: Development required a) systematic review to map outcomes used in efficacy/effectiveness trials b) outcome prioritization using an e-Delphi survey, c) a consensus group meeting to finalise outcomes, and d) decisions on how to measure.
Results: In 401 papers of 405 trials 2641 outcomes were measured in approximately 1560 different ways. A two-round e-Delphi study prioritized 15 outcomes to be discussed at a consensus meeting. The COS recommends the measurement of alcohol related problems or consequences, alcohol related injury, combined consumption measure which summarizes alcohol use, hazardous/harmful drinking, standard drinks consumed in a week, typical frequency, typical quantity, frequency of heavy drinking, quality of life, use of emergency healthcare services. Measurement instruments were selected to ensure the COS can be implemented in ABI settings, with recommendations based on psychometric properties and relevance.
Conclusions and implications: ORBITAL developed a COS for efficacy and effectiveness trials of ABI outcomes and their measurement. This is the gold standard for future ABI efficacy and effectiveness trials and will improve synthesis of new findings. The minimum standard can be supplemented with other relevant outcomes.

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Symposium ID and title if part of symposium:
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Last updated: 27th November, 2019
By: magonz17@eafit.edu.co, Mg Manuela González

Illness and personal control – a qualitative study of patients with cvd risk

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Background: The study of cardiovascular disease (CVD) risk factors has been focused on modifiable risk, such as healthy life habits; however cultural and psychosocial factors could also be important influences. Cultural factors could affect illness perceptions, and socio-geographical aspects have been related to physical activity and other healthy life habits. The purpose of this study was to assess psychosocial and cultural factors related to CVD.
Methods: 50 participants (mean age = 72, S.D.= 8,04 years, 52% female) with risk factors for CVD (86% have diabetes, 90% hypertension and 28% have had myocardial infarction) were interviewed using a semi structured interview. The interviews were transcribed and coded with descriptive and analytical codes in Atlas Ti V8.

Results: The analysis showed that people expect that treatment and medical recommendations helps to control their illness. People control their illness by following the recommendations about diet and medication, independently of the SEP; however, fruit and vegetable intake is considered expensive and not a part of medical recommendations. The recommendations about physical activity are not commonly followed, and are dependent on topographic neighourhood characteristics, such as the degree of steepness of the streets, more than the presence of sidewalks and parks. Additionally, people tend to adhere to recommended treatment when they perceive CVD as a serious illness.
Conclusions/implications: Health promotion programs related to cardiovascular disease should be designed considering the socio-economic position and characteristics of the neighborhood, especially when recommending dietary changes and physical activity. Home exercises could help adherence to treatment.

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Last updated: 27th November, 2019
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The role of information in adherence to treatment for people living with HIV: Results of a qualitative study in a Colombian City

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Background: After a diagnosis of HIV, patients need to adjust their lifestyle and adhere to the recommended medication regimen to decrease viral load. Adherence to treatment and maintenance of health behaviors is a challenge for professionals. The objective of this study was to explore adherence to treatment of PLWH with antiretrovirals.
Method: Eleven participants diagnosed with HIV between 6 months and 21 years ago, from a support group in Medellín were evaluated with a personal semi-structured interview. The interviews were recorded, transcribed and analyzed using Atlas.ti 8.
Results: The majority of participants accepted the HIV diagnosis in a positive manner. This acceptance was found to be an important element in adherence to treatment in most participants. One category that emerged was knowledge about HIV, which refers to how much the doctor explains to the patient what the virus is and how the treatment works. This element increases the chance of patients developing and maintaining healthy lifestyle habits and of adhering to antiretroviral treatment. Finally, beliefs about the effectiveness of the treatment is an element that reinforces the behavior and maintains it in all of the participants interviewed. The main obstacle to adherence reported by participants was the significant side effects of the drugs.
Conclusions and implications: Adjustment to HIV and adherence to treatment are associated with the information provided by medical personnel, enabling the establishment of adaptive behaviors, and decreasing the viral load. These elements should therefore be included in health education programs for patients living with HIV.

Submission ID: 241
Symposium ID and title if part of symposium: 21

Getting the most out of clinical trials: moderators, mechanisms and comparators

Decision: Accepted, Symposium
Last updated: 27th November, 2019
By: peter.kaufmann@villanova.edu, Professor Peter Kaufmann

Moderators, Mediators and Effect Sizes in Behavioral Clinical Trials

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Background/purpose: Clinical trials of behavioral interventions are expected to include collection of data on potential moderators and mediators that influence treatment effectiveness. Results are expected to inform refinements of the intervention and identify subgroups of the population for whom the intervention is likely to be beneficial. The search for moderators and mediators is applied routinely to all phases of clinical trials. We examine whether these efforts yielded the expected results, and the extent to which they may influence the observed effect sizes.
Methods: We conducted a review of the literature to identify interventions that benefited from moderator and mediator analyses, with particular attention to literature that sought to identify interactions between data collection and outcomes.
Results: Data is collected routinely to identify mediators and moderators in all phases of clinical trials, including data not needed for evaluating treatment effectiveness. Distinctions between early phase and late phase trials are unusual with respect to data collection strategies. No examples were found that described modifications of treatment informed by moderators and mediators. Some literature identified subgroups for whom an intervention may be more effective. An evolving literature raises concerns regarding reactivity to data collection and outcomes in control group and treatment group participants.
Conclusions and Implications: Explicit discussion of whether or how specific behavioral interventions were improved through analysis of moderators and mediators is lacking. The design and data collection strategies of behavioral clinical trials should distinguish between phases that are intended to refine an intervention and phases intended to evaluate effectiveness.

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Symposium ID and title if part of symposium:
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Last updated: 27th November, 2019
By: hanna.rebiboseror@observia-group.com, Senior Project Manager Hanna Rebibo Seror

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The SPUR Model: A framework for considering patient behavior

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Background: Medication nonadherence is a global problem that requires urgent attention. Roughly half of all drugs that are prescribed for chronic treatments are not taken by patients to whom they are prescribed. Initiatives designed to support patients and help them modify their behavior are enhanced by personalization, and a number of profiling tools exist to help customize such interventions. Most of these tools were originally designed as paper-based questionnaires, but the growth of digital adherence technologies (DATs) illuminate the need for the development of digital profiling systems that can interact with fully automated patient interfaces.
Objectives: The objective of this study was to examine existing frameworks from medicine, psychology, sociology, consumer behavior and economics to elaborate a comprehensive, quantifiable profiling approach that can be used to drive the customization of patient support initiatives.
Results: Building primarily on Icek Ajzen's Theory of Planned Behavior (TPB), the Health Belief Model (HBM) was used to inform the beliefs about behavior posited in the TPB, while incorporating established factors regarding self-efficacy in the "control" elements of the TPB and

selected social and psychological factors in the other constituents of the model. The resulting SPUR (Social, Psychological, Usage, Rational) framework represents a holistic, profiling tool with quantifiable outputs that describe a patient's behavioral risks and the drivers of that risk.

Conclusion: An interactive, digital questionnaire built around SPUR represents a potentially useful tool for those building interactive digital support programs for patients with chronic diseases.

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Symposium ID and title if part of symposium:
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Last updated: 27th November, 2019
By: jurgens.10@osu.edu, Lab Manager Christopher Jurgens

Sex and family history of heart disease in the inflammatory response to acute stress.

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Background/purpose: Prior studies indicate influences of acute stress on inflammatory biomarkers of cardiovascular disease (CVD) risk, including homocysteine (HCY) and c-reactive protein (CRP). However, individual differences in sex and family history of CVD have not been examined.

Methods: This study evaluated responsivity of HCY and CRP to psychological and physical stress among 77 young adults (40 women; mean age=39.8 ± 6.2 years; range: 30-49 years) with a confirmed family history (FH) of CVD (FH+ = 32; FH- = 45). Eligible participants completed two fasting laboratory sessions (speech stress and exercise stress), with at least one week between sessions and the order of sessions randomly assigned. Speech stress followed a standardized protocol with videotaped oral presentation. Exercise stress was a standardized maximal test on a stationary bicycle. Blood was drawn at rest, during each stressor, and during recovery from each stressor to assess HCY and CRP. Proc Mixed procedure (SAS) was utilized in repeated measures analyses of HCY and CRP, with FH and sex as between subjects factors and time (rest, stress, recovery) as a within subjects factor. Biomarker values were adjusted for plasma volume changes.

Results: Speech stress results indicated significant time (p<.001) and sex (p=.003) main effects for HCY; and time (p<.001), FH (p<.001) and sex (p=.01) main effects for CRP; but no interactions. Results of the exercise stress were nearly identical. Thus, sex and FH are related to biomarker levels, but biomarker reactivity was not associated with sex or FH, and results did not differ by type of stress

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Submission ID: 244
Symposium ID and title if part of symposium: 37

Women's health during phases of hormone transition in the life course: On psychobiological predictors of psychopathology and resilience

Decision: Accepted, Symposium
Last updated: 27th November, 2019
By: h.suess@psychologie.uzh.ch, M. Sc. Hannah Süss

Psychological resilience in the perimenopause – Findings from the Swiss Perimenopause Study

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Background: Despite significant biological, psychological and social challenges in perimenopause, most women report an overall positive well-being. They seem to be resilient to potentially negative effects of this life phase. The objective of this study was to find out which psychosocial factors contribute to resilience in perimenopausal women.

Method: The Swiss Perimenopause Study is investigating 160 perimenopausal women (40-60 years). Resilience was measured using the Resilience Scale 11 (RS-11), optimism using the Life Orientation Test (LOT-R), emotional stability using the Big Five Inventory (BFI), emotion regulation using the Emotion Regulation Questionnaire (ERQ), self-compassion using the Self Compassion Scale (SCS) and self-esteem using the Rosenberg Self-Esteem Scale (RSE).

Results: Optimism (r = .35, p = .000), emotional stability (r = .22, p = .007), emotion regulation (r = .20,p = .013), self-compassion (r = .43, p = .000) and self-esteem (r = .43, p = .000) are associated with resilience in perimenopausal women. Those resilience factors are related to higher life satisfaction (SWLS; β= .38, p = .001), lower perceived stress (PSS-10; β= -.33, p = .002) better overall well-being (BSI; β= -.46, p = .000), better general health (GHQ-12; β= -.34, p = .003), less psychological complaints (MRS; β= -.43, p = .000) and lower depressive symptoms (ADS-L; β= -.35, p = .002).

Conclusions and implications: Our findings confirm that resilience is strongly related to women's well-being in perimenopause.

Submission ID: 246
Symposium ID and title if part of symposium: 29

Behavioral cancer interventions: Identifying psychological, social, and biological influences and outcomes across the translational research spectrum

Decision: Accepted, Symposium
Last updated: 27th November, 2019
By: dsorkin@uci.edu, Dr. Dara Sorkin

Interpersonal influences on health outcomes within the context of a behavioral weight loss intervention for high-risk breast cancer survivors

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Background/purpose: Breast cancer survivors are at risk for weight gain, which may contribute to heightened inflammation and symptom burden. Behavioral interventions, including mobile health applications, hold significant promise for individual self-management. At the same time, interpersonal influences affect health-promoting behavior and might shape the impact of such self-guided weight management interventions.

Methods: Forty-eight breast cancer survivors were enrolled in a 12-week mobile-health weight loss pilot intervention. At baseline and 12 weeks, participants completed questionnaire measures of social support and undermining (e.g., offering unhealthy food) from others in relation to their weight loss goals. Body mass index (BMI) was computed at each time point, and plasma was collected via venipuncture for assessment of proinflammatory biomarkers.

Results: Among those who lost at least 2.5% of their BMI, greater social support was associated with weight loss (B=-0.53, p=0.04); however, among respondents who did not loss at least 2.5% of their BMI, increased undermining was associated with a trend toward weight gain (B<0.1, p=0.09). Weight loss, in turn, was associated with a trend-level increase in TNFa (B=-0.08, p=0.08) and a significant decrease in IL10 (B=1.14, p=0.03).
Conclusions and implications: These results highlight the potential impact of interpersonal influences on intervention outcomes, as well as the health benefits of weight loss. Despite the small sample size, findings suggest that self-management mobile interventions may benefit from leveraging positive interpersonal influences and safeguarding against negative influences on weight-loss efforts.

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Symposium ID and title if part of symposium:
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Last updated: 27th November, 2019
By: efkruege@iu.edu, Ms. Ellen Krueger

Symptom Importance in Advanced Lung Cancer Patients

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Background/purpose: Cancer symptom research has largely focused on severity, frequency, and distress. Examining the importance of symptom improvement following treatment would also inform patient-centered care. To this end, the present study examined associations between symptom severity and importance and identified symptom importance profiles in advanced lung cancer patients, a population with high symptom burden.
Methods: Advanced, inoperable lung cancer patients (*N*=102, 46% male, 83% White, average age=65) were recruited from an academic cancer center in the Midwestern U.S. to participate in a cross-sectional survey. Patients completed measures of symptom severity and importance (i.e., breathlessness, cough, fatigue, sleep problems, pain, nausea, lack of appetite, and emotional distress). Patients only rated the importance of symptoms that they had experienced during the past week; thus, five patients were excluded from the latent profile analysis (LPA).
Results: Moderate, positive correlations were found between the importance and severity of all symptoms, *rs*=0.30-.58, *ps*<0.05, except for lack of appetite, *r*=.26, *p*=.12. LPA revealed four patient subgroups based on their importance ratings. Subgroup 1 rated all symptoms as low in importance (12%). Subgroup 2 rated breathlessness, cough, and sleep problems as low and the other symptoms moderately (30%). Subgroup 3 rated nausea and emotional distress as low and the other symptoms moderately (24%). Subgroup 4 rated all symptoms highly (34%).
Conclusions and implications: Findings suggest that symptom severity and importance are related yet distinct aspects of the symptom experience in advanced lung cancer. Furthermore, patients have heterogeneous priorities for the management of common symptoms, which has implications for the tailoring of treatment.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 27th November, 2019
By: jennifer.carty@mclaren.org, Associate Director of Behavioral Medicine Education Jennifer Carty

Beyond mental health: keys to utilizing integrated primary care to address lifestyle behavior change in an underserved, diverse patient population

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Background: Integrated primary care (IPC) provides brief assessment and treatment of a range of health conditions common in primary care, though has been underutilized for health behavior (HB) concerns (e.g., diabetes, hypertension). Health psychologists in primary care may improve the ability to address HB associated with common chronic conditions. The aim of the current study was to improve the scope of IPC using a continuous quality improvement (CQI) model.
Method: The current study was conducted in two residency ambulatory care clinics, family medicine (FM) and internal medicine (IM), that serve a low SES urban population. To improve the utilization of IPC for HB, based on a needs assessment and input from key stakeholders, foundational changes occurred. Systemic weaknesses were identified and addressed, including: access to behavioral health consultants, health-center wide education on IPC, and HB screening.
Results: There has been a dramatic increase in the utilization of IPC, particularly for HB. Prior to the implementation phase, average monthly consultations were 15.67 (FM M=13; IM M=2.67) and consultations for HB concerns were low (8.5%). Following the implementation phase, average consultations per month doubled (M=32.11), with the most significant increase in the past 3 months (M=42; FM M=26, IM M=16) Of consultations occurring after the implementation phase, 24.9% were for HB concerns (FM=27.36%; IM=19.31%).
Conclusions and implications: Systemic, evidence-based CQI efforts focused on the unique skill-set of health psychologists have been effective in improving IPC for HB change in two clinics. Further utilization of HB-focused IPC may lead to improved patient and systems outcomes.

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Last updated: 27th November, 2019
By: chelsea.moran1@ucalgary.ca, Ms Chelsea Moran

Psychosocial distress in patients with cutaneous melanoma: Validation of the Skin Cancer Index (SCI) in a Canadian sample

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Background/purpose: The Skin Cancer Index (SCI) is a measure of psychosocial distress originally developed for use with patients with non-melanoma skin cancer. The aim of this study is to examine the factor structure and psychometric properties of the SCI in a sample of patients with melanoma.
Methods: This study uses data from an observational study with longitudinal follow-up (five time points over 2.5 years) examining predictors of skin self-examination in melanoma patients from Montréal, Canada. Exploratory factor analysis (EFA) was used to investigate the factor structure of the 15-item SCI scale. Reliability was assessed using Cronbach's alpha and correlations with other psychosocial measures of anxiety and depression, fear of cancer recurrence, quality of life and emotional well-being were computed to examine construct validity.
Results: EFA results with 241 participants revealed a two factor structure, based on two Eigenvalues > 1 (6.55, 2.46) and examination of the scree plot. The two-factor structure had acceptable fit, $\chi 2$(N=241, df=76)=292.91, *p*<.001, RMSEA=.11, 90% CI[.10, .12], CFI=.90, TLI=.86, and had no significant cross-loadings. Cronbach's alpha for both factors was high (α_{F1}=0.88, α_{F2}=0.91). Both factors showed positive associations with measures of anxiety and depression (r_{F1}=.45, r_{F2}=.31) and fear of cancer recurrence (r_{F1}=.62, r_{F2}=.40) and negative associations with quality of life (r_{F1}=-.42, r_{F2}=-.38) and emotional well-being (r_{F1}=-.53, r_{F2}=-.39).

Conclusions and Implications: Our study suggests that the SCI functions as a reliable two-factor scale assessing emotional distress and interpersonal distress in patients with melanoma.

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Decision: Accepted, Oral
Last updated: 27th November, 2019
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Depression increases HIV transmission risk in HIV-positive older adults who engage in condomless sex with serodiscordant partners

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Background: The overwhelming majority of persons living with HIV (PLWH) take precautions to reduce the likelihood of transmitting HIV to uninfected partners. One risk reduction technique is ensuring one's sexual partner' use pre-exposure prophylaxis (PrEP). Depression, a common comorbid psychiatric condition in PLWH, may complicate efforts to refrain from HIV sexual transmission risk behavior. This study examined the association between depressive symptomatology in older PLWH and their HIV-seronegative partners' use of PrEP.
Methods: Participants were 1,468 adults ≥ 50 years of age in geographically diverse areas across the United States who screened eligible for a clinical trial evaluating the efficacy of telephone-delivered sexual risk reduction strategies. All participants were HIV-positive and had engaged in condomless sex with HIV-negative persons in the past 90 days. Participants completed a self-administered survey that assessed demographic characteristics, depression symptom severity (measured by the Patient Health Questionnaire 9-item depression measure [PHQ-9]), and their HIV-negative sexual partners' use of PrEP.
Results: Logistic regression examined the linear and two curvilinear associations (quadratic and cubic) between the participants' PHQ-9 depression scores and their HIV-negative sex partners' use of PrEP. Only the linear relationship between depression and PrEP use reached statistical significance. For each 1 point increase in PHQ-9 score, the odds of participants' HIV-negative sex partners using PrEP decreased by 3% (Odds Ratio=0.97, 95% CI=0.95-0.99). This relationship remained significant after controlling for demographic characteristics.
Conclusions and implications:: Depression may reduce HIV-positive older adults' motivation to prevent HIV transmission by ensuring that their HIV-negative sexual partners use PrEP.

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Decision: Accepted, Oral
Last updated: 27th November, 2019
By: shelby.langer@asu.edu, Dr. Shelby Langer

The social cognitive processing model of emotional adjustment to cancer: support from a smartphone-enabled ecological momentary assessment study

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Background: Per the social cognitive processing (SCP) model of emotional adjustment to cancer, talking with a supportive other may facilitate cognitive processing of the cancer experience, while constraints on disclosure can inhibit cognitive processing, leading to distress. We examined this hypothesis using ecological momentary assessment data.
Methods.:Participants (232 patients with stage 2-4 breast, colorectal, or lung cancer and their caregiving partners; M[SD] age = 53[12]; 83% white; 68% female patients; 34% female caregivers) completed measures of perceived partner avoidance, intrusive and avoidant thoughts about cancer, and distress via smartphone twice daily (afternoon and evening) for 14 days (87% completion). Actor Partner Interdependence mediation models were used to examine afternoon intrusive and avoidant thoughts as mediators of associations between afternoon perceived partner avoidance and same-day evening distress.
Results: With intrusive thoughts as the mediator, actor indirect effects (IEs) emerged for both patients (IE=.003, CI=.000, .006) and caregivers (IE=.009, CI=.003, .015). On afternoons when participants (patients or caregivers) perceived their partner as engaging in avoidance during a conversation, they also reported more intrusive thoughts about cancer, which in turn was associated with their own greater distress that evening. A similar actor indirect effect emerged with one's own avoidant thoughts as the mediator (IE=.007, CI=.003, .012 for patients; IE=.006, CI=.001, .011 for caregivers).
Conclusions and implications: These results, from a large cancer sample, lend support to the SCP model and suggest that psychosocial interventions that facilitate processing of cancer-related concerns by targeting intrusive thoughts and/or avoidant responses may decrease distress.

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Symposium ID and title if part of symposium:
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Last updated: 27th November, 2019
By: katrina.champion@sydney.edu.au, Katrina Champion

An eHealth intervention to prevent multiple lifestyle risk factors among Australian adolescents: Baseline results from the Health4Life Initiative

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Background: Alcohol use, smoking, poor diet, physical inactivity, screen time and poor sleep ("the Big 6") are strong determinants of chronic disease. These behaviours emerge during adolescence and commonly co-occur. School-based interventions have the potential to address risk factors prior to the onset of disease, yet few interventions target multiple behaviours concurrently. To fill this gap, we developed *Health4Life*, an eHealth intervention to concurrently prevent the Big 6 among adolescents.
Methods: A randomised controlled trial is being conducted in 72 Australian schools, with schools randomised randomised to *Health4life* or health education as usual. *Health4Life* consists of i) six web-based cartoon modules and a smartphone application (universal prevention for all Year 7 students), and ii) additional app content, delivered to students engaging in 2+ risk behaviours when they are in Years 8 and 9 (selective prevention). Students complete self-report questionnaires at baseline, post-intervention, and 12-, 24-, and 36-months after baseline.
Results: To date, 3898 students (M^{age}=12.8yrs) have completed baseline assessments. Preliminary analyses indicate that 78% did not meet national guidelines for physical activity, 85% exceeded screen time guidelines, 71% were getting too little/too much sleep, 2% had consumed alcohol, 1% had smoked, and 26% reported excessive sugar sweetened beverage consumption. Data collection will be complete by the end of December 2019. Analyses will be conducted on the full sample and presented at the conference.
Conclusions and implications: This is the first evaluation of an eHealth intervention, that spans both universal and selective prevention, to simultaneously target six key lifestyle risk factors among adolescents.

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By: akiomi-tky@umin.ac.jp, Dr. Akiomi Inoue

Workplace social capital and refraining from seeking medical care in japanese employees: a one-year prospective cohort study

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Background/purpose: We examined a one-year prospective association of workplace social capital (WSC) with refraining from seeking medical care (RSMC) among Japanese employees.
Methods: We surveyed 8,417 employees (6,624 men and 1,793 women) aged 18–70 from 12 firms in Japan. We distributed a self-administered questionnaire comprising scales on WSC (score range, 6–24) (Eguchi et al., 2017) and potential confounders (i.e., demographic and socioeconomic characteristics as well as health-related behaviors) at baseline (from April 2011 to March 2013). At a one-year follow-up, we measured RSMC during the follow-up period using a single-item question "In the past year, have you ever refrained from visiting a hospital, clinic, acupuncturist, or dentist despite your sickness (including a slight cold or cavity) or injury?" We conducted multiple logistic regression analysis and trend test by gender.
Results: In the crude model, the low-tertile group of WSC had a significantly higher odds ratio of RSMC compared to the high-tertile group for both genders (odds ratio=1.16 [95% confidence interval: 1.02–1.32] and 1.32 [95% confidence interval: 1.03–1.68] for men and women, respectively). Trend test also showed a significant association of low WSC with a higher prevalence of RSMC (odds ratio=1.03 [95% confidence interval: 1.02–1.05] and 1.05 [95% confidence interval: 1.02–1.07] for men and women, respectively). These patterns remained unchanged after additional adjustments for potential confounders.
Conclusions and implications: Our findings suggest that the lack of social capital in the workplace is associated with RSMC among Japanese employees, independently of demographic and socioeconomic characteristics as well as of health-related behaviors.

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By: anne.soderlund@mdh.se, Professor Anne Söderlund

Compliance and adherence – concept definitions, barriers and facilitation strategies

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Background and purpose: Adherence and compliance in pain treatment have been studied since 1970s but are still unsolved topics in behavior change context. The use of the concepts adherence and compliance is ambiguous. The lack of clarity can contribute to non-systematic facilitation strategies in research and practice and thus affect the achievement and maintenance of behavior change. The aim of this narrative literature review was to clarify the definitions of the concepts of adherence and compliance in the area of pain and outline recent research on their key barriers and facilitating strategies.
Methods: A narrative literature review was conducted regarding the definitions of adherence and compliance and their barriers and facilitators. Descriptive analysis was used.
Results: Compliance, important in e.g. opioid treatment context, can be defined as a non-autonomous way of following orders from therapists. Adherence can be defined as an independent decision by the patient to follow an advice or regime. Lack of time has been reported as a major barrier for adherence, e.g. in exercise, and age, gender and type of cancer have shown to influence adherence in intervention for cancer-related distress. However, research on the most effective strategies for facilitating adherence and compliance is lacking.
Conclusions and implications: Clearly defined concepts of compliance and adherence as well as identifying barriers and facilitating strategies in behavior change context can support conducting research in these topics and lead to better patient-related outcomes and maintenance of behavior change, in both clinical work and research, Thus, these topics need to be seriously considered in future studies.

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Last updated: 28th November, 2019
By: a.s.anderson@dundee.ac.uk, Prof Annie Anderson

Volunteer Lifestyle coaching to support reduction of post- menopausal cancer risk factors – The ActWELL study

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Background/purpose: The ActWELL RCT aims to test the effectiveness of a 12-month, volunteer coach delivered, weight management programme in post-menopausal women with a BMI>25 kg/m^2 attending routine breast cancer screening appointments. We report results on recruitment and retention of volunteer coaches, and programme delivery by them.
Methods: The intervention was delivered in two face to face sessions and 9 support calls in local leisure settings. Data on volunteers were collected from routine administrative data from the charity Breast Cancer Now, self -reported fidelity data assessed by questionnaire at study exit and blind audio-recorded coach sessions assessed for adherence to protocol.
Results: From 170 applicants for volunteer posts, 114 (66%) were interviewed and 66 (58%) were trained. Of these, 45 (68%) went on to be ‘active’ coaches and were retained through the trial. The volunteers delivered 528 coaching sessions and 1940 support calls to 279 women allocated to the intervention arm and a further 100 coaching sessions (post study) to women allocated to the control arm. Although challenging logistically to coordinate timelines for recruitment, training and deployment of coaches, and match participants to them, coaches reported few concerns. Self-reported fidelity data was provided by 32 coaches who described “always” delivering seven key intervention components (range 67 to 96%). Independent, blind fidelity recording of 35 coaching sessions and 22 support calls indicated 69-88% adherence to protocol.
Conclusions and implications: Volunteer coaches can be recruited and trained to support community capacity for weight management in post-menopausal women.

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Symposium ID and title if part of symposium:
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Last updated: 28th November, 2019
By: smithp18@cardiff.ac.uk, Miss Pamela Smith

Recruitment of hard-to-reach smokers using a social media strategy

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Background/purpose: Recruiting smokers to research studies is challenging due to psychosocial barriers. Over one fifth of the UK population aged 55 and older are current smokers (ONS, 2019), with smoking rates highest in areas of socioeconomic deprivation. This UK wide study aimed to recruit older, deprived smokers to an online survey of smoking-related beliefs and behaviours using novel methods.
Methods: Participants were adult smokers aged 50 years or older and from socioeconomically deprived backgrounds. An algorithm including three deprivation measures was used to screen participants based on education, income and employment. Multiple recruitment strategies were used, including Facebook advertising to target age and location.
Results: The targeted Facebook advertisements reached 40,296 people, had 1,230 post engagements and resulted in 1,140 link clicks to the online survey. The target sample of 300 participants was achieved of whom most were recruited through Facebook (n=281, 93.7%). Seventy-two percent of participants (n=216) were renting from a housing association and 61% (n=183) had no qualifications or left school before age 16. Postcode data indicates that 79.4% (n=232) were recruited from the two lowest deprivation quintiles. Data on gender shows that 14.3% (n=43) of participants were male and 85.7% (n=257) were female.
Conclusions and implications: Targeted Facebook advertising is an effective method for recruiting older smokers from low socioeconomic groups. However, under-presentation of males in the current study suggests that there is a potential gender bias. Social media platforms offer a new avenue for engaging hard-to-reach smokers, while providing privacy and flexibility for study participants.

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Decision: Accepted, Oral
Last updated: 28th November, 2019
By: y.takano1991@gmail.com, M.A. Yuta Takano

Anxiety as a mediator of the relationship between perfectionism and perceived stress

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Background/purpose: Perfectionists likely perceive high stress (Prud’homme et al., 2017). They experience extreme anxiety in stressful situations including failure (Stoeber et al., 2014). This study examined whether anxiety mediates perfectionistic tendency’s relationship with perceived stress.
Methods: The Clinical Perfectionism Questionnaire (CPQ), Perceived Stress Scale (PSS), and Generalized Anxiety Disorder-7 (GAD-7) scale were administered to 607 undergraduate students (214 male, 385 female, 5 others, and 3 unknown, age: M=19.34±1.54 years). Mediation analysis was performed with scores on CPQ as the independent variable, PSS as the dependent variable, and GAD-7 as the mediator. Bootstrap method was used for analyzing the mediation effect. The Ethical Board in Health Sciences University of Hokkaido, Japan granted ethical approval for the study.
Results: The total effect of the CPQ scores on PSS scores was significant (total effect = .19, p<.05, 95%CI = .12 to .26). The direct effect from the CPQ to PSS scores when controlling GAD-7 score as a mediator was not significant (direct effect = -.02, n.s., 95%CI = -.08 to .04). The indirect effect of GAD-7 score was significant (indirect effect = .21, p<.05, 95%CI = .17 to .27). Therefore, anxiety fully mediated perfectionistic tendency’s relationship with perceived stress.
Conclusions and implications: High anxiety plays an important role in a perfectionists’ perceived stress in daily life. Improving their anxiety reduces their daily experiences of high stress. Perfectionists experience extreme anxiety (Limburg et al., 2017). Therefore, to reduce perceived stress, perfectionists must acquire coping strategies for anxiety.

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Symposium ID and title if part of symposium:
Decision: Accepted, Oral

Last updated: 28th November, 2019
By: jamie.hartmann-boyce@phc.ox.ac.uk, Dr Jamie Hartmann-Boyce

Behavioural interventions for smoking cessation: a suite of Cochrane reviews including an overview of reviews and component network meta-analysis

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Purpose: We set out to examine the effectiveness of behavioural interventions for smoking cessation and to investigate how their components and characteristics impact effect.
Methods: We identified existing Cochrane reviews of behavioural treatments for smoking cessation, updating these where needed. We followed standard Cochrane methods and pooled results in pairwise meta-analyses. We used GRADE to evaluate certainty. We screened relevant Cochrane reviews for trials that contained interventions and populations that would be considered 'jointly randomizable', and included these in a component network meta-analysis to determine the most effective intervention elements.
Results: The overview covers 35 Cochrane reviews; 16 were updated as part of this research. Certainty in the evidence ranges from very low (e.g., hypnotherapy) to high (e.g., incentives). Findings from individual reviews show variations in effectiveness, with considerable unexplained statistical heterogeneity in pairwise meta-analyses. Updates led to significant changes in conclusions; for example, the evidence for incentives was upgraded from low to high certainty (RR 1.49, 95% CI 1.28 to 1.73); evidence no longer supports the use of motivational interviewing for smoking cessation (low certainty, RR 0.84, 95% CI 0.63 to 1.12); and analyses were restructured in multiple reviews. Over 400 randomized controlled trials were eligible for inclusion in the network meta-analysis.
Conclusions and implications: Findings highlight areas where more research is needed, as well as areas where the evidence base is stable and resources may be better focused elsewhere. Findings also highlight where resource may be best placed regarding behavioural support for smoking cessation.

Submission ID: 270
Symposium ID and title if part of symposium: 44

"What matters to whom?" – online screening and personalised treatment for psychological and physical adjustment to chronic disease

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: c.k.cardol@fsw.leidenuniv.nl, drs. Katja Cardol

Development and evaluation of E-GOAL: a tailored ehealth care path to identify and treat psychosocial barriers for a healthy lifestyle in chronic kidney disease

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Background/purpose: Non-adherence to a healthy lifestyle is common among patients with non-dialysis-dependent chronic kidney disease (CKD), and is often influenced by psychological distress. The E-GOAL study aims to develop and assess the effectiveness of a tailored e-care path for psychological distress and lifestyle problems in patients with CKD.
Methods: Eight focus groups were conducted with patients and health care professionals. Transcripts were analysed using content analysis. After inductive analysis, codes were deductively mapped on the Theoretical Domains Framework (TDF). Based on these results, the e-care path was developed with online screening and cognitive-behavioural therapy for patients with high levels of psychological distress and lifestyle problems.
Results: Many psychosocial barriers and facilitators across all fourteen TDF-domains emerged and were incorporated into the e-care path, including social support, and patients' lack of knowledge and intrinsic motivation for engagement in healthy lifestyle behaviours. Participants confirmed the impact of psychological distress (i.e., depressive symptoms, anxiety, and stress) on lifestyle problems. Effectiveness of the e-care path is currently being evaluated in a randomised controlled trial. Primary outcome is psychological distress after the 3-month intervention and at 6-month follow-up. At this moment, RCT data collection is finished: 460 patients completed screening questionnaires and 121 were randomised. Analysis is ongoing.
Conclusions and implications: Patients with CKD experience a wide range of psychosocial barriers and facilitators. This implies that lifestyle interventions should be tailored to the individual by means of screening for and addressing psychosocial determinants, including strengthening social support, enhancing intrinsic motivation, and treating psychological distress.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 28th November, 2019
By: betina.heinsbaek.thuesen@regionh.dk, PhD Betina Thuesen

Social inequalities in functional somatic disorders

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Background/purpose: Functional somatic disorders (FSD) refer to clusters of recurrent disabling bodily symptoms (e.g., pain and fatigue) that are poorly understood. The clinical implication of FSD varies from vague symptoms to extreme disability with reduced quality of life. However, little is known about potential social inequalities in FSD. The aim of this study was to investigate associations between FSD and various measures of social position.
Methods: The project is based on data from the Danish Study of Functional Disorders (DanFunD); a large-scale population-based cohort study designed to focus on FSD. A random sample of 9,656 men and women aged 18-76 years were included. FSD was defined by use of the Bodily Distress Syndrome (BDS) construct. Social position was measured by questionnaire data on self-reported social status, education, labour market association and cohabitation. Associations were analysed by logistic regression models adjusting for age and sex.
Results: BDS-cases are more often living alone than non-cases (27.7% vs. 21.5%), and BDS is negatively associated with labour market

association and level of vocational education. On a scale showing self-assessed social status the prevalence of BDS was 46.6% among those ranking themselves on the lowest steps, whereas the prevalence was 8.4% among those ranking themselves on the highest steps.
Conclusions and implications: FSD are associated with poor social position as measured by questionnaire data on self-reported social status, education, labour market association and cohabitation. Further research on socioeconomic consequences for individuals as well as society is warranted

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Submission ID: 272
Symposium ID and title if part of symposium: 44

"What matters to whom?" – online screening and personalised treatment for psychological and physical adjustment to chronic disease

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: j.tommel@fsw.leidenuniv.nl, MSc Judith Tommel

"What matters to you?" – patient priorities in patients with (end-stage) chronic kidney disease and the development of a personalised instrument for use in healthcare and clinical trials

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Background/purpose: Patients with chronic kidney disease (CKD) suffer from diverse problems and have to make fundamental lifestyle changes. In addition, especially patients on dialysis experience a low health-related quality of life (HRQOL). In this study, we explored dialysis patients' perspectives on their most prominent problems and we developed a digital personalised instrument to identify, prioritise, and monitor individual problems over time, both in standard care and in clinical trials.
Methods: In a Dutch prospective multicentre study, patients with CKD treated with dialysis completed questionnaires on HRQOL and a wide range of potential disease-related problems at baseline (N=175) and six months follow-up (N=130).
Results: Patients' HRQOL was one to two SDs lower compared to the general population (range RAND-SF-36 T-scores, 36-45). Patients rated fatigue, impaired mobility, and increased dependence as their most prominent problems, which was also reflected in their low HRQOL scores on these domains. Based on these results and six cognitive interviews with patients in several stages of CKD, the Personalized Priority and Progress Questionnaire (PPPQ) was developed, which contains 8 questions on several domains of functioning and 5 questions on lifestyle behaviours. In addition, patients can indicate their most prominent problems. The PPPQ can be administered repeatedly to assess domain-specific changes over time.
Conclusions and implications: A personalised approach is needed to treat the various problems patients with CKD face. The PPPQ could be a useful tool to assess these problems and to evaluate individual changes over time. Currently, the PPPQ is being evaluated in two e-health RCTs.

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Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 28th November, 2019
By:

Understanding the implementation of the Antibiotic Review Kit (ARK) intervention in hospitals: Healthcare professionals' perspectives.

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Background/purpose: Antibiotic Review Kit (ARK) is a behavioural intervention that aims to safely reduce antibiotic use in hospitals by supporting healthcare professionals (HCPs) to stop antibiotics early if they are no longer needed. Results from a feasibility study in one hospital are promising, with rates of stopping increasing from 9% (6/69) at baseline to 35% (156/450) post-implementation ($p<0.0001$). However, little is known about the feasibility and acceptability of ARK in different hospital contexts. The purpose of the current study was to understand HCPs' experiences of implementing ARK in an initial sample of 15 hospitals taking part in a cluster-randomised stepped-wedge trial.
Methods: ARK champions (N=15) leading the implementation of ARK at their hospital were invited to take part in a 30-50 minute telephone interview three to nine months after the end of the initial 12-week implementation period. Semi-structured interviews explored their experiences of planning, implementing and sustaining ARK. Interviews were recorded and transcribed verbatim, before undergoing inductive thematic analysis.
Results: Five key themes emerged. Champions had 'positive perceptions of ARK overall', even when challenges were encountered. They felt that good 'staff relationships and engagement' facilitated implementation. Key issues included 'staffing and time pressures', 'managing drug chart changes', and the limited impact of 'using ARK only in acute medical units', rather than implementing it more widely.
Conclusions and implications: Although there are some challenges to implementing ARK, the intervention appeared to be acceptable and feasible. Better implementation may be supported through wider engagement with clinical teams across different hospital wards.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 28th November, 2019
By: matoba-yuki2@ed.tmu.ac.jp, Yuki Matoba

Health status and housing outcomes of homeless adults with mental health problems in urban areas of Japan

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Background/purpose: The number of sheltered homeless people in Japan is increasing. However, very few studies examine housing outcomes for homeless people living in shelters. This study endeavors to clarify the health status and housing outcomes of homeless adults with mental health problems in urban areas of Japan.
Method: Descriptive data was collected from three years of admission/exit records of 12 shelters in urban areas of Japan. A sample of 194 persons with mental health problems on admission was descriptively analyzed. This study was conducted with approval of the Institutional Review Board of Tokyo Metropolitan University, Arakawa Campus in 2016.

Results: Of the 194 subjects, 183 (94.3%) were male with an average age of 61.7 years. The proportion of reported dementia was 24.2%, schizophrenia at 20%, addiction at 25%, and communication difficulties at 13.9%. Within one year of admission, 23 (11.9%) subjects were moved to facilities for the disabled, 7 (3.6%) subjects were moved to rental apartments, and 24 (12.4%) subjects were moved to hospitals. However, 107 (55.2%) subjects had remained in shelters for over a year.
Conclusions and implications: This study shows that even after one year of living in shelters, more homeless people in urban Japan appear to remain in shelters rather than move to stable residence. Homeless people with mental health problems may have difficulty transitioning to stable residence and further research is needed into the factors which may hinder such transition.

Submission ID: 275
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 28th November, 2019
By: r.castro@psychologie.uzh.ch, Dr. Rita Amiel Castro

Adverse climatic conditions have negative effects on birth outcomes: evidence from Tanzania

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Background/purpose: Climatic changes are bound to have particularly serious implications for public health in least developed countries. We shed light on one such implication, which has been understudied to date, namely birth outcomes.
Methods: Based on unique registry data from Kilimanjaro Christian Medical Centre in Tanzania from 2001-2015 (N=30,068 deliveries), we investigate whether and how variation in intrauterine exposure to climate conditions affects neonatal birthweight, length, head circumference, and Apgar scores, measured within 24 hours postpartum.
Results: The results suggest that, overall, exposure to adverse climate conditions is associated with more negative birth outcomes.
Conclusions and implications: Because negative birth outcomes are likely to have lasting adverse health impacts and are likely to increase in magnitude with accelerating climate change, the main policy implication is that climate change adaptation efforts should pay greater attention to limiting the climate change exposure of pregnant women.

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Symposium ID and title if part of symposium:
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Last updated: 28th November, 2019
By: r01ujt15@abdn.ac.uk, Mrs Uma Thomas

Time preference and present bias: an intervention to increase physical activity

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Background/purpose: Decisions about engaging in physical activity often involve trades-offs between current costs and future benefits. Economic theory suggests that these decisions may be influenced by an individual's time preference rate (how heavily they discount the value of future events) and how present biased they are (how much they overweight the value of an immediate outcome). Psychology points to the discount rate being related to how connected an individual is to their future self while present bias might involve the conflict between temptation and self-control. We test a novel intervention designed to increase physical activity behaviour by improving an individual's *connection* to their future-self and counteracting temptation using *commitment*.
Methods: 100 inactive UK men and women were randomly assigned to one of three groups: pedometer-based walking plan; pedometer-based walking plan plus *connection* intervention; pedometer-based walking plan plus *connection* & *commitment* interventions. Physical activity was recorded at baseline and week four: pedometer step counts and self-reported activity minutes. Analyses were performed on an intention to treat basis using linear regression and controlling for baseline characteristics.
Results: Results based on the first 57 participants show increased activity at week four of 1900 steps per day/190 minutes per week ($p < .01$) across all arms relative to baseline. The connection group had an insignificant increase in activity of 850 steps per day/ 105 minutes per week compared to control.
Conclusions and implications: All groups were successful in increasing their physical activity over baseline, with the connection intervention showing a non-significant increase relative to the control.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 28th November, 2019
By: susanlutgendorf@gmail.com, Susan Lutgendorf

Cancer survivors undertaking challenging journeys: improved mood and narratives of growth and resilience

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Background/purpose: Above and Beyond Cancer is a nonprofit that takes cancer survivors and caregivers on physically and emotionally challenging journeys for the purpose of empowerment, inspiration, and community building. This study examined effects of these journeys on mood and explored processes related to personal growth.
Methods: This mixed-methods study examined responses of heterogeneous cancer patients participating in journeys to Kathmandu (Nepal), Mt. Kilimanjaro (Tanzania), and Mt. Kailash (China). Trips also included service at a local cancer hospital. 21 survivors completed surveys and short essays pre-departure, 3 weeks and 3 months post-trip. All trips were analyzed together.
Results: Participants (mean age 50.8 y/o; 76% female) reported significant decreases in POMS anxiety (p=0.02) and trends to decreased anger and total POMS distress (p*'s* =.08). Based on qualitative responses, some of the decreased distress may be explained by the deep connection with others developed during the trip, and gratitude for being alive and for the opportunity to participate in the trip. Qualitative responses reflected finding meaning and deeper understanding in survivorship as a result of the trip, as well as inner strength to accomplish physically and emotionally challenging goals. Survivors gained new perspectives and shifted values and priorities, leading to instances of growth and transformation both during and after the trip.
Conclusions and implications: Limitations include lack of a control group and completion of surveys by only a subset of survivors. These

findings suggest that challenging journeys in the context of group support can play a role in enhancing mood and personal growth of cancer survivors.

Submission ID: 278
Symposium ID and title if part of symposium: 46

Beliefs about stress - from psycho-biological mechanisms to interventions

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: johannes.laferton@googlemail.com, Johannes Laferton

Changing beliefs about stress (c-bas): a pilot randomized wait-list-controlled trial optimizing stress beliefs in university students

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Background/purpose: Negative beliefs about stress have prospectively been associated with detrimental health and well-being, such as detrimental daily affect, higher somatic symptom burden and increased mortality. The current study evaluated whether a brief, online video intervention can optimize university students' beliefs about stress (primary outcome), and whether this would result in improved affect, and reduced somatic symptoms (secondary outcomes).
Methods: *N*=122 university students were randomly allocated (1:1) to a wait-list control group (*n*=68) or to Changing Beliefs about Stress (C-BAS; *n*= 54), a 9-minute online video containing psychoeducation on the positive effects of stress, on the effects of stress beliefs, and an imagination exercise to foster positive stress beliefs. Participants completed online questionnaires prior to randomization and again two weeks following the intervention including the stress mindset measure (SMM), the positive and negative affect schedule (PANAS), and the somatic symptom scale (SSS-8).
Results: Participants in the C-BAS condition showed significantly larger changes towards a more positive stress mindset (ΔSMM: *M*=0.61; *SD*= 0.53) compared to the wait-list control group (*M*=0.04; *SD*=0.28; *B*=0.53; *95%CI*= 0.30-0.75; *p*<.001, *d*=1.24). However, there were no differences between C-BAS and the wait-list control group regarding changes in positive and negative affect, nor regarding somatic symptoms.
Conclusions and implications: A brief online video intervention substantially enhanced university students' beliefs about stress. However, those changes did not result in short term effects on affect or somatic symptoms. Future studies might benefit assessing stress-event-related and long-term outcomes to further evaluate this interventions' stress preventive potential.

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Symposium ID and title if part of symposium:
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Last updated: 28th November, 2019
By: kristian.krause@med.uni-greifswald.de, - Kristian Krause

A computer-tailored motivational intervention to foster depression preventive behaviors among proactively recruited medical care patients: results from a randomized controlled trial

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Background/purpose: Depressive symptoms may be addressed by motivating individuals to apply evidence-based depression preventive behaviors (DPBs). Here we present data from a randomized controlled trial analyzing if a newly developed unguided computer-based intervention based on the transtheoretical model of behavior change can successfully promote uptake of such behaviors.
Method: Adult patients from German ambulatory practices and general hospitals (n=12,828) were systematically screened for depressive symptoms. Individuals who reported at least one subsyndromal depressive episode within the past year were eligible for study participation. In total, 456 patients (mean age 41.3 years, 63.4% female) were randomized to an intervention and a control condition. Over a period of 6 months, intervention participants received 3 individualized motivational feedback letters and weekly text messages promoting 5 domains: dealing with unhelpful thoughts, stress management, exercising, help-seeking, and behavioral activation. The number of applied DPBs was assessed at baseline and 6 (n=335) and 12 (n=338) months later. Data were analyzed using generalized estimation equation modeling adjusting for age, sex, and recruitment setting.
Results: In the total sample, the number of applied DPBs increased over time (p<0.001). At month 6, increases were larger in the intervention compared to the control condition (p=0.003). At month 12, the intervention effect vanished (p=0.087).
Conclusions and implications: The intervention was effective in motivating individuals to apply DPBs. However, intervention effects were not persistent. Research is needed on how to maintain effects in unguided minimal intervention formats.

Submission ID: 280
Symposium ID and title if part of symposium: 13

Behavioural aspects of cardiac rehabilitation - Unresolved problems and new solutions

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: sophia.humphries@kbh.uu.se, Miss Sophia Humphries

Collaborating with patient research partners to develop an internet-based psychological intervention for patients with myocardial infarction with nonobstructed coronary arteries (MINOCA)

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Background/purpose: Collaboration with patient research partners (PRPs) is rapidly gaining momentum, with the purpose to ensure that new, evidence-based interventions are robustly tailored to the specific needs of the patient group. Myocardial infarction with nonobstructed

coronary arteries (MINOCA) often leaves patients requiring psychological support, yet there is no consensus of a treatment scheme for these patients. The development of an internet-delivered intervention could be beneficial in providing easy and remote access to psychological treatment for patients with MINOCA. Aim: To develop a tailored psychological intervention for patients with MINOCA using the internet as a delivery method.
Methods: Using a participatory design, seven patients diagnosed with MINOCA participated in the development of a web-based intervention in collaboration with a team of psychologists, cardiologists and researchers. The process took an iterative building-block approach whereby content was presented stepwise to the PRPs through web-based exercises and was adjusted accordingly following feedback.
Results: The continued collaboration between PRPs and the research group resulted in a 9-step internet-delivered intervention that was cognitive behavioural therapy-based (CBT), therapist-guided, and tailored towards patients with MINOCA. PRP input helped modify key components of the intervention, including therapy content, multimedia (interviews, short-films, relaxation audio), interactive activities (homework tasks), feedback (therapist support) and educational content.
Conclusions and implications: This patient-focused research has produced an internet-based intervention that will undergo evaluation and can lead to a new psychological treatment option for a patient group that has been largely neglected in this area. The possible impact in healthcare and for patients with MINOCA is considerable.

Submission ID: 281
Symposium ID and title if part of symposium: 44

"What matters to whom?" – online screening and personalised treatment for psychological and physical adjustment to chronic disease

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: whitney.scott@kcl.ac.uk, Dr Whitney Scott

Feasibility of online acceptance and commitment therapy for chronic pain: results from a feasibility trial and qualitative study

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Background/purpose: Acceptance and Commitment Therapy (ACT) has growing evidence for chronic pain. Online delivery holds promise to increase the accessibility of ACT. Research is needed to understand the feasibility of online ACT for pain, including how to tailor this treatment for specific populations with a high burden of pain, such as people with HIV.
Methods: A feasibility randomised-controlled trial compared therapist-supported online ACT for pain with medical treatment as usual at a specialty pain clinic. Participants completed questionnaires of pain, functioning, and mood at baseline, and three- and nine- months. A subsequent qualitative study conducted semi-structured interviews with 26 people with HIV and neuropathic pain to explore their views about online ACT for pain. Thematic analysis was conducted on interview transcripts.
Results: For the feasibility trial, sixty-three people with chronic pain were recruited and 75% of these were retained at follow-up. Sixty-one percent of online ACT participants completed treatment. There were small to medium effects (Cohen's d=0.24-0.51) favouring online ACT for mood and functioning at three-months; the effect for functioning was maintained at nine-months (d=0.54). For the qualitative study, three themes were identified regarding the acceptability of online ACT for pain in people with HIV: the desire for holistic pain management, treatment barriers (concerns about the Internet, lack of trust, and symptom exacerbations), and treatment facilitators (accessibility, usefulness of therapist support, social connection, and experiencing success).
Conclusions and implications: The data support the feasibility of online ACT for pain. Engagement can be optimised by tailoring treatment to address identified barriers and facilitators.

Submission ID: 282
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 28th November, 2019
By: kaschnab@uni-mainz.de, - Katharina Schnabel

More exhausting but equally efficient - Emotion regulation in patients with somatic symptom disorder

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Background/purpose: Emotion regulation (ER) has increasingly received attention in clinical psychology, but experimental research on somatic symptom disorders (SSD) is still lacking. This study examines emotional reactivity, the efficacy of two ER strategies, and the regulatory choice in patients with SSD.
Methods: 62 patients with SSD and 61 healthy participants underwent two experiments. In experiment 1, participants rated valence and arousal after being exposed to negative emotional pictures (pre-rating). Then they were asked to either reappraise, suppress emotional expressions or just observe the stimuli and rated valence and arousal again (post-rating). In experiment 2, participants chose freely between reappraisal and suppression. Repeated-measure ANOVAs and t-tests were conducted.
Results: Both groups did not differ significantly in pre-ratings of valence (p=.65, d=-0.08) and arousal (p=.67, d=-0.08). Regarding ER efficacy, both groups showed significantly higher valence and lower arousal in post-ratings compared to pre-ratings, but did not differ significantly from each other. In both groups, reappraisal was significantly more effective than suppression or observation (valence p<.001, η^2=.123, arousal p=.002, η^2=.070). Patients reported significantly more effort when regulating emotions (p=.038, d=-0.38). Regarding the choice between suppression and reappraisal, no significant group difference (p=.38, d=.16) emerged.
Conclusions and implications: Patients with SSD (a) did not show altered emotional reactivity; (b) did not demonstrate lower efficacy in ER; (c) did not select different strategies compared to healthy participants; (d) but perceived ER as more effortful. Findings suggest no deficits in ER, but indicate that patients with SSD might initiate less ER because of higher costs.

Submission ID: 283
Symposium ID and title if part of symposium: 30

Core Outcome Sets (COS) for Alcohol Brief Intervention (ABI) trials: Applications in implementation, criminal justice and health economics research

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: z.khadjesari@uea.ac.uk, Dr Zarnie Khadjesari

Development of a COS for implementation studies on alcohol brief interventions

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Background/purpose: With robust evidence for effectiveness, recent alcohol screening and brief intervention (ASBI) studies have focused on the challenge of implementation in routine healthcare. However, outcomes to assess ASBI implementation are defined in different ways and assessed by different measures. A core outcome set to assess ASBI effectiveness and efficacy has been established. However implementation outcome measures most appropriate for this field are unknown. We will identify which outcomes and associated measurement instruments are validated in healthcare settings and consider their applicability to ASBI.
Methods: We scrutinised the results of systematic reviews (Proctor 2011; Lewis 2015; Khadjesari, unpublished) to identify outcomes and associated measurement instruments employed in implementation research. We also searched databases of outcomes assessed in the ASBI trial literature (Shorter, in press) to determine whether any appropriate implementation outcomes/measures were included.
Results: Proctor's taxonomy identifies a core set of implementation outcomes (acceptability; adoption; appropriateness; cost; feasibility; fidelity; penetration; sustainability). Previous research has identified implementation outcome measures in mental and physical health (n=154 studies), most assess intervention acceptability (n=77) or adoption (n=27) and are of low psychometric quality. There is a need to develop instruments to assess feasibility, appropriateness and sustainability. ASBI trials do not collect implementation outcome data or use validated implementation outcome measures.
Conclusions and implications: Outcome taxonomies exist to improve the quality and consistency of ASBI implementation research, however, there are few validated instruments for their measurement. Future research needs to evaluate the status of ASBI implementation research, and to develop/validate instruments relevant to ASBI.

Submission ID: 284
Symposium ID and title if part of symposium: 43

Establishing external validity for interventions with low acceptability: the example of food and alcohol health warnings

Decision: Accepted, Offered Poster
Last updated: 28th November, 2019
By: agrummon@hsph.harvard.edu, Dr. Anna Grummon

Impact of health warnings on sugar-sweetened beverage purchases: a randomized controlled trial in a laboratory store

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Background/purpose: Policymakers worldwide have proposed requiring health warnings for sugar-sweetened beverages (SSBs). Researchers are increasingly using lab-based settings to evaluate SSB warnings, but the external validity of these settings remains understudied. The objective of this study was to quantify the impact of SSB warnings on participants' purchases in a lab-based store setting and to describe measures of the external validity of the study store.
Methods: Participants (n=400) made one study visit to a life-size replica of a convenience store. Participants were randomly assigned to a health warning arm (SSBs in the store displayed a front-of-package health warning) or a control arm (SSBs displayed a control label) and completed a shopping task in which they selected 6 products (2 beverages, 2 foods, 2 household items). One item was randomly selected for the participant to purchase with their $10 incentive. The primary outcome was SSB calories purchased in the shopping task. Secondary outcomes included participants' beliefs about the purpose of the study and measures of potential "gaming" of the task (e.g., proportion of participants selecting the least-expensive items).
Results: Exposure to SSB health warnings led to lower SSB purchases (adjusted difference: -31.4 calories/transaction, 95% CI: -57.9-5.0). Only 5% of participants correctly identified that the purpose of the study was to assess warnings' impacts on purchases. Few participants selected the least expensive food (5%) or household item (3%). (Beverages were all priced similarly).
Conclusions and implications: Health warnings reduced real-stakes purchases of SSBs. Lab-based store settings can conceal a study's purpose.

Submission ID: 285
Symposium ID and title if part of symposium: 45

Uncovering novel behavioural targets to alleviate the burden of persistent pain

Decision: Accepted, Symposium
Last updated: 28th November, 2019
By: d.harvie@griffith.edu.au, daniel harvie

Modulating body-image in people with chronic back pain using virtual reality

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Background/purpose: Body-image refers to attitudes toward, and the conscious experience of, the body. Because of the potential interactions between body-image and clinically relevant constructs such as self-efficacy, kinesiophobia, disability, and pain, body-image may be a relevant target for intervention. In this study we investigated whether virtually embodying athletic avatars in virtual reality (VR) has the potential to augment body-image.
Methods: A randomised controlled proof-of-concept study was used whereby participants with chronic back pain received a single session of either a VR intervention targeting body-image 'Body-image-VR' (n=20), or single session of general virtual reality 'General-VR' (n=10). Body-image and pain were assessed pre-, during- and post-intervention using a series of rating scales relating to perception of strength, vulnerability, confidence with activity and current pain intensity. An interview conducted at 1-week follow-up assessed perceptions of the interventions. We hypothesised that embodying hyper-capable avatars in VR would improve body-image and pain.
Results: Preliminary findings support our hypothesis in regards to body-image in that relative to baseline (Mean(SD) = 3.1(1)/10) body-image was improved during- and post-VR (Mean = 7(1)/10 and 5.4(2)/10) indicating that perception of strength, vulnerability and confidence with activity were improved. Our hypothesis in regards to pain was also supported in that relative to baseline (Mean(SD) = 4.5(1)/10) pain was reduced during- and post-VR (Mean(SD) = 2.3(1)/10 and 3(1.5)/10).
Conclusions and implications: Preliminary data supports the possibility that virtual reality could target body-image, and justifies further investigation.

Submission ID: 286
Symposium ID and title if part of symposium: 46

Beliefs about stress - from psycho-biological mechanisms to interventions

Decision: Accepted, Symposium
Last updated: 29th November, 2019
By: christopher.kilby@mq.edu.au, Mr. Christopher Kilby

Believing is seeing: the association between stress beliefs and stressor appraisals

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Background/purpose: Stressor appraisals and stress beliefs both predict responses to stress and subsequent health outcomes. Theoretically, beliefs should influence cognitive appraisals. To be consistent with current stress and cognitive appraisal theories, stress beliefs should predict stress responses via appraisals for stress beliefs. This study assessed the predictive relationship between stress beliefs and a range of stressor appraisals made of a stress induction.
Methods: First-year university students (*N*=137) were assessed on momentary stress and stress beliefs (Subjective Thoughts REgarding Stress Scale; three subscales: consequences of stress, coping efficacy, and interpersonal relations under stress), before reading the stress induction instructions (speech and mathematics task). Stressor appraisals (primary appraisals - challenge and threat appraisals measured separately and combined, secondary appraisals, and a ratio of primary and secondary) were then measured between reading the instructions and the induction. Momentary stress was reassessed post-instruction, mid-induction, post-induction, and post-debrief.
Results: Momentary stress increased mid-induction and decreased post-debrief (*p*<.0005). Multiple regression analyses regressing STRESS subscales onto each appraisal revealed only coping efficacy predicted challenge appraisal (*b*=.42, *p*<.0005). Consequence (*b*=-.25, *p*=.010), coping efficacy (*b*=-.30, *p*=.006), and interpersonal relations (*b*=-.27, *p*<.001) predicted threat appraisal. Only interpersonal relations (*b*=-.27, *p*=.004) predicted combined primary appraisals. Consequence (*b*=.23, *p*=.042) and coping efficacy (*b*=.43, *p*<.001) predicted secondary appraisals. Only consequence (*b*=-.24, *p*<.001) predicted ratio appraisals.
Conclusions and implications: Results suggest different stress beliefs relate to different appraisals. This highlights a complex interplay between stress beliefs and appraisals. This association provides a theoretically consistent link between stress beliefs and the stress response.

Submission ID: 287
Symposium ID and title if part of symposium: 46

Beliefs about stress - from psycho-biological mechanisms to interventions

Decision: Accepted, Symposium
Last updated: 29th November, 2019
By: jkeech@usc.edu.au, Dr Jacob Keech

Examining cross-lagged associations between stress mindset, psychological health, and health behaviors

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Background/purpose: The current study tested cross-lagged effects of stress mindset on psychological health and health behaviors across cultures.
Methods: Three samples of undergraduate students from Hong Kong (HK), Mainland China (C), and Australia (AU) completed self-report measures of stress mindset (SCMM), depression, anxiety, and stress (DASS-21), sleep quality (PSQI), alcohol use (AUDIT-C), and physical activity online at baseline (T1) and at a 4-week follow-up (T2). Maximum likelihood cross-lagged panel models for the psychological health and health behaviour outcomes were estimated using lavaan in R.
Results: We observed a significant cross-lagged effect of T1 stress mindset on T2 depression, T2 anxiety, and T2 stress in the sample from China. However, these effects were not observed in samples from Hong Kong or Australia. No cross-lagged effects were observed for any of the health behaviors. No T1 psychological health factor or health behavior predicted T2 stress mindset and all constructs were highly stable between T1 and T2.
Conclusions and implications: Findings provide preliminary support for the temporal sequence of relationships between stress mindset and psychological health in China. However, high stability of the outcomes over the study period suggests that experimental research is needed to further examine how stress mindset impacts stress-related outcomes.

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Last updated: 29th November, 2019
By: jojo.yykwok@gmail.com, JoJo Kwok

'Mindfulness in sounds': a randomized controlled feasibility trial of sound meditation for anxiety and depression for people with Parkinson's Disease

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Background/purpose: People with Parkinson's disease (PwPD) experience significant emotional distress resulting from the persisting physical symptoms such as resting tremor, rigidity, and bradykinesia. This multi-center feasibility RCT adopted sequential explanatory mixed-method design to investigate the feasibility and acceptability of sound meditation using singing bowls for PwPD.
Methods: PwPD were randomised to sound meditation (n=33) or stretching exercise (n=35) group. Eight weekly 90-minute meditation and stretching sessions were held, respectively. Outcomes include anxiety and depression, mindfulness, cognitive function, motor symptoms, mobility, and HRQOL. Assessments were done at baseline and immediate, and three-month post-intervention. 22 semi-structured interviews were done to explore participants' experiences and acceptability of sound meditation. Thematic analysis was used for the qualitative data.
Results: 68 participants with mild-to-moderate PD (39 female) and mean age of 64.5 years were recruited. Feasibility findings focused on recruitment (target achieved); adherence (75% attendance); retention (less than 10% attrition); and outcome measures (three measures were considered feasible, changes were recommended). Most participants described sound meditation as extremely enjoyable and the instructors were skilled in instilling mindfulness. Three themes emerged from qualitative findings: 'relieved physical symptoms', 'deep relaxation and revitalizing experiences', and 'grounding with equanimity'.

Conclusions and implications: We have demonstrated the feasibility and acceptability of sound meditation for PwPD and recommend a full-scale trial to investigate its effectiveness compared to usual care control. Future research should continue to investigate the optimal sound frequency and resonant vibrations of singing bowls as a catalyst and sensational stimuli for mental activation and emotional healing for chronic illness care.

Submission ID: 289
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 29th November, 2019
By: virginia.chan1995@gmail.com, Virginia Chan

Factors influencing length of meals in young Australian adults (18-30 years old) assessed using wearable cameras

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Background/purpose: According to time-use data, Australians are spending less time eating. Despite this the prevalence of overweight and obesity is increasing. This study aimed to examine the length of time spent consuming meals and snacks with nutritional quality and preparation location, social interaction, screen use and body mass index (BMI) in a sample of young Australian adults (18-30 years old).

Methods: A subsample from a large cross-sectional study wore a small camera that captured images every 30 seconds for 3 consecutive days. Images (n = 137,066) from 47 participants were annotated across 4 domains: nutritional quality based on proportion of five food groups and discretionary foods, preparation location, social interaction and screen use. BMI was calculated using self-reported height and weight and participants classified as underweight, healthy weight, overweight or obese. Comparisons of domains and BMI group and meals and snacks duration were analysed using non-parametric statistics.

Results: Median time spent consuming snacks (2.27 minutes, IQR: 5.92) was shorter than main meals (8.83 minutes, IQR: 10.48, $p < 0.001$). Overall, discretionary foods were consumed more quickly than five food group foods ($p < 0.001$). Main meals prepared outside the home ($p < 0.001$), consumed with social interactions ($p = 0.002$) or screen use ($p = 0.008$) were longer. Those classified as obese had shorter main meal times than those within a healthy weight range ($p < 0.001$).

Conclusions and implications: Meal length showed a negative relationship with BMI in these young adults and shorter meals were more likely to be discretionary.

Submission ID: 290
Symposium ID and title if part of symposium:
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Last updated: 29th November, 2019
By: jodie.scott@adelaide.edu.au, Ms Jodie Scott

Intervention mapping of the “Begin Better” program for preconception weight management

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Background/purpose: Half of all women begin a pregnancy with overweight or obesity, which increases the risk of pregnancy complications and adversely affects the lifelong health of their babies. Recent research highlights the importance of the preconception period in influencing the gestational environment. We used interview findings and relevant literature to inform the development of a lifestyle intervention for women intending pregnancy.

Methods: An intervention mapping approach, guided by the Information-Motivation-Behavioural Skills (IMB) framework, was taken to co-design the “Begin Better” eHealth intervention. Findings were translated into practical strategies to address the change objectives – using behaviour change techniques and Persuasive System Design (PSD) model principles.

Results: The resulting intervention takes an integrated approach, combining aspects of cognitive behaviour therapy and acceptance and commitment therapy. Behavioural determinants and strategies are as follows: *Information:* Poor knowledge is addressed with information on the benefits of weight management before pregnancy and building healthy heuristics around nutrition and physical activity. *Motivation:* Reported as a key barrier to sustained healthy change – is attended to with accountability via personalised messages, goal setting, ongoing encouragement, flexible options and consideration of family support. *Behavioural skills:* are fostered via stress reduction techniques, self-care, problem solving and relapse prevention, time management and strategies to increase self-efficacy.

Conclusions and implications: The “Begin Better” program aims to enhance health outcomes for women and their children in order to lower the impact of intergenerational obesity as well as to increase wellbeing and quality of life.

Submission ID: 292
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Last updated: 29th November, 2019
By: go10@st-andrews.ac.uk, Dr Gozde Ozakinci

Increasing physical activity levels: connecting primary care to community-based jogscotland groups

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Background/purpose: Existing evidence on exercise referral schemes suggests that referral to activities based outside of the of the gym may be linked to increased attendance. We aimed to design and pilot a process of connecting patients attending primary care to community-based jogscotland groups and to examine barriers and facilitators of such a pathway for health professionals and patients.

Methods: A realist scoping review of methods of connecting primary care patients with physical activity opportunities was conducted in conjunction with exploratory interviews with primary care health professionals (n=14) and patients (n=14) to investigate effective and acceptable methods of connecting primary care to community-based physical activity.

Results: Three acceptable/effective methods of connection were identified from the review and interviews: 1) passive advertising; 2) formal referral or prescribing; 3) informal signposting. These three methods were then implemented in a feasibility study across NHS Fife GP practices where practices employed one of three connection pathways; poster advertisement in practice, practice issued letter to patient, verbal signposting during consultations each providing details for a local jogscotland group.

Conclusions and implications: This project provided a unique opportunity to develop a partnership between primary care and community-based physical activity groups, signposting patients to a structured and volunteer-led physical activity programme in their community. Given these factors, this example of social prescribing has the strong potential of being successful in promoting behaviour change and achieving positive health outcomes for patients.

Submission ID: 293
Symposium ID and title if part of symposium: 48

The World Mental Health International College Student (WMH-ICS) initiative: from prevalence to prevention of mental disorders in college

Decision: Accepted, Offered Poster
Last updated: 29th November, 2019
By: anne.h.berman@ki.se, Dr Anne H Berman

National assessment and e-health interventions for mental health problems among university students: Swedish partnership in the WHO-World Mental Health International College Student (WHM-ICS) consortium

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Background: The life transition between late adolescence and emerging adulthood is often troubled, with one in three university students showing symptoms of depression and anxiety. Help-seeking behavior is low due to emotional and practical barriers, generating a treatment gap. The purpose of this project is to map Swedish university students' mental health problems and deliver e-health interventions to those at risk, thus reducing the treatment gap. The project is the first in a Swedish partnership with the WHO WMH-ICS 20-country international consortium.

Methods: The project is organized in four work packages (WPs) over four years, beginning in 2020. An annual epidemiological survey targeting first-year students will map mental health problems and disorders, including suicidal thoughts and behaviors (WP1), and annual follow-up surveys will track participants' developmental trajectories in terms of persisting problems and help-seeking behavior (WP2). Students identified as at-risk will be offered participation in a three-arm randomized controlled trial (RCT), delivering guided or unguided transdiagnostic e-treatment, or treatment as usual in a control group (WP3). At 5-week follow-up, participants at higher risk of failing treatment according to a precision treatment algorithm will be randomized to personally adapted e-treatment or continued WP3 treatment in a secondary trial-within-trial (WP4). WP1 will begin in the spring of 2020 with a pilot survey at selected Swedish universities

Results: We anticipate being able to present preliminary pilot survey results.

Conclusions and implications: We envisage high potential for reducing mental health problems among Swedish university students, improving academic performance and reducing dropout.

Submission ID: 294
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 29th November, 2019
By: otsuka@human.tsukuba.ac.jp, Dr Yasumasa Otsuka

Sex and age differences in homophobia and transphobia among Japanese workers

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Background/purpose: As men and older people generally express higher levels of discomfort with lesbian, gay, bisexual, and transgender (LGBT) people, this study aimed to examine whether this tendency is also true in Japanese workers.

Methods: The study population was 200 working Japanese men and women in their 20s to 60s. Twenty workers were extracted for each age group and sex, and an online survey was conducted in July 2019. Participants read 22 Japanese newspaper articles about LGBT people and rated their impressions from 1 (pleasant feeling) to 7 (unpleasant feeling). Articles were presented to each participant in random order.

Results: Two-way analysis of variance using sex and age as independent variables and total scores of feelings as dependent variables was conducted, but no significant differences were found in their interaction and main effect. Subsequently, two-way multivariate analysis of variance using the scores of feelings for each article as dependent variables was conducted. In this case, the main effects of sex and age were found in one article each. Male workers felt a greater amount of unpleasant feelings than female workers regarding an article that described foster parent status for couples in which one person had gender identity disorder. Workers in their 40s felt more unpleasant feelings than those their 60s regarding an article that described installing toilet facilities that anyone could use.

Conclusions and implications: These results suggest that levels of transphobia may differ by sex or age depending on the article contents.

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Last updated: 29th November, 2019
By: thomas.meinertz.dantoft@regionh.dk, Mr Thomas Dantoft

Multiple chemical sensitivity and physical fitness described in the general population. The DanFunD study

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Background/purpose: Multiple chemical sensitivity (MCS) is a functional somatic disorder (FSD) characterized by unspecific symptoms attributed to exposures to everyday odours, such as fragranced products.

MCS shows symptomatic overlap with other FSD. The aims were to characterize MCS in the general population based on muscular, cardiopulmonary, morphological and metabolic fitness, and to compare fitness levels between MCS cases with and without FSD comorbidity.
Methods: The Danish Study of Functional Disorders (DanFunD) is a large-scale population-based cohort study designed to focus on FSD. DanFunD includes a random sample of 9,656 men and women aged 18-76 years that has completed a health examination and a questionnaire. FSD were classified using international accepted classifications. MCS cases (n=188) and controls (N=7.791) not fulfilling criteria for FSD were identified, and MCS cases were further stratified into subgroups; MCS only (N=109) and MCS with comorbid FSD (N=73). By logistic regression analyses, MCS and MCS subgroups were compared with controls and MCS subgroups with each other, adjusting for age and sex.
Results: MCS was associated with decreased morphological, muscular, cardio-pulmonary and metabolic fitness, i.e., measures of BMI, body fat, waist circumference and pulse were increased among MCS cases, and measures of lung capacity, cardiovascular fitness by step test and muscle strength were decreased. Additionally, triglycerides and non-HDL cholesterol levels were increased in the MCS group. In the MCS only group, only cardiorespiratory fitness differed from controls.
Conclusions and implications: MCS is associated with poorer morphological, muscular, cardio-pulmonary and metabolic fitness, however, many associations can be explained by FSD comorbidity.

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By: anne.soderlund@mdh.se, Professor Anne Söderlund

Operationalizing behavioral medicine approach in physiotherapy - scoping review.

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Background/purpose: In clinical trials for musculoskeletal pain, physiotherapists are often testing variations of behavioral and/or cognitive components in physiotherapy. A uniform definition of the intervention content could help practitioners and researchers to better communicate treatment contents to patients and policymakers. The aim of this scoping review was to study the operationalization of a behavioral medicine approach in physiotherapy for patients with musculoskeletal pain investigated in randomized controlled trials and implementation studies.
Methods: Topic relevant MeSH search terms were used. The databases PsychInfo, Cinahl plus, MEDLINE, PubMed and Web of Science Core were searched. The results were descriptively synthetized. The intervention contents were categorized by searching for integration of psychosocial, behavioral and biomedical aspects in the studies' interventions. Also, specific behavior change techniques reported in the interventions were noted.
Results: A total of 256 studies were found and of these 15 studies were included. Biomedical aspects of interventions were well integrated. Psychosocial and behavioral aspects were less extensively integrated. Behavior change techniques such as goal setting, self-monitoring, feedback, and problem solving strategies were reported in most of the studies.
Conclusions and implications: A behavioral medicine approach in physiotherapy for patients with musculoskeletal pain can be described by the extent of integration of psychosocial, behavioral and biomedical aspects. The biomedical aspects of interventions were most clearly integrated in comparison to the psychosocial and behavioral aspects. Thus, clarification of integration of psychosocial and behavioral aspects in behavioral medicine in physiotherapy is needed to support its implementation in physiotherapy research and practice.

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Chronic stress and functional somatic disorders. The DanFunD study.

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Background/purpose: Functional somatic disorders (FSD) are clusters of bodily symptoms (e.g. pain and fatigue) that are poorly understood. In small case-control studies FSD has been associated with chronic stress. Chronic stress influences the autonomic nerve system (ANS) and activates adrenal glands, which again influences metabolism. The aim was to analyse associates between FSD and chronic stress, ANS and lipid metabolism to elucidate possible pathogenic pathways for FSD.
Methods: The Danish Study of Functional Disorders (DanFunD) is a population-based cohort study including a random sample of 9,656 men and women aged 18-76 years invited for a health examination. FSD were classified in two ways: a) international accepted classifications (fibromyalgia (FM), chronic fatigue syndrome (CFS), and irritable bowel syndrome (IBS)); and b) bodily distress syndrome concept (BDS). Self-reported chronic stress (Cohens perceived stress scale), function of ANS (measured as heart rate variability (HRV)), and levels of triglyceride and cholesterol (total, HDL, and non-HDL) were assessed. Logistic regression analyses taking relevant confounders into account was used.
Results: Compared to persons without symptoms, persons with BDS (N=1447) had a significant higher level of chronic stress, lower variation in HRV with dominance of the sympathetic part of ANS, higher triglycerides, and higher non-HDL cholesterol. FM (N=442) and CFS (N=823), but not IBS (N=337) showed the same pattern.
Conclusions and implications: This cross-sectional study supports that a possible pathogenic pathway for FSD could be longstanding chronic stress mediating its effect through changes in the ANS balance and a deterioration of lipid metabolism. Prospective studies are needed.

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Do males and females differ in their response to an individualized proactive e-health intervention promoting a lifestyle against depression: Results of a randomized controlled trial on depressive symptoms, affect and well-being.

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Background/purpose: Little is known about interventions promoting a depression-preventive lifestyle. The aim of this study was to analyze interaction by gender in the response to an e-health intervention promoting a depression-preventive lifestyle among a non-treatment seeking population.
Methods: German general practice and hospital patients were systematically screened. Eligible participants reporting at least one past year subsyndromal depressive episode and giving informed consent (participation rate 49%; n=456, mean age=41 years, 63% females) were randomized into an assessment only control (CG) or an intervention group (IG). IG received 3 individualized counselling letters and weekly short-messages promoting depression-preventive behaviors within 6 months. Generalized estimation equation analyses adjusting for gender, age, and setting were used to analyze interaction by gender in the outcomes: changes in depressive symptoms (Patient Health Questionnaire-8), affect (Positive and Negative Affect Schedule) and well-being (WHO-5-well-being-index) after 6 (n=335) and 12 months (n=338).
Results: Over 6 and 12 months, depressive symptoms and negative affect decreased, while well-being increased in both study groups (ps<0.005). Independent of gender, study groups differed in depressive mood, fatigue, poor appetite/overeating (smaller decreases in IG) and well-being (larger increases in IG, ps<0.05). Males tended to smaller decreases, females to larger decreases of anhedonia at 6 months (interaction:p=0.036) and sleeping problems at 12 months (interaction:p=0.009) in IG compared to CG. Females but not males in IG reported higher increases in positive affect at 6 months compared to CG (interaction:p=0.013).
Conclusions and implications: Among proactively recruited medical care patients, our intervention effectively increased well-being across gender. Only effects on depressive symptoms and positive affect were gender-specific.

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Extending the screening interval for women at low risk of breast cancer as part of a risk-stratified Breast Screening Program: Views from two Professional stakeholder groups.

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Background/purpose: Studies assessing the feasibility of introducing risk-stratification into breast screening program s allow women at high-risk to benefit from more frequent screening and the offer of chemoprevention. Risk stratification also allows women at low-risk to be screened less frequently, as the harms such as overtreatment may outweigh benefits. The present research aimed to elicit views from UK healthcare policy decision-makers and breast screening professionals regarding implementation of longer breast screening intervals for low-risk women.
Methods: Seventeen policy decision-makers were purposively recruited ensuring representation across relevant groups including the UK National Screening Committee. Interviews were conducted face-to-face (n=10) or via telephone (n=7). Three focus groups with screening professionals (n=26) were held at three sites, with two telephone interviews. Data from each sample were analyzed separately using thematic analysis.
Results: All participants were concerned about evidence limitations regarding the safety of extending screening intervals for women at low-risk of breast cancer. Policy decision-makers were more positive but with concerns about accurately defining a low-risk group and program capability to deliver variable screening intervals. Screening professionals were not confident about advising low-risk women about longer screening intervals and questioned who would be responsible for any negative impact on the service.
Conclusions and implications: Extending the screening interval is acceptable in principle to professional stakeholders, but a variety of issues needs to be resolved before this can happen. The present study findings, alongside further qualitative work with women, will inform the development of care pathways that are acceptable to all stakeholders.

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By: l.a.van.tuijl@umcg.nl, Dr Lonneke van Tuijl

Psychosocial factors and cancer incidence: a pre-planned meta-analysis of the PSYchosocial factors and CAncer (PSY-CA) consortium.

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Background/purpose: Over the last decades, it has been repeatedly suggested that psychosocial factors like depression may lead to the onset of cancer. However, evidence till now is conflicting due to weak designs, limited sample sizes, short follow-up, and the absence of controlling for crucial confounders. Furthermore, research has failed to consider that health behaviors like smoking and alcohol intake may mediate the relationship between psychosocial factors and cancer incidence.
Methods: The psychosocial factors and cancer incidence (PSY-CA) consortium aims to test whether 1) psychosocial factors are related to the incidence of cancer (overall and for specific types); 2) the link between psychosocial factors and incidence of cancer is particularly true in specific subgroups of individuals like smokers or post-menopausal women; and 3) health behaviors like smoking and sedentary behaviour mediate the relationship between psychosocial factors and cancer incidence. PSY-CA involves 18 large international cohorts that have been linked to cancer registries. A two-stage, individual-patient data, pre-planned meta-analysis will be conducted. Stage one involves the harmonization of the data and analysis at the local (cohort) level. At stage two, meta-analyses are run on the aggregate data.
Results: The rationale and design of PSY-CA will be explained. Specifically, an overview of the data harmonization process and the derived analysis plan will be presented.
Conclusions and implications: The outcome of PSY-CA will increase the knowledge regarding the association between psychosocial factors and cancer incidence, and the mediating role of health behaviors.

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Uncovering novel behavioral targets to alleviate the burden of persistent pain.

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By: ann.meulders@kuleuven.be, Dr Ann Meulders

When the good gets bad: return of pain-related fear and avoidance after response prevention with extinction.

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Background/purpose: Response prevention (RPE), i.e. prohibiting avoidance/safety behavior, is standard practice in exposure treatment for chronic pain. Yet experimental research on this topic is scant. Allowing avoidance during exposure may hamper corrective learning because safety is misattributed to the avoidance response (*protection-from-extinction*). This approach, however, may shift the problem because the (un)availability of the avoidance response may constitute a context-switch (from therapy context to the patient's daily life) impeding the transfer of corrective learning and leading to *renewal* (return of avoidance due to context-switch).
Methods: In Study 1 participants (N=61) performed arm-reaching movements differing in pain-effort trade-off using a robotic arm. They could avoid pain by performing more effortful movements. During RPE they only performed the formerly pain-associated movement, but painful stimuli were omitted; they were either forbidden (Restricted group) or merely instructed (Instructed group) not to perform other movements. Twenty-four hours later, we tested return of avoidance with availability of all movements. Study 2 (N=69) used the restricted set-up in a one-day protocol; participants were randomly assigned to the AAB, ABA, or AAA Group. The ABA group received RPE in a different context, and the AAB group was tested in a different context, no context changes occurred in the AAA group.
Results: Study 1: Results showed a return of avoidance, albeit not to pre-treatment levels, in both groups, $p<.001$, $\eta_p^2=.64$. Study 2: We observed a similar renewal of avoidance effect in all groups, $p<.001$, $\eta_p^2=.68$.
Conclusions and implications: RPE may paradoxically lead to relapse. We will discuss findings in the context of learning processes and relapse prevention in chronic pain treatment.

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Testing temporal frames of colorectal cancer risk: evidence from online experiments.

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Background/purpose: Narrower time frames appear to increase perceived risk and intentions to engage in risk-aversive behaviors. In two online experiments, we tested how manipulating risk information about colorectal cancer (CRC) influenced risk perception and preventive behaviors.
Methods: Participants (902 men and women aged 45-54yrs) were recruited from an English online panel. Study 1 (N=132) investigated how communicating CRC mortality instead of incidence rates influences on risk perception, controlling for temporal effect, and with the intention to include it in study 2. In study 2 (N=770), CRC incidence was described as occurring *yearly*, *daily* or *hourly*. The primary outcome measures were risk perception, intention to engage in preventive behaviors and whether participants chose to read information about ways to reduce CRC risk or skipped it to finish the survey.
Results: Study 1 did not find a difference in intention based on information about the risk of developing vs the risk of dying from CRC. In study 2, while communicating CRC incidence occurring as *every day* increased information seeking behavior compared to *every year* and *every hour* (57.4% vs 45.9% vs 45.6%, p=0.012), individuals in the *daily* condition were less likely to get all comprehension questions right (69.9% vs 78.2% vs 85.0% respectively, p=0.015). Temporal framing had no impact on perceived risk or intentions to engage in risk-reducing behaviors.
Conclusions and implications: While manipulating risk information in terms of temporal framing did not increase perceived risk, it may influence people's decision to engage with the information in the first place.

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Learned pain: Understanding learning processes involved in pain.

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By: a.m.thomaidou@fsw.leidenuniv.nl, Mia Thomaidou

Pain-related fear as a facilitator of nocebo hyperalgesia: an experimental study.

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Background/purpose: Nocebo hyperalgesia refers to adverse health or treatment outcomes, which are induced by pain expectations. Nocebo hyperalgesia has been studied experimentally using classical conditioning and negative suggestions. The exact cognitive-emotional contributors to the formation of nocebo effects remain uncertain. A better understanding of the role of fear may aid future research and help prevent nocebo hyperalgesia in the therapeutic context.
Methods: In this study we aim to test 72 healthy participants. Magnitudes of induced nocebo hyperalgesia and the time-course of extinction are compared between nocebo conditioning (group 1) and two groups receiving distinct fear inductions. Fear is induced either by means of higher pain stimulations (group 2) or by a threat manipulation (group 3; i.e., fear-inducing information regarding unusually high skin sensitivity). During nocebo induction trials, groups 1 and 3 receive moderate thermal-pain stimulations paired to the nocebo (sham) electrical stimulation, whereas group 2 receives high pain during these nocebo trials. During extinction, pain stimuli are equivalent across all trials. Fear is measured by electromyography of startle responses and self-report.
Results: Preliminary statistical analyses of the first 36 subjects indicate that nocebo hyperalgesia is induced ($p < 0.01$) and tends to be weaker in the absence of fear inductions. Moreover, preliminary data show that nocebo induction combined with fear manipulations tends to lead to more durable effects over the course of extinction.

Conclusions and implications: These preliminary findings suggest that fear may be an important contributor to nocebo hyperalgesia. Full results of the study will be presented at the conference.

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By: d.b.oconnor@leeds.ac.uk, Prof Daryl O'Connor

Exploring resilience factors and daily cortisol levels in individuals vulnerable to suicide.

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Background/purpose: Suicide is a major global health issue. Dysregulated hypothalamic-pituitary-adrenal (HPA) axis activity, as measured by cortisol levels, has been identified as one potential risk factor. Evidence is emerging to suggest that different trait factors may be associated with increased resilience in this context. This study investigated whether trait resilience, social support, social perfectionism, worry and impulsivity influenced diurnal cortisol levels over a 7-day study in individuals vulnerable to suicide.
Methods*:* Participants (N=154) were categorized into three groups: suicidal attempt, suicidal ideation or control group. Cortisol samples were provided upon waking, at 15, 30, and 45 mins, and at 3, 6, 9 and 12 hours on 7 consecutive days. Measures of daily stressors and mood were completed at the end of each day. Measures of suicide behavior were completed at baseline, 1 and 6 months.
Results*:* Participants with higher levels of trait resilience, lower levels of social perfectionism, trait worry and impulsivity exhibited significantly higher cortisol upon awakening (consistent with a healthy awakening response) compared to individuals who scored lower on these traits. Trait resilience and worry were also associated with steeper wake-peak to 12 hour cortisol slopes.
Conclusions and implications*:* These results extend findings from the laboratory into naturalistic settings and indicate that particular psychological traits may help protect against dysregulated HPA axis activity in individuals vulnerable to suicide. Researchers ought to elucidate the precise causal mechanisms linking these traits, cortisol and suicide risk in order to develop interventions to help build resilience in vulnerable populations.

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Difficulties and ethical issues in support processes among community-dwelling elderly and their families in Japan.

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Background/purpose: The purpose of this study was to clarify difficulties and ethical issues in support processes among community-dwelling elderly and their families in Japan.
Methods: A self-administered questionnaire survey was conducted among nurses of 449 comprehensive community support centers in Tokyo. Question items were about age, type of license, years of job experience, number of residents who were difficult to support, and reasons for difficulties and ethical issues. A free text box requested information on ethical issues. This study was approved by the Institutional Review Board of Tokyo Metropolitan University in 2018.
Results: A total of 143 responses were analyzed (response rate: 31.9%). Overall, 43.4% were aged 50 and over, and 21.7% were public health nurse. Meanwhile, the mean years of job experience was 7.8 (SD 7.0), mean number of residents who were difficult to support was 8.4 (SD 12.7), and mean number of residents who were difficult to support owing to ethical issues was 4.3 (SD 6.1). The reasons for difficulties owing to ethical issues were obsessions (52.4%), difficulty with acceptance of others (49.7%), self-neglect of residents (49.7%), suspicion of the abuse (38.5%) or abuse from family (28.9%). Practices for ethical issues were repeatedly listening to what he/she and his/her family were saying, respecting the intentions of the person, building relationships based on trust, and protecting the confidentiality of personal information.
Conclusion: We need to clarify decision making processes for ethical issues among the elderly in community settings.

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Learned pain: Understanding learning processes involved in pain.

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By: ann.meulders@kuleuven.be, Dr Ann Meulders

Generalization of fear and avoidance in the context of pain.

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Background/purpose: Pain-related fear and avoidance contribute to the transition from acute to chronic pain. When avoidance behavior serves to reduce/eliminate genuine bodily threat, it is adaptive. Yet, unbridled generalization of avoidance to (perceptually or conceptually unrelated) novel situations may lead to functional disability. Growing evidence suggests that pain-related fear and avoidance are acquired via associative learning and that this learning is modulated by context. We propose that overgeneralization plays a role in the etiology and/or maintenance of chronic pain disability by spreading of undesired protective behaviors.
Methods: Using a robotic arm-reaching task, participants (N=50) performed arm-reaching movements in two contexts: a pain-avoidance (e.g., black background) and a safe context (e.g., white background). In the pain-avoidance context, pain could be avoided by performing the more effortful movements; in the safe context, no painful stimuli were delivered. Study1 tested generalization of avoidance to novel contexts (i.e., shades of grey backgrounds) in low vs. high trait anxious people. In Study2 (N=50), generalization to novel conceptually-related contexts (e.g., outdoor/indoor scenes as backgrounds) was tested.
Results: Study1: High trait anxious people generalize their avoidance behavior more to novel contexts similar to the safe context than low trait anxious people, $p<.05$, $\eta_p^2=.07$. Study2: Contingency aware participants

generalized their avoidance to novel conceptually-related contexts, $p<.01$, $\eta_p^2=.75$; contingency unaware participants did not, $p = .53$, $\eta_p^2=.01$.
Conclusions and implications: Generalization of avoidance is modulated by perceptual and conceptual similarity of the context. Trait anxious people overgeneralize avoidance to safe contexts, which may lead to inactivity and functional disability.

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Screening of children with developmental disorders in Japan (Study 1).

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Background/purpose: In Japan, the 'Maternal and Child Health Act' was established to improve the health of all mothers and their children. The purpose of this survey was to analyze the screening process of children with developmental disorders during health check-ups for young children.
Methods: Questionnaires were administered to 1,742 Japanese municipalities via postal mail, and data were collected from 15 October to 11 November, 2019, and analyzed using descriptive statistics.
Results: A valid response rate of 30.9% was observed in 538 municipalities who responded to the survey. The 18-month-old child health check-up is referred as A, and the 3-year-old child health check-up is referred as B. The screening rate for children with developmental disorders was 91.8% for A, 91.1% for B, and 90.7% for both A and B. Items (overlap answers) wherein public health nurses noticed developmental disorders in terms of delay in language development was 92.9% for A and 94.5% for B. The percentage of children diagnosed with developmental disorders in A and B was approximately 1%–10%. The follow-up content with the most responses was observation until the next health check-up (80.3% for A) and introduction of the development consultation (81.6% for B). The early support implementation rate was 74.9% for A and 77.8% for B, whereas the continuation support implementation rate was 84.4% for A and 83.1% for B.
Conclusions and implications: Some municipalities were unable to provide early or continuous support. We must provide support that continues from an early stage with the cooperation of other organizations.

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Investigative the cognitive underpinnings of anxiety in Multiple Sclerosis.

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Background/purpose: Multiple Sclerosis' (MS) unpredictable neuropathology and disease trajectory can result in patients experiencing high levels of anxiety and illness uncertainty (IU). Previous research has discovered a strong association between heightened anxiety surrounding this uncertainty, with poorer psychological outcomes and overall quality of life. It has been suggested within other health populations that this may be maintained by unhelpful thinking habits, such as the tendency to pay attention towards threatening information, or to interpret benign information in a threatening way. However, the relevant thinking habits remains unknown in an MS population. The aim of this research is to identify the thinking habits responsible for the maintenance of anxiety surrounding uncertainty in an MS population using a cross sectional design.
Methods: Eighty persons with MS completed self-report questionnaires of anxiety, worry and IU, as well as 3 novel tasks developed to assess attentional and interpretation bias, as well as cognitive flexibility.
Results: Through regression analysis, it was found that 1) attentional bias was significantly associated with higher instances of anxiety, worry and rumination, and intolerance of uncertainty, and 2) Biases in interpretation and cognitive flexibility predicted unique variances in self-reported levels of anxiety and depression.
Conclusions and implications: A comprehensive understanding of the cognitive mechanisms associated with anxiety surrounding uncertainty and disease progression has important implications for developing targeted interventions aimed at enhancing more adaptive processing in PwMS, including an increased tolerance for uncertainty and threatening information, as well as reduced anxiety levels.

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By: m.karacaoglu@fsw.leidenuniv.nl, Drs. Merve Karacaoglu

Nocebo effects on pressure pain: Induction and reduction via learning.

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Background/purpose: Nocebo effects adversely affect the experience of various physical symptoms, such as pain and itch. A recent study on itch has shown that nocebo effects can be induced and reduced by learning mechanisms of conditioning and counterconditioning, respectively, especially combined with verbal suggestions. The manipulation of nocebo effects has, however, not been investigated for pain modalities such as pressure pain, that are relevant to disorders affecting the musculoskeletal system.
Methods: In this RCT, we investigated in healthy female participants whether nocebo effects on pressure pain can be 1) induced via conditioning and 2) reduced via counterconditioning, combined with open-label verbal suggestions about the function of a placebo TENS-device. First, participants were randomly allocated to either the nocebo or sham conditioning group. Next, those in the nocebo group were allocated to either the counterconditioning group or one of the control groups; extinction or continued nocebo conditioning.
Results: Current sample of 88 participants (71% of total data) showed that nocebo effects were significantly induced by conditioning ($t(68)=6.35, p<.001, d=1.3$). One-way ANOVA showed an effect of group on the reduction of nocebo effects (*Welch's* $F(2,42)=14.61$, $p<.001$). Post-hoc tests revealed a significantly larger reduction for counterconditioning than for extinction ($p=.009$) and continued nocebo conditioning ($p<.001$).

Conclusions and implications: Our current results suggest that learning mechanisms of (counter)conditioning and open-label verbal suggestions can manipulate nocebo effects on pressure pain. Our findings have clinical implications for the design of learning based treatments for disorders affecting the musculoskeletal system.

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The actual situation of children with developmental disorders in Japan (Study 2).

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Background/purpose: This study examined the relationship between the challenges faced by public health nurses (PHNs) and their occupational stress when supporting children with developmental disorders.
Methods: The procedures, time period, and subjects of this study are the same as those of Study 1. The stress factors related to the challenges faced by PHNs were analyzed using multivariate logistic regression.
Results: PHNs who face challenges in sharing information with other staff members were associated with a sense of depression (OR=1.10, 95%CI=1.01–1.19) and lack of their boss's support (OR=1.22, 95%CI=1.07–1.41). The challenges faced by PHNs to cooperate with relevant organizations in the department were associated with interpersonal stress (OR=1.82, 95%CI=1.41–2.33), a sense of depression (OR=1.10, 95%CI=1.02–1.19) and lack of their boss's support (OR=1.31, 95%CI=1.14–1.51). The challenges faced by PHNs to cooperate with multiple occupational departments were associated with a quantitative burden of psychological work (OR=1.18, 95%CI=1.02–1.37), interpersonal stress (OR=1.34, 95%CI=1.10–1.64) or working environmental stress (OR=1.47, 95%CI=1.14–1.89). The challenges faced by PHNs to cooperate with local related organizations were associated with interpersonal stress (OR=1.40, 95%CI=1.16–1.70), working environmental stress (OR=1.33, 95%CI=1.04–1.69) or lack of support from co-workers (OR=1.18, 95%CI=1.06–1.32). The challenges faced by PHNs to cooperate with parents were associated with lack of support from co-workers (OR=1.19, 95%CI=1.06–1.34).
Conclusions and implications: These results suggest that occupational stress is high in PHNs, with difficulties in cooperating with others individuals and organizations. Future studies are warranted to develop policies to reduce these challenges.

Submission ID: 315
Symposium ID and title if part of symposium: 48

The World Mental Health International College Student (WMH-ICS) initiative: from prevalence to prevention of mental disorders in college.

Decision: Accepted, Offered Poster
Last updated: 29th November, 2019
By: saschastruys@gmail.com, Sascha Struijs

Improving student mental wellbeing in the Netherlands: The Caring Universities project.

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Background/purpose: Large scale epidemiological data of psychological problems and disorders within college students is lacking in the Netherlands. Existing services to improve student wellbeing do not reach all students in need.
Methods: The Caring Universities (CU) project aims to implement an internationally embedded system to enhance student mental wellbeing in the Netherlands. Currently 4 colleges are participating within the project as a consortium, which is open to more members.
Results: The project consists of three core elements. The first element is a survey that assesses psychological problems and disorders, correlates of these problems and the effects of these problems on students' functioning. The survey was administered to all students from 2 colleges in 2019. We plan to extend this to all students from 5 colleges in the spring of 2020. The second element is the development and testing multiple guided e-health interventions. Within 3 years we will develop at least 6 interventions targeting common psychological complaints for students such as mood related problems, stress and procrastination. The third element is the implementation and dissemination of the interventions that are proven to be effective.
Conclusions and implications: By addressing these elements, the CU aims to offer insight about the mental health status of Dutch students, and improve the wellbeing of said students with evidence-based interventions.

Submission ID: 316
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 29th November, 2019
By: isakiko715@gmail.com, sakiko ishizu

Caregiver burden as a mediator of the relationship between behavioral symptoms of dementia and depression in Japanese family caregivers.

BA Sakiko Ishizu[1], MA Miei Umeda[2], MA Yuta Takano[3], MA Yui Tsuji[1,4], PhD Yuji Sakano[5]
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Submitter email: isakiko715@gmail.com

Background/purpose: Family caregivers of dementia patients are at high risk of developing depression. They feel more burdened by behavioral and psychological symptoms of dementia (BPSD) than care professionals do (Seidel & Thyrian, 2019), and care burden is a causal factor for depression (Salim et al., 2015). This study examined whether behavioral symptoms of BPSD affects depression mediated by caregiver burden.
Methods: Sixty two family caregivers of dementia patients in Japan (20 males, 41 females, 1 unknown; $M = 69.21 \pm 11.59$ years) were requested to complete the Dementia Behavior Disturbance Scale (DBD) for assessing behavioral symptoms, Japanese Zarit Burden Interview (J-ZBI_8) for assessing care burden measurement, and Kessler Psychological Distress Scale (K6) for assessing depressive symptoms. Mediation analysis was performed using behavioral symptoms of dementia (independent variable), depression in family caregivers (dependent variable), and caregiver burden (mediator). This research was conducted under the approval of the Ethical Board in Health Sciences University of Hokkaido.

Results: The effect of DBD score on K6 score was significant (total effect = .22, $SE = .07$, $p < .01$); direct effect when controlling J-ZBI_8 scores as a mediator was not significant (direct effect = .05, $SE = .06$, *n. s.*). The indirect effect of J-ZBI_8 score was significant (indirect effect = .17, 95% CI = .05 to .32).
Conclusions and implications: Findings indicate that caregiver burden fully mediates behavioral symptoms of BPSD and depressive symptoms in caregivers. As Waller et al. (2017) suggested, expert consultations and computer counseling might be effective in alleviating caregiver burden and depression.

Submission ID: 317
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 29th November, 2019
By: roryoc2@gmail.com, rory o'c

Understanding the relationship between physical pain sensitivity and suicide risk: the role of entrapment and fearlessness about death.

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Submitter email: roryoc2@gmail.com

Background/purpose: Although there have been many advances in understanding suicide risk in recent decades, our ability to predict suicide remains limited. As a result, new approaches to understanding this complex phenomenon are required. For the first time, within the context of the integrated motivational-volitional model of suicidal behavior (O'Connor & Kirtley, 2018), we investigated whether actual physical pain sensitivity (a key suicide risk factor) varies as a function of entrapment and fearlessness about death.
Methods: Two hundred participants with different suicidal histories (with a history of previous suicidal attempt, suicidal ideation or no suicidal history) were recruited to this experimental study. Participants completed background questionnaires, including measures of suicidal ideation, depression, entrapment and acquired capability before completing a task that involved the administration of pressure to the participant's hand via an algometer. The algometer, a pressure meter, yields an index of physical pain threshold and tolerance.
Results: Multivariate analyses revealed that the highest levels of physical pain tolerance (on the algometer) were found among those participants who reported high levels of entrapment and high levels of fearlessness about death. These effects remained significant even after controlling for baseline mood, suicidal ideation and suicidal history.
Conclusions and implications: These findings are consistent with the integrated motivational-volitional model of suicidal behavior which posits that the interplay between motivational (entrapment) and volitional (fearlessness about death) phase variables determine suicide risk. Overwhelming emotional pain (entrapment) may facilitate increased physical pain tolerance and suicide risk. Implications for risk assessment and intervention development will be discussed.

Submission ID: 318
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 29th November, 2019
By: inan@sund.ku.dk, associate professor Ingelise Andersen

How does socioeconomic development in Brazil shape social disparities in diabetes?

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Submitter email: inan@sund.ku.dk

Background/purpose: Many countries, including Brazil, are facing growing social inequalities in diabetes prevalence. The different states in Brazil represent different levels of development and socioeconomic contexts. By comparing states with different levels of human development index (HDI) we aim to better understand how educational inequalities in diabetes, obesity and other covariates are linked to socioeconomic development.
Methods: We use the latest cross-sectional national health survey of Brazil – PNS-2013 (N=60.202) and analyze the variation in educational disparity across states with different levels of human developments measured as HDI. We examine the differential exposure of covariates and susceptibility to the effect of obesity across states for men and women.
Results: Among women in high-HDI states the prevalence of diabetes is 11.7 percentage units (CI: 9.3;14.0) higher among lowest compared to highest educated. In less developed states the disparity is smaller. Among men, there is no social gradient found for diabetes, but obesity is positively associated with education. The association between obesity and diabetes is stronger among the low educated particular for men in high-HDI states. Here the interaction effect between low education and obesity is 11,7 (CI: 8.1;15.4) percentage units.
Conclusions and implications: The fact that economic development is associated with unequal levels of both exposure and susceptibility to obesity indicates that other interacting social determinants including those with developmental effects are important for the development of the diabetes epidemic in Brazil.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 29th November, 2019
By: s.meijer@fsw.leidenuniv.nl, Miss Simone Meijer

Reducing nocebo effects: a literature review on counterconditioning.

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Background/purpose: Nocebo effects (negative outcomes not attributable to active treatment) can significantly worsen symptoms such as pain or itch. One of several methods in which nocebo effects can develop is through learning by means of classical conditioning. Consequently, a potential method for reducing nocebo effects is counterconditioning, during which conditioned effects are reversed. Counterconditioning is previously studied in the field of fear and evaluative conditioning, but it is unclear whether those counterconditioning paradigms can be directly translated to nocebo research. In a review, previous literature on counterconditioning is summarized.
Methods: Different definitions of counterconditioning and different experimental paradigms as previously used in research are described. In addition, the efficacy of counterconditioning for changing conditioned responses will be described, as well as the possible use of counterconditioning for reducing nocebo effects. Lastly, the potential use of counterconditioning in clinical practice and directions for future research are discussed.
Results: Preliminary search results on experimental studies suggest that counterconditioning could be an effective method for reducing conditioned fear and evaluative responses. At least one study also showed that counterconditioning can be used to successfully reduce nocebo effects. The procedure in this study is similar to paradigms used in fear and evaluative conditioning, but involved mechanisms differ in some respects.

Conclusions and implications: Counterconditioning could be an effective method for changing conditioned responses. Paradigms similar to counterconditioning procedures used in fear and evaluative conditioning can be used to examine the reduction of conditioned nocebo effects.

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Symposium ID and title if part of symposium:
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Last updated: 29th November, 2019
By: kherttua@health.sdu.dk, Dr. Kimmo Herttua

Respiratory tract infections requiring hospital care in maritime trades in 1997-2016: a Danish register-based longitudinal study.

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Background/purpose: Workers in maritime trades are exposed to many work- and behavior-related, and environmental risk factors for respiratory tract infections (RTIs). However, their access to medical care may be limited. We sought to investigate relative risk of hospital contacts due to RTIs in maritime trades, such as seafarers, fishermen and offshore workers, compared to relevant land-based trades.
Methods: The participants in this register-based cohort study were all workers in maritime trades and individuals from relevant land-based trades aged 18-65 years and residing in Denmark in 1997-2016. Sociodemographic and work-related characteristics of the participants obtained from registers of the Statistics Denmark were linked to records from health registers. We employed repeated-measures Poisson regression within the generalized equations (GEE) framework to estimate the rate ratios of hospital contacts due to RTIs according to occupation. We also computed marginal means of hospital contacts by occupation derived from the Poisson models to illustrate the changes in hospital contact rates during the study period.
Results: During the observation period of 20 years, there were 2827 hospital contacts due to RTIs in maritime trades, of which 19% were due to acute upper respiratory infections and 10% due to pneumonia. After adjustment for a range of covariates, incident rate ratios for RTIs for seafarers and offshore workers, compared to those working in land-based trades, were 1.70 (95% CI: 1.45 to 2.08) and 2.37 (95% CI: 1.98 to 2.85), respectively.
Conclusions and implications: In conclusion, seafaring and working in offshore are associated with an elevated risk of RTIs.

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Last updated: 29th November, 2019
By: witthoef@uni-mainz.de, witthoef@uni-mainz.de witthoef@uni-mainz.de

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Symptoms attributed to environmental factors (SAEF) in the general population: prevalence, structure, and associations with psychopathology.

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Background/purpose: Somatic symptoms that are attributed to environmental factors (SAEF; e.g. low levels of everyday electromagnetic fields, chemicals, and sounds) represent a common phenomenon worldwide. Little is known about the exact prevalence, structure, and the etiology of SAEF. The current study assessed the prevalence and correlates of five common subtypes of SAEF among members of the general population.
Methods: As part of a representative national survey in Germany, 2531 participants (1350 female) answered questions regarding SAEF (i.e. everyday chemicals, electromagnetic radiation, sounds, infrasound from windfarms, building-related symptoms). The structure of SAEF was explored using taxometric analyses as well as exploratory and confirmatory factor analyses. Correlations between SAEF and measures of psychopathology were investigated.
Results: 41.7% of respondents reported at least mild and 16% at least considerable somatic symptoms associated with at least one of the five environmental factors. The most frequent types of SAEF included symptoms attributed to noises (10.7%), chemicals (10.4%), and buildings (10%). Taxometric analyses suggested a dimensional latent structure. Associations between the five SAEF types were considerable and a single factor model reached adequate model fit. SAEF showed significant positive associations with somatic symptom distress, health anxiety, and symptoms of depression.
Conclusions and implications: SAEF represent a frequent phenomenon in the general population that are associated with somatic distress and elevated psychopathology. Psychometric findings show a high degree of commonality between different types of SAEF suggesting joint etiological mechanisms (e.g. nocebo, conditioning, and social modelling effects).

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Symposium ID and title if part of symposium:
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Last updated: 29th November, 2019
By: laura.koenig@uni-konstanz.de, Dr. Laura König

"This pizza contains 60 grams of sugar." Quantifying overestimation of the sugar content of foods.

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Background/purpose: Sugar consumption in the general population exceeds recommendations. To decrease sugar consumption and so reduce health risks, consumers need to be able to accurately estimate the sugar content of foods. The present study investigated how well consumers estimate the sugar content of 10 commonly consumed foods. Specifically, estimation in grams and in sugar cubes were compared to test which estimation measure leads to more accurate estimations.
Methods: Sugar content estimations were assessed in 886 participants of the longitudinal cohort study Konstanz Life Study, who were randomly assigned to estimation in grams ($n = 453$) or in sugar cubes ($n = 433$).
Results: Estimations of sugar content diverged considerably from actual values in both groups (ts $\geq |4.02|$, ps $\leq .001$, ds ≥ 0.20). However, misestimation was more pronounced when sugar content was estimated in grams compared to sugar cubes in 7 of 10 foods (ts ≥ 4.04, ps $\leq .001$, ds ≥ 0.14). On average, sugar consumption was overestimated by 544% (SD = 516) in grams and by 300% (SD = 419) in sugar cubes. Overestimation was most pronounced for foods high in carbohydrates. For instance, mean estimations for pizza were 58.73 (SD = 56.28) grams / 11.70 (SD = 13.56) sugar cubes, while actual sugar content is 2.9 grams / 1 sugar cube.
Conclusions and implications: Despite efforts in educating consumers, current measures of sugar consumption are not intuitively understood. Alternative strategies (e.g., choice architecture interventions, taxation) might thus be needed to reduce sugar consumption.

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Symposium ID and title if part of symposium:
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Last updated: 29th November, 2019
By: anne.moehring@med.uni-greifswald.de, Dr Anne Moehring

Measurement invariance between intervention participants and non-participants: Results from alcohol and depression screenings in primary care.

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Background/purpose: Reach and equality of reach are core determinants of public health impact for preventive measures. It is often assumed that participants might be healthier, more educated and higher motivated to change behavior than non-participants. To examine equality of reach, relevant health measures have to be psychometrically comparable between people who accept and those who reject participation. We examined measurement invariance, a prerequisite of group comparisons, between participants and non-participants after a health screening.
Methods: Primary care patients aged 18 – 64 years were proactively recruited in three German cities (Greifswald, Luebeck, Tuebingen) to complete a health screening. Among the patients, 1758 were eligible for further randomized intervention studies. Of these, n=786 gave their informed consent for study participation and n=972 did not. We used multiple group confirmatory factor analysis (MGCFA) to examine measurement invariance of the Alcohol Use Disorders Identification Test (AUDIT) and the Patient Health Questionnaire (PHQ-8) between study participants and non-participants.
Results: Models were compared from the least to the most restrictive model and measurement invariance was assumed if they did not differ substantially (ΔCFI < .01; ΔRMSEA < .005). The AUDIT showed full strict invariance. Full metric and partial strong invariance were established for the PHQ-8.
Conclusions and implications: While the AUDIT was established as a robust screening questionnaire for alcohol consumption, adequate for group comparisons between intervention participants and non-participants, the PHQ-8 should be regarded more critically. Due to the lack of full invariance, item-specific testing should be interpreted with caution.

Submission ID: 324
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 29th November, 2019
By: andreas.goreis@univie.ac.at, Mr Andreas Goreis

Psychobiological impact of chronic ethnic discrimination in Turkish immigrants living in Austria.

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Background/purpose: Chronic ethnic discrimination may impact the health of ethnic minorities via biological dysregulation of stress-reactive systems due to ongoing psychosocial stress. We investigated the impact of chronic ethnic discrimination on Turkish immigrants living in Austria in two studies: 1) in daily life, using an ambulatory assessment (AA) design, and 2) in response to ethnic discrimination in the laboratory.
Methods: For the 30-days AA study, N=10 Turkish immigrants who experienced chronic ethnic discrimination were equipped with iPods to report discriminatory situations. Perceived stress and discrimination, and affect were assessed each evening. For the laboratory study, we recruited N=72 Turkish immigrants, 35 participants who experienced chronic discrimination and 37 who experienced no discrimination. They underwent an ethnic discrimination task for 10 minutes. Over 2h, perceived stress and discrimination were assessed, and saliva samples were obtained. Heart rate was measured continuously. Hair samples were collected to determine long-term cortisol concentrations.
Results: Results of the AA study revealed that perceived discrimination and negative affect were higher (ps<.05) on days when discrimination occurred compared to days without discrimination. Results of the laboratory study indicated that the chronic discrimination group reported higher levels of perceived stress and discrimination, and a lower salivary cortisol reactivity than the non-discriminated group in response to the ethnic discrimination task (interactions ps<.05). Hair cortisol concentrations will be reported upon completion of analyses.
Conclusions and implications: Both in daily life and the laboratory, chronic ethnic discrimination was associated with negative psychobiological responses to discriminatory situations, which may result in chronic dysregulation of stress-reactive systems.Submission ID: 328
Symposium ID and title if part of symposium: 30

Core Outcome Sets (COS) for Alcohol Brief Intervention (ABI) trials: Applications in implementation, criminal justice and health economics research.

Decision: Accepted, Symposium
Last updated: 29th November, 2019
By: aisha.holloway@ed.ac.uk, Professor Aisha Holloway

Is there a place for a core outcome set for Alcohol Screening and Brief Intervention (ASBI) in the criminal justice setting?

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The work of the ORBITAL team has shown that there is a need for a core outcome set for Alcohol Screening and Brief Intervention (ASBI) in the general population, particularly amongst those in primary care, but can we hypothesize that the same outcome set is needed for different populations within society? The levels of risky drinking are three times higher and levels of probable dependence are 10 times higher in the criminal justice system than in the general population. Moreover, these levels have been found, in the UK, to be similar across different points of the criminal justice system: police custody; probation; males on remand and convicted individuals. Recent systematic reviews tell us that there is very little evidence of efficacy or effectiveness of ASBI in the criminal justice system although evidence is growing and it is seen by policy makers as a potential area for carrying out ASBI. The needs of the criminal justice system and the differing agencies involved have implications for what should be included in a core outcome set for this population. Our systematic review identified studies in the criminal justice system across the world and a large number of different outcome measures in this population, including those relating to consumption and harm but also to recidivism. This presentation will pose the question: Is there a place for a core outcome set for ASBI in the criminal justice setting? The results around this will be used to inform the next stages of INEBRIA RMS-SIG in relation to this topic.

Submission ID: 329
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 29th November, 2019
By: andreas.goreis@univie.ac.at, Mr Andreas Goreis

What mediates the relationship between ethnic discrimination and stress? Coping strategies and perceived social support of Russian immigrants in Germany.

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Background/purpose: Experiences of ethnic discrimination may constitute major stressors for ethnic minority groups. This study examined the associations between different forms of ethnic discrimination and levels of perceived stress in Russian immigrants living in Germany, taking into account potential moderating (in-group identification) and mediating (coping and social support) factors.
Methods: Russian immigrants ($N = 308$) were assessed via online questionnaires (e.g., Behaviors from Intergroup Affect and Stereotype Treatment Scale, Perceived Stress Scale, Brief-COPE). Three forms of ethnic discrimination were assessed: Active harm (e.g., open aggression), passive harm (e.g., paternalistic behavior), and everyday discrimination (e.g., receiving poor service). Moderation by in-group identification and mediation via coping and social support was tested.
Results: Passive harm was more prevalent than everyday discrimination and active harm. Passive harm and everyday discrimination were associated with higher perceived stress (rs = .22 and .15, ps < .01) and in-group identification did not moderate these associations (ps > .18). The coping strategy of self-blame mediated the association between active harm and stress; substance use and self-blame mediated the association between passive harm and stress; and venting, behavioral disengagement, denial, self-blame, and social support mediated the association between everyday discrimination and stress. A direct effect remained for all three forms of ethnic discrimination.
Conclusions and implications: The present study revealed that Russian immigrants encounter ethnic discrimination and this is associated with higher levels of stress. These associations were mediated via coping and social support, illustrating possibilities for interventions to improve adaptive coping responses and promote social support seeking for Russian immigrants.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 29th November, 2019
By: m.thomson.3@research.gla.ac.uk, Mrs Meigan Thomson

Barriers and facilitators of successful weight loss during participation in behavioral weight management programs: a systematic review.

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Background/purpose: Behavioral weight management programs can be efficacious in supporting adults to lose weight. Yet, many people fail to achieve their weight loss goals in such programs. The aim of this systematic review is to identify and synthesize data on barriers and facilitators to weight loss in these programs.
Methods: Five databases were systematically searched in August 2019. Eligibility of studies was assessed by two reviewers. To be included, interventions had to be with adults living with obesity who were enrolled in a behavioral weight loss program with no other health behaviors targeted. Weight loss programs had to have a primary goal/outcome of weight loss and use education and behavior change techniques to promote change. Intervention details, weight loss data and details of barriers and facilitators were extracted from qualitative and quantitative studies, and narratively synthesized. Quality appraisals were conducted on all included studies by the lead researcher and cross-checked by the remainder of the team.
Results: 5895 studies were identified of which 48 met the eligibility requirements to be included in the review. Extracted barriers and facilitators were coded to develop themes. Themes were grouped according to the social ecological model. Key themes included: health, social dynamics, the physical, financial, and work environment, and program material and approach.
Conclusions and implications: This review identified key barriers and facilitators to weight loss in weight management programs. This will be used to develop theory to inform improvements to such programs for those at risk of failure.

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Symposium ID and title if part of symposium:
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Last updated: 29th November, 2019
By: anasko@rm.dk, Mrs Anna Louise Skovgaard

The social dynamics of resources in chronically ill patients with repeated acute admissions.

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Submitter email: anasko@rm.dk

Background/purpose: Managing life with chronic illness demands resources. In health care, patient resources are often related to individual 'factors' such as education and income. With the concept of 'cultural health capital', it has been suggested that resources in health care could also be understood as relational, contextual and dynamic (Shim 2010). In order to counter health care inequalities, more knowledge is needed on the actual workings of resources in the context of life with chronic illness.
Methods: Ethnographic fieldwork, closely following chronically ill patients experiencing repeated acute admissions (n=10, t=6-12 months). Methods included participant observation and interviews in various situations, to capture the social dynamics of resources over time. The analytical approach was abductive, moving between theoretical and empirical exploration throughout the period.
Results: As the physical condition is deteriorating, patients experience an increase in illness related everyday work, creating a need for continuous negotiation of resources and care needs. Carefully exploring patient pathways over time, suggests that these negotiations are closely connected to the ongoing changes in family life and relatedness of patients to health care professionals. These relations provide essential, but highly dynamic, resources to manage life with chronic illness.

Conclusions and implications: The social dynamics of patient resources must be taken into account when developing health care services that counter health inequalities.

References: Shim, Janet K., 2010, Cultural Health Capital: A Theoretical Approach to Understanding Health Care Interactions and the Dynamics of Unequal Treatment. In: *Journal of Health and Social Behavior*, vol. 51/1, American Sociological Association

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Last updated: 29th November, 2019
By: mette.andersen.nexoe@regionh.dk, Doctor Mette Nexø

Work life expectancies for people with type 1 and type 2 diabetes: Results from a Danish retrospective cohort study.

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Background/purpose: We examined differences in Work Life Expectancies (WLE) of individuals with type 1 and type 2 diabetes compared to people without diabetes.

Methods: Individuals aged 18-65 years, diagnosed with type 1 (n=33,188) or type 2 diabetes (n=81,930) were identified from national registers from the entire Danish population and age and gender matched with controls without diabetes (n=663,656), for period 2000-2017. WLE in years were estimated as time in employment from age 35 to 65. We used a life table approach with multi-state Cox proportional hazard modelling (95% Confidence Intervals: CI). Age was the underlying time-axis. Inverse probability weights accounted for differences between populations. Analyses were performed separately for sex, educational status, and types of diabetes in 5-year age intervals.

Results: Individuals with type 1 diabetes and type 2 diabetes had significantly shorter WLE compared to people without diabetes in the 30-year span. Type 1 diabetes: WLE ranged from 8 years shorter among women with low education [-8.0; CI:-11/-5.0] to 4 years shorter [-4.4; CI:-6.6/-2.3] with high education; WLE in men ranged from -6.4 [CI:-8.7/-4.0] with low education to -3.0 [CI:-4.5/-1.5] with high education. Type 2 diabetes: WLE ranged from -6.5 [CI:-8.9/-4.0] in women with low education to -2.9 [CI:-4.5/-1.3] with high education. WLE in men ranged from -7.0 [CI:-9.4/-4.5] with low education to -3.7 [CI:-5.4/-2.0] with high education.

Conclusion: The substantial number of years lost in a work life span for individuals with type 1 or type 2 diabetes, particularly with low education, highlight need for new preventive strategies.

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Last updated: 29th November, 2019
By: xavier.trudel@crchudequebec.ulaval.ca, M. Xavier Trudel

Long working hours and risk of acute recurrent coronary disease events.

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Background/purpose: Evidence from prospective studies has suggested that long working hours are associated with incident coronary heart diseases (CHD). However, no previous study has examined whether long working hours are associated with an increased risk of recurrent CHD events among patients returning to work after a first myocardial infarction (MI). The objective was to examine the effect of long working hours on the risk of recurrent CHD events.

Methods: This is a prospective cohort study of 971 men and women aged 35 to 59 who returned to work after a first MI. Data were collected at three measurement times: at baseline (on average 6 weeks after their return to work), as well as 2 years and 6 years after baseline. Long working hours were assessed at baseline using a self-reported questionnaire. Incident CHD events occurring during follow-up were ascertained using patient's medical files. Hazard ratios (HR) were estimated using Cox proportional hazard regression models.

Results: Recurrent CHD events occurred among 206 patients. In the unadjusted analysis, long working hours (55+hrs /week vs <35hrs/week) were associated with recurrent CHD (HR: 2.44, 95% CI= 1.52 – 3.89). Long working hours remained associated with the risk of recurrent CHD in the fully adjusted models, including sociodemographics, lifestyle-related risk factors, clinical risk factors, work environment factors and personality factors (HR: 1.85, 95% CI= 1.12 -3.05).

Conclusions and implications: Findings suggest that working 55 hours or more per week is associated with an increased risk of recurrent CHD among patients returning to work after a first MI.

Submission ID: 337
Symposium ID and title if part of symposium: 26

To vape or not to vape? The health effects of e-cigarettes and implications for smoking cessation and policy.

Decision: Accepted, Symposium
Last updated: 29th November, 2019
By: n.j.paine@lboro.ac.uk, Dr Nicola Paine

Acute e-cigarette smoking and cardiorespiratory health: Healthier than combustible cigarettes?

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Background/purpose: E-cigarettes (e-cigs) have been promoted as "safe and harmless" alternatives to smoking, however, more recent evidence suggests that they may have negative health consequences. E-cig use is increasing, but the detrimental effects of combustible cigarette smoking are observed in young adults under conditions that trigger increased cardiorespiratory demand (e.g., mental stress). Stress-induced cardiorespiratory reactivity is linked to cardiovascular and lung disease. No studies have assessed how e-cigs may influence reactivity to mental stress.

Methods: After abstaining for 12hrs, 11 young healthy adult smokers completed 3 lab sessions, and smoked an e-cig, a combustible cigarette, or sat quietly [abstinence] before completing two mental stressors: 1) Active stress: mental arithmetic (PASAT); 2) Passive stress: viewing unpleasant images (IAPS). Respiratory measures were taken continuously before and during each task.

Results: Initial results showed interactions for VO_2 (ml/kg) (F(8, 4036)=13.9, p<.0001), VCO_2 (ml/kg) (F(8, 4058)=17.1, p<.0001), Minute Ventilation (VE, [L]) (F(8, 4149)=39.8, p<.0001), and Tidal Volume (VT, [L]) (F(8, 4153)=3.68, p=.0003). For the PASAT,

abstinence and e-cig conditions produced a decrease in VO_2, VCO_2, VE and VT compared to rest, whereas combustible smoking saw increases in response to the PASAT. No differences were observed for VO_2, VCO_2, or VT responses to passive stress (IAPS) between the smoking conditions.
Conclusions and implications: Our results suggest smoking an e-cigarette and combustible cigarette have different effects on respiratory reactivity to stress; however, more work is needed to determine the long-term consequences of e-cigarette use.

Submission ID: 338
Symposium ID and title if part of symposium: 51

For healthcare professionals, with healthcare professionals: Co-creation approaches used to design interventions to support patients and healthcare professionals.

Decision: Accepted, Offered Poster
Last updated: 29th November, 2019
By: pamela.rackow@stir.ac.uk, Dr Pamela Rackow

The Multimorbidty Collaborative Medication Review And Decision Making (MyComrade) intervention: Partnering with General Practitioners for intervention development and implementation
.

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Background/purpose: Person-centered approaches to managing medications for people living with two or more conditions – multimorbidity – are needed. In response, the MyComrade intervention was developed using a multi-phase, inductive approach based on the Medical Research Council (MRC) guidance. A high level of GP involvement in development and implementation of MyComrade aimed to ensure the intervention addressed priorities, avoiding implementation failure.
Methods: The MyComrade intervention was developed based on a systematic review and synthesis of qualitative research with GPs, a qualitative study with GPs, and an expert consensus process, which included GP input. A non-randomized feasibility study using a qualitative framework approach was conducted with GPs from 10 practices. A pilot cluster randomized controlled trial (RCT), using the same intervention design and mixed methods analysis, is currently underway in 16 practices in Northern Ireland & the Republic of Ireland.
Results: The qualitative findings of the non-randomized feasibility study suggested that GPs see MyComrade as an acceptable intervention. These findings informed the current pilot study which aims to assess the feasibility and acceptability of the intervention, and study procedures. Engagement by GPs and participants suggests that MyComrade is addressing a priority issue. Differences between the two health systems require flexible study procedures, related to activities like recruitment.
Conclusions & implications: The development and implementation of MyComrade, involving constant GP input, may have facilitated positive engagement. However, rigorously following MRC guidance is a lengthy and costly process, requiring multi-disciplinary input and support from funders. The findings will inform the design of a definitive RCT.

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Last updated: 29th November, 2019
By: andrewbaxter439@gmail.com, Andrew Baxter

Did England's Teenage Pregnancy Strategy reduce pregnancy rates in England? A Natural Experiment study.

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Background/purpose: The Teenage Pregnancy Strategy was launched in 1999 and implemented for 10 years at an estimated cost of £280m. This period and years following the strategy saw an observed decline in rates of pregnancy amongst under-18-year-olds, falling by more than 50% by 2014. Billed as a unique nation-wide, comprehensive and evidence-based intervention, the strategy has been hailed as a reproducible model for similar success in other affected countries.
Methods: To evaluate the impact of the strategy, we compared England with other countries not exposed to the intervention using Interrupted Time Series and Synthetic Control methods. Under 18 pregnancies and births and under 20 pregnancies were used as measures of strategy success.
Results: We were not able to observe any change in pregnancy or birth rates attributable to the strategy. In ITS analyses, changes in England rates of teenage pregnancy at 1999 were not found to be different from simultaneous trend changes in Scotland and Wales. In SC analyses, England and Wales saw changes in rates very similar to its synthetic control in the post-implementation phase. Placebo testing confirmed that there was little effect. Removing other UK countries from the synthetic control – to account for potential bias due to spill-over of the intervention – did not change the results greatly.
Conclusions and implications: Our analyses cast doubt on the effectiveness of the Teenage Pregnancy Strategy. Other countries were experiencing similar falls concurrently. These results should be factored into decision making if other countries or England in the future contemplate similar costly strategies.

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Last updated: 29th November, 2019
By: rohgriep@gmail.com, Dr Rosane Griep

Work-family conflict and weight gain in four years of follow up: results from ELSA-Brasil.

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Background/purpose: The difficulty in reconciling the demands of the professional and domestic spheres, domains considered central in adulthood, has been related to several health problems, unhealthy eating habits, and lower levels of physical activity. This study aimed to test the effects of work-to-family conflict (demands from work that interfere with one's family/personal life) and family-to-work conflict (demands from family/personal life that interfere with work) on weight gain among Brazilian civil services.
Methods: All 11,166 active workers (5,820 women and 5346 men) from the multicenter Brazilian Longitudinal Study of Adult Health (ELSA-Brasil) who were recruited in 2008-2010 were included in the analyses. Changes in weight over a mean 4-year follow-up (increase $\geq 5\%$ from

baseline values, vs stability) were analyzed according to work-family conflict (work-to-family conflict; family-to-work conflict and lack of time for personal care and leisure). We performed logistic regression models using R software.
Results: After adjusting for age, marital status and educational level, women that referred work-to-family conflict and family-to-work conflict presented higher chances of weight gain (OR=1.18; IC1.02-1.35 and OR=1.46; IC=1.17-1.83, respectively). Among men, work-to-family conflict was associated to weight gain (OR=1.28; IC95%=1.07-1.54).
Conclusions: Work-family conflict has become a fact of life for many contemporary women and men workers. The findings suggest the need for occupational and social health promotion programs to help men and women in the labor force to reach a balance between work and family life in order to reduce weight gain.

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By: l_wijnhoven@hotmail.com, Lonneke Wijnhoven

One year trajectories of symptoms indicative for adjustment disorder in breast cancer survivors.

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Background/purpose: An increasing number of cancer survivors are dealing with long-term consequences of cancer treatment. Some survivors are not able to adequately adjust to their new situation and might develop an adjustment disorder (AD). This study investigates the course of symptoms indicative for AD in breast cancer survivors (BCS) during one year.
Methods: 459 BCS completed the Hospital Anxiety and Depression Scale (HADS) at baseline, and after 3, 6 and 12 months. HADS scores were defined as negative for AD (HADS$\leq$10), positive for AD (HADS 11-14), and positive for depression/anxiety (HADS$\geq$15). Descriptive profiles over time were a-priori defined as stable negative for AD (stable low), stable positive for AD (stable AD), fluctuating around cut-offs (fluctuating AD), and stable positive for depression/anxiety (stable other disorder(s)). Latent class growth analysis (LCGA) was used as a data-driven approach to identify distinct trajectories.
Results: 293 participants (63.8%) completed all HADS-questionnaires. Across measurements, 70.3%-74.7% BCS scored negative for AD, 10.5%-14.9% positive for AD, and 14.2%-15.2% positive for depression/anxiety. Over time, 1.4% BCS scored stable AD, 54.4% stable low, 37.5% fluctuating AD and 6.8% stable other disorder(s). LCGA identified 3 classes: a stable low (58.6%; intercept 3.6; slope: -0.09), moderate stable (32.9%; intercept 11.4; slope -0.1) and high increasing (8.5%; intercept 19.8; slope 1.29) profile.
Conclusions and implications: In breast cancer survivors, adjustment disorder symptoms were found to be low or to fluctuate over time. A single screening moment may not be optimal to identify breast cancer survivors at risk for an adjustment disorder.

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Last updated: 29th November, 2019
By: t.m.withers@bham.ac.uk, Dr Thomas Withers

Systematic review on the effect of training interventions that aim to improve the skills of health professionals in promoting health behavior change, with meta-analysis of behavioral outcomes.

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Background/purpose: We aimed to identify, synthesize and evaluate randomized trial evidence on the effects of healthcare professional training on the delivery quality of health behavior change interventions and, subsequently, on patient health behaviors.
Methods: Narrative systematic review with meta-analysis. We searched Medline, EMBASE, PsychInfo, AMED, CINAHL Plus and the Cochrane Central Register of Control Trials up to March 2019. Studies were included if they were in English and included intervention delivery quality as an outcome.
Results: Twelve-studies were identified as suitable for inclusion. All studies were judged as being high risk of bias with respect to training quality outcomes. Educational elements were used in all studies and nine included additional practical learning tasks. Narrative synthesis highlighted that 54% of healthcare professional communication outcomes and 55% of content delivery outcomes improved. Training that included both educational and practical elements tended to be more effective. Meta-analysis of patient health behavioral outcomes in six-studies found significant improvements (Standardized Mean Difference (SMD): 0.20, 95% confidence interval: 0.11 to 0.28, P<0.0001, I^2= 0%). No significant difference was found between short ($\leq$6-months) and long-term (>6-months) studies (SMD: 0.25 vs 0.15; P=0.31).
Conclusions and implications: Delivery quality of health behavior change interventions appears to improve following training and consequently to improve health behaviors. Due to high potential for reporting bias, these conclusions should be interpreted cautiously. Future studies should develop a method to reduce quantity of outcome measures and develop optimal methods of training delivery.

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By: t.r.cohen.rodrigues@fsw.leidenuniv.nl, MSc Talia Cohen Rodrigues

Interviews with healthcare professionals about lifestyle support: Why is eHealth rarely used in CVD prevention and treatment?

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Background/purpose: Cardiovascular disease (CVD) is the leading cause of death worldwide. Even though healthy living is crucial for prevention and treatment, lifestyle programs are rarely offered. eHealth is a promising tool that could facilitate lifestyle support, but adoption into cardiac care is low. Therefore, we interviewed healthcare professionals working in cardiac care about their opinions, needs, and perceived barriers related to lifestyle support, and more specifically eHealth support.
Methods: Sixteen healthcare professionals working in Dutch cardiac care facilities were submitted to in-depth semi-structured interviews

concerning facilitating and impeding factors for eHealth use and providing lifestyle support to CVD patients. Interviews were coded following a content analysis approach.

Results: Healthcare professionals mentioned intervention-, patient- and healthcare-related factors that play a role in lifestyle support. Within these three areas, they recognize potential benefits of eHealth, such as increasing patient autonomy, intervention personalization and improving the format and continuity of lifestyle support. However, the professionals also raise several factors (e.g. old age, face-to-face support preference) as barriers to successful eHealth implementation.

Conclusions and implications: Our results show that healthcare professional's intention to use eHealth does not only depend on perceived usefulness. Professionals see the benefits of applying eHealth, but at the same time experience barriers that make them hesitant to apply digital tools. This highlights the importance of investigating solutions to these barriers in eHealth adoption within cardiac care. All in all, including healthcare professionals is essential to develop eHealth solutions that are successfully adopted into the healthcare system.

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By: t.m.withers@bham.ac.uk, Dr Thomas Withers

Long-term effectiveness of interventions designed to increase physical activity: Systematic review and meta-analysis.

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Background/purpose: Although physical activity interventions are frequently reported to be effective, there are criticisms that outcomes are often self-reported and are measured only in the short term. The aim of this study was to assess the long-term effectiveness of behavioral interventions on objectively measured physical activity.

Methods: A systematic review and meta-analysis included randomised controlled trials of intervention to increase physical activity that used an objective measure of physical activity at a minimum of 24 months of follow-up.

Results: In six studies examining physical activity intervention on daily steps 24 months post baseline, the meta-analysis indicated a significant effect (SMD: 0.17 95% CI: 0.09 to 0.25). Four trials extended further (from 36 to 48 months) and similar results were found (SMD: 0.17 95% CI: 0.07 to 0.27). In five trials assessing the effect of intervention on moderate-to-vigorous activity (MVPA), there was a significant effect 24 months post baseline (SMD: 0.19 95% CI: 0.11 to 0.28). The effect on MVPA at 36 to 48 months was also significant (SMD: 0.19 95% CI: 0.12 to 0.25). Use of accurate method to measure outcomes, large sample size and additional support during follow-up were associated with effectiveness for both outcomes.

Conclusion and implications: This review shows that physical activity interventions were effective for promoting objectively measured physical activity in the long-term, particularly if the intervention involved additional participant support during follow up.

Submission ID: 347
Symposium ID and title if part of symposium: 26

To vape or not to vape? The health effects of e-cigarettes and implications for smoking cessation and policy.

Decision: Accepted, Symposium
Last updated: 29th November, 2019
By: simon.bacon@concordia.ca, Dr. Simon Bacon

The (human) health effects of acute e-cigarettes usage: A systematic review and meta-analyses.

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Background/purpose: There is a tension growing between the potential smoking cessation benefits of e-cigarettes (e-cigs) and their potential harm, as evidenced by the growing number of 'e-cigarette, or vaping, product use associated lung injury' (EVALI) cases. There is a currently expanding literature on the acute effects of e-cigs, but, to date, there has not been a comprehensive synthesis of the acute exposure data in humans. The current study sought to systematically review all the acute e-cig exposure studies in adults and then summarize the related physiological effects.

Methods: Studies were searched in PubMed, SCOPUS, Web of Science and the Cochrane Library databases (up to October 2019). The inclusion criteria were: English or French language peer-reviewed articles; studies including adult participants; and objective measurements of physiological responses to active e-cigarette smoking. Measures were compared between pre- and post-smoking.

Results: Of the 4345 studies investigated, 32 studies met the inclusion criteria. These studies indicated that the short-term (4-20 minutes) use of nicotine based e-cigs resulted in increases in cardiovascular measures such as heart rate (HR) and blood pressure, as well as, decreases in measures of respiratory function such as forced expiratory volume in one second (FEV1) and exhaled nitric oxide (FeNO).

Conclusions and implications: Initial results suggest that e-cigs have acute negative impacts on cardiovascular and respiratory parameters, with some measures being shifted to levels that have been associated with notable clinical outcomes (e.g., HR). The current review provides important evidence in the continued political debate about regulation of e-cigs.

Submission ID: 348
Symposium ID and title if part of symposium: 51

For healthcare professionals, with healthcare professionals: Co-creation approaches used to design interventions to support patients and healthcare professionals.

Decision: Accepted, Offered Poster
Last updated: 29th November, 2019
By: j.m.mclellan@stir.ac.uk, Miss Julie McLellan

Barriers and facilitators to midwives' health promotion practice behaviors: theoretical domains framework-based interviews and survey.

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Background/purpose: Midwives are expected to perform various health promotion practice behaviors (HePPBes) such as informing pregnant women about the benefits of physical activity during pregnancy. This research investigated perceived barriers and facilitators to midwives' implementing HePPBes.

Methods: Study 1: midwives (N = 11) took part in semi-structured interviews underpinned by the theoretical domains framework. Interviews were analyzed using a direct content analysis approach to identify barriers or facilitators to undertaking HePPBes. Study 2: midwives and student midwives (n=505) participated in an online survey, informed by study 1, assessing demographics, HePPBes and cognitions about HePPBes. Hierarchical multiple regression predicted the influence of demographics, health status and cognitions about HePPBes on the number of HePPBes performed.

Results: Midwives perceived barriers to carrying out HePPBes, such as a requirement to perform an increasing amount of HePPBes. Facilitators, including strategies used by midwives to perform HePPBes, were identified. Significant predictors of the number of HePPBes performed, when controlling for years of experience and midwifery occupational status, were: belief that HePPBes were outwith the professional role ($b = -.105$, $p < .05$), confidence ($b = .182$, $p < .01$), motivation ($b = .145$, $p < .05$) and support from colleagues and resources ($b = .170$, $p < .01$).

Conclusions and implications: Midwives' perceived multiple barriers and facilitators to carrying out HePPBes. HePPBe performance was predicted by the belief that these behaviors were within the role of the midwife, confidence, motivation and perceived support from colleagues and resources. These findings were used to systematically develop a multiple behavior change intervention for, and in consultation with, midwives.

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Last updated: 29th November, 2019
By: emma.brown@leedsbeckett.ac.uk, Dr Emma Brown

A pilot trial of self-incentives for smoking cessation in routine and manual employees

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Background/purpose: People in routine and manual (R&M) occupations (e.g., bar staff) are twice as likely to smoke than employees in professional occupations. Encouraging smokers to self-administer incentives contingent on cessation are effective in community and prison-based settings and have the potential to help employees who may struggle to attend cessation support. The aim of the present study was to gauge the feasibility and estimate the effect size associated with encouraging R&M employees to self-incentivise to promote smoking cessation.

Methods: Thirty-two smokers from R&M occupations were invited to take part in the study. Twenty-four participants agreed to take part and were randomised to: (a) form an overall plan to quit smoking (n=12), or (b) self-incentivise if they had not smoked at all by the end of each week (n=12). Feasibility was assessed through acceptance and completion rates. Chi square was used to generate effect sizes to inform future randomised controlled trials.

Results: Twenty-four of the 32 smokers approached completed the baseline questionnaire and were analysed on an intention-to-treat basis. At 1-month follow-up, one participant (1/12; 8%) in the control condition quit. In contrast, 58% (7/12; p = 0.08, d=0.83) of employees who self-incentivised on a weekly basis quit.

Conclusions and Implications: Use of self-incentivising implementation intentions are feasible and can be delivered outside of cessation support for employees. Furthermore, the medium-sized effect generated by the intervention suggests a fully powered randomised controlled trial is needed to assess the potential of self-incentivising to begin to address the inequality gap in smoking prevalence.

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By: emma.l.godfrey@kcl.ac.uk, Dr Emma Godfrey

Treatment fidelity in the Gait Rehabilitation in Early Rheumatoid Arthritis Trial (GREAT) feasibility study

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Background/purpose: Many people with early rheumatoid arthritis report foot pain and walking disability. Physiotherapists and podiatrists received a two-day bespoke training in a psychologically informed gait rehabilitation intervention (2 compulsory and 4 optional sessions delivered over 3/12), incorporating motivational interviewing (MI) and behaviour change techniques (BCTs), to address this. This study assessed fidelity of delivery within a feasibility study.

Methods: Four physiotherapists and two podiatrists delivered 78 sessions across three UK centres. The Motivational Interviewing Treatment Integrity (MITI) Rating Scale and a bespoke tailored treatment fidelity measures were used to assess fidelity to MI and core components plus BCTs. Two independent assessors rated audio recordings of sessions.

Results: 28 (80%) participants' data across 64 sessions were rated for core components and BCTs and 37 (50%) sessions were analysed for MI. Relational (score=4.4) and technical (score=4.2) aspects of MI were delivered with good fidelity. 6 core components and 7/17 BCTs in Session 1 were conveyed with high (over 80%) treatment fidelity. 5 core elements and 3/12 BCTs in Session 2 were provided with high fidelity. Sessions 3 and 4 reliably delivered 3/12 BCTs, while only one session 5 and 6 was delivered. Inter-rater reliability showed agreement of over 80% (range 82-87%) was reached for all sessions.

Conclusions and Implications: Clinicians delivered core components and MI with high fidelity, but not all BCTs. Treatment fidelity might be enhanced with further training or on-going support. Alternatively, the intervention could be amended to specify mandatory BCTs alongside optional ones, depending on the needs of individual participants.

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By: elissa.weitzman@childrens.harvard.edu, Dr. Elissa Weitzman

Results from a randomized trial of a novel patient-centered preventive intervention to reduce alcohol use among medically vulnerable youth

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Background/purpose: Alcohol poses unique risks for youth living with a chronic medical condition, yet many drink and preventive interventions are scarce.
Methods: We recruited n=451 adolescents with type 1 diabetes, inflammatory bowel disease, or rheumatic disease to an RCT involving a brief condition-tailored intervention. Participants reported: past 90-day alcohol use, intentions to drink, perceptions of alcohol-related risk, knowledge of alcohol's impacts on their condition. We used GEE models and Stuart-Maxwell tests of marginal homogeneity to evaluate effects 6-/12-months post-intervention.
Results: At baseline, subjects were 16.0 years old on average (SD=1.4), 51.5% female, 81.4% white non-Hispanic, 24.3% past-year alcohol users. As alcohol-related knowledge increased for everyone over time, the intervention group experienced additional gains, even in adjusted models (8.2 and 8.7 percentage points at 6- and 12-months, p<.001). Perceived risk increased only for youth in the treatment arm, from baseline to 6-month (p=0.01), with changes mainly among 16-18 year olds and white non-Hispanic youth (p=0.053 and p=0.020, respectively). Higher intent to drink was observed at 12-months for all youth; although intentions increased among females and youth 16-18 years old in the control group (p=.019 and p=.002), their treatment group counterparts did not experience a change. The number of alcohol drinking days increased for everyone by the 12-month follow-up, with no differences by treatment arm.
Conclusions and Implications: Positive effects of a preventive intervention targeting alcohol use on knowledge, perceived risk, and intentions were found, with heterogeneities by age, gender, and race/ethnicity. Further work is needed to optimize the model for behavior change.

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Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 29th November, 2019
By: mandeep.sekhon@kcl.ac.uk, Miss Mandeep Sekhon

Applying a theoretical framework to assess the acceptability of therapist training and delivery of the Gait Rehabilitation in Early Rheumatoid Arthritis Trial Intervention (GREAT STRIDES): A qualitative analysis

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Background/Purpose: GREAT Strides is a novel gait rehabilitation intervention with an embedded psychological component aimed at improving walking ability in people with early rheumatoid arthritis. Therapists received two days of gait rehabilitation training, motivational interviewing (MI) and behaviour change techniques (BCTs). This study explored therapists' acceptability of: (1) the training received and (2) delivering GREAT Strides within a feasibility study.
Methods: Nine therapists (four physiotherapists, five podiatrists) participated in semi-structured interviews. The topic guide was informed by the Theoretical Framework of Acceptability (TFA). Interviews were professionally transcribed, and a deductive thematic analysis was applied. Data were coded into six TFA constructs (Affective Attitude; Burden; Intervention Coherence; Opportunity Costs; Perceived Effectiveness; Self-efficacy).
Results: Key barriers and enablers with regards to the acceptability of the training and intervention delivery were identified. *Training*: Therapists liked the supportive training environment (affective attitude) and reported that role play exercises aided their confidence in applying MI and BCTs (self-efficacy). The lack of time available to attend training was considered unacceptable (opportunity costs). *Delivery:* All therapists valued the opportunity to provide individualised care (intervention coherence). Barriers associated with acceptability included the use of trial-related materials (e.g. checklist) during intervention delivery (burden) and the time delay between receiving training and intervention delivery (perceived effectiveness).
Conclusions and implications: The bespoke training and Great Strides delivery was acceptable to most therapists. Key refinements (e.g. timing of training in relation to intervention delivery) have the potential to improve aspects of the training and delivery of the intervention, maximising efficiency and potential for effectiveness.

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Symposium ID and title if part of symposium: 49 Community-led approaches to increasing physical activity participation
Decision: Accepted, Offered Poster
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By: h.quirk@shu.ac.uk, Dr Helen Quirk

What impact does parkrun have on previously inactive people? Results from the parkrun health and wellbeing survey 2018

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Background/Purpose: *parkrun* organises free, weekly community physical activity events attracting 300,000+ people worldwide every week. Promoting health and wellbeing is high on *parkrun*'s agenda. This study aimed to explore physical activity levels and perceived impact of *parkrun* among UK participants.
Methods: The online *parkrun* health and wellbeing survey 2018 recruited *parkrun* registrants. The International Physical Activity Questionnaire (IPAQ) and a single-item physical activity question measured self-reported physical activity. Perceived impact of *parkrun* on 15 health-related outcomes was also measured. Respondents were matched to their *parkrun* registration data which identified physical activity level before *parkrun* participation. Previously inactive participants were identified as those reporting <1 day a week of activity at registration.
Results: Of 27,656 respondents who walked/ran at least one *parkrun*, 1,496 (5.4%) were inactive at registration. Using IPAQ, respondents reported: low activity 22.3%, moderate activity 45.2% and high activity 32.5%. The mean activity was 2.3 days of activity per week or 118.0 days per year. Respondents completed an average of 11.1 *parkruns* per year. Large proportions of respondents reported their health characteristics as 'better' or 'much better' since participating in *parkrun*: 93% reporting improvements to fitness, 89% to physical health, 82% to happiness and 73% to mental health.
Conclusions and implications: This is the largest study of its kind to demonstrate *parkrun's* potential to reach and engage inactive communities. Previously inactive people engage in moderate and high levels of physical activity and report improvements to fitness, mental health and happiness since participating in *parkrun*.

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Last updated: 29th November, 2019
By: milica.vasiljevic@durham.ac.uk, Dr Milica Vasiljevic

How do labels using lower strength verbal descriptors, %ABV, or their combination impact wine consumption? A bar laboratory adaptive randomised controlled trial

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Background/Purpose: Wine and beer labelled as lower in strength increased consumption compared to the same drinks labelled as regular strength (Vasiljevic, Couturier, Frings, Moss, Albery, & Marteau, 2018). The label comprised both a verbal and numerical descriptor of strength. The present study aimed to ascertain the impact of each of these label components.

Methods: One-hundred and forty-seven weekly wine drinkers were sampled from a nationally representative English panel. An adaptive trial design was used, comprising of an internal pilot sample (*N1*=90) and a confirmatory sample (*N2*=57). Participants were randomised to one of three groups to taste test wine in a bar-laboratory, varying only in the label displayed: Group 1: verbal descriptor (*Super Low*); Group 2: numerical descriptor (*4%ABV*); Group 3: verbal descriptor and numerical descriptor (*Super Low 4%ABV*). The primary outcome was total volume (*ml*) of wine consumed.

Results: The volume of wine consumed was significantly higher when the label contained a numerical strength descriptor. Participants in Group 2 (*M*=155.12) and Group 3 (*M*=154.59) drank significantly greater amounts than Group 1 (*M*=125.65); *p*=.016 and *p*=.014 respectively. No statistically significant difference was detected between Group 2 and Group 3.

Conclusions and implications: The increased consumption of lower strength alcoholic drinks appears driven by the numerical rather than the verbal descriptors on the label. The mechanisms by which numerical information has this effect are currently unknown.

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Last updated: 29th November, 2019
By: k.j.peerdeman@fsw.leidenuniv.nl, Dr Kaya Peerdeman

Views of physician's competence and empathic skills can affect patients' trust and expectations

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Background/Purpose: Patients can increasingly find information online about their physician's skills. It is largely unknown how such information impacts patients' views of their physician and treatment outcomes. We investigated if written pre-consultation information about the competence and empathic skills of a physician may impact trust and treatment outcome expectations in mild and severe conditions.

Methods: Participants (n=237) in this web-based experiment read 1 of 8 variants of a vignette according to a 2x2x2 design. The vignette regarded an upcoming surgical removal of an innocent mole (mild) or melanoma (severe). The dermatologist who would conduct the surgery was described as having low or high competence and as having low or high empathic skills. Trust in the physician and expected treatment outcomes were assessed.

Results: Views of condition severity, competence, and empathic skills were successfully modified (η_p^2=.35-.74). Both descriptions of the physician as highly competent and descriptions of the physician as highly empathic led to heightened trust (η_p^2=.19, η_p^2=.14, respectively), regardless of condition severity (η_p^2=.00 -.01). Both high competence and high empathic skills also elicited higher expected surgery success (η_p^2=.42, η_p^2=.03, respectively). High competence, but not high empathic skills, led to lower expected side effects (η_p^2=.04, η_p^2=.00, respectively).

Conclusions and implications: Pre-consultation information describing a physician's high competence and/or empathic skills may increase trust in that physician and positively shape treatment outcome expectations. Healthcare providers may want to take control of online information, for example by providing professional profiles on hospital websites.

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Symposium ID and title if part of symposium:
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Last updated: 29th November, 2019
By: jduffecy@uic.edu, Dr. Jennifer Duffecy

Development of a sleep optimization intervention for individuals with Type 1 diabetes

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Background/purpose: Less than 20% of adults with type 1 diabetes (T1DM) achieve glycemic targets. Sleep is increasingly recognized as a potentially modifiable target for improving glycemic control. Diabetes distress, poor self-management behaviours, and reduced quality of life have also been linked to poor sleep. The purpose of this study was to pilot a sleep optimization intervention for individuals with T1DM.

Methods: Participants were diagnosed with T1DM and had self-reported short sleep (sleep duration < 6.5 hours). They were randomized to receive either 8 weeks of the experimental intervention or a healthy living control. Sleep-Opt-In consisted of sleep focused lessons, a sleep tracker and weekly coach phone calls. The control group received weekly lessons on health topics and coach calls. Participants were followed for 4 weeks post-treatment.

Results: As this was a pilot study, descriptive statistics were used to examine the data. After 12 weeks, sleep duration increased for both the experimental group (n = 5; D +8.93 mins) and the control group (n = 3; D +22.06 mins). However, Pittsburgh Sleep Quality Index scores decreased in the experimental group (baseline M = 6.4; D -1.4) but not in the control group (baseline M = 10.33; D +1.17). The Center for Epidemiological Studies Depression (CESD) mood scores also showed improvement for those in the experimental group (Experimental: baseline M = 9.2; D -6.73; Control: baseline M = 15; D +5).

Conclusions and implications: While this was a small sample pilot, it appears that self-report measures of sleep quality and depression showed

improvement following a sleep optimization intervention. Next steps include examining change in glucose variability as related to changes in sleep.

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Last updated: 29th November, 2019
By: bo.wang@umassmed.edu, Associate Professor Bo Wang

Predicting adolescent HIV-related behaviors using machine learning

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Background/purpose: Precision prevention is increasingly important in HIV prevention research to move beyond universal interventions to tailored ones for high-risk individuals. The current study employs a novel analytic approach to develop a Learning Framework of Risk Stratification for HIV (ALERT-HIV) in predicting adolescent HIV risk.
Methods: Comprehensive longitudinal data on adolescent risk behaviours, perceptions, sensation-seeking, peer and family influence, and neighborhood risk factors were collected from 2,564 grade-10 students followed for 24 months in 2008–2012. Machine learning techniques were applied to innovatively leverage longitudinal data for robust HIV risk behaviour prediction.
Results: We used 80% of data for training models (20% for testing). Among different learning algorithms, support vector machines and logistic regression yielded overall better performance in predicting HIV risk behaviours. The learning model using longitudinal data achieved the best sensitivity of 83%, specificity of 75.7% and AUC of 0.87, for multiple sex partners, and sensitivity of 81.8%, specificity of 71.8% and AUC of 0.83, for non-condom use at last sex for 5-fold cross-validation on the training data, with AUC of 0.88 and 0.85 respectively on the unseen testing data. Top predictors included having sex in the last six months, intrinsic rewards, alcohol use, parental monitoring, response cost, and having a boy- or girlfriend.
Conclusions and implications: Machine learning can be used to build effective prediction model(s) to identify adolescents who are likely to engage in HIV risk behaviours. This study builds a foundation for targeted intervention strategies and informs precision prevention efforts in a school-setting.

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Last updated: 29th November, 2019
By: bo.wang@umassmed.edu, Associate Professor Bo Wang

Optimizing implementation strategies: A Multiphase Optimization Strategy (MOST) trial to improve teachers' delivery of an evidence-based HIV prevention program

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Background/purpose: There are significant challenges to implementing evidence-based prevention programs into school settings. Effective implementation strategies are needed to enhance the success of implementation. The current study uses a Multiphase Optimization Strategy (MOST) design to build an optimized intervention for at-risk or moderate-performing teachers.
Methods: Using our 7-item Pre-Implementation School Screening tool, we identified teachers who are at-risk for not implementing the Focus on Youth in the Caribbean (FOYC) intervention curriculum, moderate- and high- performing teachers. After completing a two-day curriculum workshop, at-risk and moderate-performing teachers were randomly assigned to one of the six experimental conditions and were asked to teach the intervention curriculum for one semester. This full factorial trial examines two implementation components, including biweekly monitoring and feedback (two-level) and site-based assistance/mentorship (three-level), with workshop/video as a constant component. The primary outcome is implementation fidelity. The main effect of the intervention components and interactions between them were estimated using ANOVA.
Results: There were significant main effects of biweekly monitoring and feedback (BMF) and site-based assistance/mentorship (SAM) on teachers' implementation fidelity (number of core activities taught), and one significant interaction between BMF and enhanced SAM. The most effective combination of components for at-risk teachers includes BMF and enhanced SAM. The optimized intervention for moderate-performing teachers is BMF or SAM.
Conclusions and implications: The highly efficient experimental design allows identification of the most effective combinations of implementation strategies for teachers. The optimized teacher training and implementation package(s) will be used to train at-risk and moderate-performing teachers for the subsequent nation-wide implementation of the HIV prevention intervention.

Submission ID: 362
Symposium ID and title if part of symposium: 52 - Cardiometabolic Health in Racial/Ethnic Minorities across the Cancer Continuum: Prevention to Survivorship
Decision: Accepted, Symposium
Last updated: 29th November, 2019
By: patty.i.moreno@gmail.com, Dr Patty Moreno

Cardiometabolic comorbidities in hispanic/latino cancer survivors: Prevalence and impact on health-related quality of life

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Background/purpose: The aim of this study is to elucidate the prevalence of cardiometabolic comorbidities (i.e., myocardial infarction, congestive heart failure, peripheral vascular disease, cerebrovascular disease, and diabetes) in Hispanic/Latino cancer survivors and examine the association between cardiometabolic comorbidities and health-related quality of life (HRQoL).
Methods: Hispanics/Latinos diagnosed with breast, prostate, or colorectal cancer (n=288) completed assessments including the Charlson Comorbidity Index and the Functional Assessment of Cancer Therapy General Scale (FACT-G) within 15 months of treatment completion as part of a project funded by the National Cancer Institute.
Results: Participants were on average 56 years old, married/cohabitating (61.5%), and had a high school education or less (65.6%) with a household income less than $50,000 (68.4%). Most participants were foreign-born (59.4%) and either monolingual Spanish-speaking (54.2%) or English-Spanish bilingual (26.0%). One-quarter of participants (24.7%)

were diagnosed with comorbid diabetes and one-fifth of participants (20.8%) were diagnosed with comorbid peripheral vascular disease. 2 to 3% of participants were diagnosed with comorbid myocardial infarction, congestive heart failure, or stroke. A higher number of cardiometabolic comorbidities was associated with worse overall HRQoL, poor social and functional wellbeing, and greater cancer-specific symptom burden (*p*s < .05). A diagnosis of comorbid diabetes was uniquely associated with lower self-efficacy in patient-provider communication (*p* < .05).

Conclusions and implications: Cardiometabolic comorbidities are highly prevalent among Hispanic/Latino cancer survivors and have a deleterious effect on multiple facets of HRQoL and cancer-specific symptom burden. The complexity of managing diabetes and cancer care may lead patients to feel less confident in their communication with providers and negatively impact patient-provider relationships.

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Last updated: 30th November, 2019
By: brittany.johnson@flinders.edu.au, Ms Brittany Johnson

Where to next in comprehensive intervention strategies to supporting parents to reduce children's unhealthy food intake

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Background/purpose: Parents are an important target for interventions to reduce children's excessive unhealthy snack intake. Reducing unhealthy snacks consumption is a complex issue and requires intervention strategies to be designed using best-practice, systematic approaches. We aimed to develop theoretically-grounded, evidenced-informed intervention content to support parents to limit purchasing of unhealthy snacks for their 3-7-year-old children.

Methods: The Behaviour Change Wheel process guided the design of a comprehensive package of intervention strategies, including those suitable for implementation in different environments within the socio-ecological model. This study synthesised evidence from two of our previous studies with parents and published literature, in a behavioural analysis based on the COM-B model. Design focussed on gaps in the use of behaviour change approaches in past interventions.

Results: Thirteen intervention strategies were proposed to address parents' psychological capability, physical and social opportunity, and reflective and automatic motivation needed to limit unhealthy snack purchasing. Strategies were designed for implementation in: policy/society (n=5), food supply (n=3), community (n=3) and home setting (n=2). Most commonly proposed intervention functions included environmental restructuring, persuasion, enablement, coercion and education, and communication/marketing, guidelines, legislation, and environmental/social planning policy categories. Together strategies could include up to 38 unique behaviour change techniques, most commonly from the hierarchical clusters of antecedents and natural consequences.

Conclusions and implications: Our study provides a road-map for future intervention research to comprehensively address parents' provision of unhealthy snacks to their children. Proposed intervention content can be refined in proceeding stakeholder consultation and feasibility testing.

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Last updated: 30th November, 2019
By: isharvey@tamu.edu, Idethia Harvey

Environmental affordance model: Exploring the role of stress and diabetes management

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Purpose: Chronic exposure to socioeconomic inequalities and inadequate healthcare are associated with stress and early onset of chronic illness among African Americans. Rural African Americans who live in pathogenic environments experience disproportional chronic comorbidities and are especially vulnerable to rural deprivation compared to rural White Americans. Addressing T2D and hypertension among rural African Americans using the Environmental Affordance Model can forge new ground in rural minority health research.

Methods: Semi-structured interviews among African Americans (N = 30) diagnosed with a history of T2D (N = 15.9 years) and hypertension (86.2%). Questions and probes elicited descriptions for self-management behaviors within the context of stress, social support, and physical environment. Digital audio files were transcribed verbatim. Data were analyzed using thematic content analysis.

Results: The common themes that reflected shared concerns and insights regarding socio-environmental disparities in rural communities. Narratives were consistent with the Environmental Affordance Model, indicating that rural African Americans are disproportionality burdened with chronic, everyday stressors and use unhealthy behaviors to mitigate their stress. The main themes identified were 1) maladaptive coping behavior under distress and 2) socio-environmental burdens on disease management.

Conclusions and implications: Using the Environmental Affordance Model to examine African Americans with type-2-diabetes contributed to a novel perspective of understanding etiologies and socio-environmental factors influencing their health. Indeed, the length of diagnosis and residing in endemic and deprived rural areas confounds the complexity of self-management behaviors. By examining how rural African Americans manage their chronic conditions, we can develop programs to support their self-management practices.

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Symposium ID and title if part of symposium: 53

Health promotion through cultural activities

Decision: Accepted, Offered Poster
Last updated: 30th November, 2019
By: gunter.kreutz@uol.de, Gunter Kreutz

Biopsychological perspectives on choral singing and social connectedness

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Background: The hypothesis that singing may provide health and wellbeing benefits has been proposed and supported by empirical evidence over the past decades. However, the question of how singing as a social activity may contribute to such potential effects in diverse groups of older adults with chronic health problems has rarely been addressed directly.

Methods: We report two studies on community-based choirs, Study 1 compared a choir of Parkinson patients (N = 14; mean age: 73.8 years) with a choir of healthy-aging older adults (N = 10; mean age 72.8 years) in a pre-post design (60-minute singing sessions). Study 2 compared two subgroups of participants drawn from the same mixed choir in a pre-post design (60-minute singing sessions). The two subgroups included older adults living with lung disease (N = 16 mean age = 72) and older adults living without chronic illness (N = 9; mean age: 74.3). Different sets of dependent measures were applied per study. They included positive and negative affect, pain thresholds, social connectedness and salivary cortisol.

Results: Significant improvements of mood and feelings of social connectedness were found irrespective of individual health status. Parkinson patients specifically benefitted from reduced negative affect and higher pain thresholds, whereas lung patients showed reduced perceived stress. Positive behavioral changes were accompanied by overall reductions of cortisol concentrations in lung patients.

Conclusions and implications: These findings replicate and extend previous work by suggesting similar beneficial effects of choral singing in older adults irrespective of health status as represented in behavioral and biological changes.

Submission ID: 369
Symposium ID and title if part of symposium: 47

Learned pain: Understanding learning processes involved in pain

Decision: Accepted, Symposium
Last updated: 30th November, 2019
By: j.s.blythe@fsw.leidenuniv.nl, Mr. Joseph Blythe

Nocebo effects on pain: An investigation of behavioural and neural learning processes

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Background: Pain is a noxious somatosensory experience and is affected by learning processes. Particularly in chronic conditions, learning plays a role in the experience of pain. Nocebo effects are a learned exacerbation of pain that occurs in clinical and laboratory settings and can lead to deleterious treatment responses. By studying the learning processes underlying nocebo effects at a behavioural and neural level, we aim to unravel the neurobiological processes underlying nocebo effects and predict their occurrence.

Methods: Nocebo effects on pain were induced in 36 healthy volunteers through classical conditioning. Participants learned to associate an inert gel applied to their volar forearm with increased thermal pain intensity, relative to a moderate pain intensity without gel. After conditioning, nocebo and control trials were both paired with moderate pain to test for learned nocebo effects (evocation). EEG measurement was collected during pre- and post-learning resting states, and during acquisition and evocation.

Results: A nocebo effect was induced ($p<.001$, $\eta_p^2=0.36$), based upon comparison of the first evocation control and nocebo trials. EEG analyses are underway and will be reported at the conference.

Conclusions and implications: This experiment replicates previous research which demonstrate the role of learning processes for inducing nocebo effects on pain. Additionally, a novel analysis of EEG data will be used to identify neurobiological predictors such as differences in resting state alpha band power, oscillations and peak frequencies which may be used investigate neurobiological mechanisms for nocebo effects and identify individuals most susceptible to nocebo effects in the course of their treatment.

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By: darlina.fadilazim@perdanauniversity.edu.my, Ms Darlina Hani Fadil Azim

Perceived barriers in communication with healthcare providers among women in semi-urban and urban areas in Malaysia

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Background/purpose: Effective communication with healthcare providers (HCPs) is essential in ensuring quality healthcare among women. This study aimed to investigate the influence of women's mental health status on perceived difficulties in healthcare communication.

Methods: A cross-sectional study was conducted among 1837 women (mean age=28.5±10.2 years) from semi-urban and urban areas in Selangor, Malaysia using a self-administered questionnaire. Data on demographic details, communication difficulties with HCPs and mental health status (Depression, Anxiety and Stress Scale [DASS-21]) were collected.

Results: There were significant differences between participants in semi-urban and urban areas: those in urban areas were younger, single and reported higher levels of stress. Women from both areas reported perceived difficulties in communicating with male HCPs. Further analysis revealed that difficulties in contacting HCPs were significantly correlated with levels of depression ($r=0.13$, $p<0.01$), anxiety ($r=0.13$, $p<0.01$) and stress ($r=0.67$, $p<0.01$). Difficulties in communicating with male HCPs were also significantly correlated with levels of depression ($r=0.09$, $p<0.01$), anxiety ($r=0.11$, $p<0.01$) and stress ($r=0.05$, $p<0.05$). Logistic regression showed that women with higher levels of anxiety (OR=1.45, 95% CI= 1.14-1.85) and depression (OR=1.76, 95% CI = 1.30-2.38) found it more difficult to contact HCPs.

Conclusions and implications: These findings suggest that healthcare communication barriers among women, especially those with mental health issues, still exist. These barriers could contribute to delays in healthcare seeking behaviour and consequently further impact women's mental and physical health. Hence, strategies on improving communication with HCPs, particularly male HCPs, among women need to be promoted.

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Last updated: 30th November, 2019
By: r.v.h.ijzerman@fsw.leidenuniv.nl, MSc Renee IJzerman

Online therapy by psychologists in medical healthcare: Uptake and implementation challenges

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Background/purpose: Online therapy is promising in improving self-management among chronically ill people. Despite its effectiveness, implementation in clinical practice remains complicated. This study examined uptake of online therapy among psychologists in medical healthcare, and associated barriers and facilitators among users and nonusers.
Methods: An online survey, based on the Unified Theory of Acceptance and Use of Technology (UTAUT), was disseminated among psychologists in medical healthcare in the Netherlands, covering current provision of online therapy to their patients and future intention to provide online therapy. To study possible predictors of online therapy uptake, performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating conditions (FC) were operationalized. Moreover, age, gender, experience and voluntariness of use were mapped. Multiple regression analysis and moderator analysis determined the relationship between variables.
Results: Of the 432 psychologists approached, 107 (24.8%) participated. Of these, 15.9% provided online therapy and 74.8% expected to start providing online therapy within 5 years. The UTAUT constructs, PE, EE, and SI, significantly influenced behavioural intention (BI, mean=3.9, SD=0.8) among both users (R^2=.087; F=25.507; p<.001) and nonusers (R^2=0.490; F=20.405; p<.001). Gender significantly moderated the relationship between BI and SI among nonusers; such that women who had high social influence had higher behavioral intention compared to men (*B*=.896; *t*=2.683, p<.05).
Conclusions and implications: Even though intention to start providing online therapy is average to high, actual uptake remains quite low. There is a need to narrow the gap between intention and actual use by influencing predictive constructs.

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By: j.s.blythe@fsw.leidenuniv.nl, Mr. Joseph Blythe

Nocebo effects on cowhage-evoked itch: A comparison of associative and observational learning processes

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Background/purpose: The worsening of pruritic symptoms caused by negative expectations (nocebo effects) can lead to increased severity and deleterious treatment responses in dermatological conditions. Itch-related nocebo effects have previously been shown to form through classical conditioning with verbal suggestion (associative learning). In this experiment, we compared the impact of another learning process, observational learning, to classical conditioning for inducing nocebo effects on cowhage-evoked itch.
Methods: A sample of 66 healthy female participants was randomly allocated to either a classical conditioning, observational learning or sham conditioning (control) procedure. Participants in the classical conditioning group learned to associate the administration of a gel with an increased intensity of cowhage-evoked itch, while participants in the observational learning group learned through viewing a video of the conditioning paradigm.
Results: While classical conditioning induced a nocebo effect on itch (p=.036, η_p^2=.12), observational learning did not (p=.153, η_p^2=.054) compared to the sham conditioning control group.
Conclusions and implications: This experiment demonstrates for the first time that observational learning may be less likely to induce nocebo effects on cowhage-evoked itch than first-hand associative learning (classical conditioning with verbal suggestion). While it is important to replicate these results, the findings demonstrate the important role that learning can play in pruritic symptoms, and suggest that clinicians should be mindful of what their patients observe and experience in the course of their treatment.

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By: maria.sandborgh@mdh.se, Associate professor Maria Sandborgh

Dyadic intervention for complex person transfer situations in dementia care: A single-case replication study

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Background/purpose: Problematic person transfer situations (moving people from A to B) within dementia care often need physiotherapist consultation. Interventions guided by Functional Behaviour Analysis (FBA) can improve transfer situations in dementia care dyads (i.e., a person with dementia [PWD] and their caregiver). Clinical replications of a Single Case Study (SCS) are important for internal and external validity. The aim of this study was to replicate an SCS of an FBA-guided intervention for problematic person transfer situations in two dementia care dyads in a second clinical setting.
Methods: A quasi-experimental A-B design was used. Two dementia care dyads' problematic transfer situations were targeted. Transfer situations were video-recorded and evaluated with the Dyadic Interaction in Dementia Transfer Assessment Scale and the Resistiveness to Care Scale-Dementia Alzheimer Type. Tailored interventions were generated through the FBA. Changes in levels between A and B phases were analyzed visually and with Nonoverlap of All Pairs (NAP).
Results: The tailored interventions showed significant improvement for care dyad one, with less discomfort expressed by the PWD and improved adaption to the complex needs of the PWD by caregivers. In the second care dyad, the transfer-related behaviour of the PWD varied greatly and no significant changes were detected. These results parallel those from the earlier SCS.
Conclusions and implications: The methods and findings of an SCS could be replicated in a new clinical setting. This strengthens the generalizability of an FBA-guided intervention for problematic person transfers in dementia care dyads.

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Symposium ID and title if part of symposium: 53
Health promotion through cultural activities
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Last updated: 30th November, 2019
By: anja.feneberg@univie.ac.at, MSc Anja Feneberg

Feasibility, acceptability, and effectiveness of an Ecological Momentary Music Intervention (EMMI) for stress reduction in daily life: Protocol and pilot results

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Background/ purpose: Music listening is an activity of daily life with beneficial effects on biological and self-reported levels of stress. New technologies are promising aides for translating previous research on music listening into daily life contexts. This study describes a music-based intervention aiming at alleviating stressful experiences in everyday life. Besides the feasibility and acceptability of this ecological momentary music intervention (EMMI), we will test the capability of the intervention to reduce stress levels on both a momentary perspective and a pre-post comparison.
Methods: Ten healthy participants aged 18-35 years will be equipped with a pre-programmed smartphone app assessing psychological stress for a period of 24 days. Moreover, participants will provide saliva samples for the later analysis of biological stress markers at each measurement point. The EMMI provides the opportunity to listen to music in moments of stressful experiences through an ecologically valid approach. This includes random assessments throughout the day of momentary subjective stress levels, which will eventually guide participants to listen to self-selected relaxing pieces of music. After a baseline period, participants will use the EMMI for 18 days, followed by a post period of 3 days.
Results: This is a protocol description, and pilot results will be presented at the conference.
Conclusions and Implications: To the best of our knowledge, this is the first study that applies music listening as an intervention targeting momentary stressful experiences. Results from this pilot study will inform an extensive trial to test the effectiveness of the EMMI in a larger sample.

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Last updated: 30th November, 2019
By: l.wilderink@vu.nl, Mrs Lisa Wilderink

Key elements of a successful local integrated community-based approach aimed at reducing socioeconomic health inequalities in the Netherlands: A qualitative study

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Background/ purpose: Due to the complex combination of factors contributing to socio economic health inequalities, community-based multilevel approaches are most likely to reduce these inequalities. Since 2010 the Zwolle Healthy City approach is carried out in the Dutch municipality of Zwolle, and has been proven successful. The aim of the current study was to identify key elements of this local community-based approach, according to perspectives of various stakeholders.
Methods: Semi-structured interviews were carried out with 29 professionals. Data was analyzed using the thematic analysis approach.
Results: Respondents indicated that key elements are (1) various local organizations that collaborate, (2) support for the approach on the strategic, tactical and operational level, (3) proper leadership and coordination, both for the network and within the organizations, (4) collaboration with private organizations, (5) collaboration with citizens, (6) profiling the approach as a brand, (7) taking advantage of trends and opportunities, (8) embedding the approach in organizations' policies and processes and (9) monitoring and adapting goals and process.
Conclusion: Nine key elements, which contribute positively to the approach, are identified and explain the success of the Zwolle Healthy City approach. With this overview the approach can further develop, by improving the key elements as they provide guidelines for policy making. Likewise, others working on similar approaches aimed at reducing socio economic health inequalities can learn from this. It gives insight into which elements deserve further elaboration and other approaches could adapt this in their specific local and dynamic context.

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Last updated: 30th November, 2019
By: t.i.bootsma@gmail.com, Tom Bootsma

Experiencing and responding to chronic cancer-related fatigue: A meta-ethnography

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Background/purpose: At least one quarter of cancer patients experience Chronic Cancer-Related Fatigue (CCRF) after treatment is finished. Qualitative research helps to understand patients' experiences of CCRF and complements quantitative research. An interpretative overview of qualitative research could help to guide clinical practice and future research in personalising treatment. This meta-ethnography focused on how patients experience and respond to CCRF.
Methods: A comprehensive systematic literature search in five databases was conducted (05.03.2018). Eligibility screening and quality appraisal were performed independently by two researchers. The meta-ethnography method (Noblit & Hare, 1988) to extract, translate, and synthesise first-order constructs (patients' interpretations) and second-order constructs (authors' interpretations) from the selected studies into third-order constructs (new interpretations) were followed.
Results: After deduplication and screening of the 1178 collected articles, 16 studies were included. From the synthesis we developed a new figure of six interrelated third-order constructs: (1) embodied experience encompasses the awareness of the body in a negative way; (2) (mis)recognition consists of (lack of) recognition of CCRF by patients, loved ones, and health professionals; (3) small horizon reports a perceived narrowed world; (4) role change entails changes in life roles; (5) loss of self indicates the effect on people's identity; and (6) regaining one's footing describes the process of managing CCRF by struggling, adapting and accepting.
Conclusion and implications: The experiences and responses to CCRF are based on being embodied, which we presented in a figure with social, spatial, and temporal dimensions. This figure can help to improve recognition and personalise treatment.

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Last updated: 30th November, 2019
By: t.i.bootsma@gmail.com, Tom Bootsma

Navigating chronic cancer-related fatigue: An interpretative phenomenological analysis

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Background/purpose: Chronic Cancer-Related Fatigue (CCRF) is a disrupting symptom frequently experienced by cancer patients after treatment. The richness and depth of the patient perspective in qualitative research can help personalise effective treatments for CCRF. Patients' experiences and responses to CCRF are based on being embodied because their bodies become a focal point of attention. The purpose of this qualitative study is to explore how patients experience these bodily disruptions of CCRF. This exploration is theoretically guided by the philosophical phenomenological account of disruptions in the experience of embodiment, time, space, and how these are related.
Methods: Data collection consisted of interviews with a mixed sample of 25 participants (16 females/9 males) who suffered from severe CCRF at least three months after the end of cancer treatment. We applied interpretative phenomenological analysis to analyse the transcripts.
Results: We identified four themes on how chronic fatigue is experienced post-cancer: 1) *Worn out* entails the bodily sensations; 2) *Diminishment of one's "I can"* represents several limitations patients with CCRF experience; 3) *Socially invisible objectification of the body* describes the presentation of the problematic body in a social context; 4) *Restoring one's "I can"* shows ways of adapting to the experience of fatigue.
Conclusion and implications: For clinical practice, these results imply that health professionals could focus more on the role of a patient's body and the limitations of "I can" when treating CCRF. By studying these embodied CCRF experiences in individuals, future research could help personalise and optimise treatment.

Submission ID: 378
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Cardiometabolic health in racial/ethnic minorities across the cancer continuum: prevention to survivorship

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By: frank.penedo@miami.edu, Professor Frank Penedo

Cardiometabolic health in prostate cancer survivors: addressing prevalent comorbidities in a growing and aging population

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Background/purpose: Prostate Cancer (PC) survivors face challenges associated co-managing cancer treatment, recovery and managing cardiometabolic comorbidities (e.g., type 2 diabetes, hypertension: T2DM; HTN). Limited work has examined the influence of such comorbidities on disease course, and health-related quality of life (HRQoL) despite such comorbidities conferring a greater risk of cancer- and all-cause mortality in PC. As PC primarily occurs in older men (~80% 65 yrs. old), comorbidities are prevalent and affect treatment choice, prognosis and survival. PC survivors with cardiometabolic comorbidities also have greater risk for other-cause mortality within 10-yrs.
Methods/results: We have found that comorbidities are significantly associated with several domains including greater perceived stress, and poorer emotional well-being, social and physical functioning, and PC-specific HRQoL. Between 52-73% of participants in our various PC studies have ≥ 2 comorbid conditions with HTN and T2DM as the most commonly reported. In these samples HTN and T2DM were associated with poorer social and family functioning, poorer EPIC sexual and bowel functioning, and greater McGill total pain ratings (p's<.05), with trends towards poorer urinary function and greater bother (p's <.10). We also found that having T2DM and HTN was associated with greater PROMIS depression, greater global distress, and poorer physical functioning (all p's <.05). PC-related anxiety has also been associated with lower physical activity, a risk factor for these comorbidities.
Conclusions and implications: As the aging and comorbid population of PC survivors continues to grow, it is critical that cardiometabolic conditions are integrated into PC survivorship management strategies.

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By: luana.fantini2@unibo.it, Mrs Luana Fantini

Improving healthy lifestyle in adolescents through the promotion of psychological well-being in school-setting.

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Background/purpose: Adolescents are particularly vulnerable to risk-taking behaviour. Psychological Well-Being (PWB) is negatively associated with engagement in risky behaviours and it could be regarded as a target for treatment. Among these, Well-Being Therapy (WBT) has shown promising findings in school setting in order to reduce psychological distress. The purpose of the study was to test the efficacy of an intervention based on WBT techniques (WB intervention) to improve healthy lifestyle in students.
Methods: Four classrooms comprising 88 students (mean age=15.43 ± 0.68; 65.4% females) were randomly allocated to WB intervention (WB group, WBG) or attention placebo group (Control Group, CG), using cluster sampling. Sociodemographic data, lifestyle, psychological distress, allostatic overload, problem-solving and psychological well-being were assessed in students. Pre-post intervention differences between the two groups were analysed with independent samples t-test and Chi-Square.
Results: Statistically significant differences on lifestyle variables emerged between WBG and CG at post-treatment. Students who received WB intervention were more likely to be aware of negative effects of alcohol and drugs ($\chi2$ (1) = 4.561; p=0.033), have healthy diet ($\chi2$ (1) = 4.893; p=0.027), use e-cigarettes ($\chi2$ (1) = 4.744; p=0.029) and less likely to use technology devices in excess ($\chi2$ (1) = 4.632; p=0.031), compared with CG.
Conclusions and implications: A preliminary promising effect of a WB intervention on adolescents' lifestyle was found. Improving risky behaviours at this vulnerable stage of life could have important implications on psychological, physical and social aspects. Further research should evaluate potential long-term effects.

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Cannabis Use in Vulnerable Populations: International Perspectives from Laboratory to Field Studies.

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Last updated: 30th November, 2019
By: j.cousijn@gmail.com, dr. Janna Cousijn

Direct effects of cannabis intoxication on motivations for softer and harder drug use: an experimental approach to the gateway hypothesis.

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Background/purpose: Cannabis may be a gateway to softer and harder drug use, but the underlying mechanisms are still unclear. The goal of the current double-blind placebo-controlled study was to assess if cannabis intoxication increased implicit (i.e. approach tendencies) and explicit (i.e. craving and liking) motivation for cigarettes and cocaine.

Methods: A total of 90 monthly cannabis users aged between 18-30 performed a task assessing approach and avoidance tendencies towards cannabis, cigarettes and cocaine related images twice; once after smoking an active joint and once after smoking a placebo joint. Craving and liking was assessed before and after each test session. All test sessions took place in a Dutch cannabis outlet (Coffeeshop).

Results: Results showed a general approach bias to cannabis, cigarettes and cocaine across test-session. While cannabis intoxication decreased reaction speed and craving for all of the substances, the approach biases and measures of liking did not significantly differ between the active and placebo test session. Nevertheless, the difference between the cannabis approach bias measured during the active and placebo session correlated positively with baseline cannabis craving. Cannabis intoxication may therefore only increase the cannabis approach bias in users that already developed craving.

Conclusions and implications: Given that cannabis intoxication did not increase craving, liking and approach tendencies towards cigarettes and cocaine, the current findings do not support cannabis intoxication as a gateway to cigarette and cocaine use in sporadic cannabis users.

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Last updated: 30th November, 2019
By: shawna.ehlers.wilbur@gmail.com, Dr. Shawna Ehlers

Preliminary effectiveness of CBT-based cancer distress management in healthcare delivery: Results of a hybrid implementation-effectiveness trial.

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Background/purpose: Cognitive behavioral therapy for cancer distress management (CBT-C) has been studied for over 30-years, and independently replicated as efficacious for female breast cancer survivors with secondary findings of improved recurrence and survival. However, most survivors do not have access to CBT-C. Both the implementation and effectiveness of CBT-C need to be tested in heterogeneous "real world" clinical settings, with higher external validity, to reach more survivors.

Methods: After adapting CBT-C content and delivery for the clinical setting (e.g., multiple cancer types, men, rural populations) and establishing acceptability and feasibility, a pilot hybrid implementation-effectiveness trial was designed to test a 5-session CBT-C group intervention, delivered as a clinical service within an academic medical center (n= 66). Relaxation skill self-efficacy was the primary outcome/subscale, as assessed by the Measure of Current Status-A, pre- and post-CBT-C. Cohen's d was calculated to estimate the magnitude of CBT-C effectiveness.

Results: Patients were predominantly married, white, non-Hispanic women (mean age= 55, range= 29-86 years). The majority had cancer types other than breast, and men comprised 25.4% of the sample. CBT-C was associated with a large primary effect size (Cohen's d= 1.21, relaxation). Effect sizes for secondary outcomes/subscales were in the range of medium-large; (d= .84 awareness of tension, .82 cognitive skills and overall coping confidence, .48 assertiveness).

Conclusions and implications: This study provides preliminary evidence to support the effectiveness of CBT-C for mixed samples of cancer survivors in "real world" clinical settings. Larger trials are needed in diverse and underrepresented populations.

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Longitudinal data on the course of fear of cancer recurrence: trajectories, predictors and mechanisms.

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By: esther.deuning-smit@radboudumc.nl, Mrs. Esther Deuning-Smit

Course and Trajectories of Fear of Cancer Recurrence in Patients with Newly-diagnosed Head and Neck Cancer: a Longitudinal Study.

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Background/purpose: Head and neck cancer (HNC) patients are vulnerable for developing fear of cancer recurrence (FCR). While previous studies in HNC patients suggest that FCR is stable, in other populations

distinct FCR trajectories have been identified. This study aims to a) document the course of FCR in HNC patients from diagnosis to 6-months post-treatment on group level, b) identify distinct FCR trajectories, and c) examine baseline predictors of trajectories.

Methods: For 616 HNC patients participating in the prospective cohort study NET-QUBIC, baseline and 3 and 6 months follow-up data were analysed for FCR (Cancer Worry Scale-6). The course of FCR was analysed using repeated measures ANOVA and FCR trajectories were identified using Latent Class Growth Mixed Analysis (LCGA). Demographic and medical variables, coping (Mental Adjustment to Cancer scale and Utrecht Coping List) and self-efficacy (General Self-Efficacy scale) were used in logistic regression analysis as predictor for FCR.

Results: On group level, FCR decreased significantly between baseline and 3 months (p <.001) and remained stable thereafter unto 6 months (p=.225). Two FCR trajectories were identified: 'high stable' (n=125 (20%)) and 'low declining' (n=491 (80%)). Patients with high stable FCR were younger (OR=.93), reported higher levels of negative adjustment (OR=1.17), passive coping (OR=1.34), and reassuring thoughts (OR=1.16), and reported less avoidant coping (OR=.88) and lower self-efficacy (OR=0.94).

Conclusions and implications: Although fear of cancer recurrence (FCR) declined on group level, 20% of the HNC patients experienced persistent high levels of FCR up to 6 months post-treatment. This group might benefit from evidence based FCR interventions.

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By: chavez.melody@gmail.com, Melody Chavez

Is pseudoaddiction a nice way of reporting opioid addiction among cancer survivors? The misunderstanding and controversy surrounding chronic opioid treatment within the cancer community

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Background: Opioids are the most effective drugs for cancer-related pain among cancer survivors. However, in light of the opioid epidemic in the United States (US), attitudes have shifted regarding the long-term medical use of opioids in response to the possibility of addiction. The purpose of this study was to explore perceptions of opioid use within the context of cancer-related pain management and survivorship.

Methods: Cancer survivors treated with prescription opioid medication (POM) for pain management, and health care providers (HCPs) who served cancer survivors were recruited throughout the US. Qualitative interviews were audio-recorded, transcribed, and coded using Atlas.ti v8. Inductive applied thematic analysis was used to identify emergent themes.

Results: The majority of survivors (n=25) were breast cancer survivors (88%), and of the HCPs (n=30), 40% were medical doctors. Overall, HCPs and survivors had differing perceptions and understanding that addiction is an iatrogenic consequence of medical use of opioids, partially due to confusion over the terminology of opioid dependency, tolerance, and addiction. For survivors, this often led to a misunderstanding of addiction resulting in poorly managed pain. Some HCPs felt that pseudoaddiction resulted in undertreatment of pain, whereas others believed that controversy in the clinical concept of pseudoaddiction legitimized aberrant behaviors in some people with a cancer diagnosis.

Conclusions and implications: Our findings suggest that HCPs and survivors often misunderstand the nature and risk of opioids. In addition, differing use of the terminology of opioid abuse increases disparities that can undermine appropriate clinical management of pain and addiction.

Submission ID: 384
Symposium ID and title if part of symposium: 57

Reducing skin cancer risk in healthy and patient populations; behavioral interventions targeting poor adherence to photoprotection and skin-checking

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Last updated: 30th November, 2019
By: m.johnston@abdn.ac.uk, Prof Marie Johnston

Behavioral intervention to increase skin examination following melanoma: Development and evaluation

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Background: Following melanoma surgery, risk of recurrence is high. Patients are encouraged to perform regular total skin self-examination (TSSE) but performance is sub-optimal. The ASICA intervention [Achieving-Self-directed-Integrated-Cancer-Aftercare] was developed on the basis of literature review, patient interviews, theory [Information-Motivation-Behavioural skills model and Control Theory], selection of behavior change techniques and extensive simulation with patients. ASICA involves text message prompts, information and TSSE demonstration by tablet, monitoring of TSSE, photographing any skin changes and sending to the nurse via tablet, feedback and follow-up.

Aims: 1) To assess acceptability and feasibility of ASICA 2) to evaluate ASICA in a randomized controlled trial.

Methods: Interviews with 21 people previously treated for cutaneous melanoma and pilot-testing with 20 people treated for melanoma. 240 people with primary cutaneous melanoma were randomized to ASICA or treatment as usual. Participants were followed up by postal questionnaire at 2, 6 and 12 months following randomization on the following measures: TSSE practice, intentions, self-efficacy and planning; Melanoma Worry Scale; the Hospital Anxiety and Depression Scale (HADs); the EuroQoL EQ-5D-5L.

Results: 1) Interviewees were positive about the use of technology to remind and instruct on TSSE, conducting it in their homes and getting feedback quickly. Pilot participants were strongly positive; intention and self-efficacy increased, 15 adhered well to the intervention, 4 intermittently and one withdrew. 2) Trial results will be reported

Conclusions: The ASICA intervention was acceptable to most patients and feasible following small technical adjustments. Results of the randomized controlled trial will inform future use of ASICA.

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By: benyael@tauex.tau.ac.il, Prof. Yael Benyamini

Self-rated health and frailty as predictors of mortality in older adults

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Background/purpose: Frailty is characterized by decreased reserve and lower resistance to stressors, which lead to vulnerability to adverse outcomes. Self-rated health (SRH) involves one's subjective perception of health. Both constructs have been found to predict disability, institutionalization and mortality. The current study aimed to compare mortality risk associated with a 33-item Frailty Index (FI) to that of a single-item SRH.
Methods: Data were derived from the first National Health and Nutrition Survey of the Elderly (n=1798; mean age=75±6.2; 53% women) by the Israel Ministry of Health. The FI was based on accumulation of deficits (e.g., functional and cognitive limitations, comorbid conditions).
Results: At baseline, 41% were classified as frail. During a mean follow-up of 10(±4) years, 51% died. SRH was rated on a 4-point scale (poor to very-good); FI was split to four in similar proportions to SRH levels. Cox regression models, age and gender-adjusted, showed that compared with very-good SRH (reported by 9%), hazard ratio (HR) for mortality for poor SRH (reported by 11%) was 3.69 (95%CI 2.69-5.06); HR for the lowest 11% on the FI, compared to the highest 9%, was 5.12 (3.64-7.21). A model including FI and SRH (+age, gender), revealed lower yet still significant HRs for both measures.
Conclusions and implications: SRH captures valid information on multidimensional frailty. Both FI and SRH are integrative measures of one's health, which may explain their predictive power, yet each has a unique contribution to the prediction of mortality that is not captured by the other.

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By: b.tatar.1@research.gla.ac.uk, Ms Betül Tatar

Food thoughts overlap measure: an initial assessment of a novel measure in the context of a mindfulness-based technique for food cravings

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Background/purpose: Being engrossed in negative thoughts (e.g. depressive rumination) or positive, reward-related thoughts (e.g. food cravings) can be problematic. Here, we developed a measure of one's perceived distance to one's thoughts, and assessed it in the context of a brief mindfulness-based strategy, in the domain of food.
Methods: Participants (N = 238) received randomly assigned mindfulness instructions to "imagine waving goodbye to food thoughts" or control instructions, while viewing food images. They reported food cravings, desire, and spontaneous eating simulations. We assessed participants' perceived distance to their thoughts using the Food Thoughts Overlap Measure – a novel graphical measure based on a social psychological measure of interpersonal closeness (Aron, Aron & Smollan, 1992). We tested the effect of instruction type on cravings, desire and perceived distance to one's thoughts with ANCOVAs. We conducted multiple linear regression models with eating simulations and Food Thoughts Overlap Measure scores as predictors, and cravings or desire as the outcome variable.
Results: There was no direct effect of instruction type on food cravings, desire, or perceived distance to thoughts ($F < 1.39$, $p > .247$). However, increased perceived distance to thoughts reduced the impact of eating simulations on cravings ($\beta = -0.27$, $p = .026$) and desire ($\beta = -0.28$, $p = .031$).
Conclusions and implications: The Food Thoughts Overlap Measure may be an intuitive and clinically relevant measure of one's perceived distance to one's thoughts. Future research should validate and explore the use of this measure with adults and children, in various domains.

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By: bogucki.olivia@mayo.edu, Dr. Olivia Bogucki

Brief cognitive behavioral therapy for insomnia in primary care: Using qualitative feedback to improve interventions

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Background: Sleep disruption is a prevalent problem in primary care, with rates as high as 50%. Cognitive behavioral therapy for insomnia (CBT-I) has been identified as the first-line treatment for insomnia. Primary care is an ideal setting to implement CBT-I given the elevated rates of insomnia and integration of medical and mental health care. This study used a novel measure to survey treatment experiences during a brief CBT-I group in primary care.
Methods: A 4-session, 60-minute CBT-I group was designed and implemented in a large primary care clinic. Session components included: psychoeducation, case formulation, sleep tracking, and sleep hygiene (1); stimulus control (2); sleep restriction (3); and cognitive strategies, relaxation skills and relapse prevention (4). At session 4, a 10-item questionnaire was administered to assess patients' perceptions.
Results: 49 patients completed the questionnaire. Patients reported that they would recommend this group (94%). Most patients felt favorably about the frequency and length of sessions (78-82%). Some patients expressed interest in additional services (35-63%). Patients reported sufficient time was spent on all care components (82-98%). Most patients reported improved management of sleep problems and quality of life (88%). Data collection is ongoing and updated results will be presented with qualitative feedback.
Conclusion: Short-term, group CBT-I was positively perceived by the majority of primary care patients with insomnia. Patients generally viewed the length, timing and pacing of treatment as appropriate, with some expressing interest in additional services. While patients viewed all components of treatment as beneficial, some requested increased focus on certain content areas.

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By: aggeloskasianos@hotmail.com, Angelos Kassianos

A scoping review of medication adherence assessment methods across chronic conditions

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Background/purpose: Medication non-adherence (MNA) constitutes a complex health problem contributing to increased economic burden and poor health outcomes. Almost one in two patients with chronic conditions reports low adherence to their prescribed medication. The purpose of this scoping review was to examine the available assessment methods of medication adherence (MA) among adult patients with chronic conditions with high MNA (asthma, hypertension, epilepsy, diabetes and cancer).
Method: Published and unpublished quantitative studies of chronic health conditions with MA explicitly stated as the primary outcome were included. PubMed, PsycINFO and Scopus databases were screened with 18 studies included.
Results: Most commonly used methods assessing MA across conditions were self-reports (44.4%). Both self-report and non-self-report methods were used by 38.9% of studies, with the majority being of hypertension studies (71.4%). No studies were found examining assessment methods of MA among patients with epilepsy. The most commonly used self-report questionnaires across conditions included the Medication Adherence Report Scale for Asthma (MARS) and the Morisky Medication Adherence Scale (MMAS). Non-self-report methods included mostly electronic measurements.
Conclusions and Implications: This is the first review examining assessment methods of MNA across chronic conditions. It highlights the importance of using various methods to assess MA in order to have a better picture of the MNA problem, and more accurate and reliable data. Although self-reports are commonly used to assess MA, researchers should include additional methods such as electronic measurements, as they tend to overestimate medication adherence.

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By: e.broadbent@auckland.ac.nz, Professor Elizabeth Broadbent

The psychological effects of reading a mobile phone while walking

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Background/purpose: Many people look at their mobile phone while they are walking. This can result in a stooped posture, neck pain, unstable gait, inattention and accidents. Since stooped posture has been associated with lower physiological arousal and negative mood, phone walking may also negatively affect mood and arousal. This experiment aimed to investigate the effects of phone walking on mood as well as posture, gait, heart rate, awareness of the environment and connection to nature.
Method: 125 people were randomized to walk around an oval track in a park either with or without reading text on a mobile phone. Self-reported mood, feelings of power, walking difficulty, awareness and connectedness with nature were measured before and after the walk. Neck posture was calculated from a still capture from video mid-way during the walk. A wrist worn device captured walking speed and heart rate.
Results: The phone walking group walked significantly slower, with more stooped posture, and experienced more walking difficulties than the usual walking group. Phone walking increased negative mood, reduced awareness of the environment and connectedness with nature, decreased positive mood and reduced feelings of power compared to usual walking. Posture did not mediate these effects.
Conclusions and implications: Walking while reading a mobile phone can negatively impact mood. To get the greatest health benefits from walking, people should refrain from reading their mobile phones. Future research needs to replicate these effects in an urban setting, with variation in reading materials, and further investigate mechanisms.

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Effects of a cognitive behavioral intervention on pain and mood outcomes in an acute post-operative gynecologic oncology population: A randomized controlled trial

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Behavior change and interventions

Abstract
Background/Purpose: While pain has been effectively managed in non-cancer populations via Cognitive Behavioral Therapy (CBT), there exists a lack of evidence on its efficacy within oncologic populations. The study examined CBT for insomnia and pain (CBTip), effects on pain and mood, within gynecologic malignancies.
Methods: Thirty-five women with insomnia status/post-surgery for gynecologic cancers were randomized to CBTip (N=18) or Psychoeducation (PE; N=17). Acute-on-chronic pain (ACP) was assessed at baseline via interviews. The following outcomes were assessed at baseline, post-intervention and 2-month follow-up: pain disability via Pain Disability Scale, pain experience via McGill Pain Questionnaire, and AM/PM pain intensity/unpleasantness (AMi/u; PMi/u) via sleep diaries. Controlling for ACP, longitudinal group differences were analyzed via mixed linear analyses. Given power-related challenges, the study focused on effect size estimates.
Results: ACP modified condition-by-time effects on depression, EWB, and PMu. CBTip participants with ACP reported decreased depression (d=-0.63; r=0.30) as well as, contrary to hypotheses, increased PMu (d=1.11; r=0.49) across time compared to PE participants. CBTip participants without ACP reported improvements in EWB across time compared to PE participants (d=0.76; r=0.36). There were no significant condition-by-time effects on PMu (d=-0.52; r=0.25) and depression (d=0.52; r=0.25) for individuals without ACP and on EWB (d=-0.59; r=0.28) among individuals with ACP.
Conclusion and Implications: ACP may be a critical modifier of CBTip effects on pain and mood, likely due to potential inflammatory responses elicited by CBTip, within individuals conceivably presenting with heightened inflammation. Further research is needed to dismantle these complex interactions.

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By: elissa.weitzman@childrens.harvard.edu, Dr. Elissa Weitzman

Associations among patient-reported measures of psychological and physical functioning and willingness to share social media data among adolescents with a chronic rheumatic condition

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Introduction/Purpose: Adolescent social media (SM) use is ubiquitous. Information gleaned from SM may augment understanding of disease and treatment experiences and quality-of-life for youth living with chronic illness. We compared the health status of youth willing/unwilling to share SM data for health research, to elucidate differences between groups and quantify biases related to analyzing SM data.
Methods: We recruited adolescents in treatment for a rheumatic disease who were members of a US clinical disease registry, collecting from them self-report measures of mobility, pain interference, fatigue, depression, anxiety and sense of meaning/purpose using PROMIS© measures. We compared these measures for sharing/non-sharing youth, using descriptive statistics and logistic regression.
Results: Among n=123 participants (average age 15.6 years (SD=1.6), 65.0% female), n=117 reported using SM. Of these, 76.1% (n=89) shared SM data; 63.4% of males and 82.9% of females shared (p=0.19). Compared to youth who were unwilling to share SM data, the sharing cohort reported lower mobility (p=0.016), greater pain interference (p=0.001), more fatigue (p=0.0001), more depression (p=0.0002), and greater anxiety (p=.001); sharing was associated with worse outcomes across these measures in regression analyses controlling for age and gender (all p-values <0.05).
Conclusion: High percentages of youth living with a rheumatic condition use SM and will share their SM data for research and these youth reported worse health than their non-sharing peers. SM may offer a potent information source and engagement pathway for youth but differences between sharing/non-sharing cohorts merit consideration for designing studies and evaluating SM-derived findings.

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Longitudinal data on the course of fear of cancer recurrence: Trajectories, predictors and mechanisms

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By: jlaurenceau.phd@gmail.com, J-P Laurenceau

A longitudinal examination of fear of cancer recurrence at two time scales in couples coping with breast cancer: The role of inhibited disclosure

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Background: Fear of cancer recurrence (FCR) often occurs within an interpersonal context, yet there has been little research on relationship processes that may influence FCR in patients and spouses. Patient and spouse/partner mutual self-disclosure may be central not only for maintaining intimacy but also for cognitive processing when transitioning to life after cancer. The goal of this study is to examine the role of inhibited disclosure in FCR at two times-scales: 1) on a day-to-day basis and 2) over several months following the end of adjuvant treatment. Social constraints and protective buffering (two forms of inhibited disclosure) were hypothesized to be predictors of greater FCR at the within-person level.
Method: Early-stage breast cancer (BC) patients and spouses (N = 69 to 79 couples) a) completed up to five repeated measures of FCR, social constraints, and protective buffering during the year after diagnosis and b) reported on daily protective buffering social constraints, and FCR for 21 consecutive days at the end of adjuvant treatment. Dyadic multilevel structural equation modeling was used.
Results: Across both time scales, social constraints and protective buffering both emerged as within-person predictors of FCR (all p-values $\leq$ .05) above and beyond relevant covariates and these effects held for both BC patients and partners.
Conclusions: Findings supported the proposition that disclosing cancer-related concerns to a responsive partner is a natural mechanism by which both BC patients and spouses adapt to health adversity and is an interpersonal process that could be incorporated to enhance existing interventions for FCR.

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By: kzwatanabe-tky@umin.ac.jp, Detecting workplace bullying from demographics, health/occupational outcomes, and psychosocial factors at work: a cross-sectional study applying machine learning Kazuhiro Watanabe

Detecting workplace bullying from demographics, health/occupational outcomes, and psychosocial factors at work: A cross-sectional study applying machine learning

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Background/purpose*:* Early detection of workplace bullying is important to minimize the adverse effects on health. Although applying machine learning seems to be possible to detect workers who have experienced workplace bullying, there is no such study so far. This study aimed to test whether the machine learning approach could detect workplace bullying from self-reported data.
Methods*:* A total of 17,360 workers (12,989 men and 4,371 women, mean age=38.25±9.2) completed a cross-sectional survey. Workplace bullying for the past three months was measured in 11 items based on a definition of workplace bullying. A total of 39 features were measured by a validated questionnaire, including demographics, health/occupational outcomes, job demands and job resources. Classification performance was tested of the five machine learning algorithms (logistic regression, random forest, support vector machines, K-nearest neighbor, and the ensemble classifier).
Results*:* A total of 3,262 participants (18.8%) had experienced workplace bullying for the past three months. Accuracy scores of the classification ranged from 0.733 to 0.830. The classification performance of random forest was the highest (accuracy=0.830, AUC=0.807, 95% CI, 0.795 to 0.819), and was significantly higher than those of support vector machines (AUC=0.769, 95% CI, 0.755 to 0.782) and K-nearest neighbor (AUC=0.769, 95% CI, 0.754 to 0.783). Logistic regression had the highest performance for sensitivity (0.709).

Conclusions and implications: Early detection of workplace bullying can be possible if we apply machine learning algorithms. Combinations of the various features, could lead to high classification performance.

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Living with Diabetes

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Abstract:
Background: Rapid socio-economic transitions along with genetic vulnerability have led to an upsurge in diabetes epidemic among Indians living in urban as well as rural areas. The aim of the study is to explore the lived-experiences of individuals with diabetes from different social, cultural and contextual backgrounds.
Methods: A qualitative study was conducted with 35 individuals (13 women and 12 men), above the age of 40, who have been living with Type 2 Diabetes for at least 6 months. The participants were interviewed at a multi-disciplinary clinic in India, using purposive sampling technique. Semi-structured interviews were conducted. The data was analyzed using thematic analysis with the constant comparative method.
Results: Several themes emerged in the data including acceptance of diabetes as "a part of my life" and "a challenge given by God" in contrast to "I want it to go away". The disease was perceived as "a silent killer that weakens everything" and "it is never cured". Cognitive adaptations such as "it's a common disease" "I feel better with the changes" were seen. Behavior related themes related to diet and exercise were also observed.
Conclusion and implications: Findings highlight cultural and gender differences in diabetes perception and management, along with challenges influenced by social and contextual factors. Understanding these lived-experiences in diabetes care can aid in developing more personalized interventions.

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By: akizumi@gmail.com, Akizumi Tsutsumi

Association of long working hours and ischemic stroke among Japanese workers

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Background: There are scarce prospective studies which examine the association between working hours and the risk of ischemic stroke among Japanese workers who work very long hours. Interaction of occupational stress and working hours has not been investigated. We aim to confirm: 1) whether long working hours are associated with incident of ischemic stroke among Japanese workers and which level of work hours increases the risk, and 2) whether the associations are independent of occupational stress.
Methods: Using dataset from a multi-center community based prospective study of Japanese residents (JMS cohort study), we analyzed 3081 male and 3037 female workers who worked 30 hours or more per week. We asked the participants the number of hours spent at work on any given weekday and created five categories of weekly working hours (>=50, >=55, >=60, >=65, and >=70) to test the work-hours threshold.
Results: During a mean follow-up of 11 years, we identified 82 incident ischemic strokes. Multivariate analysis revealed lineally increased relative risks with increasing working hours. However, statistically significant associations were found only for workers working 65 hours or more per week (hazard ratio = 2.00; 95% confidence interval: 1.00, 3.99), and workers working 70 hours or more per week (2.30; 1.02, 5.18) compared with those working 30-40 hours per week. Adjustment for job strain provided essentially the same results.
Conclusion: Long working hours are associated with incident ischemic stroke, independently of occupational stress, among Japanese workers. The work-hours threshold among Japanese workers appears higher than that of Western society.

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By: sherryshe0319@link.cuhk.edu.hk, Dr. Rui She

Minority stress associated with risky sexual behaviors and anxiety among transgender women sex workers in China

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Background/purpose: Minority stress contributes to elevated mental and sexual health risks among sexual and gender minority populations. However, there is a paucity of such research among transgender women sex workers (TGSW) in China. This study examined unprotected anal intercourse (UAI) with male clients, substance use during sex, anxiety, and their associations with minority stress in a sample of Chinese TGSW.
Methods: A cross-sectional study was conducted in Shenyang, China. Participants were 204 TGSW (mean age 33.4 years, 18.2% self-reported as HIV positive) who completed a structured questionnaire assessing background characteristics, discrimination and victimization due to stigmatized identity, sexual behaviors, and anxiety. Multivariable logistic regression models were used to assess the associations, adjusted for sociodemographic and HIV related characteristics.
Results: 27.9% and 26.6% of TGSW had had UAI with male clients and substance use during sex in the past three months respectively. Probable anxiety assessed by GAD-7 were reported by 51.0% of TGSW. Minority stress showed consistent associations with greater levels of UAI with male clients (AOR=1.23 for discrimination, $p<0.01$; AOR=1.21 for victimization, $0.05<p<0.10$), substance use during sex (AOR=1.15 for discrimination, $0.05<p<0.10$; AOR=1.32 for victimization, $p<0.01$) and anxiety (AOR=1.35 and 1.42, both $p<0.001$).
Conclusions and implications: Findings highlight the salience of minority stress to explain sexual and mental health disparities experienced by TGSW. Addressing the widespread discrimination and victimization in the context of co-occurring risky behaviors and psychological distress, will be key to achieving optimal health for TGSW.

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By: ohchuhyang@gmail.com, Chuhyang Oh

Association between ethnicity and physical/mental health status among asian older adults in Japan

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Purpose: This study examined the association between ethnicity and physical/mental health status among community-dwelling older adults of different ethnicities in Japan.
Methods: This cross-sectional study targeted community-dwelling older adults in Japan, aged 65 years and above, who were categorized into 3 ethnic groups: Japanese ($n = 220$), Chinese Japanese (Chinese) ($n = 200$), and Korean Japanese (Korean) ($n = 334$). We conducted a questionnaire survey in 2017 to assess their physical and mental health, socioeconomic status, social network status and health literacy. Chi-square test, residual analysis and Kruskal-Wallis tests were used to compare the ethnic groups.
Results: There were 450 (59.7%) valid responses. Language, economic stability and pension receipt showed significant differences among the ethnic groups ($p < .001$, respectively). The Chinese significantly preferred to use only the Chinese language. Koreans were largely found to be in economic difficulty and less likely to be pensioners. The Chinese and the Koreans had significantly lower scores on the FCCHL (functional health literacy) ($p < .001$) and the LSNS-6 (social network)($p <. 001$) scales. Significant differences were seen among the three groups in terms of health conditions such as hypertension, dyslipidemia, diabetes, osteoporosis and excretion disorder. The Chinese had the highest prevalence of such as heart disease and diabetes.
Conclusion: The findings predict that the Chinese have patterns of diseases that are different from those of Japanese and Koreans; hence, the study suggests the need to assess the lifestyles of each group and consider how best to support them.

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By: aamina.sadia@gmail.com, Amina Sadia

Understanding obesity-related eating and drinking behaviors in Pakistani University Students: A conceptual model through qualitative enquiry

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Background: High prevalence of obesity in Pakistan is a risk factor for a range of chronic illnesses. Pakistani university students, aged 18-35 years, have the second-highest prevalence of obesity when compared with other age groups in the country. Maladaptive eating behaviors are one of the main drivers of obesity. In general, Pakistani practitioners adopt Western conceptual models to understand obesity-related eating behaviors, but these models provide an incomplete explanation for the presence of the behaviors. The goals of the study were two-fold: First, to explore the Pakistani university students' perception of their obesity-related eating behaviors and attitudes; second to develop a culturally sensitive model of eating behaviors in university students from Pakistan.
Methods: Semi-structured interviews were used with 24 Pakistani university students, categorized as obese on Body Mass Index as per Asia-Specific cut-offs. Interviews were transcribed, translated, and then analyzed through a constant comparison method. Five major categories emerged from interviews: (1) Eating habits (social eating, emotional eating, and eating whatever and whenever you want); (2) Beliefs about food in the culture; (3) Student life attitudes; (4) Stressors; (5) Inconsistent weight-control strategies.
Results: The findings showed cultural beliefs about food, student life attitudes, and stressors as important factors related to eating habits, while inconsistent weight-control strategies contributed to further weight gain.
Conclusion: The findings highlighted the importance of psychosocial and cultural factors, which influenced eating behaviors among university students in Pakistan. This emerging model can be used to guide the development of future therapeutic interventions to manage eating behaviors associated with obesity.

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By: dongwmc@live.unc.edu, Ms. Willa Dong

A photo elicitation study of transgender sex workers' social and economic stressors in shenyang, China: Implications for pursuing health equity

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Background/purpose: Chinese transgender and gender non-conforming (TGNC) people experience severe stigma, contributing to excess stress and disproportionate depression and other disease burdens. The aim of this study was to examine stressors experienced by TGNC sex workers in Shenyang, China to identify intervention priorities.
Methods: We engaged transgender women, gender non-conforming people, and cross-dressing sex workers (n=5) using a photo elicitation process to explore perspectives on stressors. Participants were given cameras. We conducted four group discussions (July-August 2018) on prompts developed by community organization staff: creating a home in the city, work stressors and aspirations, family expectations and self-care practices. Data were thematically analyzed.
Results: Participants' experiences of stigma and stressors, reflected their diverse gender identities and socioeconomic backgrounds. Economic pressures included low pay and reduced employability due to older age. Sex work-specific stressors included police harassment, exposure to extreme weather, and hiding gender identity from clients. Family stressors included parental ambivalence towards gender identity and participants' internalized expectations towards marriage and children. While participants reported experiencing low mood and social isolation, they also described self-care, social support and coping strategies to support their mental health.
Conclusions and implications: TGNC sex workers experienced significant stress due to stigma against gender minorities but these stressors may differ by intersecting identities. Further research should examine the impact of multilevel stressors and resiliencies on mental health to inform interventions. Engaging communities through photo elicitation may be useful for exploring multilevel contributors to health inequity due documentation of complex and sensitive contextual information.

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By: antje.ullrich@med.uni-greifswald.de, Mrs. Antje Ullrich

Effect of a video-based visualization of intensity levels to reduce the disagreement between self-reported and accelerometer-based physical activity

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Background: Studies have shown a disagreement between self-reported and accelerometer-based moderate-to-vigorous physical activity (MVPA). We tested the effect of a video that visualizes the intensity levels of PA to increase the agreement between self-reported and accelerometer-based MVPA within a randomized study.

Methods: In total, 302 adults (65% women, median = 61.5 years) received 7-day accelerometry and fulfilled wearing criteria (≥10 hours/day; ≥6 days). Afterwards, self-reported MVPA (IPAQ-SF) with (video group [VG]), *n* = 151) or without preceding video presentation (control group [CG], *n* = 151) was assessed. The outcome was the difference between self-reported and accelerometer-based time spent in MVPA (Δ MVPA$_{\mathrm{IPAQ-Accelerometry}}$). We applied simultaneous-quantile regression to test the video effect. All models were adjusted for sex, age, education, smoking, regular exercise, waist circumference, and accelerometer wear time.

Results: Overall, the median of Δ MVPA$_{\mathrm{IPAQ-Accelerometry}}$ was = −9.7 min/day (IQR: −30.2 to 27.8; CG: median = −9 min/day [IQR: −32.1 to 66.7]; VG: median = −11.5 min/day [IQR: −29.9 to 14.3]). Simultaneous-quantile regression revealed no relationship between video presentation and Δ MVPA$_{\mathrm{IPAQ-Accelerometry}}$ in the 25th percentile. In the 50th (b = −12.4 [95% CI = −23.2 to −1.5] and 75th percentile (b = −45.7 [95% CI = −70.5 to −20.9]), Δ MVPA$_{\mathrm{IPAQ-Accelerometry}}$ was negatively associated with video presentation.

Conclusions: The disagreement between data of self-reported and accelerometer-based PA was small with an underestimation of self-reported MVPA. However, video-supported assessment may increase the accuracy of self-reported MVPA among individuals who slightly underestimated and those who overestimated their MVPA.

Submission ID: 409
Symposium ID and title if part of symposium: 55

Therapeutic processes in long term physical health conditions: Mindfulness, self-compassion, or psychological flexibility?

Decision: Accepted, Symposium
Last updated: 1st December, 2019
By: jojo.yykwok@gmail.com, JoJo Kwok

Mindfulness Yoga for Parkinson's disease: Mediating Effects of Spiritual Resilience on Mental Health and Health-related Quality of Life

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Background: Health-related quality of life (HRQOL) is an increasingly critical outcome of chronic illness care. However, its disease-independent attributes, particularly its spiritual resilient indicators for people with Parkinson's disease (PD) have not been explicitly examined. This presentation will describe the data from a "Mindfulness Yoga for PD" trial to address this and investigate the role of spiritual resilience in terms of perceived affliction and perceived equanimity in relation to mental health and HRQOL outcomes.

Methods: 138 community-dwelling adults with idiopathic PD (H&Y stage I–III) were recruited and completed the outcome measures of spiritual resilience (validated Holistic Well-being Scale), along with the measures of psychological distress (Hospital Anxiety and Depression Scale), severity of motor symptoms (Movement Disorder Society-Sponsored Revision of the Unified Parkinson's Disease Rating Scale, Part III Motor examination) and health-related quality of life (Parkinson's Disease Questionnaire-8).

Results: The mediation analysis found that after simultaneously controlling for the degree of perceived affliction and perceived equanimity, a significant reduction was observed in the direct effect between emotional distress and HRQOL. This result indicated the partially mediating roles of perceived affliction and equanimity in the pathways between emotional distress and HRQOL.

Conclusion: The study findings affirm the importance of strengthening spiritual resilience in distress patients with PD to diminish the negative impacts of emotional distress, a crucial factor associated with their HRQOL. Understanding the role of spiritual resilience in patients living with chronic disabling health conditions provides new insights into mechanisms that enhance their well-being and presents new opportunities for intervention.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 1st December, 2019
By: nadia36.psy@gmail.com, Mrs Nadia Maria

"Only one breast": A compassionate online community for women with breast cancer

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Background: Women with breast cancer, especially those who have had or will have a mastectomy, face many problems. They need accompaniment from other breast cancer patients who have similar experiences to psychologically strengthen each other. This paper describes our community in one of our Palliative Programs in Jember, East Java. Our aim is to create a support system to help patients cope with psychosocial problems.

Methods: Our volunteers created a WhatsApp Messenger group for breast cancer patients at the end of 2017. Now the group consists of more than 120 members. More than half of those members actively communicate through the group. The patients named the group as "Only One Breast". The group has taken several actions: 1) spread important health-related information, 2) provide psychological support for new patients who will undergo chemotherapy or surgery, 3) distribute breast prosthesis, and 4) hold a bi-monthly gathering. In July 2019 we conducted research through a questionnaire with a series of open-ended questions, asking about the advantages the members get from the group. Thematic analysis was performed. One hundred and two members participated (aged 31 to 69 years).

Results: Four themes were identified: getting health-related information, getting information about hospitals' services, making new friends with similar health conditions, and helping them to overcome uncomfortable feelings (loneliness and fear of surgery and chemotherapy).

Conclusions: An online community which was formed through an application in a smartphone could be a simple way to create a beneficial support system for women with breast cancer.

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Symposium ID and title if part of symposium:
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Last updated: 1st December, 2019
By: bridgitteswales@gmail.com, Bridgitte Swales

Keeping Active in Residential Elderly (KARE): The feasibility and impact of a specialized strength training intervention to improve multi-dimensional healthy aging in frail older adults in residential care

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Background: Frailty is a syndrome associated with adverse health outcomes including hospitalization, disability and mortality in older adults. Physical activity interventions demonstrate positive impact on healthy aging; however, studies are needed to assess feasibility and impact in frailer populations. This feasibility study used a specialized strength-training intervention to improve health and functional capacity of older adults in residential care.
Methods: Eleven frail older adults (≥65 years) were randomized into intervention or wait-list control groups. A muscle-strengthening protocol used specialized machines, installed in the care home, for 6 weeks. Mixed methods were used to assess intervention feasibility, research measures, and conduct limited efficacy testing of secondary outcomes, including adherence statistics, focus groups and interviews. Preliminary analyses examined changes pre-to post-intervention in multi-dimensional health measures.
Results: Intervention group (n=6) adherence was 98.9%. Interviews revealed participants and staff found measures and intervention acceptable and beneficial. ANOVAs indicated improvements in intervention group compared to control in walking speed, F (1,9) =5.87, p=.04, =h^2.40; leg extensor strength, F (1,9) =7.07, p=.03, h^2 =.44; Fried Frailty score, F (1,9) =13.96, p=0.01, h^2 =.61. Similar trends for positive effects were evident in other strength measures. Psychosocial variables (stress, depression, social support), immunological measures and cognition did not change in either group.
Conclusions: A specialized strength-training intervention for frail older adults in residential care is feasible and beneficial. High adherence and positive trends for frailty and physical function, support use of such interventions to improve multi-dimensional health in frail older adults.

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Last updated: 1st December, 2019
By: parisaamiri@yahoo.com, Dr Parisa Amiri

Trends of low physical activity among iranian adolescents across urban and rural areas: Findings of a national survey 2006-2011

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Objective: Physical inactivity, is related to weight disorders leading to main chronic diseases. This trend study investigated changes of physical activity (PA) among Iranian adolescents in urban and rural areas between 2006-2011.
Methods: A total of 12178 adolescents, aged 15-19 years who had participated in the National Surveys of Risk Factors for Non-Communicable Diseases (SuRFNCD) were recruited. Data on PA was obtained using the global physical activity questionnaire (GPAQ). A complex sample survey and multinomial logistic regression were used to model PA levels.
Results: The percentage of adolescents with low levels of PA increased from 2006 to 2011 in both urban and rural areas. The adjusted prevalence of low and moderate PA for boys compared to girls were 0.11 (95% CI; 0.09-0.14) and 0.20 (95% CI; 0.17-0.25) in urban and 0.11 (95% CI; 0.10-0.14) and 0.21(95% CI; 0.18-0.24) in rural areas respectively. The prevalence of low and moderate levels of PA for rural, compared to urban areas were 0.59 (95% CI; 0.47-0.74) and 0.59 (95% CI; 0.47-0.74) in girls and 0.56 (95% CI; 0.43-0.75) and 0.60(95% CI; 0.48-0.74) in boys PA, respectively.
Conclusion: There was an increasing trend of low PA in both genders, and from both urban and rural areas of Iran.

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Symposium ID and title if part of symposium:
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Last updated: 1st December, 2019
By: l.weng@fsw.leidenuniv.nl, Miss LingLing Weng

Do placebo and nocebo effects generalize from pain to itch?

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Background: Pain and itch negatively affect quality of life, particularly when chronic. These symptoms can be effectively decreased by placebo effects and increased by nocebo effects. The aim of the present study is to investigate whether learned placebo and nocebo effects on one pain stimulus can generalize to another pain stimulus and to itch.
Methods: Currently, 55 (of in total 82) healthy participants were randomized to either a placebo group or a nocebo group. First, in the learning phase, expectations were induced by verbal suggestion ("heat pain intensity will be decreased/increased, respectively, due to the activation of TENS device") and conditioning (by decreasing/increasing, respectively, heat stimulus

intensity when TENS device is supposedly on). Subsequently, placebo and nocebo effects on heat pain were tested. To test generalization of these effects to pressure pain and itch, pressure stimuli and cowhage spicules were applied with the TENS device supposedly on or off. The data were tested by paired t-tests comparing TENS on with ENS off trials, separately for each group.
Results: These interim analyses indicated significant placebo effects in the placebo group during both the heat (p=.002, 95%CI [.25;.78]) and pressure pain stimuli (p=.003, 95%CI [0.31;1.12]), but not on itch stimuli (p=.976, 95%IC [-1.04;.85]). There was a significant nocebo effect on heat pain (p=.001, 95%CI [-.62;-.20]), but not on pressure pain stimuli (p=.062, 95%CI [-.98;.02]) and itch stimuli (p=.306, 95% [-1.12;.45]).
Conclusions: Placebo effects may generalize from heat pain to pressure pain, while nocebo effects may not generalize across pain stimuli modalities.

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Decision: Accepted, Oral
Last updated: 1st December, 2019
By: cindy.gray@glasgow.ac.uk, Dr Cindy Gray

Using arts-based methods as enquiry for non-communicable disease prevention in Tanzania and Malawi

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Background/Purpose: Sub-Saharan Africa (SSA) is experiencing a rapidly-increasing epidemic of chronic non-communicable diseases (NCDs). By 2030, NCD mortality is expected to overtake combined communicable, maternal and perinatal disease mortality. Effective NCD prevention interventions are needed and require understanding of local NCD drivers, which are complex and influenced by many (often unspoken) socio-cultural factors. Arts-based activities have been used to communicate socio-culturally appropriate information on communicable diseases, but little attention has been paid to using arts in NCD prevention. This study aimed to explore the role of arts in understanding local communities' lived experiences to inform socio-culturally sensitive NCD intervention design.
Methods: A participatory approach with communities in Tanzania and Malawi to inform a new arts-based methodology (ABM) for exploring local socio-cultural contexts around NCDs/NCD risk factors. Following piloting in four creative workshops (each N=7-9), thematic analysis compared researcher reflections, field-notes and written transcripts to traditional focus group discussion (FGD) transcripts.
Results: The new methodology comprised three arts-based activities: verbalized senses, embodied images, and performance. When compared to FGDs findings, the ABM appeared to be more inclusive, promote engagement and support community members to direct the enquiry. Through the ABM, participants expressed values, beliefs, sentiments and fears in relation to NCDs more freely than in FGDs. However, these (often negative) expressions may precipitate stigma and blame.
Conclusions and Implications: The ABM provides a promising approach to support development of socio-culturally appropriate NCD prevention interventions, but further research is needed and careful attention required to minimize risk of unintended consequences.

Submission ID: 420
Symposium ID and title if part of symposium: 48

The World Mental Health International College Student (WMH-ICS) initiative: From prevalence to prevention of mental disorders in college

Decision: Accepted, Offered Poster
Last updated: 1st December, 2019
By: david.daniel.ebert@gmail.com, David Daniel Ebert

StudiCare –Results of Randomized-Controlled Trials Evaluating Online Interventions Delivered at German-Speaking Universities as Part of the WHO-WMH International College Student Initiative

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Background: Mental disorders are highly prevalent among university students. It is estimated that even in high-income countries, only one in five students suffering from a mental disorder receives minimally adequate treatment. Internet interventions might be a promising way to increase access to effective treatment and preventive programs.
Methods: As part of the WHO-WMH-ICS, the StudiCare project platform provides free internet interventions for more than half a million students within a network of 19 German, Austrian and Swiss universities. More than 15 distinct internet and mobile-based interventions are available, targeting topics ranging from academic stress, depression, social anxiety disorder, test anxiety, procrastination and substance use, among others. All interventions have been or are currently evaluated in a total of 24 randomized-controlled trials (*N*=42-399).
Results: Since November 2016, more than 12,000 students have signed up for an intervention. Up to 77% of trial participants were first-time help-seekers. Results of completed trials indicate that internet interventions can be effective for a broad range of target outcomes, including, among others, stress (*d*=0.69), depression prevention (*d*=0.36), social anxiety (*d*=0.83) and mindfulness (*d*=1.13).
Conclusion: Results indicate that internet intervention platforms may be a promising way to provide effective mental health care at scale in university student populations. Future steps may include the implementation and integration into routine care, as well as the development of multivariate prediction algorithms to select the most effective intervention for each student.

Submission ID: 422
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 1st December, 2019
By: els.clays@ugent.be, Prof. dr. Els Clays

Low back and neck-shoulder pain: What is the role of objective and subjective measures in determining physical and psychosocial workplace hazards in non-sedentary jobs?

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Background: Evidence about workplace risk factors of musculoskeletal pain is mixed, and the use of subjective assessments is often debated. The aim was to relate objectively measured physical activities and subjective ratings of physical and psychosocial risk factors, with low back pain (LBP) and neck-shoulder pain (NSP), among non-sedentary workers.

Methods: Data were used from 331 workers (57% female; mean age 38.8 year – SD 11.2), recruited within the service and manufacturing sector. Psychosocial characteristics and physical demands were measured with the Job Content Questionnaire. Physical activity was assessed with two accelerometers (Axivity AX3) worn for 3-4 consecutive working days. A modified version of the Nordic questionnaire was used to report LBP and NSP.
Results: LBP and NSP (>30 days over the past year) was reported by 25% and 30% of participants, respectively, and the composite measure of LBP/NSP simultaneously by 17%. After adjusting for confounders, job control reduced the odds for LBP (OR 0.56; 95% CI 0.34-0.93) and LBP/NSP (OR 0.50; 95% CI 0.28-0.89), while job demands increased the odds for NSP (OR 1.60; 965% CI 1.00-2.57). Self-rated physical job demands were associated with higher odds for NSP (OR 2.17; 95% CI 1.42-3.32) and LBP/NSP (OR 2.24; 95% CI 1.33-3.76). The results for objective measures of physical activities did not reach statistical significance.
Conclusions and implications: Psychosocial factors and physical job demands are important risk factors for musculoskeletal pain. Although self-report instruments have their limitations, they provide crucial information about workplace hazards that are difficult to measure objectively.

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Symposium ID and title if part of symposium:
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Last updated: 1st December, 2019
By: greig.r.m.logan@gmail.com, Greig Logan

Cycle nation project: Feasibility and acceptability of a workplace-based intervention to encourage employees to cycle more

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Purpose: In the UK, 28% of adults currently cycle less than once a month but would like to cycle more regularly. The Cycle Nation Project (CNP) is a workplace-based practical cycling program, where staff at a major UK bank who cycle infrequently are offered a loaned bike to attend practical cycle training group sessions delivered by Cycle Champion colleagues (self-identified cycling enthusiasts trained in program delivery). This study aimed to explore the feasibility and acceptability of CNP to inform optimization for a future randomized controlled trial.
Methods: CNP was delivered over nine, 90-minute sessions at four bank offices across the UK between August 2019 and April 2020. Session observations and end-of-program participant focus groups and Cycle Champion interviews were analyzed thematically.
Results: CNP was feasible to deliver: appropriate locations were found near each office for cycle training, and fidelity was high. Cycle Champions welcomed the program's 'hands-on' approach: "[the] practical nature of building up week-by-week people's confidence… was very good". Participants were extremely positive about the program, but attendance dropped in later sessions; work commitments and winter weather cited as contributing factors. Few participants used the goal-setting tool in their CNP handbooks, and in-session goal review was often rushed. Despite extensive signposting, few participants used the bank's Cycle to Work Scheme to replace their loaned bike, suggesting modifications are needed to enhance sustainability.
Conclusion: CNP was well received, but adaptations are needed to improve delivery of goal setting, attendance at later sessions and maintenance of cycling post-program.

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Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 1st December, 2019
By: greig.r.m.logan@gmail.com, Greig Logan

Can a workplace-based program engage people to increase cycling: The cycle nation project feasibility study

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Background/purpose: Compared with other European countries, the UK has low levels of cycling: 28% of adults cycle less than once a month. The Cycle Nation Project (CNP) is a workplace-based initiative to encourage bank staff who cycle infrequently to cycle more. CNP includes a 12-week bike loan and practical 9-week foundation (or 6-week intermediate) group cycling course delivered by trained Cycle Champions (local cycling enthusiast staff members). This feasibility study aimed to explore recruitment, attendance and indicative outcomes from CNP.
Methods: CNP was delivered to employees at four UK bank offices between August 2019-March 2020, targeting recruitment of 30 staff at each site. Baseline, 9- and 13- week measurements included self-reported cycling and wellbeing (WEMWEBS). Cycle Champions recorded weekly session attendance.
Results: CNP was delivered at Site 1 between August-October to 14 participants (mean age 37.7±11.0 years; 12 men; 9 foundation, 5 intermediate). 12/14 (86%) completed the program, attending 72.4% of sessions. Multi-faceted strategies at Site 2 achieved recruitment of 32 participants (mean age 37.8±9.4 years; 18 men; 17 foundation, 15 intermediate). 26/32 (81%) completed between October-November, but only attended 49.2% of sessions. At Site 1, mean self-reported cycling increased from 1.6±3.2 at baseline to 6.5±5.4 rides per week at 9 weeks. Wellbeing improved from 52.9±4.1 to 56.1±4.1.
Conclusions and implications: Multi-faceted strategies achieved CNP recruitment targets, but session attendance decreased as day length shortened. CNP has potential to increase cycling and improve wellbeing. Findings from four sites will be available in August.

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Last updated: 1st December, 2019
By: genevieve.rouleau.6@ulaval.ca, PhD candidate Geneviève Rouleau

Virtual patient simulation to improve nurses' communication skills based on motivational interviewing: Findings from a mixed-method acceptability study

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Background/purpose: Nurses play a critical role in supporting treatment adherence for people living with HIV. Managing situations of non-adherence can be challenging for nurses. Featuring an HIV-positive man having difficulty adhering to treatment, we co-developed a virtual patient simulation aimed to train nurses in motivational interviewing. This study aimed to describe and explore nurses' acceptability of the simulation.
Methods: We performed a mixed-methods sequential explanatory study, starting with the quantitative phase (single-group post-test design). We used a self-reported questionnaire to assess nurses' views on: simulation designs, roles of simulation to support continuing professional development (CPD) and learning objectives achievement. We presented the survey findings with descriptive statistics. We conducted an exploratory qualitative study with five nurses who participated in an online focus group to explain survey findings. The discussion transcript was subjected to thematic analysis.
Results: 27 participants completed the survey. Nurses became aware of their communication style and its possible effects on patients. They acknowledged the importance of using motivational interviewing-consistent communication skills to support patients in the identification of their own solution to improve adherence. Participants recommended other healthcare professionals and nurses to use the simulation as CPD opportunity.
Conclusions and implications: Participants agreed that motivational interviewing delivered through simulation has a large potential of applicability to various healthcare professionals, to many clinical situations and to other health-related behaviors. We plan to conduct further research to explore the healthcare professionals' perceived barriers and facilitators of implementing better care, i.e. better communication skills to improve medication adherence, in clinical settings.

Submission ID: 429
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 1st December, 2019
By: noriko@fukuyama-u.ac.jp, Prof. Noriko Kusakabe

The relationship among anxiety, stress, and help-seeking preference in university students in Japan

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Background: It is clear that many university students in Japan face mental health problems such as anxiety. High anxiety levels affect academic performance and job hunting. In order to reduce anxiety, it is important to identify factors that contribute to it. The purpose of this study was to clarify the factors contributing to anxiety among university students in Japan.
Method: Participants were 60 university students (mean age 20.77 years old), and they were asked to complete questionnaire, Stress Coping Scale (Kusakabe,2017), Social Support Scale (Kusakabe, 2017), Help-seeking Preference Scale (Kusakabe, 2018), and A-trait scale of STAI Japanese version. Help-Seeking Preference Scale has three sub-scales (Positive attitude towards help-seeking behavior, sense of resistance to help-seeking behavior, concern about help-seeking).
Results: As a result of Pearson's correlation coefficient, the "resistance to aid" of the Help-seeking Preference Scale is significantly weakly correlated with the Stress Coping Scale "problem-solving behavior"(r=.33**). Moreover, there was a significant moderate positive correlation between anxiety and "affirmation of aid" and "resistance to aid" (r=.43***,.45***). And as a result of multiple regression analysis, high self-efficacy had a positive effect on anxiety(R^2=.55**).
Conclusion: The results indicated that students who tried to solve problems by themselves do not seek support. Such coping behavior might increase stress response in difficult problems such as human relationships. The correlation between trait anxiety and help-seeking preference suggested that the students with strong anxiety would not be able to take appropriate cooping from contradictory feelings of avoidance and approach to support-seeking.

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Symposium ID and title if part of symposium:
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Last updated: 1st December, 2019
By: rachel.crockett@stir.ac.uk, Dr Rachel Crockett

Consumption of artificially and sugar sweetened drinks and snack choice in teenagers: An experimental study

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Background: The consumption of artificially sweetened soft drinks (ASDs), is associated with obesity. Preferences for sugary foods following consumption of an ASD may be driven by physiological responses to the sweetener or psychological responses to information about the sweetener. This study aimed to assess whether preferences for sugary snacks, following consumption of an ASD, are driven by physiological or psychological processes.
Methods: A between subjects 2 (drink sweetener: artificial vs. sugar) x 2 (drink label: artificially vs. sugar sweetened) factorial design. Ninety-seven participants aged 13 to 18 years were randomly allocated to experimental group. Participants completed an unrelated task while consuming the drink and then given the choice of a sugary or non-sugary snack.
Findings: Binary logistic regression found no significant effect of the type of soft drink sweetener on subsequent snack choice. However, there was a significant effect of sweetener information on subsequent choice, such that believing that the soft drink was artificially sweetened resulted in participants being four time as likely to choose a sugary snack subsequently compared to those who were told the drink was sugar sweetened (OR= 4.17, 95%CI: 1.07,16.28, p=.04)
Conclusions and implications: These findings suggest cognitive processes underlie choices for sugary foods following ASD consumption. This study extends similar findings in an adult sample to teenagers who consume high levels of soft drinks and are at risk of unhealthy weight gain. To reduce sugar intake in this population, interventions should consider the promotion of unsweetened drinks to teenagers.

Submission ID: 431
Symposium ID and title if part of symposium: 57

Reducing skin cancer risk in healthy and patient populations; behavioral interventions targeting poor adherence to photo-protection and skin-checking

Decision: Accepted, Symposium
Last updated: 1st December, 2019
By: jessica.2.walburn@kcl.ac.uk, Dr Jessica Walburn

Personalized adherence intervention improves photo-protection amongst adults with Xeroderma Pigmentosum (XP): results from the XPAND trial

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Background/Purpose: Poor adherence to photo-protection for people with the rare condition of Xeroderma Pigmentosum (XP) can be life-threatening. This study tested the efficacy of a personalized adherence intervention (XPAND) to reduce the level of ultraviolet radiation (UVR) reaching the face, by improving photo-protection activities in adults with XP.
Methods: A two-armed parallel groups RCT where we randomized 16 patients with sub-optimal adherence to either an intervention group receiving XPAND in 2018 or a delayed intervention group who receive XPAND in 2019. XPAND involves seven sessions, one-to-one with a facilitator, using behavior change techniques and specially designed materials to target personalized barriers to photo-protection. Following baseline assessment in April and intervention, the primary outcome was measured across 21 consecutive days in June, July and August 2018. The primary outcome was the average daily UVR dose to the face calculated by combining objective UVR exposure at the wrist, with face photo-protection activities recorded on a daily diary.
Results: Participants (n=6) who received the intervention had significantly lower UVR (SED) reaching the face compared to control (n=7) across June to July [between group difference (SED) = 0.33 (95%CI 0.19-0.47) p<0.001; SMD=2.19] and August [between group difference (SED) = 0.26 (95%CI 0.12-0.40) p<0.001; SMD=1.72].
Conclusions and Implications: A personalized adherence intervention improves photo-protection and lowers the dose of UVR reaching the face. This has implications for reducing skin cancer in the XP population. XPAND has potential to improve photo-protection in other at-risk groups, where its efficacy can be tested in larger samples.

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Last updated: 1st December, 2019
By: timm_danmark@hotmail.com, Anne Timm

Strategies to promote health behaviors in parents with small children – a systematic review and realist synthesis of behavioral interventions

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Background: Parents with small children have poorer health behaviors than non-parents, e.g. decreased physical activity and unhealthy diet, warranting a need to identify new strategies for health promotion. This systematic review and realist synthesis aims to understand what context and mechanisms are important to improve health behaviors in parents with small children.
Methods: A systematic search was conducted in MEDLINE, Embase, CINAHL and PsycINFO in February 2020. Studies should target parents with at least one child (0-3 years); assess and report on outcomes of physical activity and diet. The reporting followed the PRISMA guidelines.
Results: In total, 15 interventions (25 studies, 17 effectiveness studies, 8 protocols) were included. Data was extracted on intervention content, delivery and context and behavior change techniques were coded in all interventions. Per realist synthesis, a program theory was developed from nine interventions based on rigor (quality assessment Rob2 or ROBINS-1) and relevance (research aim and process evaluation). Interventions which were easily accessible (home-based or online), activated social support, involved the child and/or father and tried to restructure the environment were most likely to promote diet and physical activity in mothers.
Conclusion: Future interventions should involve the whole family to target parents' health behaviors, secure a strong social support component, intervention accessibility and extensive training of intervention deliverers.

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Last updated: 1st December, 2019
By: elissa.weitzman@childrens.harvard.edu, Dr. Elissa Weitzman

Negative health effects associated with feeling one's disease is an "invisible illness" for youth living with a chronic rheumatic condition

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Introduction/Purpose: Rheumatic diseases (RD) are rare and rising in incidence. Youth living with them may consider they have an "invisible illness" that others neither understand nor believe, with potential to undermine health and quality-of-life. We sought to understand this experience and its associations with psychological and physical health.
Methods: We recruited adolescents in treatment for a RD from a US clinical disease registry, collecting from them reports of mobility, pain interference, fatigue, depression, anxiety, and sense of meaning/purpose using PROMIS© measures. We compared health status of youth who do/do not consider they have an "invisible illness" using descriptive statistics and logistic regression.
Results: Among n=123 participants (average age 15.5 years (SD=1.6), 65.0% female), n=89 (65.9%) reported feeling their condition is an "invisible illness" ("somewhat"/"a great deal" versus "a little"/"not at all"); 53.5% of males and 72.5% of females reported this (p=0.034). Compared to youth who had low/no "invisible illness" feelings, those affirming this reported lower mobility, greater pain interference, more fatigue, more depression, and greater anxiety (all p-values ≤ 0.001); feeling invisible was associated with negative outcomes across measures, in regression analyses controlling for gender (all p-values <0.05).
Conclusion: High percentages of youth living with RD report feeling they have an "invisible illness" and these youth exhibit lower levels of health across a range of psychological and physical dimensions. Future research is needed to identify objective and subjective factors that contribute to these feelings, to inform interventions and ameliorate health status and quality-of-life.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster

Last updated: 1st December, 2019
By: phoenix.mo@cuhk.edu.hk, Dr. Phoenix Mo

Is ehealth literacy associated with better self-care and health outcomes among patients with Type 2 diabetes mellitus?

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Background / purpose: The Internet plays an increasingly important part in disease management among Diabetes Mellitus (DM) patients. Given the substantial health needs of individuals with DM, examining their ability to search for high-quality health information/resources online and make informed decisions about applying the information to improve their health, would be particularly useful. The present study assessed the level of eHealth literacy among DM patients, and examined the association between ehealth literacy, self-care, self-care self-efficacy, diabetes distress, and glycated hemoglobin (HbA1c) control among Type 2 DM patients in Hong Kong.
Methods: A total of 427 Type 2 DM patients were recruited from the DM clinic of a public hospital and completed a cross-sectional survey.
Results: Findings showed that around two-third (65.1%) of patients were classified as having high level of ehealth literacy. Results of ANCOVA showed that after controlling for significant sociodemographic and medical variables, participants who were classified as having high level of ehealth literacy had significantly higher level of self- care, self-care self-efficacy, and lower level of diabetes distress. Results from logistic regression analysis showed that after controlling for significant sociodemographic and medical variables, the association between high level of ehealth literacy ideal HbA1c control was marginally significant.
Conclusions and implications: Assessing DM patients' level of ehealth literacy could be useful to identify patients who are more vulnerable to poorer health. Promoting ehealth literacy of DM patients could potentially be an important means to improve health-related outcomes of the population.

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Last updated: 1st December, 2019
By: naje@ph.au.dk, Nanna Jensen

Fidelity of implementation of a diabetes preventive program targeting women with prior gestational diabetes mellitus and their families: The face-it program

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Background: Gestational diabetes (GDM) affects more than one in seven births and is associated with high risk of future type 2 diabetes (T2D) for mother and offspring. The risk of T2D can be reduced through health behavior changes. The Face-it randomized controlled trial evaluates a complex intervention among women with prior GDM and their families. The intervention consists of active involvement of health visitors, digital health technology and structured cross-sectoral communication in the healthcare system. Little is known about the implementation of health behavior interventions which is a barrier for scaling-up and dissemination. We aim to assess fidelity of implementation of the Face-it intervention and to investigate the families' engagement in the intervention.
Methods: An assessment of the intervention fidelity will be conducted across three sites in Denmark including data from 100 families and approx. 12 health visitors (intervention deliverers). Fidelity indicators will be collected through surveys. Fidelity will be investigated by a comparison of the intervention's delivery to the standard of the described program. Family characteristics (age, education, income, cohabitant status) and intervention engagement will be examined by descriptive statistics.
Results: Face-it was initiated in October 2019. Initial experiences indicate that it is possible to implement the intervention as expected. However, families seem to engage more with the health visitor-led intervention activities than the digital health technology.
Conclusions: Results among the first 65 families will be presented at the conference. Outline of this integrated evaluation of fidelity could guide the development of interventions targeting families with small children.

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Last updated: 1st December, 2019
By: a.j.ford@stir.ac.uk, Allison Ford

Engaging homeless smokers in an e-cigarette smoking cessation intervention: Qualitative findings from a feasibility study

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Background/purpose: Seventy-eight smokers accessing homeless support services participated in a feasibility study exploring the uptake and use of e-cigarettes as a method of stopping smoking. This nested qualitative component examined the perceived value of the intervention, and facilitators and barriers to engagement.
Methods: Face-to-face interviews were conducted with a sub-sample of 22 homeless smokers and 12 staff members across four UK homeless centres participating in the main study. Interviews were conducted after week 4 of the intervention between February and November 2019. Analysis followed a thematic approach aided by NVivo12.
Results: Interviews with participants highlighted initial anxiety about participating in the research process, including skepticism and mistrust on being provided with a free e-cigarette starter kit, and concerns about providing personal data. However, once engaged, study perceptions were very positive and the perceived value of the e-cigarette intervention was high. Interviews with staff highlighted that taking part in the study, especially receiving training on smoking related harms and cessation approaches, changed how they viewed smoking among this group. It made them reconsider the importance of cessation (previously viewed as low priority) for homeless individuals and gave staff the confidence to initiate conversations around smoking with clients.
Conclusions and implications: Providing stop smoking interventions, such as e-cigarettes, within homeless services provides an opportunity to engage homeless smokers who are interested in quitting smoking but who would not otherwise access more traditional stop smoking support. Clear communication, trust and good relationships are key to engaging homeless individuals and staff in interventions.

Submission ID: 438
Symposium ID and title if part of symposium: 15

State of the science in understanding and promoting organ donation:

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Last updated: 1st December, 2019
By: jordan.miller1@stir.ac.uk, Ms Jordan Miller

'If it's opt-out you remove their choice and their voice': Exploring the views of people who plan to opt-out of organ donation

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Background/purpose: To overcome the shortage of organ donors, nations across the world are introducing opt-out consent. This means consent for organ donation will be deemed automatically unless one actively records an opt-out decision. Existing research shows that emotional barriers play a key role in donor decisions under opt-in legislation, yet little is known about factors that influence donor decisions under opt-out consent. Our objectives were to investigate attitudes towards opt-in and opt-out consent from individuals who plan to opt-out, and to explore the reasons *why* they plan to opt-out.
Methods: Fifteen semi-structured interviews were conducted with individuals from Scotland and England who self-reported the intention to opt-out of the register following the legislative change to opt-out. The interviews were analysed using thematic analysis.
Results: Three main themes were identified; 'consent vs coercion', which describes the freedom of choice offered under an opt-in system and fears of threatened autonomy and government control regarding donor decisions under opt-out. Secondly, 'barriers to organ donation', including medical mistrust, bodily integrity concerns and apprehension regarding the recipient selection process. Lastly, 'riddled with pitfalls', which encompasses the notion that opt-out consent will "*overrule ethics*" and may increase the susceptibility of stigma and reproach when registering an opt-out decision.
Conclusions and implications: Perceptions of unwarranted government control and a threat to one's autonomous choice may evoke psychological reactance, an important factor in the decision to opt-out of organ donation. Investigation of heightened government control and the development of campaigns to minimise reactance under opt-out consent are required.

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By: cjt87@miami.edu, Ms. Chloe Taub

Relationship between cancer-related distress and sexual relationships over the first 12-months of primary treatment for non-metastatic breast cancer

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Background/purpose: It is well-known that side-effects of treatment can negatively impact sexual health and well-being, however, more work is needed characterizing relationships between psychological adjustment and sexual relationships during primary treatment to better inform intervention.
Methods: Stage 0-IIIb breast cancer (Bca) patients (N=183) who were post-surgery but had not started adjuvant therapies (M age = 54) completed a psychosocial questionnaire at baseline and 12 months. The Psychological Adjustment to Illness Self-Report Scale sexual relationships subscale (PAIS-SR-Sexual) assessed the effects of illness on sexual interest, activity, pleasure/satisfaction, function, and communication with higher scores indicating poorer adjustment. The Impact of Event Scale intrusions subscale (IES-I) assessed cancer-related distress and the Measure of Current Status A (MOCS-A) assessed perceived stress management skills. Regression analyses controlled for age, stage, and time since surgery and post-adjuvant treatment analyses additionally controlled for radiation, chemotherapy, and hormonal treatment.
Results: Post-surgery, greater IES-I (p=.297, p=0.007) scores and lower MOCS-A scores (p=-.489, p<.001) were associated with greater PAIS-SR scores. PAIS-SR-Sexual scores at 12-months were also related to greater IESI-I scores (p=.414, p<.001) and lower MOCS-A scores (p=-.301, p=.006). Change in PAIS-SR-Sexual scores over 12 months relate to change in IES-I scores over 12 months (p=.334, p=.021) suggesting that as distress decreased sexual adjustment improved.
Conclusions and implications: Cancer-related distress and stress management skills confidence relate to adjustment in sexual relationships during primary treatment for BCa. Changes in sexual functioning presenting early in treatment may turn into chronic problems impacting relationship satisfaction and quality of life without early and effective intervention.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 1st December, 2019
By: leppey94@googlemail.com, Nico Leppin

Cancer patient utilisation of psychosocial care: A meta-analytic study of uptake and associated factors

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Background/purpose: Through cancer care guidelines distress screening among patients and offering psychosocial support when indicated became best practice. Though, many patients still decline offers of such professional support. This study aimed to quantify the utilisation of professional psychosocial support and to identify associated factors of uptake. A special focus lies on the so far neglected role of psychological factors.
Methods: PubMed, Web of Science and PsycINFO were systematically searched to identify studies reporting uptake rates for professional psychosocial support and associated demographic, psychological and medical variables for cancer patients or survivors. We applied standard meta-analytic techniques to analyze both published and unpublished data from the retrieved studies.
Results: Across the 54 included studies reporting utilisation and associated factors for 40 556 cancer patients, the mean uptake rate was 29.9% (95% CI [25.1, 34.7]). The primary predictor *distress* showed a small positive significant effect on support uptake (d=-.17; 95% CI [.03, .31]). Further predictors were age, sex, education, depression, anxiety, cancer location, disease stage and cancer-related quality of life.
Conclusion and implications: Patients uptake of psychosocial support was not meeting the reported desire for help. Although distress screening is common, evidence for being a good predictor of patients support uptake rates is lacking. Other promising predictors like attitudes towards psychosocial support and mental health literacy merit further investigation.

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Last updated: 1st December, 2019
By: lcameron@ucmerced.edu, Professor Linda Cameron

Messages about the gut microbiome framed with risk-action coherence and metaphoric strategies: Impact on healthy diet behavior

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Background/purpose: Gut microbiome science is revolutionizing medicine, with increasing evidence that having diverse probiotic bacteria protects against multiple diseases including cancer, heart disease, and depression. With people often failing to grasp how nutrients influence disease risk, messages explaining the gut microbiome could clarify their understanding of these processes. According to the Common-Sense Model of Self-Regulation, coherence in links between disease-risk representations and action representations is crucial for motivating protective behavior. Messages explaining these links could promote healthy behavior; applying well-understood metaphors could facilitate understanding and message persuasiveness.

Methods: Applying these principles of risk-action coherence and metaphor, we designed messages and tested whether they enhance representational coherence of how diet influences disease development, worry about poor nutrition, and healthy diet behavior. A national sample of 630 adults participating in a longitudinal, online study were randomized to read one of three messages: (1) a risk-action coherence message detailing links between diet, gut microbiome, and disease; (2) a message using a garden metaphor to describe these links; or (3) a control message (standard nutrition information).

Results: As predicted, the risk-action coherence and metaphoric messages induced greater representational coherence relative to the control message both immediately and one week later (Time 2). Both messages induced relatively greater worry immediately, although these effects dissipated by Time 2. Both messages (versus the control message) induced greater improvements in diet behavior at Time 2. Representational coherence fully mediated the risk-action coherence and metaphoric message effects on diet behavior.

Conclusions and implications: The findings support the utility of these communication strategies in promoting behavior change.

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Last updated: 1st December, 2019
By: kacel.elizabeth@mayo.edu, Dr. Elizabeth Kacel

Exercise facilitators, barriers, and confidence among individuals preparing for hematopoeitic stem cell transplant

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Background/purpose: Exercise is associated with reduced fatigue, cardiovascular and cancer risk, bone loss, and muscle deconditioning, factors which may influence outcomes of hematopoietic stem cell transplant (HSCT). Better understanding patients' perspectives on exercise may lead to improved adherence to HSCT practice guidelines on exercise promotion, and thus survivor health.

Methods: As part of a large prospective HSCT cohort study on lifestyle factors and outcomes, participants completed a pre-transplant clinical evaluation and concurrent research survey. Within the exercise domain, a subset of participants (n=675; 76.4%) indicated intention to increase exercise following transplant. Exercise facilitators (checklist), barriers (checklist), and confidence level (0-10 Likert scale) were explored among this subset.

Results: Participants were primarily Caucasian (91%), males (61%) with an indication for autologous transplant (79%). Diagnoses prompting HCST varied, including: leukemia/lymphoma, plasma cell disorders, and amyloidosis. Exercise facilitators included: improved health (95%), relieving illness symptoms (48.1%), friends/family concern (20.3%), setting an example for children (19.1%), and doctors' concern (18.7%). Barriers included: fatigue (83.9%), stress (24.6%), time constraints (22.8%), enjoying life as it is (4.0%), and pressure from family/friends (0.7%). Confidence in ability to increase exercise ranged from 0 to 10 (mean=7.49; SD=2.10). The majority of HSCT candidates reported intention to increase exercise following transplant.

Conclusions and implications: Highlighting exercise benefits associated with common facilitators (e.g., health, symptom relief, social support) and addressing barriers (e.g., fatigue, stress) might improve patients' ability to shift from intention to action, and in turn improve outcomes. These factors should be explored in diverse and underrepresented populations, and within intervention development.

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Last updated: 1st December, 2019
By: jihunwoo@utexas.edu, Phd Student Jihun Woo

Emotion-focused coping accounts for the longitudinal association between negative affect and depression and anxiety

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Background/purpose: Negative affect is a major predictor of depression/anxiety. However, there is limited research on the mechanism through which negative affect influences depression/anxiety. Previous studies suggest that coping strategies may mediate this association. The purpose of this study is to examine the mediating roles of emotion-focused coping and problem-focused coping on the longitudinal association between negative affect and depression/anxiety.

Methods: Participants (N=2361) from the Midlife in the United States (MIDUS) cohort completed psychosocial and mental health surveys over the course of 19 years. Structural equation modeling tested the direct path from negative affect (6 items, baseline) to depression/anxiety (dichotomous variable, 17-19 years follow-up), and indirect path via emotion-focused coping and problem-focused coping (12 items, 8-11 years follow-up). Age, sex, race, education, employment status, marital status, and baseline depression/anxiety were included in the analysis as covariates.

Results: Negative affect was directly associated with depression/anxiety (=.149, p <.001) and indirectly through emotion-focused coping (=.027, p <.001), but not through problem-focused coping (=-.005, p >.05). Negative affect was positively associated with emotion-focused coping (=.298, p <.001), and negatively associated with problem-focused coping (=-.150, p <.001). Emotion-focused coping was positively associated with depression/anxiety (=.091, p <.001), but no association was found between problem-focused coping and depression/anxiety (=-.035, p >.05).

Conclusion: Findings show that negative affect is associated with an increased prevalence of depression/anxiety longitudinally, and emotion-focused coping exacerbates this association. The present study contributes to our understanding of mechanisms linking negative affect and depression/anxiety.

Submission ID: 444
Symposium ID and title if part of symposium: 55

Therapeutic processes in long term physical health conditions: Mindfulness, self-compassion, or psychological flexibility?

Decision: Accepted, Symposium
Last updated: 1st December, 2019
By: k.vowles@qub.ac.uk, Professor Kevin Vowles

Weekly changes in pain acceptance, self-compassion, and craving in the prediction of outcome following integrated treatment for chronic pain & hazardous opioid use

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Background/purpose: Opioid prescription in the treatment of chronic pain is frequent and carries a consequent risk of poor treatment outcome, as well as higher morbidity and mortality in a clinically significant number of patients. There are few treatment options available that target both pain interference and opioid misuse among patients with chronic pain who are using opioids in a hazardous manner. A recent clinical trail from our group indicated that an integrated intervention, combining Acceptance and Commitment Therapy (ACT) for chronic pain and Mindfulness-Based Relapse Prevention (MBRP) for opioid misuse, successfully reduced both pain interference and opioid misuse in a sample of individuals with chronic pain (Vowles et al., in press, *Journal of Pain*).
Methods: The present study examined weekly changes over the twelve week intervention in theorized treatment mechanism variables, including pain acceptance, self-compassion, and opioid craving, in relation to treatment outcomes. Specifically, Latent Growth Mixture Modeling (LGMM) was preformed to determine trajectory of change in treatment mechanism variables.
Results: A single latent linear trajectory of change was indicated for each mechanism. Trajectories were significantly related to decreases in pain interference and opioid misuse, such that greater decreases (i.e., negative slope) in mechanism variables were associated with greater reduction in both outcome variables at six month follow-up.
Conclusions and implications: This pattern of findings provides support for the hypothesized mechanisms of for both ACT and MBRP and suggests that interventions focused on changing these mechanisms may allow for improved treatment effectiveness.

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Last updated: 1st December, 2019
By: i.al-dhahir@fsw.leidenuniv.nl, PhD Isra Al-Dhahir

Possibilities and challenges in ehealth lifestyle interventions for people with low socioeconomic status: a scoping review

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Background/purpose: eHealth lifestyle interventions that target the general population are known to effectively improve health behaviour. However, people with a low socioeconomic status (SES) demonstrate low acceptance and adherence to these interventions, and desired health behaviour effects remain limited or unsustainable. Our scoping review aimed to identify the key components, barriers, and facilitators in the development, use, reach and implementation of eHealth lifestyle interventions for low SES populations.
Methods: We performed a scoping review guided by Arksey and O'Malley's framework. A systematic literature search used appropriate key terms in Pubmed, Embase, Web of Science, Cochrane Library, and relevant gray literature.
Results: Our scoping review indicated that eHealth interventions targeting diet, physical activity, weight, or smoking were delivered via internet-based (e.g. social media) and offline methods (e.g. telephone consultations). Low SES participants were recruited face-to-face and through newspapers, websites, and social media. Focus groups, interviews, and usability tests were used to develop and/or evaluate the interventions with health experts, designers, and the target group. Most studies provided limited information about how the interventions were developed, adapted, evaluated, and implemented, and how participants interacted with the eHealth application. Finally, low motivation, no internet access, and lack of (digital) skills were often cited as obstacles to the (long-term) use of lifestyle interventions.
Conclusions and implications: While eHealth interventions are available for people with low SES, future studies should further investigate how eHealth interventions can be adapted for this disadvantaged group to increase acceptance, adherence, and effectiveness of the interventions.

Submission ID: 447
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Cannabis Use in Vulnerable Populations: International Perspectives from Laboratory to Field Studies:

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Last updated: 1st December, 2019
By: jane_metrik@brown.edu, Jane Metrik

Acute Effects of Cannabis on Alcohol Consumption: Moderation of Effects by Cannabis Use Patterns

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Background/purpose: Cannabis use relative to non-use is strongly linked with heavy drinking but for some individuals cannabis may act as a substitute for alcohol. The aim of this placebo-controlled laboratory study is to examine individual differences in dose-dependent effects of cannabis administration on alcohol consumption during a task in which participants choose to drink their preferred alcoholic beverage, with total amount of alcohol available designed to raise blood levels up to .10 g/dl.

Methods: Data from 107 non-treatment seeking heavy episodic alcohol drinkers (50% ethnic/racial minorities) who smoked cannabis at least twice weekly (averaging 41% drinking and 86% cannabis use days) were analyzed. Across three separate days following overnight cannabis abstinence, participants smoked a placebo, moderate (3% THC), or high (7% THC) cannabis dose.
Results: Participants subsequently consumed more alcohol after smoking placebo relative to the high (B=-8.8, p<.001) and to the moderate (B=-5.3, p<.05) cannabis dose. There was a significant interaction of THC dose by baseline edibles use status, such that, relative to placebo, high THC dose reduced drinking among users of edibles but not among users not exposed to edible formulations. Frequency of baseline cannabis use also moderated cannabis's acute effect on alcohol self-administration such that both THC doses significantly reduced drinking among less frequent cannabis users but to a lesser extent among daily users.
Conclusions and implications: Results suggest acute cannabis administration may uniquely change drinking behavior for a subset of users. Findings are consistent with emerging evidence of a non-linear relationship between characteristics of cannabis users and alcohol outcomes.

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Does sleep quality affect stress reactivity?

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Background: The hormone cortisol is released in response to stress. Disrupted sleep could contribute to stress (e.g. Leproult ea, 1997). Studies investigating the relationship between sleep deprivation, stress and cortisol levels have reported varied and inconclusive results (Dalfsen & Markus, 2018). This could be explained by large methodological variation, such as the operationalization of disturbed sleep and the type of stressor. This study compared the cortisol response to psychosocial and physical stress in people with a good and bad sleep quality.
Methods: Good (n=23) and poor sleepers (n=23) were distinguished by the Pittsburgh Sleep Quality Inventory. Participants were exposed to the Cold Pressor Test (CPT, physical stress) and the Trier Social Stress Test (TSST, psychosocial stress), one week apart. Saliva cortisol was sampled 5 minutes before and 5, 15, 25 and 45 minutes after the stressor. Area under the curve increase scores were compared using ANCOVA, corrected for gender, baseline cortisol, and stressor order.
Results: Although the TSST led to an increase in cortisol ($t(45) = 2.02$, $p = 0.049$), the CPT did not ($t(45) = .37$, $p = .71$). No differences between good and poor sleepers were found on cortisol reactivity for either the physical ($F(1,41) = 0.55$, $p = .464$) or the psychological stressor ($F(1,41) = 0.01$, $p = .914$).
Conclusion and implications: The current study did not show an effect of self-reported sleep quality on physical or psychosocial cortisol reactivity. Future research could extend these findings using both experimental and field designs with various operationalizations of sleep deprivation.

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By: psy.aysenur@gmail.com, Aysenur KILIC

Understanding the effects of self-compassion and psychological flexibility on psychological problems of type II diabetes mellitus patients: a cross-sectional study

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Background/purpose: Type II Diabetes Mellitus (T2DM) is a metabolic disorder which is distinguished by high blood glucose levels, presenting in 85% to 95% of patient populations suffering from Diabetes Mellitus (DM). Previous studies show that psychological problems, such as depression, have high incidence rates, and associated with T2DM bidirectionally and worsened illness outcomes. Thus, the treatment of T2DM is also involves controlling for psychological symptoms. Recent studies show that usage of self-compassion in diabetes may be a promising method to decrease psychological problems in T2DM patients. Therefore, this cross-sectional study aims to understand the effects of self-compassion and psychological flexibility on psychological problems of T2DM patients.
Methods: 147 people with T2DM took part in a cross-sectional study and completed online self-report measures on their psychological health in the United Kingdom.
Findings: Structural Equation Modelling were conducted with using R coding on psychological problems (depression, anxiety, diabetes – distress), psychological flexibility, and self-compassion. Results show a mediation between these variables.
Conclusions and implications: Study findings show that psychological flexibility mediated the relationship between self-compassion and psychological problems, which contributes to the understanding of the underlying mechanism between self-compassion and psychological problems. Further research may focus on the effects of psychological flexibility and test these results with longitudinal studies.

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By: yangxuemail8@gmail.com, Prof Xue Yang

Relationships between academic related stress, negative emotions and internet gaming disorder among adolescents in China: The general strain theory

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Background/purpose: Internet/online gamers have been dramatically increasing worldwide. There were over 2.2 billion online gamers worldwide in 2017. Internet gaming disorder (IGD) was included in the DSM-5 and the ICD-11. The general strain theory suggests that strain (e.g., academic-related stress) results in negative emotions, which in turn can pressure individuals into negative behaviors (e.g., gaming) to escape from stress and negative feelings. Based on this theory, the study tests the direct and indirect associations between academic-related stress (academic stress and academic expectation stress) and IGD through negative emotions (depression and anxiety) in a large sample of Chinese adolescents.
Methods: In total, 2666 (Mean_{age}=12.767±0.747; 51.9% males; n_{Shanghai} =1423, $n_{\text{Xi'an}}$=1243) secondary school students finished our self-

reported questionnaire. Structural equation modeling (SEM) was conducted. Bootstrapping analyses (based on 5,000 bootstrap samples) tested the mediation hypotheses. SPSS version 18.0 and AMOS were used.

Results: The structural model fit the data well, chi-square (df)=1052.49 (147), p<0.05, CFI=0.95, NNFI=0.94, RMSEA=0.05. Academic stress was positively associated with IGD directly (B=0.04, β=0.08, p=0.04) and indirectly through negative emotions (B=0.13, β=0.24, p=0.001, 95%CI=0.19-0.31). Academic expectation stress was positively associated with IGD through negative emotions (B=0.01, β=0.03, p=0.01, 95%CI=0.01-0.05) but negatively associated with IGD (B=-0.06, β=-0.15, p<0.001).

Conclusions and implications: The results provide evidence for the application of general strain theory in explaining IGD and the potential psychological process. It highlights the potential importance of identifying and addressing academic-related stress and negative emotions in preventing and reducing IGD among Chinese adolescents.

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Last updated: 1st December, 2019
By: lyndsay.hughes@kcl.ac.uk, Dr Lyndsay Hughes

Perceptions of breast cancer and experience of side-effects by breast cancer survivors prescribed tamoxifen and aromatase inhibitors

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Background/purpose: Adjuvant hormonal therapy (HT) can significantly reduce the risk of breast cancer (BC) recurrence. The different side-effect profiles of tamoxifen and aromatase inhibitors (AIs) may impact on quality of life and successful treatment management. We aimed to compare perceptions of BC, HT and side-effect experiences of women prescribed tamoxifen and AIs.

Methods: Women who have been prescribed either tamoxifen or AIs in the last three years were recruited from outpatient clinics across the UK. Participants completed questionnaires assessing expected side-effects (GASE), experienced side-effects (BCPT), illness perceptions (IPQ-BCS) and treatment beliefs (BMQ).

Results: 966 women were recruited; n=310 (32.1%) were prescribed tamoxifen and n=656 (67.9%) were prescribed AIs. Women prescribed tamoxifen expected significantly greater symptom intensity than AIs (p=0.001). The most commonly reported symptoms across the entire sample were fatigue (91%), sleep difficulties (83%), joint pain (82%) and general aches/pains (86%). Hot flushes/night sweats (p≤0.001), cognitive symptoms (p≤0.001), and vaginal symptoms (p≤0.001) were rated worse for tamoxifen, whereas pain was rated significantly worse for AIs (p=0.029). There were no differences in treatment beliefs, however women prescribed tamoxifen had stronger perceptions that their BC was cured (p=0.003), that there were high consequences of BC (p=0.001), that they had more personal control over BC (p=0.024) and have a stronger emotional response (p<0.001).

Conclusions and Implications: Important differences between the beliefs about the impact of breast cancer, expected and reported side-effects are evident between women prescribed tamoxifen and aromatase inhibitors. This should be accounted for when supporting breast cancer survivors.

Submission ID: 452
Symposium ID and title if part of symposium: 48

The World Mental Health International College Student (WMH-ICS) initiative : from prevalence to prevention of mental disorders in college

Decision: Accepted, Offered Poster
Last updated: 1st December, 2019
By: jordalonso@gmail.com, Jordi Alonso

Suicidal Thoughts and Behaviors (STB) in Spanish University Students

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Background/purpose: To estimate the prevalence and 12-month incidence of STB and their correlates among university students in Spain.

Methods: A cohort of 2,118 first course students from 5 Spanish universities responded the WMH-ICS online questionnaire on mental disorders, suicidality and other personal factors.

Results: Baseline prevalence of 12-month suicidal ideation (SI) was 9.9%, that of suicidal plans, 5.6% and that of attempts, 0.6%. Factors significantly associated with the 12-month SI were: parental psychopathology (aOR = 1.7), mood disorder (aOR = 5.2), and sexual abuse (aOR = 5.6). Positive relationships in childhood were significantly associated with a lower risk. At 12 months of follow-up, SI prevalence was7.3%, with an incidence rate (new cases) of 3.7%. Recurrence among LT ideators was 12.2% and persistence among previous 12-month ideators, 33.8%. Several risk factors for incidence, recurrence, and persistence were identified. Sense of belonging to the university was a protector factor for the three outcomes.

Conclusions and implications: This is the first study estimating incidence of suicidal ideation in university students in Spain. The frequency of ideas, plans and suicidal attempts in first-year Spanish university students is high compared to the general population, but similar to that of developed countries with suicide rates higher than Spanish. This suggests the need to monitor and prevent suicidal behavior among Spanish university students.

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By: friederike.bender@staff.uni-marburg.de, M.Sc. Friederike Bender

Seasonal influenza vaccination: A meta-analysis on adverse events in placebo groups of randomized controlled trials

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Background/purpose: Immunization is a preventive, cost-effective health intervention without immediately noticeable benefits. Additionally, since vaccines are usually administered to healthy people, adverse events following immunization (AEFIs) are less accepted and could be involved in stagnating vaccination rates. Assuming vaccines to be sensitive to nocebo mechanisms, our aim was to conduct an effect size analysis of AEFIs reported in placebo groups in randomized controlled trials administering seasonal influenza vaccination.
Methods: Literature search via PubMed, Web of Science, and Cochrane Library was conducted taking grey literature into account. Only RCTs with placebo groups using substances without inherent pharmacological effects (like saline) were included. Effect sizes were estimated using a random-effects model based on $K = 28$ studies covering 17,615 participants.
Results: Reported local AEFIs in placebo groups showed a significant and robust effect size of proportions (ES_l). In $k = 8$ analysed placebo groups, 17% of participants reported at least one local AEFI ($p < .001$). The most common particular systemic AEFIs were headache ($k = 27$; 16%; $p < .001$), fatigue ($k = 20$; 14%, $p < .001$), and hyperhidrosis ($k = 5$; 11%; $p < .001$) within one week after vaccination.
Conclusions and implications: The results show significant AEFIs in placebo groups, suggesting substantial nocebo responses during vaccination process. Considering stagnating rates of vaccine uptake, the results might play a role in evolving strategies to address vaccine hesitancy. Health care professionals administering vaccines should be aware of the nocebo effect and take action to prevent or at least decrease the burden of adverse events following immunization.

Submission ID: 454
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Cannabis use in vulnerable populations: International perspectives from laboratory to field studies

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Last updated: 1st December, 2019
By: laura_stroud@brown.edu, Dr. Laura Stroud

Cannabis in pregnancy: Perceptions of prenatal users and patterns of prenatal use

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Background/purpose: We investigated perceptions of pregnant cannabis (CB) users and patterns of prenatal CB use in an ongoing US cohort.
Methods: 69 pregnant women (67% CB users) were interviewed at 14 ±3 weeks gestation; participants were primarily low-income (54%), unmarried (74%), and racially/ ethnically diverse (73%).
Results: Most common reasons for CB use in pregnancy were: stress/ anxiety relief (43%), nausea relief (37%), and recreation (20%). Although 64% of CB users reported using CB for medicinal purposes; only 11% had a physician's recommendation. Both users and non-users perceived CB as less harmful than tobacco (*p*s<.001). Users perceived CB as less harmful than did controls (*p*s≤.006)–59% of users did not perceive CB as harmful for their pregnancy, 82% did not perceive CB as addictive. 52% of users met criteria for CB Use Disorder. 71% of CB users reported primarily smoking blunts; 50% reported co-use of tobacco products. 75% reported using ≥1X per week. Average days of CB use per week was stable in the 3 months preconception but declined linearly over 1st trimester (*IRR*=.92; *p*<.0001)–primarily due to women who quit post-conception. Among persistent users, there was no reduction in average days of overall CB use per week; however, frequency of blunt use decreased (*IRR*=.98; *p*=.025) and frequency of vaping, edibles and CBD use increased linearly over pregnancy (*IRR*=1.15; *p*<.0001).
Conclusions and implications: Results highlight perceived safety of CB, use for symptom relief, high rates of tobacco co-use, and potential replacement of combusted CB products over pregnancy. Implications for screening and studies of offspring neurodevelopment are discussed.

Submission ID: 455
Symposium ID and title if part of symposium: 52

Cardiometabolic health in racial/ethnic minorities across the cancer continuum: Prevention to survivorship

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Last updated: 1st December, 2019
By: ramirezag@uthscsa.edu, Dr Amelie Ramirez

Anti-inflammatory dietary intervention among overweight and obese US breast cancer survivors

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Background/purpose: Cardiometabolic risk factors such as obesity, diabetes, hypertension, and hypercholesterolemia induce inflammation which, in part, explains the link to several cancers and cancer recurrence. U.S. breast cancer survivors (BCSs) are expected to increase to 4 million in the next 5-10 years. Inflammatory (Pro-I) biomarkers including C-reactive protein (CRP), Interleukins (IL) 3, 6, and 8, and Tumor Necrosis Factor (TNF)–α have been associated with cancer severity and recurrence. Nutritional interventions aimed at reducing inflammation may contribute to reduced recurrence risk and increase survival rates.
Method: This one-year intervention aimed to decrease Pro-I biomarkers and increase anti-inflammatory (AI) cytokines by promoting AI food incorporation into BCS dietary routines, and to examine effects on potential recurrence risk factors including body mass index (BMI) and circulating adipose stromal cells (ASCs).
Results: Overweight and obese adult BCSs were randomized into intervention (IG; n=76) and control (CG; n=77) groups. Participants (IG) attended 6 monthly workshops and received monthly tailored newsletters and telephone calls incorporating Motivational Interviewing techniques. Controls received monthly nutritional brochures. Fasting serum was collected and assayed for Pro-I/AI marker and ASC levels at baseline, 6- and 12-month assessments.
Conclusions and implications: Participants' mean age at baseline was 56.6 (SD=9.4) and mean BMI 32.4 kg/m^2 (SD=4.9). Adherence to Mediterranean diet guidelines increased in the IG, but not in the CG (+22.5% vs. +2.7%, P<0.001). IG increased the use of spices and herbs compared to CG (+ 146.2% vs. +33.3%, P<0.001), including significantly more frequent consumption of cinnamon, turmeric, garlic, ginger, black pepper, and rosemary. Changes in the expected direction for CRP and IL-6 markers overall at 6 and 12 months, and for IL-8 only at 6 months were observed.

Submission ID: 456
Symposium ID and title if part of symposium: 52

Cardiometabolic health in racial/ethnic minorities across the cancer continuum: Prevention to survivorship

Decision: Accepted, Symposium
Last updated: 1st December, 2019
By: manuel.ortiz@ufrontera.cl, MANUEL S. ORTIZ

"Psychological stress, depressive symptoms, and metabolic syndrome in Chilean adults: A longitudinal study"

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Background/purpose: Chronic psychological stress and depressive symptoms are associated with metabolic syndrome (MetS); however, these associations have been primarily examined employing cross-sectional designs with little attention to whether these variables predict trajectories of MetS and its individual components. The primary aim of this study was to examine the longitudinal association between chronic psychological stress, depressive symptoms, and MetS, and test whether these variables predict trajectories of MetS and its components in Chilean adults.
Methods: Four hundred and twenty-three participants (mean age = 44 years old), without cardiovascular disease at baseline were enrolled in the Chilean Study of Psychological Stress, Obesity, and MetS. Participants were followed for three years during which they completed annual assessments that included psychological questionnaires, blood samples, and anthropometric measures.
Results: Hierarchical linear regression analyses demonstrated that chronic psychological stress at baseline predicted the total number of MetS components (MetS score) at third wave ($ß = 0.147$; $p < 0.01$). Growth curve modeling demonstrates that participants with a baseline score of psychological stress and depressive symptoms one standard deviation or more above the mean had greater waist size circumference over time compared to those with a score of one standard deviation below the mean.
Conclusions and implications: Chronic psychological stress predicts metabolic syndrome score and its components over time. Further, psychological stress and depressive symptoms at baseline predicted elevated metabolic syndrome score trajectories and the greatest waist size circumference.

Submission ID: 457
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The role of psychological factors in kidney failure

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Last updated: 1st December, 2019
By: d.beck@erasmusmc.nl, MSc Denise Beck

Promoting medication adherence and self-management among kidney transplant recipients (mars-trial): Development and first experiences

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Background/purpose: Non-adherence to anti-rejection medication after kidney transplantation is highly prevalent and has serious consequences for clinical outcomes. We aim to describe the development of an adherence promoting intervention and the first experiences of testing this intervention.
Method: Evidence-based theories and methods were translated into an intervention for non-adherent adolescent and adult kidney transplant recipients (ages > 12 yrs). A pilot study was conducted to test acceptability and feasibility and make necessary adjustments to the intervention. The effectiveness of the intervention is currently being tested in an RCT using electronic monitoring, self-report and blood assays to measure adherence.
Results: The intervention is outreaching (home-based) and is based on principles of (multi) systemic therapy. During the intervention sessions, determinants of non-adherence are assessed with the patient in dialogue with the social network. Specific behavior change techniques are offered based on the determinants, making tailoring possible. Duration and frequency of the intervention are dependent on the achievement of 'treatment' goals. First experiences will be illustrated based on case studies from the pilot. In the ongoing RCT approximately one-third of the patients invited consented to participate. Reasons for declining were too busy, no interest or not necessary.
Conclusions and implications: This unique intervention is outreaching, tailored to the needs and situation of each individual and their social network. However, reaching and recruiting this difficult to identify and motivate group remains the biggest challenge in adherence research.

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By: jennifer.murray@qub.ac.uk, Dr. Jennifer Murray

Comparing social norms for adolescent smoking and vaping behaviours using game theory based experiments and self-reports: Insights from the MECHANISMS Study

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Background: Many adolescent smoking prevention programs target social norms, typically evaluated with self-report, susceptible to social desirability bias. An alternative approach with limited application in public health is to use experimental norms elicitation methods.
Methods: Using the Mechanisms of Networks and Norms Influence on Smoking in Schools (MECHANISMS) study baseline data, from 12–13 year old school pupils (n=1656) in Northern Ireland and Bogotá, we compare two methods of measuring *injunctive* and *descriptive* smoking/vaping norms. These include: (1) incentivized experiments, eliciting norms using monetary payments; (2) self-report scales. Confirmatory factor analysis (CFA) examined whether the methods measured the same construct. Paths from exposures (country, sex) to norms, and associations of norms with smoking behaviour/intentions were inspected in structural models.

Results: Second-order CFA showed latent variables representing experimental and survey norms measurements were measuring the same underlying construct of anti-smoking/vaping norms. Adding covariates into structural models showed significant paths from country to norms (second-order anti-smoking/vaping norms latent variable: standardized factor loading [β]=0.30, standard error [SE]=0.09, p<0.001), and associations of norms with self-reported anti-smoking behaviour (β=0.40, SE=0.04, p<0.001), anti-smoking intentions (β=0.42, SE=0.06, p<0.001), and objectively measured smoking behaviour (β=−0.20, SE=0.06, p=0.001).
Conclusions and implications: We provide evidence for the construct validity of behavioural economic methods of eliciting adolescent smoking/vaping norms. These methods seem to index the same underlying phenomena as commonly-used self-report scales. Our research uses innovative, transdisciplinary insights from game theory about norms elicitation that will have future relevance for other health-related behaviours
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Last updated: 1st December, 2019
By: hans.knoop@amsterdamumc.nl, phd Hans Knoop

Mediators of the positive effect of Internet-based Cognitive Behavioral Therapy on fatigue severity in cancer survivors

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Background/purpose: Fatigue is a persistent and disabling symptom experienced by many cancer survivors. The CHANGE study demonstrated that Internet-based Cognitive Behavior Therapy (iCBT) leads to a significant reduction of fatigue. The present study aimed to identify whether changes in cognitive-behavioral fatigue-related variables, targeted in iCBT mediate the reduction in fatigue. Additionally, the mediating role of a change in depressive symptoms, often co-occurring with fatigue, was explored.
Method: Severely fatigued breast cancer survivors were randomized to iCBT (n=66) or care-as-usual (n=66). Fatigue severity, potential cognitive-behavioral mediators, and depressive symptoms were assessed at baseline and post-treatment, 6 months later. The PROCESS macro by Preacher and Hayes was used to test mediation models.
Results: Data of 127 survivors were analyzed. Mediation models including a single mediator indicated that increased self-efficacy, decreased fatigue catastrophizing, decreased focusing on symptoms, reduced sleep problems and increased perceived activity each partially mediated the decrease in fatigue following iCBT. In a parallel multiple mediation model, increased self-efficacy, decreased focusing on symptoms and increased perceived activity mediated the fatigue-reducing effect of iCBT (total effect: -13.36, p<0.001; direct effect: -1.62, p=0.27). Depressive symptoms was added to this multiple mediation model and emerged as additional mediator (indirect effect: -1.77, 95% CI [-3.2,-0.56]), while the aforementioned cognitive-behavioral mediators remained significant.
Conclusions and implications: Changes in fatigue related cognitions (increased self-efficacy, reduced focusing on symptoms), increased perceived activity and a reduction in depressive symptoms mediate the reduction of fatigue in severely fatigued breast cancer survivors following Internet-based Cognitive Behavior Therapy. These insights can help optimize treatment in the future.

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By: wilhel46@uni-marburg.de, Dr. Marcel Wilhelm

With friends like these who needs enemies? How social interaction shapes the perception of performance related threat

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Background/purpose: Individual differences in neuronal correlates of performance monitoring, such as the Error-Related Negativity (ERN), are implicated in a wide variety of psychopathologies. Performance monitoring is considerably influenced by situational factors: Errors committed during social interaction often lead to enhanced ERNs. However, it remains unclear how personal factors may interact with situational incentives to influence performance monitoring.
Methods: We analyzed how performing a task after a positive or after a negative social interaction influenced the amplitude of the ERN. Individual dispositions (e.g., social anxiety, extraversion) were also assessed to test for possible moderation effects. Electroencephalography was recorded from 37 individuals while they performed a Flanker Task in three different contexts: solitary, positive, and negative social interaction. In the positive and negative conditions, participants received a video call from a second participant and were instructed to explain the Flanker Task to them. This second participant was in fact a standardized video of a person who reacted either positively or negatively during the participants' explanation.
Results: Results indicate a selective enhancement of the ERN after negative social interaction compared to ERNs recorded after positive social interaction. In addition, this enhancement was dependent on whether and to which degree participants reported negative feelings and negative performance-related expectations after negative social interaction.
Conclusions and implications: These results suggest that performance monitoring is not only influenced by the nature of a social interaction, but also depends on individuals' subjective experience of the same. Expectations derived from these situations could become a problem in performance-related situations, if no corrective experience is made.

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Last updated: 1st December, 2019
By: zorgoszilvia@gmail.com, assistant professor Szilvia Zörgő

Using epistemic network analysis to model patient decision-making vis-à-vis lay theories of etiology and trusted sources of information

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Background/purpose: Novel strategies are needed to explore interactional and interpretive domains of clinical practice where quantitative methods are insufficient. Epistemic Network Analysis (ENA) is a technique for modeling and comparing the structure of connections among elements in large amounts of coded, qualitative data; thereby bridging qualitative and quantitative methods. Our initiative concerns patient decision-making regarding therapy choice, specifically how lay etiology influences the patient journey, the use of non-conventional medicine, and forgoing biomedical treatment.

Methods: Semi-structured interviews were conducted with patients (N=26) in Budapest, Hungary; data collection is on-going. Non-proportional quota sampling was used; strata: therapy choice, diagnosis, and sex. Deductive coding and segmentation were performed manually; ENA software was employed to calculate code co-occurrences in narrative segments and generate networks.

Results: Patients using solely biomedicine exhibited strong connections among etiologies “genetic”, “environmental”, and “chemical imbalance” regardless of disease type, while patients using complementary/alternative medicine (CAM) tended to emphasize “psychosocial” and “vitalist” etiologies. When scrutinizing therapy choice within diagnosis groups, CAM users showed stronger connections to rejecting conventional treatments a priori, and relied more heavily on their own interoception/intuition (as opposed to their physician) in deciding about healthcare issues and evaluating treatment validity, efficacy.

Conclusions and implications: Scrutinizing lay theories of illness causation and trusted sources of information lends greatly to understanding patient decision-making regarding therapy choice. This subject is vital when the patient is diagnosed with a life-threatening illness, yet forgoes conventional treatment. ENA was employed as a promising tool in modelling such complex interactions within patient cognition.

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Last updated: 1st December, 2019
By: schaare@cbs.mpg.de, Ms Lina Schaare

Higher blood pressure is associated with fewer depressive symptoms and greater well-being in the uk biobank

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Background/purpose: Paradoxically, high blood pressure is associated with an increased risk of cardiovascular disease and mood disorders, and higher levels of well-being. In this preregistered study, we investigated these opposing findings in relation to their putative role in hypertension development.

Methods: Using the UK biobank (baseline N=502,494; 273,378 women; median age=58 years), we performed cross-sectional and longitudinal multiple linear regressions with systolic blood pressure (SBP) and hypertension diagnosis (HTN) as predictors and self-reported current depressive symptoms and well-being as outcomes. To explore relations to the development of HTN, we studied a subsample of participants who were normotensive at baseline and became hypertensive until follow-up. Models were adjusted for confounders (age, sex, BMI, among others) and sensitivity analyses explored the dependence of effects on previous diagnoses of cardiovascular disease, depression and medication intake (anti-hypertensives, antidepressants).

Results: Results yielded small associations of higher SBP with fewer depressive symptoms (β=-0.063; 95% CI [-0.067,-0.060]; $p<0.001$) and greater well-being (β=0.057; 95% CI [0.051, 0.063]; $p<0.001$), persisting until follow-up ~10 years later. Sensitivity analyses yielded that effects were robust to influences of chronic disease and medications. The magnitude of the association of SBP with depressive symptoms differentiated between people who transitioned from non-HTN to HTN within the following 10 years (β=-0.014; 95% CI [-0.026,-0.003]; $p=0.015$).

Conclusions and implications: We found that higher blood pressure was associated with better subjective mood, which may explain why compliance during antihypertensive treatment is typically low. We further suggest that the relationship between blood pressure and mood may be relevant to the development of hypertension.

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Last updated: 1st December, 2019
By: vibhore.prasad@kcl.ac.uk, Dr Vibhore Prasad

Help-seeking in individuals with symptoms suggestive of attention-deficit/hyperactivity disorder (ADHD): a systematic review and narrative synthesis

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Background/purpose: Attention-deficit/hyperactivity disorder (ADHD) is a common neurodevelopmental disorder that affects 3-5% of children and young people worldwide. Delayed recognition of ADHD is a consequence of poor educational, socioeconomic and family achievement in childhood and adulthood. The reasons how and why people of all ages with symptoms of ADHD seek help are not well understood. An understanding of the help-seeking of people with symptoms suggestive of ADHD may help us to educate health professionals, design more effective healthcare systems and support people with ADHD earlier than is currently possible.

Methods: A systematic review and narrative synthesis was undertaken to summarise the help-seeking behaviour of people with symptoms of ADHD. Six electronic databases were searched using a pre-defined search strategy: Medline; Embase; PsycInfo; Global Health; ASSIA; and CINAHL. The review was registered using the International Prospective Register of Systematic Reviews (PROSPERO).

Results: 19,365 articles were identified, of which 13 full papers were included in the review. Five main themes were identified: (1) individual and family factors influencing help-seeking, (2) symptomology, (3) barriers to seeking care, (4) disease state acceptance, and (5) pathways to care. Evaluation and treatment rates were higher for males vs. females. Ethnic minorities may be less likely to seek help.

Conclusions and implications: There is a need for additional education and training of individuals, caregivers, teachers, and general practitioners, as well as a demand for standardised guidelines and protocol development. Enhanced guidelines may help to reduce help-seeking delays and improve the awareness of ADHD as a potential diagnosis.Submission ID: 466

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By: k.loveys@auckland.ac.nz, Ms Kate Loveys

A qualitative study on social closeness and emotional support with a digital human

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Background: Digital humans (DH) are starting to be used in healthcare, either as virtual therapists to deliver psychological interventions or as companions to reduce loneliness and stress. A DH is an embodied conversational agent with artificial intelligence. A DH's ability to form close relationships with people is important for intervention effectiveness and engagement. As it is a fairly new technology, research is needed to investigate how design features of DHs can promote social closeness and emotional support seeking from people.
Methods: Data was taken from an experimental study about the effect of multimodal emotional expression on social closeness with a DH. 198 participants interacted with one of six DHs that varied in modality richness and emotional expression. Data were 396 responses to two open-ended questions on reasons for feeling social closeness and for seeking emotional support with a DH. Data was analysed by two independent raters using conventional content analysis. Parent themes and sub-themes were derived from observations in the data and refined to achieve rater agreement.
Results: Themes for creating social closeness with a DH included its physical characteristics, conversation ability, rapport building strategies, and program errors. Themes for emotional support seeking were the same plus emotional intelligence, preference for human support, and aspects of DH support (e.g. being non-judgmental, and private).
Conclusions and implications: A DH's physical characteristics and communication strategies are important aspects for creating social closeness and providing emotional support. Experimental research should further evaluate these effects.

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By: e.hunter.18@abdn.ac.uk, Emma Hunter

Daily companionship and social support in couples facing a health behaviour change

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Background: Social relationships play a role in health and health behaviour change. The beneficial effects of different types of social support have been studied extensively, while there is much less evidence on other important relationship aspects such as companionship. In this study we consider the role of companionship and its association to both emotional and practical social support in everyday life, when one partner embarks on a behaviour change attempt—quitting smoking.
Methods: Smokers and their non-smoking partners (n=99) completed daily mobile phone diaries for 32 consecutive days; 10 days before a self-determined quit date and 21 days after. A mean-difference approach was used to examine the association of companionship with social support on both a daily level and a couple level.
Results: Around a smoking quit attempt, couples reporting higher levels of companionship also reported higher levels of social support. On a daily basis, higher companionship was associated with higher emotional social support (0.418, 95% CI [0.155, 0.682], p= .002) and higher practical social support (0.396, 95% CI [0.115, 0.677], p= 0.006).
Conclusions and implications: Couples who reported higher companionship also reported higher levels of social support. Companionship co-occurs with social support on a daily basis in couples. Using a dyadic longitudinal approach may enhance our understanding of the interplay of social processes involved in health behaviour change in daily life. Intervention developers wishing to involve close others in behaviour change should address both social support and companionship.

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Behavioral Physical Activity Interventions for Underserved Populations: Innovative Approaches to Reduce Health Disparities

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Last updated: 1st December, 2019
By: rodney.joseph@asu.edu, Assistant Professor Rodney Joseph

Leveraging e- and mHealth technology to Increase Physical Activity and Reduce Cardiometabolic Disease Risk among African American women

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Background/purpose: Cardiometabolic diseases are a major public health concern for African American (AA) women. Fifty-five percent are obese, 57% have cardiovascular disease, and 13% have diagnosed type 2 diabetes. Regular aerobic physical activity (PA) is an established mechanism to manage weight, improve myriad cardiometabolic disease risk factors, and has an inverse dose-response relationship with cardiovascular disease and type 2 diabetes. Despite these benefits, only 27-40% of AA women meet national PA guidelines; highlighting the need for effective interventions to increase PA and reduce cardiometabolic disease risk in this population.
Methods: Over the past decade, our work has focused on the development and implementation of theory-based, culturally relevant e- and mHealth PA interventions for the reduction of cardiometabolic disease risk among sedentary overweight and obese AA women. This work has included the use of websites, social media, text messaging, and most recently, a smartphone app to deliver these interventions.
Results: This presentation will discuss the development, outcomes, and lessons learned from two of our most recent e- and mHealth PA promotion studies for AA women. First, we will present how the social media platform Facebook was leveraged to increase PA and reduce cardiometabolic disease risk among AA women (n=29; *M* age = 35 years). Next, a description of how we expanded on success of this Facebook intervention to develop a smartphone app to deliver a refined version of the PA intervention in a larger randomized controlled trial (n=60; *M* age = 38.7 years).
Conclusions and implications: The presentation will conclude with future directions for this research.

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Last updated: 1st December, 2019
By: davidbuisonje@gmail.com, David de Buisonjé

Less carrot more stick? investigating the effect of loss aversion on the uptake of individual and dyadic financial incentives for health behavior change

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Background/purpose: Financial incentive interventions for health behavior change have proven to be effective but costly. Deposit contracts (in which participants pledge their own money as an incentive) would be affordable with perhaps superior effects on behavior by exploiting the power of loss aversion. A downside of using deposit contracts could be that the required personal contribution decreases uptake. Uptake might be enhanced by requiring the incentive from a dyad (two people cooperating) and reward shared goal achievement. Therefore, this study investigated (1) whether requiring a personal deposit decreases uptake and (2) whether offering a dyadic incentive increases uptake.
Methods: A 2 (incentive type; deposit vs reward) x 2 (incentive recipient; individual vs dyad) between-subjects design was used with uptake as the primary outcome. Ninety-eight respondents were randomly presented one of four financial incentive options online and afterwards indicated their likelihood of participating.
Results: A two-way ANOVA shows that respondents who were offered a deposit incentive indeed reported a lower uptake than those who were offered a reward incentive (p = .009). However, offering a dyadic incentive did not increase uptake compared to an individual incentive. Furthermore, we did not find an interaction between these factors.
Conclusions and implications: This study shows that requiring a personal deposit in a financial incentive intervention decreases uptake and that offering an incentive for dyads does not increase uptake. Future studies should investigate how the uptake of deposit contracts can be improved through thoughtful incentive design.

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Last updated: 1st December, 2019
By: john.wiggers@hnehealth.nsw.gov.au, Professor John Wiggers

A clinical practice change intervention to improve the provision of antenatal care addressing alcohol consumption by women during pregnancy: a randomised controlled trial

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Background: Despite clinical guideline recommendations, implementation of antenatal care addressing alcohol consumption by pregnant women is limited. The aim of this study is to examine the effectiveness of a multi-strategy clinical practice change intervention in increasing antenatal care addressing consumption of alcohol by pregnant women.
Methods: A randomised controlled stepped-wedge trial was conducted in two hospitals in a health district in New South Wales, Australia. The 7-month multi-strategy clinical practice change intervention involved: leadership support, local clinical practice guidelines, electronic prompts and reminders, opinion leaders, audit and feedback, educational meetings, and performance monitoring. Outcome data were gathered for 7 months prior to and 7 months following the intervention. Seven primary outcome measures addressed the proportion of women at ‘booking in’, 28 weeks and 36 weeks gestation who reported being: assessed for alcohol consumption; provided brief advice, and being referred to a specialist service.
Results: Outcome data were collected from 2,329 women. There was no significant changes for any of the 7 care outcome measures at ‘booking in’. There were significant increases in each of the 7 care outcome measures at both 28 and 36 week visits (p<0.001-0.034).
Conclusions and implications: This is the first randomised controlled trial of the effectiveness of a comprehensive clinical practice change intervention to increase clinician’s provision of recommended care that addresses alcohol consumption by pregnant women. The results suggest that the intervention significantly improved the provision of such care later in pregnancy demonstrating a means of improving the continuity of such care throughout the pregnancy.

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By: nmccleary@ohri.ca, Dr Nicola McCleary

Improving opioid prescribing in primary care: examining the active ingredients and behavioural targets of existing audit & feedback and academic detailing initiatives

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Submitter email: nmccleary@ohri.ca

Background: In Ontario, Canada, initiatives supporting safer opioid prescribing in primary care include Health Quality Ontario's (HQO's) audit and feedback (AF) reports delivered to ~3000 physicians; and academic detailing (AD; educational outreach) provided by the Centre for Effective Practice (CEP) to ~800 physicians. Partnering with these organisations, we aimed to examine the initiatives to identify active ingredients and target clinical behaviours.
Methods: We reviewed the AF report, and 21 educational materials used in the AD, and coded each instance of a Behaviour Change Technique (BCT) and the clinical behaviour it targeted. We conducted semi-structured interviews with HQO staff, CEP staff, and detailers (pharmacists delivering AD). We coded further BCTs and behaviours. Data were coded independently by two researchers.
Results: Most frequent BCTs in the AF were ‘feedback on (prescribing) behaviour’ (20 instances), and ‘social comparisons’ (others’ prescribing) (34 instances). HQO staff (n=5) noted challenges in delivering AF which encourages behaviour change but discourages abrupt opioid withdrawal. The AD included ‘instructions on how to perform the behaviour’ for a range of behaviours (e.g. tapering opioids, providing non-pharmacological treatments, treating opioid use disorder) (112 instances). Interviews (n=11) revealed that detailers emphasized BCTs such as ‘problem solving’ (to support challenging conversations), whilst adding BCTs such as ‘social support’.
Conclusions and implications: The initiatives include a small range of BCTs addressing various clinical behaviours. Results will support efforts to optimize the initiatives, facilitated by existing partnerships. Behavioural approaches can provide valuable insights into the content and implementation of large-scale initiatives supporting improvements in quality of care.

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By: martti.tuomisto@tuni.fi, Professor Martti T. Tuomisto

Determinants of daily blood pressure and heart rate levels during activities in normal life

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Background/purpose: Daily blood pressure and heart rate are important variables to measure for adequate cardiovascular assessment.
Methods: We studied daily systolic, mean arterial and diastolic blood pressure (SP, MAP, and DP) and heart rate (HR) in healthy normotensive and mildly hypertensive middle-aged men (n = 95). The data were from the Tampere Ambulatory Hypertension Study intra-arterial BP data bank from 1987-1992. About 10 million cardiovascular data points per variable were reduced to 30-second means. Structured diary variables were monitored for 15 activity classes for 24 hours. In hierarchical regression analyses, the predictors in theoretically determined order were entered in eight steps: Diagnostic BP, motor activity (0-240) and the respective diary variables in order.
Results: The explanation rates for SP were the following: Diagnostic SP (R^2 = .294), motor activity (R^2 = .4323, ΔR^2 = .1383), daily activity classes (R^2 = .4881, ΔR^2 = .0558), emotions or mood (anger-, anxiety-, sadness-, interest-, hurriedness- and tiredness-dimensions; R^2 = .5103, ΔR^2 = .0222), location (home, work, elsewhere; R^2 = .5134, ΔR^2 = .0031), self-assessed difficulty and control of situation (R^2 = .5136, ΔR^2 = .0002), self-assessed physical and psychological effort (R^2 = .5139, ΔR^2 = .0003) and number of people present (R^2 = .514, ΔR^2 = .000). The first five variables entered were highly significant (p<.001) in these significant models. The same statistics were analysed for DP, MAP and HR respectively.
Conclusions and implications: The results show important directions for the assessment of blood pressure on different levels in healthy people.

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By: maria.bloechl@gmail.com, Maria Blöchl

Long-term changes in depressive symptoms before and after stroke

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Background/purpose: Depression is increasingly recognised as an important complication in patients with stroke. The present study uses a prospective design to investigate how stroke shapes the course of individuals' depressive symptoms several years before and after the event.
Methods: Data came from the English Longitudinal Study of Ageing (ELSA), a 12-year longitudinal, population-based panel study. 425 individuals reported a first-ever stroke during the study. Cases were matched to individuals who remained stroke-free using propensity scores to account for normative age-related changes in depressive symptoms as well as sociodemographic and health-related characteristics. Multilevel models with piecewise regression coefficients were used to describe trajectories of depressive symptoms in people with stroke and matched controls.
Results: A small but significant increase in depressive symptoms occurred about two years before stroke. There was a further increase in depressive symptoms following stroke, which persisted even years after stroke. The increases in depressive symptoms before and after stroke were significantly different from matched controls, who showed little changes in depressive symptoms over time. Symptom-based analyses suggested that the effects were primarily driven by depressed mood and fatigue-related symptoms.
Conclusions and implications: While the occurrence stroke is associated with lasting increases in depressive symptoms, at least part of this increase can be observed before the acute event, perhaps indicating a looming pathological process. Changes in fatigue-related symptoms seem particularly prominent before and after stroke.

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By: zoe.moon@kcl.ac.uk, Dr Zoe Moon

Understanding low adherence to endocrine therapy in breast cancer survivors from minority ethnic groups

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Background/purpose: Adherence to adjuvant endocrine therapy (ET) may contribute towards the poor clinical outcomes seen in breast cancer survivors from minority ethnic groups. This study aims to investigate ET adherence levels in white women and women from minority ethnic groups and explore how factors associated with adherence may differ across these groups.
Methods: 1000 breast cancer survivors prescribed ET were recruited from outpatient clinics across the UK. Participants completed a series of validated questionnaires assessing adherence (MARS), illness and treatment perceptions (IPQ-BCS, BMQ), and side effects (BCPT). A series of linear regressions were carried out to investigate the impact of ethnicity.
Results: The majority of participants were White British (92%). 49% of women from minority ethnic groups were non-adherent to ET, compared to only 28% of white women. When controlling for clinical and demographic factors, women from minority ethnic groups had significantly lower adherence and higher medication concerns, were less likely to see their breast cancer as cured, reported higher depression and anxiety levels, had higher emotional representations around their risk of recurrence and perceived poorer empathy from their healthcare professionals.
Conclusions and implications: Women from minority ethnic groups were less likely to take their endocrine therapy as prescribed and more likely to have illness and treatment perceptions which are associated with non-adherence. More research is needed to understand why this is and to explore how best to support women from a range of ethnic backgrounds, in order to ensure all women are supported with their ongoing endocrine therapy treatment.

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Last updated: 1st December, 2019
By: heckman@uga.edu, Dr. Timothy Heckman

Viral load, PrEP use, and risky sexual behaviors in older adults living with HIV

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Background: Contemporary HIV prevention methods include maintenance of undetectable viral loads in persons living with HIV (PLWH) and use of pre-exposure prophylaxis (PrEP) for HIV-negative individuals. The extent to which these contemporary HIV prevention strategies are used by sexually active older PLWH is unknown.
Methods: Participants were 1,468 adults ≥ 50 years of age residing throughout the United States who screened eligible for a clinical trial testing the efficacy of a telephone-administered sexual risk reduction intervention. All participants were HIV-positive and had engaged in condomless sex with HIV-negative persons during the past three months. Participants completed a survey that assessed demographic characteristics, self-reported HIV viral load, HIV-negative sexual partners' use of PrEP, and personal sexual behavior.
Results: Ninety-two percent of participants self-reported a current undetectable viral load, while 64% of participants had HIV-negative sex partners who used PrEP. Poisson regression characterized associations among viral load status, PrEP use, and number of condomless sex acts in the past 90 days, controlling for demographic variables. Consistent with study hypotheses, participants who reported a greater number of condomless sex acts were more likely to report undetectable viral loads (OR=1.41, 95% CI=1.32-1.51). Contrary to hypotheses, having HIV-negative partners who used PrEP was associated with *fewer* condomless sex acts (OR=0.46, 95% CI=0.45-0.48).
Conclusions and implications: The preponderance of older persons living with HIV in this sample maintained undetectable HIV viral loads, thus reducing HIV transmission risk. Condomless sex, however, occurred more frequently in the absence of pre-exposure prophylaxis, highlighting the complexity of sexual risk reduction approaches in this population.

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Last updated: 1st December, 2019
By: pbrown3@ucmerced.edu, Professor Paul Brown

Return On Investment (ROI) for a community-based diabetes prevention program

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Background/Purpose: Return on investment (ROI) analysis is increasingly favored by local decision makers due to its transparency, easy of understanding, and ability to be tailored to local preferences. This study reports the ROI for a three-year, community-led diabetes prevention program.
Methods: The program involved enrolling at-risk adults in the National Diabetes Prevention Program (NDPP) with the stated aim of showing a positive ROI within 3-5 years. Two methods were used to monetarize the outcomes: Willingness to pay estimates from a discrete choice experiment and the monetarized value of gains in quality adjusted life years (QALYs) using a $50,000 threshold for a QALY gained. Of the 153 people enrolled in the NDPP, 43 successfully completed. The operating cost of the program was $102K per year.
Results: The results suggest that while the program had a positive ROI using either the QALY (return of $7.55 for each $1 invested) or WTP (return of $5.48) if the lifetime health benefits and cost savings from avoiding diabetes were considered, the ROI was negative using either QALY (-$0.57 for each dollar invested) or WTP (return of -$.21) if the analysis was restricted to the first 5 years. With the shorter timeline, the program would have to enroll over 1700 people per year to yield a positive ROI.
Conclusions and implications: The results highlight the limitations of using ROI for many prevention programs and suggests that behavioral medicine researchers should ensure local decision makers understand the implications of using shorter timelines when determining the value of an intervention.

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By: m.van.vliet@fsw.leidenuniv.nl, MSc Milon van Vliet

Combining behavior change techniques and material incentives for effective weight loss programs: A meta-analysis

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Background/Purpose: The primary aim of this meta-analysis is to investigate whether adding material incentives to weight loss programs increases their effectiveness. Furthermore, it aims to investigate whether the effectiveness of incentives differs when combined with behavior change techniques (BCTs) requiring passive receipt versus active participation of participants, and when different incentive targets (behaviors versus outcome) are used.
Methods: Reference searching was used to identify (quasi-)RCTs using incentives to promote weight loss in adults. From the 61 identified studies, 10 were included in the random-effects meta-analyses, subgroup analyses, and quality assessment (1338 control and 1615 intervention participants). Effect sizes were calculated separately for short- (during intervention; *n*=12) and long-term (follow-up; *n*=5) weight loss.
Results: We found no significant difference in short- (*SMD*=.10, *p*=.062) and long-term (*SMD*=.08, *p*=.311) weight loss between participants in the incentive and the control condition. Furthermore, the used incentive target did not moderate these effects on short- (*Q*(2)=.96, *p*=.620) and long-term (*Q*(1)=1.43, *p*=.232) weight loss. Interestingly, for both short- (*Q*(1)=5.59, *p*=.018) and long-term (*Q*(1)=5.38, *p*=.020) weight loss, there was significant moderation of the type of BCTs, such that the incentive effect was greater when incentives were combined with BCTs requiring active participation (short-term: *SMD*=.31, *p*=.001; long-term: *SMD*=.33, *p*=.012) than with BCTs requiring passive receipt (short-term: *SMD*=.03, *p*=.618; long-term: *SMD*=-.02, *p*=.813).
Conclusions and implications: Weight loss programs using incentives, should combine incentives with BCTs requiring active participation of participants for effective short- and long-term weight loss.

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By: mbasan-jallow@hotmail.com, Ms mbasan jallow

Facilitators and barriers to diabetes self-management in the gambia: A qualitative analysis using the theoretical domains framework and com-b model

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Background/Purpose: Diabetes mellitus poses a significant health challenge in The Gambia leading to high morbidity and mortality rates. Self-management is an effective strategy in improving health outcomes although evidence indicates a low adherence to self-management practices. The purpose of this study was to understand the perceived facilitators and barriers to self-management in The Gambia using the theoretical domains framework (TDF) and COM-B model.
Methods: This qualitative study used semi-structured interviews conducted with patients with type 1 or 2 diabetes (n=16, 7 males and 9 females aged 45-69 years) between May and June 2019. Interviews were in English, Wolof, and Mandinka. Questions focused on three aspects of self-management: diet, exercise, and medication compliance. Discussions were recorded, translated, transcribed and analysed inductively and deductively using a combined approach to framework analysis.
Results: Data saturation was achieved after interviewing 13 participants. Fifteen themes were identified that linked onto 10 of the TDF domains. Frequently reported facilitators included support from the Doctor and family, assuming responsibility for self-management, self-efficacy, acknowledgment of the health benefits of self-management and the fear of developing complications. The main barriers were a lack of knowledge, limited resources especially finances and reduced physical ability.
Conclusions and implications: Participants perceived facilitators to a greater extent than barriers. The use of the TDF and COM-B model provides a comprehensive understanding of the influences of self-management behaviours. The model enables the systematic selection of theory-based strategies for the development of future diabetes self-management interventions in The Gambia.

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Symposium ID and title if part of symposium: 54 Longitudinal data on the course of fear of cancer recurrence: trajectories, predictors and mechanisms
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Last updated: 1st December, 2019
By: gmh4@st-andrews.ac.uk, Mr Gerald Humphris

A comparison between weekly ‘snap-shot’ and daily diary methods of measuring fear of cancer recurrence in patients with breast cancer

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Background/Purpose: Fear of cancer recurrence (FCR) is one of the major concerns of patients diagnosed with cancer that has marked consequences on health care utilisation. Assessment of this concern is paramount to determine a patient’s level of FCR during the health care process. Questions are raised whether to use regular intermittent (i.e. weekly snapshots) or frequent daily diary ratings of FCR. The aim of this study was to estimate the association of weekly versus daily ratings of FCR.
Method: Patients with breast cancer attending a regional cancer centre (n=92 sampled consecutively) for radiotherapy treatment completed a weekly seven item FCR measure (FCR7) and a reduced set of items in a daily diary consisting of three questions (FCR3). Latent growth curves were constructed using MPlus (version 7.4) so that the association between the trajectories of the 4-weekly FCR7 and the 15 daily diary FCR3 assessments could be calculated.
Results: A strong association between the two trajectories of the weekly and daily assessments was found (r=0.90, p<.001) as well baseline intercepts (r=0.92, p<.001).
Conclusions and implications: The investigator can have some reassurance that multiple assessment of FCR on a weekly or daily basis share a high degree of association. The basis of selecting the frequency of assessment will rely on the theoretical question of the phenomena under investigation. Researchers who wish to investigate the influence of events in finer detail over time might find in-depth daily diary methods particularly revealing for investigation of the dynamics of FCR.

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By: larissa.bolliger@ugent.be, Ms Larissa Bolliger

Straw project: Disentangling the sources and context of day-to-day stress at work

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Background/Purpose: Health-related consequences of chronic workplace stress remain a major interest of occupational health research. The STRAW Project focuses on the sources and context of day-to-day stress among office-based workers in academic settings. One of the aims of the project was to develop an Ecological Momentary Assessment (EMA) protocol to capture work environment risk factors and self-perceived stress outcomes.
Methods: A mixed-methods approach, a systematic review and focus groups with office-based workers, was used to develop the EMA protocol. The search strategy for the systematic review was applied in seven databases. The focus groups were conducted in Slovenia and Belgium with office-based workers of six different groups.
Results: The systematic review resulted in a qualitative synthesis of 41 studies. Oral statements of 39 office-based workers participating in the focus groups were included. These results, categorized according to the seven job quality indices of the 6th European Working Conditions Survey (EWCS), show that work intensity and social environment were most commonly studied/mentioned, followed by skills and discretion, working time quality, and prospects. While physical environment was mentioned in the focus groups only, earnings was not covered in our results.
Conclusions and Implications: These results suggest inclusion of all job quality indices of the EWCS, especially work intensity and social environment. This was considered during the development of the EMA protocol, which was implemented within a self-developed smartphone application and which is being used as a key method for ongoing data collection with 50 office-based workers in academic settings.

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By: rebecca.luong@sydney.edu.au, Miss Rebecca Luong

Nutritional inadequacy among individuals aged 65-75 years and the associations with macronutrient composition: The nutrition for healthy living (nhl) study

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Background/Purpose: The largest proportion of older people are between 65-75 years of age. Diet is an important modifiable behaviour that influences health. The aim was to assess the nutritional adequacy of the habitual diet and investigate the associations with macronutrient ratio intakes of individuals aged 65-75 years participating in the Nutrition for Healthy Living (NHL) Study.
Methods: Of the 113 participants, participant characteristics were collected and 107 completed the baseline 7-day weighed food record. Baseline nutritional intakes were compared to the Australian Dietary Guidelines, World Health Organisation Free Sugar Guidelines and across macronutrient intake ratios through graphs and median tests.
Results: Participants (73 female and 34 male) had a median age of 69 years, median BMI of 26.9kg/m^2 and median energy intake of 7676kJ (P5= 4326kJ, P95= 11332kJ). Substantial proportions did not meet recommendations for carbohydrate E% (86%), total fat E% (52%), saturated fat E% (90%), sodium (45%), dietary fibre (59%), linoleic acid (55%), calcium (76%), potassium (58%), vegetables (82%), fruits (80%), dairy (91%), meat/alternatives (45%) and discretionary (100%). Majority had protein E% (80%) intakes within recommendations. Although those with high protein: non-protein ratios had higher intakes of red meat, they also had higher intakes of meat/alternatives, seafood and lower intakes of energy, discretionary, saturated fat E% and free sugar E% (all p-values<0.05).
Conclusions and implications: Substantial proportions in this group of individuals aged 65-75 years had inadequate nutritional intakes. Macronutrient composition was positively and inversely associated with energy, food groups and nutrient intakes.

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By: ksls20@bath.ac.uk, Miss Katherine Sawyer

Co-design of an integrated smoking cessation treatment and it’s delivery within psychological therapies for patients with depression and anxiety: Multi-perspective qualitative study

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Background/Purpose: People with depression and/or anxiety are twice as likely to smoke compared to people without depression/anxiety. In England, people with depression/anxiety receive NHS therapy via ‘Improving Access to Psychological Therapies’ (IAPT) services. IAPT Services could integrate smoking cessation treatment alongside usual care. To investigate the views of relevant stakeholders to inform the development of an intervention to help people with depression/anxiety to quit smoking that could be integrated into IAPT services.
Methods: We conducted semi-structured interviews with IAPT service users, psychological wellbeing practitioners (PWPs) and smoking cessation advisors. Data were analysed using thematic analysis.
Results: Five themes were identified: Smoking as a coping mechanism, smoking as a vicious cycle, IAPT as a natural infrastructure, risk management, and future implementation recommendations. Data indicated that service users use smoking to cope with mental health symptoms, but also to self-harm. Service users and PWPs understood the mental health benefits of quitting smoking and this prompted interest in quitting/supporting smoking cessation despite experiencing psychological withdrawal symptoms. IAPT is a patient-centred environment that regularly addresses unhealthy behaviours in aim of improving mental and physical health. Smoking cessation treatment was accepted by PWPs and PWPs have the skill set to offer such treatment. PWPs recommended more time and funding for optimal delivery of the smoking cessation intervention.
Conclusions and implications: IAPT is a natural environment for smoking cessation intervention, PWPs and service users buy into the idea that smoking can harm mental health, and quitting can benefit their overall wellbeing.

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By: gmh4@st-andrews.ac.uk, Mr Gerald Humphris

The role of anxiety in predicting change of fear of cancer recurrence in people with head and neck cancer: A latent change model

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Background/Purpose: The fear of cancer recurrence (FCR) literature is expanding. However, the dynamic changes in this major patient concern recovering from initial diagnosis and treatment are poorly documented. This study utilises an extensive data set of people who have been recruited into the Head and Neck 5000 (HN5000) study. The aim of this study was to determine the predictive utility of changes in anxiety and depression in the early stages following diagnosis and treatment for FCR change during the initial phase of survivorship.
Methods: The HN5000 study recruited 5111 people with a new diagnosis of head and neck cancer (HNC) in the UK over the period: 1st April 2011 and 31st December 2014. A questionnaire consisting of the Hospital Anxiety and Depression Scale was sent to patients at diagnosis and at 4 and 12 months. The 4 item Fear of Cancer Recurrence Scale (FCR4) was given at the latter two stages. A latent change model predicted FCR change (4-12 months) by the change in anxiety and depression levels (diagnosis4 months). Control variables were included e.g. initial levels of anxiety and depression, patient age and gender. Analyses were conducted using full-information maximum likelihood estimation (MPlus).
Results: Change of anxiety (Beta=0.17, p<.02) but not depression (Beta=0.06, p=.30) predicted change in 4 to 12 months FCR.

Conclusions and implications: Early changes in anxiety have a reliable effect on FCR change during the early survivorship phase. The clinical team need to be sensitive to managing anxiety soon after diagnosis to prevent FCR increase.

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By: pbrown3@ucmerced.edu, Professor Paul Brown

Preferences regarding organ donations from deceased donors: Evidence from a discrete choice study

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Background/Purpose: The demand for organs currently exceeds supply. This study reports on a discrete choice experiment (DCE) aimed at understanding individuals' motivations for deciding whether to donate an organ from a deceased relative.
Methods: Two policies were examined: Providing financial incentives and information about the recipient. Participants (N=130 ages 18 to 89 [mean= 46.4) were presented with 18 choice sets and asked whether they would agree to donate a deceased relative's organs. The choices varied the organ (cornea, kidney, skin or heart), attributes of the recipient (age, organ's lifespan, reason for failure, impact if not transplanted), the deceased donor wishes, and cost/reward ($0 to $30k).
Results: The results suggest a preference for donating organs, with the age, reason for recipient's need, and impact of not receiving the organ important factors. The financial incentive was not important. Marginal analysis suggests the willingness to donate the organ would increase by 22% if the recipient was a child who needs a heart transplant due to an accident, would likely live for 20 more years after the transplant, and the donor was a close relative. But organ donations would likely decrease by 29% if the recipient was older, needed a new cornea, had abused drugs and alcohol, would not die if not transplanted, and the donor was a stranger who wished not to be organ donor.
Conclusion and implication: This suggests that providing information about the characteristics of the recipient would impact on donation rates, but the direction of the impact might be negative.

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By: breid57@gmail.com, Robert Reid

The efficacy of e-cigarettes for smoking cessation

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Background/Purpose: Many smokers are interested in using e-cigarettes to help them quit smoking conventional cigarettes. E-cigarette popularity and technology has evolved over the past 10 years. Uncertainty about the role of e-cigarettes in smoking cessation persists. A qualitative synthesis of systematic reviews of the efficacy of e-cigarettes for smoking cessation was undertaken.
Methods: Systematic reviews of RCTs considering the efficacy of e-cigarettes for smoking cessation published since 2010 were considered.
Results: There is heterogeneity in the technologies of e-cigarettes studied in RCTs. Nicotine containing e-cigarettes appear to produce quit rates that are the same or better than NRT mono-therapy in helping smokers quit conventional cigarettes. Most intervention studies have combined counseling for with e-cigarette and comparator interventions. There is some evidence that people using e-cigarettes to quit smoking conventional cigarettes continue to use e-cigarettes beyond the treatment period.
Conclusions and implications: Some types of e-cigarettes might help some people to quit smoking conventional cigarettes. E-cigarettes may be appropriate as time-limited intervention for people who have failed to quit using conventional smoking cessation therapies. First, they need to quit smoking, then the need to quit vaping.

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Last updated: 2nd December, 2019
By: skmama@mdanderson.org, Dr. Scherezade Mama

Translating an evidence-based intervention into rural communities using a community-engaged approach

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Background/Purpose: Rural cancer survivors are more likely to report high psychosocial distress and physical inactivity than urban cancer survivors. Evidence-based interventions to reduce distress and increase physical activity (PA) in cancer survivors were developed in urban or clinical settings and have previously failed when implemented in rural community settings. Thus, there is a clear need to adapt interventions to meet rural cancer survivors' unique needs, that can be implemented in rural settings with limited resources.
Methods: This study used a staged community-engaged approach to adapt an evidence-based PA intervention to reduce psychosocial distress in rural cancer survivors. Stage 1 focused on setting-level adaptations. Community organizations (N=419) that serve rural cancer survivors in central Pennsylvania, including cancer support groups, churches, community centers, YMCAs, local health centers, and non-profits, were initially contacted to complete a web-based or mailed survey. Survey items covered key attributes that may influence successful implementation of a physical activity intervention, including inner and outer setting characteristics, characteristics of individuals within organizations, and setting-level processes that impact implementation.
Results: Ninety-three organizations completed the survey. Most (71.9%) reported that opinion leaders within their organization consider PA interventions to be beneficial and important, and 56.4% felt confident they could successfully implement a PA program. However, few (42.4%) felt they had the support or financial resources and were well-positioned to deliver a PA program and make it work effectively in their organization.
Conclusion and implication: Findings from this stage enforce the need for setting- and participant-level adaptations to aid translation of evidence-based interventions into sustained practice.

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Symposium ID and title if part of symposium: 15 State of the science in understanding and promoting organ donation
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By: eamonn.ferguson@nottingham.ac.uk,

A typology of decease organ donor under an "opt-out" policy

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Background/Purpose: We know little about the motivations of organ donors under op-out and what passive decisions under opt-out signify. To start to develop our understanding in this decision-making domain we present the first ever typology on organ donors under opt-out.
Methods: Mixture of signal detection theory and congruency mapping to identify sub-categories of donors.
Results: We identified seven categories of donors. Firstly, there were *"Cooperators"* who registered under opt-in and indicate their desire to donate under opt-out. There are two sub-categories of cooperators: "*Compassionate Cooperators*" those who actively register under-opt-out again and "*Impassionate Cooperators*" who passively register under opt-out. Secondly, there were "*Aggrieved non-donors"* who registered under opt-in *but* and actively de-register under opt-out. There are two sub-categories of aggrieved non-donors: "*Disenfranchised Non-Donors"* who feel opt-out reflects state interference in freedom of choice and "*Ego-Challenged Non-Donors"* who feel op-out detracts from their special status by making everyone a donor. Thirdly, there were *"*Default Sensitive Donors" who follow the default (majority response) under each policy. There were two sub-categories: "*Pure Default Donors"* who follow the majority and passively do not register under opt-in or de-register under opt-in and "*Committed Default Donors*" who register under opt-out but did not register under opt-in. Finally, there were *"Emotional Non-Donors"* who actively express their decision to de-register under the opt-out system, and never registered under opt-in.
Conclusion and implication: This typology offers a system to segment organ donors, identify unique motivations, aide the interpretation of passive decisions and develop interventions.

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By: vlerrisuriz@austin.utexas.edu, Dr. Vanessa Errisuriz

Perceived social status moderates intervention effects on physical activity among latina women

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Background/Purpose: It is unclear whether change in perceived social status (PSS) influences health intervention outcomes. We examined how change in PSS moderates short-term impact of a physical activity (PA) intervention on Latina women's PA.
Methods: Enlace was a 16-week PA intervention for low-income Latina women living near the US–Mexico border. Women (n=438) were randomized to a PA or control condition. Accelerometers captured past week time in various PA intensities. PSS was assessed by asking participants to indicate where, on a 10-rung ladder, they considered themselves to be in relation to others in their community. Pre/post changes in PSS were calculated and categorized (decrease, no change, increase). ANCOVAs assessed intervention effects on PA and tested an interaction between PSS and intervention on PA. Analyses controlled for age, BMI, education, cohort, health status, and baseline PA.
Results: PA intervention participants spent less time sedentary and more time in vigorous PA post-intervention than controls. Change in PSS moderated the relationship between intervention and PA. Among persons whose PSS decreased, PA participants had less sedentary time and more time in vigorous PA than controls. No intervention effects were found among participants whose PSS remained the same or increased. Control participants whose PSS increased spent less time sedentary and more time in vigorous activity than those whose PSS decreased.
Conclusions and Implications: Changes in SSS may influence health intervention outcomes and should be considered when evaluating these interventions. Future research should identify factors that can help increase SSS to enhance PA behaviors.

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By: jcrawshaw@ohri.ca, Dr Jacob Crawshaw

Exploring the experiences and perspectives of substitute decision-makers involved in decisions about deceased organ donation

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Background/Purpose: In Canada, deceased organ donation provides over 80% of transplanted organs. At the time of death, families, friends, or others assume responsibility as substitute decision-makers (SDMs) to consent to organ donation. Despite their central role in this process, little is known about what barriers, enablers, and beliefs influence decision-making among SDMs. This study aims to explore the experiences and perspectives of SDMs involved in making decisions around the withdrawal of life-sustaining therapies, end-of-life care, and deceased organ donation.
Methods: Ten hospitals across five provinces in Canada will be involved in a prospective multicenter qualitative cohort study. SDMs of 60 patients admitted to intensive care units will be recruited. We will conduct semi-structured telephone interviews in English or French with SDMs between 6 to 8 weeks after the patient's death. We will use two complementary theoretical frameworks – the Common-Sense Self-Regulation Model and the Theoretical Domains Framework – to inform our interview guide. Interview data will be analyzed using deductive directed content analysis and inductive thematic analysis.
Conclusion: The findings from this study will help identify key factors affecting substitute decision-making in deceased organ donation, reasons for non-consent, and barriers to achieve congruency between SDM and patient wishes. Ultimately, these data will contribute to the development and evaluation of tools and training for healthcare providers to support SDMs in making decisions about organ donation.

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By: lhillbaird@gmail.com, Professor Linda Hill

Reducing high risk driving behaviors with an academic-law enforcement partnership

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Background/Purpose: Human behaviors are responsible for 95% of motor vehicle crashes. A multi-disciplinary approach is required to address the complex behaviors also involving vehicles, the roads, and the legal system. This study assesses the effectiveness of a partnership of driving safety researchers with law enforcement to address high-risk driving behavior.
Methods: From 2006 to 2019, six curricula were developed by the Training Research and Education for Driving Safety Center at UC San Diego for distribution through the train-the-trainer system of California Highway Patrol. The topics included: older driver safety; distracted driving in the public, commercial drivers, and first responders; sober driving in teens; impaired driving in adults. Attendees included both regular officers and community education officers. The curriculum used the social ecological model of behavior change.
Results: Every highway patrol officer in California received at least one of the training sessions (approximately 7500), covering every county in the state. Officers reported improved knowledge in post testing, and subsequent positive behavior changes, such the use of evidence-based tools in the assessments of older drivers, and appropriate reporting. Program-educated drivers reported behavior changes, such as a reduction in the use of phones and texting. The talks were well received, well attended, and had very positive evaluations.
Conclusions and implications: This academic-law enforcement partnership has been successful in reaching communities across the state. The target audience reported officers as a credible source of traffic safety information. The train-the-trainer model has allowed wide distribution of these public safety interventions addressing driving behavior.

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By: kinjal.doshi@sgh.com.sg, Dr Kinjal Doshi

Randomized controlled trial evaluating the impact of two structured behavioural change programs for sleep-on-sleep quality, mood, anxiety and cognitive function

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Background/Purpose: This randomized controlled study tested mindfulness-training and sleep hygiene education programs as interventions to improve sleep quality as well as mood, anxiety, and cognitive function.
Methods: 48 adult participants with primary insomnia were randomized to participate in either a mindfulness-training or sleep hygiene education program. Each program consisted of eight 2-hour weekly sessions. They completed the Pittsburgh Sleep Quality Inventory, Beck's Depression Inventory and State-Trait Anxiety Inventory before and after participating in the program; their cognitive function was also assessed at both time-points using the Cambridge Neuropsychological Test Automated Battery. Repeated measures analysis of variance was performed to evaluate the impact of program participation on sleep quality, depression, and anxiety. Paired samples T-tests were subsequently performed to investigate the impact of each program on cognitive function.
Results: Participation in both the mindfulness-training and sleep hygiene education programs improved sleep quality (F(1,46) = 37.66, $p < 0.001$), depression (F(1,44) = 21.09, $p < 0.001$), and trait anxiety (F(1,44) = 5.55, $p = 0.023$). Of the cognitive tests, mindfulness participants demonstrated improvements in delayed memory recall evaluated by the Matching Sample Task (T(23) = -2,94, p=0.007). Sleep hygiene participants had improved their reaction speed and accuracy as measured by the Rapid Visual Processing Task, (T(23) = -2.92, $p = 0.008$).
Conclusions and implications: Regardless of the type of intervention received, a structured eight-week group program addressing sleep-related behaviours promotes improved sleep quality, mood and anxiety. Improvement in cognitive function, on the other hand, was determined by the type of intervention.

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Symposium ID and title if part of symposium: 55 Therapeutic Processes in Long Term Physical Health Conditions: Mindfulness, Self-Compassion, or Psychological Flexibility?
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Last updated: 2nd December, 2019
By: claudia.chisari@kcl.ac.uk, Claudia Chisari

The role of psychological flexibility, perceived injustice, and body-image in vulvodynia: A longitudinal study

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Background/Purpose: People living with Vulvodynia experience pain, pain and sex-related impact, and depression. While psychosocial factors are associated with outcomes in Vulvodynia, longitudinal data are limited, especially in mixed/spontaneous Vulvodynia. Importantly, no research has explored potentially important broad psychosocial models such as Psychological Flexibility (PF) and content-specific factors such as body-image and perceived injustice. The aim of the present study was to explore whether baseline PF, perceived injustice, and body-exposure anxiety predict pain severity, pain-related interference, sexual functioning and satisfaction, and depression at 3 months-follow-up.
Methods: A longitudinal study of 349 women with Vulvodynia was conducted. Participants completed online self-report measures of pain-related and sexual outcomes, depression, body-exposure anxiety during intercourse, perceived injustice, and facets of PF (present-moment-awareness, pain-acceptance, committed action) at baseline and after 3-months, overlapping with the start of the COVID-19 pandemic.
Results: 70% of women responded at follow-up (n=244). There were significant decreases in pain severity, pain-interference, present-moment-awareness, and committed action; there was a significant increase in depression at 3-months. All the baseline psychosocial factors significantly correlated with at least one key outcome at follow-up. When adjusting for baseline outcome and demographics, committed action significantly predicted depression at follow-up, and pain-acceptance significantly predicted pain-disability.

Conclusions and implications: Pain-acceptance and committed action are uniquely associated with pain-related disability and depression over time in Vulvodynia. As such, PF may apply to a degree in Vulvodynia. The reliability and generalisability of these results need to be established. Future studies should investigate whether targeting these factors may enhance outcomes in this population.

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Last updated: 2nd December, 2019
By: avillato@austin.utexas.edu, Research Scientist Alice Vilatoro

Mental illness stigma and help-seeking behaviors and referrals among parents of adolescents: A longitudinal assessment

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Background/Purpose: Parents act as gatekeepers to mental health (MH) services for adolescents, and stigma can be a significant barrier to care. We examined how stigma affects parental MH help-seeking behaviors and referrals.
Methods: Parents of adolescents from a two-year anti-stigma intervention study were analyzed (n=386). GEE models examined longitudinal effects of stigma—social distance, MH literacy, MH awareness and treatment action, and problem recognition—on informal and formal parental help-seeking. Similar models were examined for adolescent vignette characters described as having bipolar (Julia) and social anxiety disorder (David). Analyses adjusted for adolescent MH symptoms, the intervention, time, and sociodemographic characteristics.
Results: For their own children, parents with high MH awareness and treatment action had greater odds of seeking informal and formal help, net of controls. Recognizing a MH problem in their child was the strongest predictor for both outcomes. For Julia, parents who recognized her condition as a MH problem versus not were more likely to recommend formal help. For David, parents' desire for their child to be socially distant towards him, high MH literacy, and labeling David's issue as a MH problem were associated with greater odds of formal help-seeking referrals. Stigma was not associated with informal help-seeking referrals.
Conclusions and implications: Stigma differentially influences how parents of adolescents engage in help-seeking for their children and recommend help-seeking for adolescents outside their family. Anti-stigma efforts that target parents may improve help-seeking gaps for adolescents by creating a social context that de-stigmatizes MH problems and takes constructive action towards treatment.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 2nd December, 2019
By: cel129@sph.rutgers.edu, Mr. Caleb LoSchiavo

Misinformation, gendered perceptions, and low healthcare provider communication around hpv and the hpv vaccine among young sexual minority men in new york city: The p18 cohort study

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Background/Purpose: Human papillomavirus (HPV) is the most common sexually transmitted infection among adults in the United States and can cause several types of cancer. This is of particular concern for sexual minority men, as their increased risk of HIV acquisition increases risk for HPV and HPV-associated cancers, particularly when coupled with low rates of HPV vaccination.
Methods: As part of a larger study of the syndemic of HIV, substance use, and mental health among young sexual minority men in New York City, we sought to explore what sexual minority men know about HPV and the HPV vaccine, along with their experiences communicating about the virus and vaccine.
Results: We interviewed 38 young sexual minority men with diverse sociodemographic characteristics and identified three main themes: low knowledge about HPV infection and vaccination, highly gendered misconceptions about HPV only affecting women, and lack of communication from healthcare providers about HPV.
Conclusions and Implications: The prevalence of incorrect HPV knowledge, coupled with inadequate education and vaccination in healthcare settings, indicates a missed opportunity for HPV prevention in a high-risk and high-need population.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 2nd December, 2019
By: mlaw@ego.thechicagoschool.edu, Mr. Matthew Law

The effects of behavioral skills training for the visual analysis of behavior data on treatment decisions by staff and clinicians in an acute psychiatric hospital

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Background/Purpose: In acute psychiatric settings, up to 95% of patients may be prescribed pro re nata (PRN, or "as needed") psychotropic medications (Thapa et al., 2003). The high level of PRN psychotropic medication use, in combination with scheduled medications, have led researchers to question if PRN orders may contribute to patients receiving unnecessary doses of psychotropic medications to prevent or abate the aggressive behavior of patients (Tranulis et al., 2008; Stewart, Robson, Chaplin, Quirk, & Bowers, 2012). The strategies employed by behavior analysts could be instrumental in the evaluation of psychotropic medication interventions; however, to date, little work has been done in this area.
Methods: The current study examined the effects of a Behavioral Skills Training (BST) package to train direct care staff, nurses, and clinicians to visually analyze graphed patient data on their determination of the effectiveness of PRN psychotropic medications and changes to patient treatment plans.
Results: BST was effective in increasing the accuracy of visual analyses performed on mock patient behavior graphs when measures of problem behaviors and the cumulative dose of PRN psychotropic medications administered per day were graphed together (PND = 100%; Tau-$U_{A\ vs\ B\ -\ trend\ A}$ = 85.9% (p<.05)). BST was found to be a valuable tool to train visual analysis skills. Participants proposed treatment plan changes following visual analysis included modification of scheduled medications (62.4%), changes in PRN psychotropic medications (51.9%), restricting the patient to the unit (35.3%), requiring the patient to eat meals on the unit (32.3%), and consultation with a Behavior Analyst (21.8%).
Conclusions and implications:

Submission ID: 507
Symposium ID and title if part of symposium: 58 Behavioral Physical Activity Interventions for Underserved Populations: Innovative Approaches to Reduce Health Disparities
Decision: Accepted, Symposium
Last updated: 2nd December, 2019
By: dpekmezi@uab.edu, Dr. Dori Pekmezi

Integrating ivr-supported phone counseling and community health worker support in underserved black belt counties

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Background/Purpose: Despite cancer protective effects, physical activity rates remain low in the U.S., particularly in the Southeast where many counties are categorized as underserved and rural with income and education levels below national average. Moreover, cancer incidence and mortality rates in the U.S. are higher in this region. African Americans represent a large segment of the population in Southeastern states and report significantly higher inactivity and breast and colon cancer death rates (cancers strongly linked to PA) than Non-Hispanic Whites. Factors related to culture, literacy, finances, transportation, and distance from PA facilities impede access to PA information/resources in this region and contribute to existing cancer disparities. Telephone-based intervention strategies can overcome such barriers by not requiring clinic visits, high literacy, or access to costly technology and can be automated via Interactive Voice Response (IVR) systems for enhanced cost-effectiveness and reach. However, there has been a paucity of research on IVR-supported PA interventions, especially in underserved (racial minority, rural) populations.
Methods: Thus, the current randomized controlled trial integrates IVR-supported counseling with community health worker support to promote physical activity among mostly minority residents in 6 Black Belt Alabama counties (N=240). The resulting Deep south IVR-supported Active Living (DIAL) intervention responds to formative research data indicating limited staff/resources, cell phone service, and Internet connectivity, as well as participant calls for interactivity and accountability.
Conclusion and implications: The purpose of this presentation will be to describe the technology-supported intervention strategies and best practices for implementing behavioral lifestyle interventions for underserved populations (i.e., innovation, flexibility, community engagement).

Submission ID: 511
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 2nd December, 2019
By: nelson.cuhk@gmail.com, Dr. Nelson C. Y. Yeung

"Learning together and from each other": The benefits of a theory- and community-based intergenerational program on older and younger individuals' well-being in hong kong

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Background: Programs facilitating intergenerational relations could are beneficial to older and younger individuals' well-being and social cohesiveness. However, such intergenerational programs (IP) are lacking in Hong Kong. Based on the Intergroup Contact Theory, this project examined the efficacy of a theory-driven IP in fostering more positive attitudes towards the other generations and better well-being among older and younger individuals in Hong Kong.
Methods: The project recruited 200 older individuals aged >60 and 228 youngsters aged 12-35 from the community. Three intergenerational interventions (crafting, cooking, and darting) were designed and implemented by a panel of interdisciplinary health professionals. The older and younger participants worked in groups and learned from each other, meeting at least 3 times within 3-7 months. Equal group status, shared goals, and cooperation were emphasized among the participants. Participants' attitudes towards the other generations, perspective-taking capacity, and health outcomes were measured pre- and post-intervention.
Results: Paired-samples t-tests results indicated that both the older and younger participants reported significantly more positive attitudes towards the other generation, higher levels of happiness, life satisfaction, and perspective-taking capacity after the intervention (Cohen's *d*s (youngsters): 0.16-0.44, Cohen's *d*s (older participants): 0.16-0.65). Significant improvements in health-monitoring behaviors, stress management strategies, and self-rated health were also found among the older participants (Cohen's *d*s: 0.14-0.25).
Conclusions and implications: Theory-based IPs could benefit both the older and younger individuals' well-being and attitudes towards the other generations. In an Asian context, IPs providing cooperation and learning opportunities through shared activities could promote people's well-being.

Submission ID: 513
Symposium ID and title if part of symposium:
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Last updated: 2nd December, 2019
By: alfredsy@connect.hku.hk, Sing Yeung Alfred Lee

Using mhealth technology to maintain patients' post-surgery rehabilitation adherence: A test of self-determination theory

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Background/purpose: The current study aims to examine the effectiveness of a smartphone application drive by self-determination theory, namely "ACL-Well", on the maintenance of post-surgery rehabilitation adherence among patients of anterior cruciate ligament (ACL) rupture.
Methods: Our study was a 4-month randomised control trial with three waves of assessments (i.e., baseline, 2-month, and 4-month). We recruited 95 outpatients (M_{age}=27.81 ± 8.67, range=18 to 53; Male=60.82%) who underwent ACL reconstruction surgery within 2 weeks. Participants were randomly assigned into intervention group (who received "ACL-Well") and control group (who did not receive "ACL-Well"). They completed measures of motivations and rehabilitation adherence. Growth mixture modeling with intent-to-treat principle by Mplus was used for data analysis.
Results: The growth models showed that two classes-solution (i.e., high and low initial status) was the most appropriate. For the

intervention effects, there was significant decline for the treatment motivation in the two classes of control group (M_{slope}=-.39 to -.12, p<.01) but not in the intervention group (M_{slope}=-.10 to -.08, p>.05). The two latent classes in control group had significant drops in rehabilitation adherence (M_{slope}= -.25 to -.15, p<.01). In intervention group, the class with higher initial status also decreased in rehabilitation adherence (M_{slope}=-.50, p<.01) but no decline was found in the class with lower initial status of rehabilitation adherence (M_{slope}=.04, p>.05).
Conclusions and implications: The current study supported that "ACL-Well" was effective in maintaining patients' self-determined motivation and rehabilitation adherence for patients who had lower initial status of rehabilitation adherence.

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Last updated: 2nd December, 2019
By: alfredsy@connect.hku.hk, Sing Yeung Alfred Lee

Promoting sports safety among secondary school: An intervention based on trans-contextual model

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Background/purpose: We developed an intervention based on trans-contextual model (TCM) to promote autonomy supportive style in teaching sport safety in secondary school. We believed that would in turn facilitate students' intention in adopting sport injury prevention behaviour in an out-of-school or unsupervised context following the TCM sequences.
Methods: Three secondary schools, including 6 of their PE teachers and 1,199 of their students (M_{age}=13.33 ± 1.06, range=12 to 16; Male=48.57%) participated in a 3-month randomised control trial, which consisted of two waves of assessments (i.e., baseline and 3-month). The schools were randomly assigned into intervention group (whose PE teachers received a workshop and a smartphone phone application) and control group (whose PE teachers did not receive any material). Student participants completed a survey that measured the TCM variables during the time of assessments. Under the intent-to-treat principle, we conducted path analysis of the standardised residual changes scores of the TCM variables using Mplus.
Results: The proposed TCM model displayed adequate fit to the data, χ2=145.87 (df=15), CFI=.95, TLI=.91, and RMSEA=.09 [90% CI=.07 to .09], and SRMR=.08. The intervention had positive and significant effects on perceived autonomy support (β=.09, p<.01), that in turn formed positive and significant direct (β=.09 to .64, p<.01) and indirect (β=.01 to .04, p<.01) effects with other motivational and social cognitive variables, and intention of sport injury prevention.
Conclusions and implications: The TCM might be useful for promoting secondary school students' intention in adopting sport injury prevention behaviours.

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Last updated: 2nd December, 2019
By: shoemake.3@osu.edu, Graduate Student Jocelyn Shoemake

Race, negative affect, and sleep quality among individuals with obesity

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Background/Purpose: African Americans (AA) generally experience poorer sleep quality than European Americans (EA). Long-term sleep disturbance is associated with obesity, which disproportionately affects AAs. Studies suggest that emotion regulation (ER) and negative affect (NA) are associated with sleep disturbance. This study evaluated ER and NA in the relationship of race to sleep quality among obese individuals. It was hypothesized that ER and NA would help explain race differences in sleep quality.
Methods: A secondary analysis was conducted among 61 individuals with obesity (mean BMI= 39.4; mean age= 43.4 years; 48% AA; 84% women) who participated in a study of emotional response to exercise. AA and EA participants did not differ in BMI or demographics. At a baseline assessment, participants completed questionnaires, including: Pittsburgh Sleep Quality Index (PSQI), Difficulty in Emotion Regulation Scale (DERS), and Positive Affect Negative Affect Schedule (PANAS). Two hierarchical regression analyses were performed predicting sleep quality from race (AA versus EA), controlling DERS and PANAS_Negative.
Results: AA race predicted poorer sleep quality (β = -.387, *p*=.002). DERS and PANAS_Negative also predicted poorer sleep quality (DERS: β= .268, *p*= .037; PANAS_Negative: β= .263; *p*=.041). However, the association between sleep quality and race remained significant when controlling DERS (β = - .408, *p* < .001) and PANAS_Negative (β = -.365, *p*=.003).
Conclusions and implications: Although AA participants with obesity reported poorer sleep quality, ER and NA did not account for the effect. Further examination of sleep disturbance predictors among AAs with obesity may be an important target for future studies.

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Last updated: 2nd December, 2019
By: cnontera@richmond.edu, Dr. Camilla Nonterah

Public perceptions and knowledge of deceased and living donor transplantation

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Background/Purpose: Approximately 113, 359 people in the US are currently in need of a lifesaving organ. Although the majority of Americans (95%) support organ donation, only 54% of them are registered as deceased organ donors (UNOS, 2019; U.S. Government Information on Organ Donation and Transplantation, 2019). Given the shortage of organs, transplant candidates experience long wait times, with some candidates dying while waiting for an organ. The aim of this study was to gain insight into public knowledge and attitudes towards transplants, to develop a better understanding of the discrepancy between favorable attitudes towards organ donation and organ donor registration.
Methods: The study consisted of focus groups (N=48), with a sample (n=29) of undergraduate students from a liberal arts college and (n=29) community members from a metropolitan area in the Mid-Atlantic region of the U.S. The focus groups were audio-recorded, transcribed verbatim

and loaded into the mixed-method software, MAXQDA for analysis. Thematic analyses were conducted using a phenomenological framework.
Results: Preliminary analyses revealed that the majority of education on organ transplantation came from social media and family members. Some participants perceived the public as having limited knowledge of organ donation. Although all participants reported favorable attitudes towards organ donation, familial factors influenced the decision to donate, with many reporting a strong desire to donate to family members. Recipient race and gender do not typically influence one's decision to donate, but other recipient characteristics such as younger age and likelihood of participating in risky behaviors were reported as influential factors in decision making about organ donation.

Conclusions and implications:
Submission ID: 519
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 2nd December, 2019
By: dkwasnicka@swps.edu.pl, Dr Dominika Kwasnicka

Using innovative methods to explore psychosocial determinants of behavioural patterns: Within-person N-of-1 study

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Background/Purpose: This observational study explored the determinants of stopping, switching, and seeking treatment among heavy drinkers following Minimum Unit Pricing (MUP) policy implementation. Research questions addressed: (1) What are the individual and social determinants of within-person change in: alcohol use, other drug use, contacting support services, and (2) What contextual and environmental factors are related to behavioural outcomes.
Methods: N-of-1 within person design, predictors and outcomes were continuously assessed daily for three months, exploring dynamic changes over time. Participants were recruited in three study waves before, during and after policy implementation through Scottish Drugs Forum using peer research team who implemented the study. Daily surveys explored behavioural predictors and outcomes, e.g., drinking, stress, mood, contact with friends/family/professionals.
Results: 25 participants took part in the study; on average each participant was in the Ecological Momentary Assessment for 64 days (SD=42); and provided 27 responses (SD=26). RQ1: Respondents had different patterns of predictors for alcohol use, most commonly determined by alcohol availability, mood and motivation; stress related to other drug use; the participants did not report switching from drinking alcohol onto other substances. RQ2: Some respondents suggested MUP was influencing alcohol availability, other respondents reported no change.
Conclusions and implications: Rich information on important factors other than the policy change and how these factors vary from person-to-person were captured. Information on variation according to personal situations complemented evaluation of average MUP effect at a population level. N-of-1 approach could help focus local intervention efforts or referral pathways (e.g., community rehabilitation).

Submission ID: 521
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 2nd December, 2019
By: olivia.anstis@atlantishealthcare.com, Ms Olivia Anstis

Personalised e-health intervention improves medication adherence in Type 2 diabetes

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Background/purpose: The myMeds programme was a 26-week eHealth intervention aimed at improving medication adherence for people living with type 2 diabetes. The programme targeted medicine and illness beliefs to improve adherence to oral anti-diabetic agents. myMeds was funded by the New Zealand Government's medicine and medical device funding arm, PHARMAC and deployed in a real-world setting.
Methods: Participants were recruited with consent via their general practitioner by raising a query in the patient management system (PMS). Participants were randomly assigned one of three arms of low, medium, or high intensity, receiving personalised, belief-driven text messages with or without nurse telehealth calls. Outcomes were measured via self-reported medication adherence, and prescription data from a matched control. Non-parametric t-tests were used to test differences in medication fulfillment rates, as well as differences between groups.
Results: 528 participants completed the programme. There was a significant difference between all myMeds participants and matched control for medication fulfillment rates (p=0.020). There was a trend towards the medium- (p=0.146 (M=10.1, SD=7.5)) and high-intensity (p=0.066 (M=10.6, SD=7.7)) interventions being more effective than low-intensity. In a follow up survey (n = 51), 76% stated the programme improved their understanding of diabetes; helped them remember their medication; or motivated them to engage in better self-care.
Conclusions and implications: The myMeds programme was effective in improving adherence and was acceptable to participants. myMeds demonstrated that use of a PMS to recruit patients onto real-world eHealth interventions is effective, and that personalised interventions can improve health outcomes and wellbeing.

Submission ID: 522
Symposium ID and title if part of symposium:
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Last updated: 2nd December, 2019
By: k.j.burke@cqu.edu.au, Associate Professor Karena Burke

QUALITY OF LIFE IMPLICATIONS FOR FAMILIES LIVING WITH CHRONIC FOOD HYPERSENSITIVITY.

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Background/Purpose: Many health professionals are ill-prepared to cater to the psychological needs of families and family members living with a child with a hypersensitivity to food. Typical management of these conditions involves focus on avoidance of the offending food, with little acknowledgment of the psychological burden. The aim of this study was to investigate the impact of having a food hypersensitive child on whole family units and to examine the mechanisms which promote quality of life (QoL) and resilience within these families.
Methods: An explanatory sequential mixed methods design was used, with data from 217 participants, comprising 50 families (parents, children with chronic food-related conditions and siblings). Families completed a battery of measures, including disease-specific measures of QoL, and participated in family interviews.
Results: Mothers experienced significantly more stress surrounding the child's condition than their partner, and parents differed in stress type and

QoL impact depending on the age of the child with the food hypersensitivity (p<.05). A three-level hierarchical model of benefit-finding was proposed. Each higher benefit finding level incorporates an additional cognition or behavior that was found to generate an increase in psychological health for the individual utilizing the strategy. For example, higher-level strategy use was significantly negatively correlated with stress and QoL for Mothers.
Conclusions and implications: In order to promote resilience and positive QoL outcomes for families living with food allergies and other food hypersensitivities, individualized, holistic monitoring is needed for all family members to promote effective condition management and positive family functioning.

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Symposium ID and title if part of symposium: 15 State of the science in understanding and promoting organ donation
Decision: Accepted, Symposium
Last updated: 2nd December, 2019
By: jpresseau@ohri.ca, Dr Justin Presseau

Understanding and promoting organ donation registration: Three systematic reviews of theory-based barriers and enablers, correlates and trials of interventions

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Background/Purpose: Organ donation registration rates are low despite widespread positive views about donation. We aimed to synthesize behaviour theory-informed factors that enable/interfere with registering, and interventions that may be effective for promoting registration.
Methods: We conducted a qualitative meta-synthesis of barriers/enablers to registration, using the Theoretical Domains Framework as a synthesizing framework; a quantitative review with meta-analysis of behaviour theory-based correlates of intention and registration; and a systematic review of trials of interventions to promote registration.
Results: Our qualitative meta-synthesis identified 70 studies and highlighted views coded to social influences, beliefs about consequences, emotion, memory/attention, knowledge, environmental context and resources, beliefs about capabilities, and intention as most affecting registration. Our quantitative theory-based review identified 32 studies. Across studies, constructs within theories accounted for 51% of the variance in intention and 19% of the variance in behaviour, with the Theory of Planned Behaviour most frequently tested. Our systematic review identified 38 randomized trials of registration-promoting interventions. Interventions leveraging social influences were associated with greater registration, including peer leaders (RR=2.10[95%CI=1.00,4.43]), donor/recipient letters (RR=1.38[95%CI=1.26,1.50]), political leaders letters (RR=1.91[95%CI=1.80,2.03), reciprocity priming (RR=1.37[1.31-1.43]), and video-based content in drivers' license renewal (RR=2.05[95%CI,1.49,2.82]) and primary care offices (RR=1.42[95%CI=1.08,1.87]), and motivational techniques combined with action/coping planning (RR=2.11[95%CI=1.17,3.82]).
Conclusions and implications: Registration clarifies one's wishes, supporting next-of-kin's organ donation decisions. Most theoretical approaches focus on motivational factors, while post-intentional and prompt-focused solutions appear to be promising supplements to address the range of theory-based barriers/enablers to registration.

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Symposium ID and title if part of symposium:
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Last updated: 2nd December, 2019
By: wangzx@cuhk.edu.hk, Dr. Zixin Wang

Role of social media on chemsex among men who have sex with men in Hong Kong — an observational prospective cohort study

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Background/purpose: Chemsex (use of psychoactive substance before/during sexual intercourse) is common and associated with HIV infection among men who have sex with men (MSM). This study investigated predictors of chemsex within a 6-month follow-up period among a sample of Hong Kong MSM. We tested the hypothesis that perceptions related to chemsex would mediate the associations between influence of social media/gay apps and peers and chemsex during the follow-up period.
Method: Participants of the cohort study were Hong Kong Chinese speaking men who had anal intercourse with at least one man in the past year. A total of 600 participants recruited from multiple channels completed the baseline telephone interview; 407 (67.8%) of them completed the Month 6 follow-up survey. Logistic regression models and path analysis were fit.
Results: The prevalence of chemsex was 14.7% (88/600 in the past year) at baseline and 6.9% (28/407) during the follow-up period, respectively. Condomless anal intercourse and group sex were commonly reported during chemsex. After adjustment for significant background variables and chemsex measured at baseline, four baseline variables were significantly associated with chemsex during the follow-up period, including three constructs of the TPB (i.e., positive attitudes, perceived subjective norm and perceived behavioral control related to chemsex) and social media influence (exposure to information supporting chemsex on social media/gay apps). Bootstrapping analyses indicated that social media influence was indirectly associated with chemsex through TPB.
Conclusions and implications: Social media/gap apps may be a major source of influence on MSM's perceptions and behaviors related to chemsex. Social media may influence chemsex among MSM through modifying perceptions related to chemsex.

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Last updated: 2nd December, 2019
By: laura.e.bedford@gmail.com, Laura

The impact of a health empowerment programme on health outcomes of hong kong chinese parents of low socioeconomic status: A prospective cohort study

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Background/Purpose: Individuals of low socioeconomic status (SES) experience poorer health. This study aimed to determine whether a community-based health empowerment programme (HEP) could improve self-care and health outcomes among parents of low SES.

Methods: Included participants were enrolled in the HEP where they received free annual health assessments and health enablement programmes (intervention group) and those with a similar socioeconomic background (control group). Inclusion criteria were: 1) ≥ one working family member; 2) ≥ one child in grade 1-3; and 3) a monthly household of <75% Hong Kong's median monthly household income. Outcomes included self-care enablement (Patient Enablement Instrument (PEI)), health-related quality-of-life (Short-Form 12 Health Survey Version 2 (SF-12v2)), diet, physical activity and physical health parameters (waist-to-hip-ratio, total-cholesterol to high-density-lipoprotein-cholesterol (TC:HDLC) ratio, triglycerides and blood pressure).
Results: 239 intervention adults (mean age: 40.4, 64.9% female) and 186 control adults (mean age: 42.1, 74.7% female) were included (mean follow-up: 4 years). The change in mean PEI-total scores and SF-12v2 mental component scores were significantly greater for the intervention group than the control group (p<0.001). No statistically significant differences were found between groups for changes in SF-12v2 physical component scores. Improvements for both groups were found for reported fruit and vegetable intake and physical activity. For physical health, a significantly greater proportion of intervention group participants achieved satisfactory blood pressure and TC:HDLC ratio.
Conclusions and implications: Our findings support the implementation of community-based HEPs to build self-care capacity among individuals of low SES and ultimately improve health outcomes.

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By: wangzx@cuhk.edu.hk, Dr Zixin Wang

Depressive symptoms and physical activity level mediated the association between hiv sero-status and neurocognitive performance among chinese people aged 50 years or above

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Background/purpose: Neurocognitive impairment are prevalent among older people. It is more problematic among older people living with HIV (PLWH). This study was to compare neurocognitive performance between older PLWH and HIV-negative controls, and to explore whether the association between HIV sero-status and neurocognitive performance was mediated by some psycho-behavioral factors (smoking, alcohol drinking, physical activity, depressive symptoms and insomnia).
Methods: A cross-sectional study was conducted in Yongzhou, China. All PLWH aged ≥50 years listed in the Center for Disease Control (CDC) registry were invited. Frequency matching was used to sample HIV-negative controls according to the distribution of age, sex, and years of formal education of older PLWH. 315 older PLWH and 350 HIV-negative controls completed the face-to-face interview and comprehensive neuropsychological assessment, including seven domains (learning, memory, working memory, verbal fluency, processing speed, executive function and motor skills).
Results: As compared to HIV-negative controls, older PLWH performed worse in all neurocognitive domains ($p < 0.05$). Fewer older PLWH were current alcohol drinkers (34.6% versus 52.6%, $p < 0.001$). However, higher proportion in this group reported low physical activity level (19.4% versus 9.4%, $p < 0.001$) and probable depression (43.8% versus 19.4%, $p < 0.001$). Bootstrapping mediation analysis showed that physical activity level significantly mediated the association between HIV sero-status and verbal fluency; depressive symptoms significantly mediated the association between the associations between HIV sero-status and two neurocognitive domains (learning and memory).
Conclusions and implications: Older PLWH are more susceptible to neurocognitive impairment than their HIV-negative counterparts. Physical activity and mental health promotion in this group may be useful to prevent neurocognitive impairment.

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By: erum.whyne@utexas.edu, Erum Z Whyne

The protective role of sense of control on the longitudinal association between stress and depressive symptoms

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Background/purpose: Depression is one of the most prevalent mental health concerns for middle and older adults, and stress is an important factor related to increased depressive symptoms. The longitudinal association between stress and depressive symptoms might be attenuated by sense of control and was therefore examined as a potential moderator.
Methods: A national sample of middle age and older adults (N = 842) from the 3 waves (W1: 1995-1996, W2: 2004-2006, and W3: 2013-2014) of the National Survey of Midlife Development in the United States (MIDUS) was used. Hierarchical multiple regression analysis (controlling for age, sex, education, marital and employment status) examined the longitudinal association between stress (W1) and depressive symptoms (W3) and the moderating role of sense of control (W2).
Results: After controlling for demographics, stress was positively associated with depressive symptoms 17-19 years later ($\beta = .08$, $p < .05$), while sense of control was negatively associated with depressive symptoms 9-10 years later ($\beta = -.07$, $p < .001$). There was also a significant interaction effect ($\beta = -.15$, $p < .001$). *Post hoc* analyses showed the strength of the stress-depression relationship was stronger for individuals with a low sense of control ($\beta = .57$, $p < .001$), compared to those with an average level of control ($\beta = .20$, $p < .05$) and high control ($\beta = -.16$, $p < .05$). The final model accounted for 16% of the variance, $F(1,833) = 21.35$, $p < .001$.
Conclusions and implications: Stress is associated with increased depressive symptoms 17-19 years later and sense of control (9-11 years later) moderates this association by attenuating the stress-depression relationship.

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By: margueritebeattie@gmail.com, Marguerite Beattie

Who practices mindfulness after an intervention? Latent profile analyses of social cognitive responses

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Background/purpose: As group averages mask variance in the responses to health interventions, exploring different types of responses may complement intervention process evaluations. This study aims to explore different subgroups in terms of social cognitive responses, as well as trajectories of health behaviour change, i.e. mindfulness practice frequencies.
Method: We used data from a school-based mindfulness intervention (N=1646) within the Healthy Learning Mind cluster-randomised trial to investigate profiles of social cognition after the intervention at 10 weeks and mindfulness practice at 0, 10, and 26 weeks. Latent profile analyses were performed with Mplus Version 7.
Results: Analyses indicated a solution of five latent groups for both social cognition and practice. The five social cognition profiles included groups more uniformly inclined or disinclined towards mindfulness practice, but also groups varying in between. For example, the largest group (40.2%) were otherwise positively inclined towards mindfulness practice, but were uncertain about practicing in the future. Perceptions of friends' behaviour was the strongest differentiating theoretical construct in the groups. The five practice profiles included various increasing, stable, and decreasing profiles, with the largest (52.1%) being those with almost no practice from start to finish. Some demographic differences were found in the profiles.
Conclusions and implications: Looking for patterns in intervention responses is potentially useful for better understanding different responses evoked by the intervention. This knowledge is important as it could indicate that universal interventions should be tailored for subgroups with different needs.

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By: prince.atorkey@health.nsw.gov.au, Mr. Prince Atorkey

Uptake of proactively offered online and telephone support services targeting multiple health risk behaviours among vocational education students: Process evaluation of a cluster randomized trial

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Background/purpose: This study examined the uptake of proactively offered online and telephone support services targeting risk behaviours individually, and in combination, among vocational education students and the characteristics associated with the uptake of support services.
Methods: Vocational education students in New South Wales, Australia were recruited into the intervention arm of a cluster randomised controlled trial. Uptake of support was measured by whether participants signed up for the online and telephone services they were offered.
Results: 551 participants were recruited into the intervention arm. Uptake of the proactive offer of online support services was 14.3% or less and uptake for telephone support services was 7.0% or less. Uptake of any online or telephone service for multiple health behaviours was 5.8%. Participants who were employed, and those who reported not being anxious had smaller odds of signing up for online or telephone services for smoking, whereas participants who reported not being depressed had greater odds. Participants who intended to change their physical activity in the next 30 days had greater odds of signing up for online or telephone services for physical activity. Employed participants had smaller odds of signing up for support services for at least two behaviours.
Conclusions and implications: Although the uptake of proactively offered online and telephone support services is low, these rates appear to be higher than the self-initiated use of some of these services in the general population. Scaling up the proactive offer of online and telephone services may produce beneficial health outcomes.

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By: joebtay@googlemail.com, Joseph Tay Wee Teck

Managing chronic non-cancer pain in primary care. "It's not you, it's us...."

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Background/purpose: Chronic non-cancer pain impacts 20% of the population and is the presenting complaint in 22% of GP consultations. In response, strong opioid medications are often prescribed in primary care. Despite a lack of efficacy, the rate of strong opioid prescribing has doubled between 2003 and 2012, with areas of deprivation having a 3.5 times greater rate. We at Sighthill Practice recognised these trends in our population. In a time of austerity, our aim was to use all available resources to improve our management of chronic pain and, through this, reduce our reliance on ineffective treatments such as opioid analgesics.
Methods: We used a collaborative quality improvement approach. The Prescribing Information System for Scotland (PRISMS) provided baseline and progress data. Process diagrams illustrated current practice and gaps, and patient feedback came from three group pain consultations and a pain information meeting.
Results: We identified culture change among the practice team as critical to success. This meant improving our management of acute pain including providing realistic improvement times, avoiding de-conditioning through early and safe mobilisation, and worsening advice, and application of a pain/function score with regards to analgesia. We focused on the biopsychosocial model of chronic pain and developed a 6-week lifestyle course which made changes more accessible to our specific deprived population.
Conclusions and implications: Going beyond the presumption of a knowledge deficit among GPs around opioid analgesic harms and using GPs privileged knowledge on local resources and population characteristics is a pragmatic way to developing chronic pain interventions.

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By: smtenga@ihi.or.tz, Dr Sally Mtenga

Gender inequality and its health and social-economic implications for women and young girls in rural Tanzania

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Background/purpose: Maternal and neonatal mortality has increased in Tanzania since 2010. Young women and adolescent girls are the most affected. We explored gender relations, maternal health (MH) and reproductive health (RH) service utilization among women, girls, and their families in Tabora region, Tanzania.
Methods: Qualitative mixed methods: 9 diaries, 30 In-Depth Interviews (IDIs) and 4 Focus Group Discussions (FGDs) were conducted. Girls, boys (age 15 to 17), women, men (age 18-49), community and religious leaders, and in-laws were interviewed. The CARE-Gender Equality (CGE) framework emphasizes the need to build agency**,** change relations and transform structures to promote long-lasting gender equality. CGE guided the thematic analysis of this study.
Results: Based on the CGE constructs, the building agency reflected that women and girls have limited capability to make decisions on accessing education, economic, and health opportunities, including RH and MH services. Changing relations: men are expected to be the main decision-makers on all matters including women's use of MH and RH services. Girls are considered as temporary members of the families with limited rights to education, property ownership, timing of marriage and who to marry. Parents and health care providers do not fully support adolescents' use of RHs (contraceptives). Transformative structures: social norms promote violence against women and girls, community structures have limited capability to defend the rights of women and girls.
Conclusions and implications: Addressing social norms that promote gender inequality practices and empowering community structures to promote gender equality are key to improving women's and girl's wellbeing including RH and MH in Tabora, Tanzania.

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By: allison.boyes@newcastle.edu.au, Dr Allison Boyes

Barriers to engaging in online health communities: A cross-sectional survey of people attending hospital outpatient clinics

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Background/purpose: Social support positively impacts health outcomes. Online health communities involve individuals affected by the same health condition connecting online to share experiences and provide social support to each other. This study examined adults' perceptions of using online health communities.
Methods: A cross-sectional study was conducted. Adult patients and support persons with access to the internet were recruited from the outpatient clinics of 1 major public hospital in Australia. A total of 274 participants completed a self-report online questionnaire assessing their sociodemographic characteristics, use of online health communities, and perceived barriers to using online health communities. Odds ratio (OR) were calculated to identify associations between sociodemographic characteristics and no intention of using online health communities.
Results: Three-quarters (74.6%) of participants had not participated in an online health community. The main barriers to using online health communities were lack of interest in this form of support (54%), concern about the accuracy of information (28.0%) and worry about privacy/security (21.5%). Participants aged 60 years or more (OR: 1.9; $p = .045$) or having completed school level education only (OR: 2.04; $p = .035$) were more likely to have no intention of using online health communities.
Conclusions and implications: Although technology-based solutions have been identified as critical to the future of sustainable health care, these findings suggest that a large proportion of people affected by health concerns will reject online health communities as a source of health-related information and support. Mechanisms to promote the benefits and trustworthiness of this form of support are needed.

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By: johanna.fritz@mdh.se, Mrs. Johanna Fritz

Development of a theory-guided intervention to support implementation of a behavioural medicine approach in physiotherapy

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Background/purpose: Theory-guided implementation interventions is recommended to make implementation efforts easier to plan and replicate and more likely to succeed by offering a structure and highlighting causal assumptions. The aim for this project was to develop a theory-guided intervention to support the implementation of a behavioural medicine approach in physiotherapy.
Methods: A qualitative design was used to explore determinants of applying a behavioural medicine approach in physiotherapy for patients with persistent pain. Data were collected through semi-structured interviews with four physiotherapists, four patients and three managers; observations of video-recorded treatment sessions; and reviews of local directives and regulations. Data were analysed with inductive content analysis, followed by mapping to relevant theories for learning and behaviour change to address the identified determinants.
Results: The determinants concerned the physiotherapists' ambivalence towards a behavioural medicine approach, a biomedical focus, embarrassment asking about psychosocial factors, lack of skills for applying the approach, self-awareness, role expectations of the physiotherapist and the patient, support from managers and peers, allocation of time, and expectations from the organization. The Constructivist learning theory and the Social Cognitive theory were considered as relevant theories to address these determinants.
Conclusions and implications: A multifaceted implementation intervention consisting of outreach visits, peer coaching, educational materials, video recordings, individual goal setting, self-monitoring, manager support and access to written patient information was developed based on the identified determinants, the Constructivist learning theory and the Social Cognitive theory. Efficient implementation interventions will benefit both the health care system and the individual patient.

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By: david.mcnaughton@hdr.mq.edu.au, Mr David McNaughton

The effects of extra-gastrointestinal and psychological symptoms on prospective healthcare use in people with irritable bowel syndrome

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Background / Purpose: There is controversy around whether gastrointestinal (GI) symptom burden or comorbid condition burden increases healthcare seeking in people with irritable bowel syndrome (IBS)[1]. We aimed to determine whether the association between GI symptom burden and health care seeking for GI conditions might actually be due to other health conditions.
Methods: We randomly selected 1159 subjects from the general population (57% female; mean age 48.6 y; 164 IBS) and matched their health records. GI symptom burden was measured by the Gastrointestinal Symptom Rating Scale (GSRS) and extra-GI symptoms were measured with a symptom checklist. Depression and Anxiety were measured with the Hospital Anxiety and Depression scale. Association was measured as the incident rate ratio (IRR; values >1 indicate positive association).
Results: On average 0.08 (SD = 0.23) GI-related visits were made per person per year. High GSRS scores were associated with increased outpatient healthcare seeking for GI conditions (IRR = 1.04 [0.1], p = 0.01). Controlling for extra-GI symptoms the IRR was reduced (IRR = 1.02 [0.02], p = 0.09). However, controlling for depression and anxiety had no effect on this association (IRR = 1.04 [0.01], p = <0.02).
Conclusions and implication: High gastrointestinal symptoms are associated with gastrointestinal healthcare seeking in IBS individuals. This relationship is partly explained by extra-gastrointestinal symptoms, however not by mood symptoms. IBS patients may benefit from more thorough assessments that examine extra-gastrointestinal symptoms to reduce health care utilization.

1. Gudleski GD et al. *Behav Res Ther.* 2017;88:65-75.
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By: prince.atorkey@health.nsw.gov.au, Mr Prince Atorkey

Do vocational education students intend to change their multiple health risk behaviours?

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Background/purpose: No previous studies have examined vocational education students' intention to change multiple health risk behaviours and whether baseline intention to change, socio-demographic and psychological characteristics predict successful behaviour change at 6-months follow-up.
Methods: A total of 540 vocational education students in New South Wales, Australia in the no-intervention control arm of a cluster randomised controlled trial completed an online survey at baseline and 6-months later. During the baseline survey, participants reported socio-demographic characteristics, psychological characteristics, health risk behaviours and intention to change behaviours within 6-months. During the 6-months follow-up survey participants reported health risk behaviours.
Results: More than 80% reported engaging in multiple (i.e. 2 or more) health risk behaviours at baseline. One third (33.1%) of these participants intended to change at least two risk behaviours within 6 months. Experiencing symptoms of anxiety and intention to change behaviours at baseline predicted successfully changing at least one behaviour at 6-months follow-up.
Conclusions and implications: Given that most vocational education students engaged in multiple health risk behaviours, this population may benefit from interventions targeting two or more behaviours simultaneously or sequentially. Multiple health behaviour interventions could support students to change behaviours they wish to as well as motivate them to address risk behaviours they are less ready to change.

Submission ID: 540
Symposium ID and title if part of symposium: 55 Therapeutic Processes in Long Term Physical Health Conditions: Mindfulness, Self-Compassion, or Psychological Flexibility?
Decision: Accepted, Symposium
Last updated: 2nd December, 2019
By: lance.mccracken@psyk.uu.se, Professor Lance McCracken

Self-compassion, psychological flexibility, and chronic pain: Intercorrelations and contributions to daily functioning

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Background/purpose: Psychological flexibility (PF) and self-compassion (SC) represent potential therapeutic processes for people living with chronic pain. However, the degree to which these overlap or reflect unique contributions is unclear. This talk will describe a study to address this and investigate the roles in of PF and SC in relation to chronic pain outcomes.
Methods: 420 adult participants seeking specialty services for chronic pain completed the Self-Compassion Scale (short form) along with measures of PF, pain, interference, work and social adjustment, and depression, prior to starting treatment.
Results: Scores from the PF and SC scales were significantly correlated (r = .38 to .56) and demonstrated significant non-overlapping variance. Multiple linear regression models explained 44% of the variance in pain interference, 36% in work and social adjustment, and 32% in depression. SC accounted for significant unique variance in each equation, however this was no longer significant when PF variables were added to the equations for pain interference and work and social adjustment.
Conclusions and implications: In conclusion, PF and SC appear related and distinct in the context of chronic pain. PF processes may incorporate effects of SC on pain interference and work and social adjustment. However, SC appears to contribute independently in depression. Given the importance or behavior patterns reflected in depression, it may be beneficial to further study SC-based processes, and the methods designed to enhance them. This may improve outcomes for particular people with chronic pain where this is relevant.

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By: k.j.burke@cqu.edu.au, Associate Professor Karena Burke

Psychological disorder in children with chronic food hypersensitivity

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Background/Purpose: Food hypersensitivity is not recognized as a risk factor for adverse psychological health and while the link may seem spurious, the relationship is consistent with emerging neuropsychological evidence linking the gut microbiome, nutrition, and development of psychiatric conditions such as anxiety and depression. This study examined the relationship between diagnosed chronic food hypersensitivity and psychological disorders amongst 1316 Australian children, from 990 families.

Method: Participants were targeted through membership of food-related illness support groups, and completed a range of questions regarding diagnosis of a range of illnesses and/or disorders, and details regarding the health professional who had made that diagnosis. Parents who reported self-diagnosis or diagnosis from a non-medical specialist or health professional (e.g. alternative and complementary therapist, nutritionist, social worker, etc.) were excluded.

Results: Of all the children, 16% (n = 211) had a diagnosed psychological condition. There were significantly more children with some form of food sensitivity and a psychological condition than those with a food sensitivity but no psychological condition χ2 (3, n = 1310) = 56.20, p < .001. The same pattern of results was maintained when psychological disorders are further broken down. For children with a food sensitivity the risk of having a psychological condition is much higher than for children without a food hypersensitivity.

Conclusions and Implications: Despite the increasing prevalence of food hypersensitivities, few studies have specifically addressed their psychosocial impact. Future research should acknowledge these potential adverse psychiatric co-occurrences when developing and managing treatment plans associated with these conditions.

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Last updated: 2nd December, 2019
By: prince.atorkey@health.nsw.gov.au, Mr. Prince Atorkey

Clustering of multiple health risk behaviours and association with socio-demographic characteristics and psychological distress among adolescents in Ghana: a latent class analysis

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Background/purpose: This study examined the prevalence of multiple health risk behaviours, the clustering patterns of health risk behaviours, and the association between socio-demographic characteristics, psychological distress and clusters among adolescents in Ghana.

Methods: Participants were senior high school (SHS) students aged 11-19 years who participated in the 2012 Global School-based Students Health Survey (n = 1763). Five health risk behaviours (smoking tobacco, inadequate fruit intake, inadequate vegetable intake, alcohol intake and physical inactivity) were measured. Latent class analysis and latent regression were used to identify the clusters and factors associated with the clusters respectively.

Results: The prevalence of multiple health risk behaviours (2 or more) was 94.8%. Two clusters emerged: cluster 1 ("Poor nutrition, inactive, low substance use cluster"; 91%); cluster 2 ("High Risk Cluster"; 9%). Using cluster 1 as a reference group, adolescents in the 11-15 years category had lower odds of belonging to cluster 2 (OR = 0.21, CI 0.05-0.91, $\rho = 0.036$) while those experiencing symptoms of depression had higher odds of belonging to cluster 2 (OR = 2.45, CI 1.45-4.14, $\rho = 0.001$).

Conclusions and implications: Health risk behaviours cluster among adolescents with age and depression associated with the identified clusters. Early interventions that target these clusters are needed at the individual, school and community level to mitigate the burden of non-communicable diseases.

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By: kikuchih-tky@umin.ac.jp, Dr. Hiroe Kikuchi

The association between momentary mood states and interstitial glucose level: a study using ecological momentary assessment and continuous glucose monitoring

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Background/purpose: Increase in blood glucose level is physiologically accompanied by positive affect and hypoglycemia is accompanied by negative affect such as anxiety. Patients with eating disorders, particularly with anorexia nervosa (AN), sometimes seem to be euphoric even if they suffer from malnutrition. The aim of this study is to investigate the associations between blood glucose level and momentary mood states in eating disorder patients to see whether they are altered in that condition.

Methods: The subjects were 4 women with eating disorders (age 21-43 y; 2 AN, 2 bulimia nervosa (BN)). They carried smartphones for 2 weeks and recorded their momentary mood states several times a day including before and after they ate or drank. Interstitial glucose level was simultaneously and continuously measured by a continuous glucose monitoring sensor and used as a substitute as blood glucose level. Multilevel modeling was used to investigate the association between interstitial glucose level and momentary mood states.

Results: Interstitial glucose level was significantly negatively associated with momentary depressive mood, anxiety, and negative affect (all p's < 0.001) and positively associated with momentary positive affect (p < 0.001).

Conclusions and implications: The physiological associations between blood glucose level and momentary mood states generally seen in healthy subjects were also observed in eating disorder patients. Further investigation in AN and BN respectively would be necessary to discuss whether change in mood states associated with blood glucose level is involved in the maintenance of disordered eating behaviours.

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By: martha.canfield@kcl.ac.uk, Dr Martha Canfield

A cross-country survey on adherence to photoprotection behaviours in Xeroderma Pigmentosum (XP) patients

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Background/purpose: Xeroderma pigmentosum (XP) is an extremely rare genetic disorder where DNA damage caused by ultraviolet radiation (UVR) cannot be repaired. The main clinical manifestations of XP include skin cancers, vision problems, and progressive neurological deterioration. The adoption of rigorous photoprotection behaviours are the only way to improve prognosis. This is the first international survey of adherence to photoprotection conducted in XP patients. Psychological factors associated with photoprotection were explored.
Methods: Analysis of a cross-sectional survey of adults with XP and caregivers of patients <16 years and those with cognitive impairment in the UK, Germany, the US, and France (n = 156). The following variables were assessed: photoprotection activities to protect the face and body when outdoors; avoidance of going outside during daylight hours; intention; self-efficacy; social support, perception of XP, beliefs about photoprotection, automaticity; clinical and demographic characteristics.
Results: 35.3% of the sample reported suboptimal adherence to photoprotection. High levels of adherence to photoprotection activities included greater perceived control of XP, stronger beliefs in necessity and effectiveness of photoprotection, and higher intention. Avoidance of going outside was associated with greater photoprotection concerns, more serious illness consequences, and higher XP- related distress. Greater automaticity and higher self-efficacy were associated with better protection across all outcomes.
Conclusions and implications: Adherence to photoprotection behaviours varies and at least one third of the sample have potential for improvement. Factors identified in this review provide the evidence to inform interventions aimed at improving health outcomes in XP patients.

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By: jf_sara@yahoo.com, Miss Sara Jalali-Farahani

What are the main motives for food choice in Iranian population?

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Background/purpose: The purpose of this study was to explore food choice motives in an Iranian population considering socio-demographic factors.
Methods: Participants were 938 adults, selected using convenience sampling method from educational and medical centers under coverage of Shahid Beheshti University of Medical Sciences in Tehran. Data on socio-demographic information, eating habits and participants’ body weight and height were collected using self-administered questionnaires. In addition, participants were asked to complete the Iranian version of food choice questionnaire (FCQ).
Results: Mean age and BMI of participants were 35.3 ±12.4 years and 24.6 ±5.4 kg/m^2 respectively. More than one third of participants were overweight and obese (38.6%) and 37.5% of participants consumed food prepared away from home more than once a week. In both Iranian men and women, the most and the least important factors influencing food choices were *Sensory appeal* and *Ethical concern* respectively. *Sensory appeal* was ranked as the most important motive for food choice in all weight groups. Furthermore, the most important motives for food choice as ranked by participants aged ≤35 years and those aged >35 years were *Sensory appeal* and *Natural Content* respectively. Finally, *Price*, was ranked as the most important food choice motive by participants with primary level of education and *Sensory appeal* was the most important factor influencing food choice of participants with both secondary and high levels of education.
Conclusions and implications: Study findings indicate the most important motives for food choice across various socio-demographic groups which provide policymakers with beneficial information for enhancing food choices in these groups.

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Last updated: 2nd December, 2019
By: melanie.kingsland@health.nsw.gov.au, Dr Melanie Kingsland

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Antenatal care for modifiable health risk behaviours: women’s receipt and acceptability of guideline recommended care to support a healthy start to life

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Background/Purpose: Management of modifiable health risk behaviours in pregnancy can improve birth and maternal and child outcomes. This study aimed to determine current levels of recommended antenatal care for smoking, alcohol consumption and gestational weight gain (GWG); characteristics associated with such care; and women’s acceptability of care.
Methods: Telephone surveys with women who had recently attended antenatal services were undertaken. Characteristics associated with care were examined using multiple logistic regression.
Results: Of the 514 women who completed the survey (74% response), 9% smoked in pregnancy, 16% consumed alcohol, 57% gained weight above/below guidelines and 12% reported 2+ behaviours. 49% received recommended care for smoking, 17% for alcohol, and 10% for GWG. Primiparous women (first time pregnant) were more likely to receive care for smoking (OR 1.60, 1.12-2.29). Women who had a lower level of education (OR 3.03, 1.41-6.49) or identified as Aboriginal (OR 4.96, 1.60-15.37) were more likely to receive care for alcohol use. Women who were younger (OR 0.92, 0.86-0.99), primiparous (OR 2.09, 1.10-3.98), identified as Aboriginal (OR 4.09, 1.53-10.89) or had higher pre-pregnancy BMI (OR 1.04, 1.01-1.07) were more likely to receive care for GWG. Women agreed that care for smoking (96%), alcohol (88%) and GWG (93%) should be part of routine antenatal care.
Conclusions and implications: Most women did not receive antenatal care for health behaviours as recommended by Australian pregnancy guidelines despite high levels of acceptability. There is a need for service-wide practice change to increase routine, universal care addressing modifiable health behaviours in pregnancy.

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Symposium ID and title if part of symposium:
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By: kufre.okop@uct.ac.za, Dr Kufre Okop

Empowering sub-Saharan African communities to learn about cardiovascular disease, risk perception and communication, and to develop strategies for cardiovascular disease prevention: A citizen science and public engagement approach

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Background/purpose: Globally, two in five adults with cardiovascular disease (CVD) are from low- and middle-income countries. Communities in sub-Saharan Africa have poor perceptions about CVD and consequent inappropriate health seeking behaviours. This project aimed to empower communities to learn about and interpret CVD risk, make recommendations on effective CVD risk communication, and to develop setting-specific strategies for prevention.
Methods: This is a participatory action research (PAR) involving qualitative enquiry and citizen science processes. We conducted community engagement with over 185 stakeholders and focus group discussions with 90 residents of rural and urban communities of Ethiopia, Rwanda and Malawi. Trained citizen scientists led semi-structured interviews with 187 randomly sampled community residents using EpiCollect mobile-app. Thematic, consensus, and social network analyses were undertaken. Findings were utilized to advocate for CVD prevention interventions during advocacy workshops.
Results: Across the countries, the understanding of health risk was unclear. CVD risk perception was poor, and CVD was associated with witchcraft, hard work and poverty, especially in rural communities. Colours were associated with specific diseases and severity in all communities; red was often attributed to life threatening events, or vitality (in rural communities). Participants prefer CVD risk messages in graphics/ pictures (48%), and verbal/audio (52%) rather than graphs or probability score. Citizen Science resulted in improved health risk awareness, high willingness to attend a clinic, appreciation of community-led science, and pilot hypertension screening.
Conclusions and implications: PAR using Citizen Science approach can be harnessed to improve CVD risk perception and support community-led advocacy for intervention.

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Last updated: 2nd December, 2019
By: nozgap@gmail.com, Miss Nozgechi Phiri

Feasibility and acceptability of a primary school-based salt-reduction intervention in rural and urban Malawi

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Background/purpose: Malawi has high discretionary salt intake. Salt reduction is a highly cost-effective strategy for reducing hypertension/ cardiovascular disease. In low income countries where most salt is added during/after cooking, behaviour change is crucial for salt reduction.
Methods: We implemented a 10-week salt reduction education/behaviour change intervention embedded in the science curriculum of primary school children (aged 11-14) as part of a cluster randomized trial in rural/urban Malawi. Primary outcome is change in 24-hour urinary sodium excretion over 12 and 52 weeks. A qualitative process evaluation (interviews/focus groups) with key stakeholders, including parents and children (n=53, thus far), and conceptually underpinned by Normalization Process Theory runs in parallel to help understand barriers/facilitators to implementation.
Results: We identified challenges in identifying, engaging, and ensuring timely input from key stakeholders. There was universal agreement that it was a worthwhile concept, with parents appreciating the information was new to them and expressing openness to change. Lessons had to be simplified to aid understanding and use of colour illustrations was valuable. Children described some resistance from parents. In urban areas, there was less parental engagement.
Conclusion and Implications: Our feasibility study suggests a high level of engagement with the topic, but considerable preliminary engagement work was required to agree on roles and responsibilities and the importance of ensuring information was easy to comprehend. The trial, process and economic evaluations will provide critical evidence of whether a school-based intervention for salt reduction is effective, feasible, acceptable and implementable in low-income settings.

Submission ID: 550
Decision: Accepted: Oral

Bodily symptoms, emotion regulation and interoception in childhood and adolescence

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Background/purpose: For adults, studies have shown that persistent somatic symptoms are associated with both emotional dysregulation and reduced interoceptive accuracy. For childhood and adolescence, there has been little research so far and from a developmental perspective it is also necessary to include parental factors. Two studies aimed to examine the relationship between children's and parents' emotional dysregulation and bodily symptoms (studies 1 and 2) and whether interoception is a relevant moderator (study 2).
Methods: In two samples, children and adolescents (N1 = 46, 65% female, Mage = 10.0, SD = 1.6; N2 = 68, 60% female, Mage = 13.1, SD = 2.2) and their parents completed questionnaires on bodily complaints, emotion regulation and interoception.
Results: Study 1 found positive, medium-strong relationships between children's persistent somatic symptoms and children's and parents' dysfunctional emotion regulation. Study 2 largely confirmed these correlations. In addition, reduced interoceptive accuracy was found to be a significant moderator for the relationship between children's emotion dysregulation and bodily symptom distress, with specific relationships between moderator and type of bodily symptoms.
Conclusions and implications: The results are in line with interoceptive predictive coding models for symptom perception. Interoceptive deficits and emotional dysregulation and their interaction seem to play a relevant role for somatic symptom distress already in childhood and adolescence.

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By: jenny.bowman@newcastle.edu.au, Jenny Bowman

The potential role of Community Managed Organisations in reducing behavioural risk factors for chronic disease among people with a mental health condition

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Background/purpose: People with a mental health condition have a reduced life expectancy of up to 30 years globally (12-16 years in Australia), with chronic physical diseases responsible more than 70% of excess mortality. High prevalence of risk behaviours including smoking, poor nutrition, physical inactivity and harmful alcohol consumption are key contributing factors. The 'CMO Connect' project aims to explore the role that community managed organisations (CMOs) may play in providing preventive care by identifying: 1) current CMO preventive care practices; 2) barriers and facilitators to providing preventive care; 3) consumer preferences for receiving care; and 4) the organisational mechanisms that may support its provision.
Methods: The project is utilising a co-design method, with qualitative and quantitative data collection via: an online survey of all CMOs in New South Wales; telephone interviews with consumers; an online survey of CMO staff; and focus groups and research involvement with all stakeholders throughout the project.
Results: The online survey with leaders of CMOs indicates that the majority (83%) are providing support to help consumers modify at least one risk behaviour; and approximately half are providing some support to modify all risk behaviours (49%). Subsequent sub-studies underway with staff and consumers will assist in providing a more comprehensive picture.
Conclusions and implications: There is a need for policy, guidelines and tools to increase organisational capacity to provide preventive care. The project aims to recommend a feasible model of preventive care provision that could be further tested, and potentially adopted and implemented by a range of CMOs.

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By: k.j.burke@cqu.edu.au, Associate Professor Karena Burke

Feasibility of a physical activity intervention for mental health in senior secondary students: A pilot study

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Background/Purpose: Adolescence is an important period for the establishment of numerous mental health disorders. The Australian National Survey of Mental Health and Wellbeing (ABS, 2009) identified that over a quarter (26%) of 16- to 24- year old Australians have dealt with a mental disorder within the past 12 months. School centered interventions have been suggested as a positive way to approach this challenge. This study investigated whether adolescents would adhere to a physical activity regime conducted within a school environment and explored changes in psychological health.
Method: Over a six-week period, 19 Year 11 students completed a total of 18 physical activity sessions, both supervised and independently. Students completed the DASS and the PAQ-A pre and post participation in the program.
Results: Overall participants significantly increased physical activity levels by 8%, [-0.59, -0.32], at the conclusion of the six weeks $t(18) = -7.31$, $p < .001$, $d = 0.79$. Pre and post symptoms of mental health illness significantly decreased by a mean of 6.47, [5.86, .08], $t(18) = 22.33$, $p < .001$, $d = 1.67$, and significant decreases were found across all negative mood states.
Conclusions and Implications: This pilot study aimed at establishing the efficacy of a physical activity intervention within a school environment for improved mental health outcomes. The evidence suggests that adolescents are capable of completing a rigorous protocol requiring structured increases in physical activity within a school environment and that this can have positive impacts on mental health in this cohort.

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By: kate.o'donnell@glasgow.ac.uk, Professor Kate O'Donnell

Association of multimorbidity and frailty with ethnicity: Findings from the UK Biobank cohort

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Background/purpose: The relationship between ethnicity and disease often focuses on single conditions. Less is known about multiple diseases or frailty. Our aim, therefore, was to explore the association of ethnicity with multimorbidity and frailty using UK Biobank data.
Method: Multimorbidity was based on counts of a pre-defined set of physical and mental health conditions. Definition of frailty was based on five criteria (weight loss, exhaustion, grip strength, low physical activity, slow walking pace). Ethnicity was self-reported and categorised as: White; Asian/Asian British; Black/Black British; Chinese; Mixed; Other. Outcome was prevalence of multimorbidity or frailty. Multivariate analysis was adjusted for sex, age, socioeconomic status, smoking status, alcohol use frequency, BMI and – for frailty – multimorbidity count.
Results: Percentage of individuals with 3+ conditions varied by ethnicity (Whites 12.4%, Asian/Asian British 13.6%, Black/Black British 10.7%, Chinese 4.4%). In an adjusted model, multimorbidity risk was lower for all ethnic groups compared to Whites, except for Asian/Asian British, where there was a small increased risk. Compared to the White population, there was a greater prevalence of pre-frailty and frailty in all ethnic groups. This pattern remained in an adjusted model, where White was the reference population: HR for frailty in Asian population 4.43 (95% CI 4.07-4.82); Black 1.72 (1.55-1.90); Chinese 2.35 (1.80-3.08).
Conclusions and implications: Compared to those identified as White, multimorbidity was raised only in Asian/Asian British population. Pre-frailty and frailty were raised in all ethnic groups compared to Whites. This raises challenges for health care provision and prevention messages.

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Symposium ID and title if part of symposium:
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Last updated: 2nd December, 2019
By: jose.custers@radboudumc.nl, PhD Jose Custers

Not as stable as we think: A descriptive study of 12 monthly assessments of fear of cancer recurrence amongst curatively-treated breast cancer survivors 0-5 years after surgery

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Background/purpose: Previous studies suggest one-third of breast cancer survivors (BCS) experience elevated fear of cancer recurrence (FCR) and that it remains stable. Most studies include long assessment intervals and aggregated group data. This study aimed to describe the individual trajectories of FCR when assessed monthly using both a statistical and descriptive approach.
Methods: Participants were 219 curatively-treated BCS 0–5 years post-surgery. Questionnaire data were collected monthly for 12 months. Primary outcome was FCR (Cancer Worry Scale (CWS)). For the descriptive approach, participants were classified as low (CWS ≤13 at each assessment) high (CWS ≥14 at each assessment) or fluctuating FCR (CWS scores above and below cut-off). Latent class growth analysis (LCGA) was conducted to identify trajectories over time.
Results: 127 (58%) women reported fluctuating CWS scores, 47 (22%) reported a consistently high and 45 (21%) consistently low course. Results of the LCGA confirmed the 3-class approach including a stable high FCR group (13%), a low FCR group (40%), and a moderate FCR group (47%). Both the moderate and low scoring groups reported declining scores over time. Younger patients, higher educated patients, and those less satisfied with the medical treatment were more likely to belong to the moderate or high trajectory.
Conclusions and implications: Assessed monthly, the majority of BCS report fluctuating levels of FCR. Stepped-care models should assess FCR on multiple occasions before offering tailored interventions.

Submission ID: 555
Symposium ID and title if part of symposium: 26 To vape or not to vape? The health effects of e-cigarettes and implications for smoking cessation and policy
Decision: Accepted, Symposium
Last updated: 2nd December, 2019
By: bacon.simon@yahoo.ca, Dr. Simon Bacon

The efficacy of e-cigarettes for smoking cessation

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Background/purpose: Many smokers are interested in using e-cigarettes to help them quit smoking conventional cigarettes. E-cigarette popularity and technology has evolved over the past 10 years. Uncertainty about the role of e-cigarettes in smoking cessation persists. A qualitative synthesis of systematic reviews of the efficacy of e-cigarettes for smoking cessation was undertaken.
Methods: Systematic reviews of RCTs considering the efficacy of e-cigarettes for smoking cessation published since 2010 were considered
Results: There is heterogeneity in the technologies of e-cigarettes studied in RCTs. Nicotine containing e-cigarettes appear to produce quit rates that are the same or better than NRT mono-therapy in helping smokers quit conventional cigarettes. Most intervention studies have combined counseling for with e-cigarette and comparator interventions. There is some evidence that people using e-cigarettes to quit smoking conventional cigarettes continue to use e-cigarettes beyond the treatment period.
Conclusions and implications: Some types of e-cigarettes might help some people to quit smoking conventional cigarettes. E-cigarettes may be appropriate as time-limited intervention for people who have failed to quit using conventional smoking cessation therapies. First, they need to quit smoking, then the need to quit vaping.

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By: amy.mullens@usq.edu.au, Associate Professor Amy Mullens

Needs identified for Vietnamese and Chinese migrant communities to enhance screening and management of Hepatitis B in Australia

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Background/purpose: Higher risks of hepatocellular carcinoma among migrants from China and Vietnam underscore needed research regarding long-term management of Hepatitis B and treatment barriers. Hepatitis B patients face difficulties accessing treatment/adherence. Low uptake may be related to stigma; lack of availability/access/familiarity with health services; privacy/confidentiality concerns; language barriers migration status and cultural/gender issues. This study identified beliefs/attitudes of affected community members in Australia; and knowledge/attitudes/practices of GP's/nurses and bilingual cultural-workers regarding Hepatitis B.
Methods: Purposive and snowball sampling was utilized (N=17; health providers n=4; community members-Chinese n= 6, Vietnamese n=2, bilingual cultural workers n=5) with industry partners. Qualitative semi-structured interview data were analysed with thematic analysis (Braun & Clarke, 2006) regarding perceptions, awareness and challenges. Ethics approval was obtained.
Results: Three key themes (with sub-themes) emerged: 1) Improving education (awareness, self-management); 2) Communication challenges (language barriers, health professionals from similar background/language); and 3) Innovations needed in health promotion to optimize reach (workshops, engaging people with Hepatitis B, engaging family members). Findings support generational differences regarding education/awareness/willingness to access services, and distinct needs within Chinese and Vietnamese communities.
Conclusions and Implications: Complex issues emerged within these priority communities. Bi-lingual cultural workers can assist in bridging education and communication gaps between patients and health professionals, managing perceived power differentials, and demystifying information regarding Hepatitis B testing, treatment and management.

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Last updated: 2nd December, 2019
By: katerina.kassavou@gmail.com, Katerina Kassavou

Programme on Adherence to Medication. A very brief face to face intervention, followed by a text message and/or smartphone app to support medication adherence in people prescribed treatment for hypertension in primary care. A feasibility randomised controlled trial.

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Background/purpose. The clinical management of hypertension is one of the most common interventions in primary care and medication adherence is essential part of effective treatment. However, many patients do not adhere to their prescribed treatment, leading to increased NHS cost. We have therefore developed PAM: a 1-minute very brief intervention (VBI) delivered by practice nurses, followed by a three months text message or smartphone app to support medication adherence in people prescribed treatment for hypertension in primary care. This study aims to evaluate intervention feasibility in primary care.
Methods. A randomised controlled trial conducted with 100 patients recruited by nurses in eleven primary care practices in East of England and London. Primary outcome is systolic blood pressure and medication adherence measured by urinalysis and self-reports at baseline and 3 months follow up. Blood samples for HbA1c and HDL/LDL are also collected. Quality of life is measured by EQ-5D. Mechanisms of change is measured by digital log files, audio-recordings and self-reports.
Results. The study has 5.7% response rate to practice invitation. From those attending the consultations, 95% met eligibility criteria, provided informed consent, and were randomised to groups. To date, we have achieved 90% of our recruitment target and obtained complete outcome data. Study recruitment and follow up is in progress and it will be completed in March 2019.
Conclusions and implications. The study has good uptake and low attrition rate and could be rapidly scaled up to a larger cost-effectiveness trial. If cost-effective, the intervention could be implemented in the NHS with immediate and long-term health care benefits.

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By: meiqixin@link.cuhk.edu.hk, Dr. Meiqi XIN

Using the common-sense model to explore the role of illness representation on diabetes distress and self-care behaviors among Chinese patients with type-2 diabetes mellitus

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Background/purpose: Patients with type-2 diabetes mellitus (T2DM) bear a high risk for mental illness, which is related to poorer diabetes self-management. According to the Common-sense model (CSM), illness representation (IR), defined as how patients think about his/her illness, has a great impact on T2DM patients' health outcomes. This study aimed to test the direct and mediated associations between IR, diabetes distress, and self-care behaviors.
Methods: A cross-sectional telephone survey was administered to 473 T2DM patients (mean age = 56.72 yrs) in Hong Kong. Based on the CSM, it was hypothesized that positive IR towards DM would be associated with higher problem-focused coping, lower avoidant coping, and higher self-care self-efficacy, which would be subsequently associated with lower diabetes distress and higher self-care behaviors. Structural equation modeling was used to test the model.
Results: The overall model showed a satisfactory fit (CFI = 0.94, IFI = 0.94, RMSEA = 0.05). The direct effect of IR was found to be significant for diabetes distress (estimate = -1.118, $P = 0.001$) but not self-care behaviors (estimate = -0.075, $P = 0.434$). As to the indirect effects, the positive paths from IR to self-care behaviors were mediated through the increased self-care self-efficacy and the decreased avoidant coping (estimate = 0.176, $P = 0.001$); while the negative paths to diabetes distress were mediated through the decreased avoidant coping only (estimate = -0.053, $P = 0.024$). The mediating effects of problem-focused coping were non-significant.
Conclusions and implications: The effects of IR on self-care behaviors and diabetes distress were significantly mediated by avoidant coping and self-care self-efficacy. The findings highlighted the need to improve IR and reduce maladaptive coping among T2DM patients.

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Last updated: 2nd December, 2019
By: ruth.hackett.09@ucl.ac.uk, Dr Ruth Hackett

Racial discrimination and health: A prospective study of ethnic minorities in the United Kingdom

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Background/purpose: Racism has been linked with poor health in the United States. Little is known about prospective associations between racial discrimination and health in the United Kingdom (UK).
Methods: Data were from 4883 ethnic minority participants in the UK Household Longitudinal Study. Perceived discrimination based on ethnicity or nationality was reported in 2009/10. Psychological distress, mental functioning, life satisfaction, self-rated health, physical functioning and limiting longstanding illness were assessed in 2009/10 and 2011/12. Linear and logistic regression analyses adjusted for age, sex, income, education and ethnicity. Prospective analyses also adjusted for baseline status.
Results: Racial discrimination was reported by 998 (20.4%) participants. Cross-sectionally, racial discrimination was associated with increased odds of limiting longstanding illness (odds ratio (OR) = 1.78, 95% confidence interval (CI) 1.49; 2.13) and fair/poor self-rated health (OR=1.50; 95% CI 1.24; 1.82), greater psychological distress ($B = 1.11$, 95% CI 0.88; 1.34), poorer mental functioning ($B = -3.61$; 95% CI -4.29; -2.93), poorer physical functioning ($B = -0.86$; 95% CI -1.50; -0.27), and lower life satisfaction ($B = -0.40$, 95% CI -0.52; -0.27). Prospectively, discrimination was associated with greater odds of limiting longstanding illness (OR = 1.31, 95% CI 1.01; 1.69) and fair/poor self-rated health (OR=1.30; 95% CI 1.00; 1.69), as well as increased psychological distress ($B = 0.52$, 95% CI 0.20; 0.85) and poorer mental functioning ($B = -1.77$; 95% CI -2.70; -0.83).
Conclusions and implications: UK adults belonging to ethnic minority groups who perceive racial discrimination experience poorer mental and physical health than those who do not.

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Decision: Accepted, Poster

Last updated: 2nd December, 2019
By: qiaobing.wu@gmail.com, Dr. Qiaobing WU

Health behaviors of cross-border, newly-arrived and local students in Hong Kong: The role of family and school social capital

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Background/Purpose: The unique geo-political context of Hong Kong results in diverse student groups. In addition to local students, there are two other distinct groups: cross-border students (born in HK, living in mainland China but attending school in HK through daily commute) and newly-arrived students (born in mainland China and have lived in HK for less than seven years). This study aims to investigate how the three groups of students differ in their health behaviors, particularly as a function of social capital embedded in their family and school.

Methods: Data came from a survey with 2,180 4th-9th grade students from twelve schools in HK. Health behaviors were assessed by the frequency of doing sports each week, number of cigarettes smoked and number of days drinking wine in the past month. Family social capital was assessed by parent-child relationships and parental monitoring. School social capital was assessed by student-teacher relationships and peer relationships.

Results: The structural equation modeling results suggest that among the three youth groups, newly-arrived students are most susceptible to risky health behaviors. Both family and school social capital demonstrate significant effects on youth health behaviors, but their respective strength of effect varies on different behavioral outcomes and across the three different youth groups.

Conclusions and implications: The research findings reveal the significant role of family and school social capital in shaping the health behaviors of youths. Health interventions may be developed accordingly to promote positive and reduce risky health behaviors, taking into account the characteristics of different youth groups.

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By: jlau@cuhk.edu.hk, Prof. Joseph T.F. Lau

Sociopolitical developments and related emotional responses as structural determinants of population mental health: a comparative study in the Hong Kong general public between 2017 and 2019

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Background/purpose: Sociopolitical circumstances, including security, income inequality, social integration, and political conflicts, are important determinants of population health in Hong Kong (HK). This study examined the population mental health in 2017 and 2019, and the mediation roles of anticipated sociopolitical developments, emotional response, and satisfaction of living in HK to explain difference in prevalence of depression between 2017 and 2019 surveys.

Methods: Two random population-based telephone survey anonymously interviewed 420 and 380 adults in HK in March 2017 and August 2019, respectively. Questionnaire included scales assessing the aforementioned variables. Structural equation modeling (SEM) was applied to test the mediation hypothesis.

Results: The prevalence of probable depression was 20.5% in the 2019 survey, which was significantly higher than the prevalence reported in 2017 (8.2%). More participants in the 2019 survey had pessimistic anticipations over sociopolitical developments, low satisfaction of living in HK, and emotional disturbance due to HK's sociopolitical situation. The SEM model indicated the year of survey (2019 vs 2017) was directly associated with higher prevalence of depression and indirectly associated with depression via four paths: satisfaction of living in HK, emotional disturbance, pessimistic anticipations over sociopolitical developments and emotional disturbance, and satisfaction of living in HK and emotional disturbance.

Conclusions and implications: As the political tension would last and political pessimism is globally found, politics may have become a regular and persistent structural risk factor of mental health. Both politicians' awareness and mental health promotion are required to alleviate the impact of negative sociopolitical perception on mental health.

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Last updated: 2nd December, 2019
By: jenny.bowman@newcastle.edu.au, Jenny Bowman

Client uptake of and views towards a 'healthy lifestyle clinician' in a community mental health service

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Background/purpose: The provision of recommended preventive care to address chronic disease risk behaviours by community mental health services is low. This study assessed client uptake of an additional preventive care consultation offered by a 'healthy lifestyle clinician', and clinical and socio-demographic characteristics associated with uptake. Client views towards this model of care were also assessed.

Methods: Data were collected in a randomised controlled trial conducted within one community mental health service. Adult clients ($n = 811$) were randomised to receive either usual care or usual care plus the offer of an additional consultation with the healthy lifestyle clinician (intervention group). Uptake of the additional consultation was recorded by the healthy lifestyle clinician. Backward logistic regression determined associations between uptake and socio-demographic characteristics.

Results: Over a third of clients allocated to the intervention condition took up the additional consultation, with no factors being significantly associated with uptake. Clients reported a high level of acceptability (82%) with the model and almost all who received a consultation with the healthy lifestyle clinician (80%) were 'very much' or 'mostly' satisfied.

Conclusions and implications: Clients of a community mental health service viewed the offer of a preventive care consultation with a healthy lifestyle clinician to be acceptable and satisfactory. Over a third of clients took up the offer; a particularly important finding given the offer was made on a universal basis to all intervention participants regardless of factors such as diagnosis or interest in change. Findings support the potential of this model for providing preventive care routinely and systematically.

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By: sitongluo@cuhk.edu.hk, SITONG LUO

Physical activities and its association with perceived stress of older people living with HIV in China

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Background/purpose: Physical activity (PA) is a critical lifestyle factor of successful aging of people living with HIV (PLWH). The study aimed to assess the PA level of older PLWH in China and its association with their perceived stress.
Methods: A cross-sectional study was conducted in Yongzhou, Hunan Province, China in 2017. PLWH aged ≥ 50 years were eligible for the study. PA in the past seven days was measured by the International Physical Activity Questionnaire (IPAQ). The metabolic-equivalent tasks (MET) minutes were calculated based on the IPAQ; and the participants' PA level was classified into low, moderate, and high levels according to their MET-minutes. The perceived stress was evaluated by the Perceived Stress Scale (PSS). The multivariable linear regression was performed to examine the association between the MET-minutes and the PSS score.
Results: A total of 337 older PLWH were included. The mean age was 61.2 years and 73.6% of the sample were males. About 18.9%, 43.1%, and 38.0% of the participants reported a low, moderate, and high level of PA, respectively. After controlling age, gender, residential area, education level, marital status, employment status and personal income, a higher level of perceived stress was associated with a lower level of PA (b = -192.4; 95% CI: -318.2, -66.5; $p = 0.003$).
Conclusions and implications: The study found the majority of older PLWH in China might not achieve a high level of PA which is recommended by the healthy lifestyle. Interventions to reduce psychological stress may be helpful to improve older PLWH's PA level.

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Symposium ID and title if part of symposium: **47 Learned pain: Understanding learning processes involved in pain**
Decision: Accepted, Symposium
Last updated: 2nd December, 2019
By: buechel@uke.de, Prof Christian Büchel

The bright and dark side of generalization in pain

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Generalization is a unique phenomenon that allows an organism to make inferences on similar, but never experienced situations. The importance of generalization for an intelligent organism is highlighted by the fact that a current in AI research is only about the ability of artificial neural networks to generalize. In pain, generalization is a double edged sword: On the one hand generalization in chronic pain can allow more and more associative cues to create pain expectations, but on the other side generalization of positive treatment experience can help to overcome pain in future treatment situations. This presentation will show examples of both forms of generalization and will highlight the important role of the anterior insula in this mechanism.

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By: tarja.h.kettunen@jyu.fi, Professor Tarja Kettunen

A lay health worker (LHW) –tutored online health coaching for people with overweight – a real life intervention delivered in primary health care

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Background/purpose: Health behavior interventions are effective at promoting initial weight loss, but reduced weight is often difficult to sustain. The Acceptance and Commitment Therapy (ACT)-based methods offer participants an opportunity to reflect on how their thoughts and feelings may hinder healthy behavior maintenance. The objective of the study was to evaluate the effects of an ACT-based online 24-months health coaching intervention in which trained lay health workers (LHWs) acted as peer tutors for people with overweight.
Methods: The participants (BMI ≥ 25 kg / m^2) were recruited via health care centres. Of the 177 participants with complete data, 84% ($n = 148$) were female, 87% ($n = 154$) were obese (BMI ≥ 30 kg/m^2). The intervention contained online modules, group meetings and phone calls, and involved 10 trained LHWs. The data was analysed using General Linear Models for Repeated Measures (GLM).
Results: A total of 177 completed baseline data and 122 (69%) completed 24 months. Significant improvements ($p < 0.01$) were found at 24 months for two health status measures (self-rated health, waist circumference), one psychological factor (thought suppression), and frequency of physical activity. The improvement in psychological flexibility was marginally significant ($p = 0.013$). 21% of the participants achieved 5% weight loss.
Conclusions and implications: The intervention appeared to improve health status, psychological flexibility, and health behaviors of people with obesity. The intervention was implemented as a part of normal work in primary health care, so it is directly applicable to practice.

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Last updated: 2nd December, 2019
By: ucnvnia@ucl.ac.uk, Mrs Nouf Almeshal

Patient demand and expectations for antibiotics in upper respiratory tract infection: A scoping review

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Background/purpose: Antimicrobial resistance (AMR) is becoming a global health threat that is exacerbated by the misuse and overuse of antimicrobial medication. Antibiotics are prescribed for up to 75% of patients with upper respiratory tract infections (URTI) in primary care settings, and up to half of prescribed antibiotics are not needed or inappropriate. Primary care prescribers are impacted by perceived patients' expectations and demand for antibiotics to treat URTI symptoms. However, it is anticipated that patient expectation for antibiotics may be overestimated by General Practitioners. This review summarises current knowledge about patient expectations and demand as a determinant of antibiotic prescribing for UTRI and considered influencing factors.
Methods: We applied a broad search strategy to assess peer reviewed articles that investigate patients' behaviour and perceptions of antibiotics to treat URTI. The full search strategy, optimised for each database, was

conducted using MEDLINE, EMBASE, CINHAL, PsycINFO, and IPA from earliest date to June 2019. Title and abstract screening, followed by full text screening, were conducted by two reviewers. All study designs were eligible.
Results: Out of 4571 articles screened, 51 met our inclusion criteria. Studies have reported patients' expectations and demand for antibiotics to range between 2.1 - 95%. Several factors were associated with patients' expectations, most commonly reported were patients' misconceptions and lack of knowledge, type and severity of symptoms, previous experience with symptoms.
Conclusions and implications: The study identified how patient demand for antibiotics have been studied and reported and identified the determinants that can serve as targets for interventions to reduce inappropriate demand.

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By: annie.jones@ucl.ac.uk, Dr Annie Jones

Differences in patient beliefs and knowledge of antibiotics and antimicrobial resistance between high and low- or middle-income countries

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Background/purpose: Antimicrobial resistance (AMR) is a global health crisis. Understanding global patterns in beliefs about AMR and antibiotics is key for designing effective, culturally-relevant public health interventions to reduce inappropriate antibiotic use. We examined differences in beliefs and knowledge about antibiotics and AMR between high (HIC) and low- or middle-income countries (LMIC).
Methods: 250 participants completed an online questionnaire using Amazon mTurk assessing previous antibiotic use, perceptions of AMR, and knowledge and beliefs about antibiotics. Mann Whitney U-tests and chi-square tests examined differences in outcomes.
Results: Income classification was associated with antibiotic use ($\chi^2 = 13.72$, $p = .002$, $\phi = .24$). Higher proportions of participants in LMIC (25%) took their last antibiotics without a prescription, compared to those in HIC (5.7%). Few participants reported sourcing antibiotics outside of medical clinics, similar proportions were evident in both HIC and LMIC. There were no differences in beliefs about AMR between groups. Knowledge about antibiotics was higher in HIC compared to LMIC ($U = 1989.00$, z = -3.382, $p = .001$). Respondents from LMIC reported greater concerns about overuse ($U = 2021.50$, z = -3.101, $p = .002$) and harm ($U = 1806.50$, z = -3.78, $p < .001$) related to antibiotics, compared to participants from HIC.
Conclusions and implications: Contextual differences exist in use, knowledge, and perceptions of antibiotics. Interestingly, LMIC reporting greater misuse of antibiotics but also report greater concerns about antibiotic overuse and harm. Public health messages to optimise appropriate antibiotic use could therefore be designed to account for contextual factors.

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By: bwanamuchai@gmail.com, Muchai Manyara

Practices and perceptions towards consumption of healthy diets in sub-saharan africa: a mixed methods scoping review

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Background: Type 2 diabetes (T2D) is becoming increasingly prevalent in sub-Saharan Africa (SSA) imposing a significant disease and economic burden. Unhealthy diet is one of the modifiable T2D risk factors. Understanding the contexts of consumption of (un)healthy diets is important in developing T2D prevention interventions. This review aimed to synthesize evidence on practices and perceived barriers to consumption of healthy diets in SSA.
Methods: Seven databases were systematically searched for quantitative and qualitative studies published between 2000 and 2018 that investigated practices, and perceptions towards healthy diets in SSA. Qualitative findings were exported to Nvivo 12 and analysed thematically while quantitative findings were analysed narratively.
Results: Fifteen studies were included (eight qualitative and seven quantitative studies) which were conducted in four SSA countries – Cameroon, Ethiopia, South Africa and Uganda. Regular intake of fruits and vegetables was low and ranged between 0-34% in most studies. The most reported barrier to consumption of healthy diets was limited accessibility (availability and affordability). The other barriers were traditional dietary practices such as consumption of starchy staple foods, and availability and association of western diets with a high socioeconomic status.
Conclusions and implications: More studies exploring contexts of consumption of healthy diets are needed to represent more countries in SSA. These findings imply a need to: increase knowledge on risk posed by unhealthy diets such as starchy staple foods; implementation of food policies that make healthy foods more accessible; and imposing taxes on unhealthy foods and restricting their marketing to limit their accessibility.

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By: stephen.kasenda@kpsllmw.org, Dr Stephen Kasenda

Cardiovascular disease risk perception in urban and Rural Malawi

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Background Cardiovascular disease (CVD) is a leading cause of morbidity and mortality in low-income settings including Malawi. Limited risk awareness and healthcare-seeking increase the impact of heart disease and stroke. We explored constructs of cardiovascular "risk" in urban and rural communities, to facilitate the development of culturally situated and effective strategies for communicating CVD risk.
Methods Twenty-four community members were randomly selected and invited to participate in one male (n=6) and one female focus group discussions (FGD, n=6) in each community. We explored perceptions of threats (risks) to health, understandings of heart disease, healthcare seeking, concepts of risk and different approaches to communicating risk

(using visual prompts). The proceedings were recorded, transcribed verbatim and analyzed in NVivo using a framework approach.

Results Lifestyle, nutrition, mental health, and socioeconomic factors were considered threats to health. Heart disease was recognized by only some participants. Participants displayed a strong awareness of hypertension and positioned it as dangerous, leading to sudden death and/or stroke. Participants described how consultations with traditional and prophetic healers often preceded biomedical healthcare attendance. Participants' conceptions of risk were grounded in the perceived disease outcomes rather than probabilistic associations between diverse factors. Within this paradigm, healthcare workers were identified as primary agents for communicating likelihood of harm to individuals and communities. The use of colours and bar-graphs were preferred formats for communicating risk.

Conclusions and implications

CVD was not a pressing concern for study participants, but hypertension was. CVD prevention work should consider how to work with outcome-focused conceptions of risk.

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Symposium ID and title if part of symposium: 57

Reducing skin cancer risk in healthy and patient populations; behavioural interventions targeting poor adherence to photoprotection and skin-checking.

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By: angela.rodrigues@northumbria.ac.uk, Dr Angela Rodrigues

Development process and testing of a smartphone app to promote sun-protection among holidaymakers

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Background: Intermittent UV-exposure is a risk factor for melanoma and recreational sun-exposure has been associated with melanoma prevalence. This study aimed to evaluate a theory and evidence-based mobile-phone application (mISkin) supporting holidaymakers in reducing excessive UV-exposure.

Methods: The development process of the mISkin app was informed by a systematic review of RCTs, a user engagement study and formal testing in a pilot study with holidaymakers travelling to sunny destinations. The systematic review of RCTs provided information on behaviour change techniques (BCTs), use of theory and delivery methods associated with effectiveness of sun safe interventions. A user-engagement study with 17 users was used to optimise acceptability. A pilot study was conducted to test feasibility and acceptability of mISkin app (using semi-structured interviews).

Results: The development of the app was based on evidence, experts' knowledge and experience, and user involvement. All 17 participants from the user-engagement study were satisfied with the mISkin prototype, expressed willingness to use it and made suggestions to optimise acceptability (e.g. customisable prompts, shortened videos). Pilot study showed that random allocation to SPF15 vs. SPF30 was not viable, with most considering SPF15 too low. Participants were satisfied with the mISkin app and made suggestions for further improvements.

Conclusions and implications: The mISkin app was designed to promote sun-protection among holidaymakers and the systematic and iterative development process brought unique and complementary insights to enable better optimisation of your intervention. The intervention procedures were found to be acceptable and feasible, but areas for improvements were identified in the pilot study.

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By: sara.c.simao@gmail.com, Sara Simão

Systematic review of dietary behaviour change interventions in adolescents based on self-determination theory

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Background: Nutrition interventions during adolescence can have a lasting health impact, affecting the adolescent themselves and potential future generations. Little is known about how to motivate adolescents to improve their diets. According to self-determination theory, lack of attention to intrinsic motivations may be one factor that prevents adolescents engaging in health behaviour change. This systematic review synthesizes self-determination theory based interventions to motivate healthier food choices in adolescents.

Methods: Seven databases were systematically searched using MeSH terms and free text. Titles and abstracts were screened by the main reviewer against inclusion criteria, which included adolescents between 10 and 19 years old, self-determination theory based interventions and measures of motivation, behavioural or behaviour related outcomes. Ten percent of the papers were screened independently by a second reviewer.

Results: The search yielded 497 potential articles, of which 14 met the inclusion criteria. Most interventions targeted both healthy eating and physical activity. Eight of the 14 studies, used multiple theories to design the intervention, 5 studies were integrated in the school settings and 4 were family and school based interventions. Preliminary analysis showed an increased autonomous motivation for healthy eating and resulted in decreased consumption of sweetened beverages and processed snacks, and increased consumption of healthy foods.

Conclusions and implications: The evidence suggests interventions based on self-determination theory to motivate healthier food choices can be engaging and effective. This review provides evidence to support using self-determination theory as the basis of future interventions targeting dietary behaviour in adolescents.

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By: michelle.clark@nes.scot.nhs.uk, Dr Michelle Clark

Learning to read MAPs: Evaluation of a blended learning programme to support behaviour change skills development in health and social care staff in Scotland.

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Background: Practitioners' ability to support patients to make changes to health behaviours is central to achieving current Scottish Government policy objectives. The Health Behaviour Change Competency Framework (HBCCF, 2010) provides a practical, theoretically aligned model (MAP: Motivation, Action, Prompts) to guide the use of evidence-based behaviour change techniques (BCTs). The Health Improvement team at NHS Education for Scotland (NES) applied this model to the development of a blended-learning skills-based training programme, which aims to increase practitioners' skills in using MAP to facilitate change in patients' behaviour. This study reports evaluations of the programme.
Methods: Between April 2018 and September 2019, self-reported knowledge and confidence in MAP skills and workshop satisfaction were assessed via pre and post questionnaires. T-tests were conducted using SPSS and content analysis applied to free text feedback.
Results: 124 practitioners from different professions (clinical, AHP, social care) attended a MAP skills-based workshop and completed questionnaires; 39 were matched pairs. Significant increases were found in mean knowledge (1.41, 95% CI 0.99 to 1.82; $P < 0.001$) and confidence (1.35, 95% CI 0.90 to 1.81, $P < 0.001$). Participants valued skills-based activities and resources provided to support implementation. Suggested improvements were more skills- practice and increasing to a 2 day course.
Conclusions and implications: MAP workshops increased self-reported knowledge and confidence in using MAP skills. Further evaluation is required to assess the programme's ability to support implementation of knowledge and skills into practice in real life settings.

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By: gillian.smith.2@glasgow.ac.uk, Ms Gillian Smith

Impact of duration of screen time use on adolescent wellbeing in scotland

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Background: Social media and internet use is ubiquitous amongst young people today, yet it's impact on adolescent wellbeing is not fully understood. This study assessed the extent to which daily screen-time was associated with mental wellbeing in Scottish schoolchildren.
Methods: The Health Behaviour in School-aged Children (HBSC) 2017/18 survey is representative of 11, 13, and 15 year olds in Scotland. The primary exposure was daily screen-time during weekdays (≤2 hours, 3-5 hours, and >5 hours). Secondary binary measures included intensive online communication, and preference for online social interaction. The WHO-5 wellbeing index was used to assess mental wellbeing. Multilevel mixed effects regression models were used, adjusted for sociodemographic factors, exercise frequency and, for 13 and 15 year olds, sleep duration and quality.
Results: There were 5,286 pupils from 208 schools in Scotland who participated. Mean wellbeing was lower in girls than boys (55 vs 60, $p<0.001$). Girls reported greater daily screen-time; 18% girls spent >5 hours (n=486), and 16% of boys (n=416), p=0.025. Mental wellbeing was lower in the heaviest users (>5 hours), with a difference of 15% amongst girls and 8% amongst boys ($p<0.001$) when compared to the lightest users (≤2 hours daily). In the adjusted models, this improved to a 6% difference for girls and 3% for boys. For older boys and girls, sleep duration and quality completely attenuated the association.
Conclusions and implications: Longer daily screen-time duration was associated with small reductions in wellbeing in Scottish adolescents, however the association was attenuated by sociodemographic factors, exercise, and sleep.

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By: adrianhelentaylor@gmail.com, Adrian Helen Taylor

A multi-centre Trial of physical Activity assisted Reduction of Smoking (TARS): Baseline characteristics, and health trainer led intervention engagement

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Background: Smoking reduction has little health benefit but can increase quit attempts and abstinence. Physical activity reduces cigarette craving and may promote smoking reduction.
Methods: 915 smokers wishing to reduce but not quit smoking were recruited through community and primary/secondary care across 4 UK sites. They were randomised to usual care or usual care plus ≤8 sessions of client-centred behavioural support. The primary outcome was floating prolonged 6 month biochemically verified abstinence at 9 month follow-up. Intervention engagement was recorded via a bespoke online system. We report the baseline sample characteristics, and explored factors associated with number of sessions using multiple regression.
Results: Overall, the sample were 55.4% female, 84.9% white British, had a mean (SD) age 49.8(13.9) years, and smoked 18.0(13.4) cigarettes per day. 5.1% reported using smoking cessation medication and 9.8% vaped. Intervention participants received a mean (SD; range across sites) 4.8 sessions (3.4; 3.5-6.8), and 76% (58-89% across sites) had ≥2 sessions. Half the sessions were face to face and half by telephone, with a mean (SD) duration of 46.3 (18.0) minutes and 20.9 (13.1) minutes, respectively. The proportion attending 2 or more intervention sessions differed by site but no baseline characteristics were associated with engagement.
Conclusions and implications: This trial is the first to assess the effects of a multiple behaviour change intervention on smoking abstinence among smokers wishing to reduce but not quit. Intervention engagement was generally good, and further work should help to understand why it differed across sites.

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By: akisan67@gmail.com, Nakata Akinori

Greater social jetlag associates with increased musculoskeletal symptoms in Japanese daytime working population: a cross-sectional study

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Background/purpose: Social jetlag, i.e., a mismatch between biological and social timing, has been suggested to be associated with various health issues including obesity, poor mental health, and metabolic disorders. The purpose of this study was to clarify the relationship between social jetlag and musculoskeletal symptoms among the Japanese working population.
Methods: A total of 69,519 non-shift daytime employees representing various industries and occupations were surveyed by means of a self-administrated questionnaire between 2007 and 2012. In the questionnaire, participants answered questions regarding bedtime and wake-up times on weekdays and weekends and musculoskeletal symptoms (stiff shoulders and back pain, respectively). Study-defined social jetlag was calculated as the difference in hours of midpoint of sleep times between weekdays and weekends. Multivariable logistic regression was used to examine the association between social jetlag and musculoskeletal symptoms with adjustment for potential confounders.
Results: Greater social jetlag was significantly associated with an increased likelihood of having stiff shoulders. The multivariable adjusted odds ratio (95% confidence intervals) for ≥2 hours and 1 to <2 hours of social jetlag for having stiff shoulder was 1.12 (1.02–1.22) and 1.07 (1.02-1.14) compared to those with 0 to <1 hour of social jetlag (reference), respectively. No significant association was found with regard to social jetlag and back pain.
Conclusions and implications: In this large population-based cross-sectional study, employees with social jetlag had a significantly higher odds of stiff shoulders but not for back pain. The results raise the importance to provide sleep training programs aiming to minimize social jetlag.

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By: barbara.mullan@curtin.edu.au, Prof Barbara Mullan

Using dual process theory to predict safe food handling behaviours

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Background: Foodborne disease is a global concern and, most incidences happen in the domestic environment. While the past decade has seen an increase in research investigating predictors of food-safety behaviours, this research has been hampered by a focus on motivational models of behaviour and the conceptualisation of food-safety as a unitary behaviour. Therefore, the aim of this study was to explore the predictors of four separate food-safety behaviours using a dual process theory.
Methods: A prospective design was used to collect data at two time points. Participants were recruited via Turk Prime, an online research participation platform based in the United States. Two-hundred and sixteen participants completed self-report measures of intention, habit, self-control, self-efficacy and food-safety knowledge at time 1, and measures of food-safety behaviours (cleaning hands and surfaces before preparing food, keeping food at the correct temperature, storing raw and cooked food separately, and cooking food properly) one week later.
Results: An extended dual process theory accounted for between 11% and 52% of the variance in food-safety behaviours, however there were no variables in the models that consistently predicted all four food-safe behaviours. Nonetheless, knowledge significantly predicted three of the four food-safety behaviours, and intention and self-control significantly predicted cleaning behaviour. Habit was not found to significantly predict any of the food-safety behaviours.
Conclusions and implications: The predictive utility of conscious and non-conscious processes varied across the four food-safety behaviours. These findings have implications for understanding the varying influences of these processes on distinct food-safe behaviours.

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By: adrianhelentaylor@gmail.com, Adrian Helen Taylor

The mediating effects of theory linked process measures on 12 month accelerometer recorded physical activity within the e-coacher RCT involving primary care exercise referral participants.

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Background: The e-coachER RCT aimed to determine whether adding web-based behavioural support to GP exercise referral schemes (ERS) increased long-term accelerometer assessed moderate and vigorous physical activity (MVPA) for patients with chronic conditions, compared to usual ERS alone. Here we assess if key process outcomes mediated intervention effects on MVPA at 12 months (as the primary outcome).
Methods: 450 adults were recruited in Plymouth, Birmingham and Glasgow. The e-coachER intervention was aligned with self-determination theory and evidence-based behaviour change techniques. Participants completed survey process measures at 0, 4 and 12 months. Data from participants included in the 12 month primary analysis were analysed. The mediating intervention effects on change in the process outcomes (from 0-4 months), on change in MVPA at 12 months was analysed through the product-of-coefficients method, controlling for baseline measures and other covariates.
Results: Based on data from 232 participants the e-coachER intervention had significant positive effects on beliefs about importance, confidence and competence (but not autonomy and support) at 4 months, but a non-significant weak indicative effect (in favour of the intervention) on 12 month MVPA. There were no intervention effects on process measures at 12 months. There were no significant mediating effects of changes in process measures on the primary outcome.
Conclusion and implications: Despite 4 month intervention effects on some process measures these did not mediate intervention effects on 12 month MVPA. More effective interventions are needed to influence behaviour changes processes with potential effects on long-term MVPA, among ERS participants with chronic conditions.

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Using a clinician-focussed nudge to increase tissue donation rates at an Accident and Emergency ward

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Background: Tissues such as corneas, heart valves, skin and tendons can be donated after circulatory death and offer both life enhancing and life-saving opportunities for many patients. Many more patients are eligible for tissue donation than whole organ donation and yet there is a national shortage of tissues. This project aimed to develop a scalable, low-cost intervention to increase tissue donation.
Methods: It was designed and implemented by a doctor working at the Accident and Emergency ward. Referring a deceased patient to the tissue donor co-ordinator is the crucial first step in tissue donation. It is the clinician who initiates this first step and so the project focusses on changing the behaviour of clincians. The project took place in an Accident and Emergency ward at a mid-sized hospital in central Scotland. Multiple staff education approaches, departmental posters and novel prompt materials were developed during the project.
Results: These resulted in a doubling in referral numbers and a doubling of corneal donations from the hospital.
Conclusions and implications: This project has shown great potential to enhance referral rates and the methods used could be readily applied in other Emergency Departments and hospital wards. Routine consideration of eligibility for tissue donation will not only benefit those patients awaiting tissues for transplant but will achieve patient centred care, even after death.

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By: pia.vonblanckenburg@gmail.com, Pia von Blanckenburg

Matters of life and death: An experimental study investigating psychological interventions to encourage end-of-life discussions

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Background: End-of-life discussions can alleviate distress and uncertainties and are associated with higher satisfaction with palliative care in both old and young adults. *Advance Care Planning* is a possibility to realize a structured discussion about relevant end-of-life topics. Nevertheless, the majority of the western population do not use these programs. Although talking about death is often seen as alleviative and worthwhile, it has become a taboo in our society, both in healthy and ill populations. The aim was to investigate short interventions encouraging end-of-life discussions in healthy adults.
Methods: 168 participants were randomized to four different interventions (EG1: value-based intervention with an EOL-perspective, EG2: motivation-based intervention with an EOL-perspective, EG3: combination of EG1 and EG2, CG: control group). The primary outcome was the readiness to engage in end-of-life topics. Secondary outcomes were fear of death, fear of dying and death acceptance. Assessments took place before, directly after the intervention and at two weeks follow up.
Results: EG2 and EG3 reported significant more changes in the readiness to engage in end-of-life discussions than the CG ($F(3,160)=7.21, p<.001, \eta^2=.12$) directly after the intervention. Young adults reported significantly more changes than older adults ($F(1,160)=18.3, p<.001, \eta^2=.10$). There were no significant effects of the intervention on end-of-life fears or death acceptance. All results remained stable at follow up.
Conclusions and implications: Short interventions can be useful to encourage end-of-life discussions and could be integrated in health care programs. The efficacy and effectiveness of these short interventions in palliative patients are currently examined by our research group.

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By: christina.potter@phc.ox.ac.uk, Dr. Christina Potter

Testing the effects of environmental labelling on food selection using an experimental online supermarket platform

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Background/purpose: The environmental impacts of foods are highly variable. To enable consumers to make environmentally informed purchases, they need relevant information about the environmental impact of food products. Here, we explore the individual and combined effects of two types of ecolabels: (i) a multi-indicator logo comprising four environmental indicators (water scarcity, climate change, nitrogen pollution, and biodiversity loss) and (ii) a total environmental impact score. This study will explore whether these labels are effective at shifting consumer purchases towards more sustainable foods.
Methods: UK adults will be recruited online to take part in an experimental supermarket study. Participants will be randomly allocated to one of four groups whereby all products on the platform will be displayed with a product-specific (i) multi-indicator logo, (ii) total environmental score logo, (iii) combination logo, or (iv) no logo. Participants will complete a shopping task using a pre-specified 10-item shopping list.
Results: One-way ANOVA will assess differences in the total environmental impact score of the shopping basket between each of the four groups. We will also examine differences in the nutrient profile and total cost (in £) of the shopping basket between groups.
Conclusions and implications: Uniquely, this experiment will test multiple environmental indicators, allow these environmental impacts to vary within a product not just between different products, will test a far greater number of products than prior studies (>11,000), and will use a first-of-a-kind online supermarket that is familiar to consumers. This talk will describe the findings and implications from this study.

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By: wenchih2@gmail.com, Wen-Chi Hung

The relationship between social capital and physical activity of rural older people in Taiwan

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Background: The environment of successful aging and social support were affected by the degree of urbanization. The main purpose of this study is to explore the meaning of social capital in promoting the physical activity of rural older people.
Methods: The older adults over the age of 65 in the Taichung area were the subjects of study. A total of 400 older adults were surveyed, 328 questionnaires were actually sent out, and 290 were actually recovered. The completion rate of the questionnaire was 88.4%. A population based cross sectional study using the Older Adult Component of the Health Survey. The questionnaire included the following parts: physical activity scale, social capital scale.
Results: The results showed that the social capital was positively related to the physical activities of the older people. When the older people have higher neighborhood satisfaction, more frequent interaction with the neighborhood, their physical activity were relatively more. The study found that age, conscious movement disorder and neighborhood interaction were significant factors predicting the performance of physical activity of the older people in rural areas.
Conclusions and implications: In the strategy of promoting physical activity of the older people, different methods must be used to overcome the cognitive dysfunction, in order to achieve the purpose of promoting physical activity of the older people. It is also possible to design activities for neighborhood communities that focus on urban and rural characteristics, strengthen interactions between neighborhood and drive the will of the older people.

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By: stephanie.a.hooker@healthpartners.com, Dr Stephanie Hooker

Patient Perspectives on the Acceptability and Utility of Physician-led Health Behavior Change Interventions in Primary Care

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Background: Despite practice guidelines urging primary care providers (PCPs) to address health behavior change with patients, PCPs spend <1% of their visit time discussing lifestyle changes. The *Change that Matters* (CtM) curriculum empowers PCPs with evidence-based tools to deliver brief interventions for six health behaviors (sleep, physical activity, alcohol reduction, smoking cessation, healthy eating, and medication adherence). Modules include didactic training, electronic health record documentation templates, and interactive patient handouts. This study examined patient perceptions of the acceptability and utility of the PCP-led discussions and patient handouts.
Methods: Adult patients (n=17) completed a brief qualitative interview immediately after discussing a health behavior during a regularly scheduled PCP visit. Interview questions explored patients' experiences with the health behavior change discussion and the handouts. Interviews were recorded, transcribed, and double-coded. Using Nvivo software, content analysis was used to extract qualitative themes.
Results: Overall, patients appreciated PCPs raising the health topics, and many patients reported feeling empowered to take ownership of their health and make positive lifestyle changes following these conversations. Patients liked the interactive, goal-setting format of the handouts, and appreciated the structured way to track progress and hold themselves accountable. Further, patients appreciated the specific suggestions to make small improvements in their behavior. Some patients acknowledged barriers, including not being ready to change.
Conclusions and implications: Patients described the handouts and PCP-led lifestyle discussions as both acceptable and helpful. These findings are an important component of the broader CtM evaluation, and may motivate PCPs to address health behavior change with patients more frequently.

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Last updated: 2nd December, 2019
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Behavioral trends of socially isolated elderly people in rural areas of Japan

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Purpose: The purpose of this study is to clarify the behavioral trends of socially isolated elderly people in rural areas of Japan. This study clarifies the behavior of the elderly who tend to avoid others by focusing on observations made of nurses at the Community General Support Centers (CGSCs).
Methods: The subjects of the study were five nurses employed at the CGSCs who continuously provided support for socially isolated elderly people. Semi-structured interviews were conducted to collect data from the nurses. The research question for our study is, "How do socially isolated elderly people live in the community?" The interview data were collected from August to September 2019 before being qualitatively analyzed. This study was conducted with the approval of the Ethics Review Board of the University of Yamanashi.
Results: The subjects included 4 females and 1 male. Their career at the CGSCs were for a period of 4 to 13 years. The behavioral trends of the socially isolated elderly include the following seven categories: "Living in a messy house," "Estranged relationship with their family," "Avoid relationship with the neighbors," "Self-based health management," "Move in from another city," "Tend to be reluctant to receive social services," and "Living inconspicuously."
Conclusions and implications: This study reveals the behavioral trends of socially isolated elderly people and establishes the need to clarify how to support socially isolated elderly people in rural area settings.
This work was supported by JSPS KAKENHI Grant Number JP15K20800, JP18K17634.

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By: katie.gallacher@glasgow.ac.uk, Dr Katie Gallacher

Youtube advice about stroke recovery: is it evidence based?

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Background: Stroke survivors are increasingly relying on internet-based resources such as YouTube to aid stroke recovery. Research has shown that YouTube videos relevant to other health conditions can contain information that is not evidence-based. Our aim was to ascertain if the information available on YouTube about stroke recovery in the community was evidence-based.

Methods: YouTube (www.youtube.com) search using terms "stroke recovery advice". Location "United Kingdom", language "English (UK)". Videos sorted by relevance, the first 200 retrieved. Screened by titles and introductions, then full videos. Two independent reviewers, a third party arbitrated disagreements. Inclusion criteria: English language; stroke recovery advice aimed at stroke survivors in the community; publication within 10 years. Descriptive data were noted e.g. country of origin. Video content was extracted and analyzed to ascertain its evidence-based nature using a framework based on the GRADE system.
Results: 67 videos included, providing information about physiotherapy, principles of recovery, lifestyle advice, swallowing advice, alternative therapies. Of the included videos, 55% were categorized as 'evidence-based' (supported by high-quality evidence); 12% 'partly evidence-based' (mix of high and moderate, low /very low quality evidence); 8% 'inconclusive' (moderate /low quality) ; 9% 'lack of evidence' (very low /no evidence) and 16% 'motivational' (motivational advice only, evidence cannot be assessed).
Conclusions and implications: 29% of videos contained advice on stroke recovery not backed by high-quality evidence. Health care providers should be aware of this when advising that stroke survivors seek information online. Tighter regulations of the publishing of health information on YouTube may be warranted.

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By: jjacobs@mgh.harvard.edu, Assistant Professor of Psychology Jamie Jacobs

Enhanced coping and self-efficacy in caregivers of stem cell transplant recipients: identifying mechanisms of a multimodal psychosocial intervention

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Background/Purpose: In a recent trial, a six-session intervention (BMT-CARE) that integrated medical information with cognitive-behavioral strategies improved quality of life (QOL), mood, coping skills, and caregiving self-efficacy in family/friend caregivers of hematopoietic stem cell transplantation (HCT) recipients. We examined whether improvements in coping and self-efficacy mediated the intervention effects on QOL and mood.
Methods: From 12/2017 to 4/2019, 100 caregivers of HCT recipients (median age=61 years) were enrolled pre-transplant and randomly assigned to either BMT-CARE or usual care. Caregivers completed self-report measures of QOL (CareGiver Oncology QOL), depressive and anxiety symptoms (Hospital Anxiety and Depression Scale), coping skills (Measure of Current Status), and self-efficacy (Cancer Self-Efficacy Scale-Transplant) at enrollment and 60 days post-HCT. We used causal mediation regression models to examine whether changes in coping and self-efficacy mediated intervention effects on QOL, as well as depressive and anxiety symptoms.
Results: Improvements in 60-day QOL in patients assigned to BMT-CARE were partially mediated by improved coping and self-efficacy (indirect effect=6.93, SE=1.85, 95% CI [3.71, 11.05]), Similarly, reductions in 60-day depressive and anxiety symptoms were partially mediated by improved coping and self-efficacy (indirect effect depression=-1.19, SE=0.42, 95% CI [-2.23, -0.53]; indirect effect anxiety=-1.46, SE=0.55, 95% CI [-2.52, -0.43]). Combined improvements in coping and self-efficacy accounted for 67%, 80%, and 39% of the total intervention effect on QOL and depressive and anxiety symptoms, respectively.
Conclusions and implications: A brief psychosocial intervention for caregivers of HCT recipients may improve QOL and mood by teaching coping skills and enhancing self-efficacy during the acute HCT recovery.

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By: csbognardr@gmail.com, Csaba Bognar dr.

Rural migration in the context of the quality of work, subjective sense of livelihood and health care system

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Background: In contrast to stressful big cities, the close-to-nature silence of the rural environment is an attractive alternative for many people. However, unwanted emigration from the countryside is significant, which can also be linked to the quality of health services.
Methods: As part of another research, in three selected villages in northern Hungary, in Nógrád County, we conducted a large number of semi-structured interviews by random approach about the attitudes towards access to health care system in August 2019. I chose from all of these, where the issue of emigration and the quality of work and livelihood were discussed in more detail in the context of health care system (N = 20).
Results: A positive attitude of life strongly correlates with the material security of living, and quality of work. The interviewees who have better job opportunities with higher material and higher social prestige -which, incidentally, had higher education qualification - are characterized not only by a happy worldview, greater family harmony but also by a high level of satisfaction with the rural environment and local conditions, in addition, the radical exclusion of longing from the village can be observed.
Conclusions and implications: In general, people with a subjective sense of living in a higher social quality gave the most positive feedback regarding access to health services and their quality.

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By: ss@mrc.soton.ac.uk, Miss Sarah Shaw

Involving parents in adolescent health interventions: How parents view their role in supporting adolescents to eat more healthily and be more active

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Background: Adolescence is often characterised by unhealthy behaviours such as poor dietary intakes and low physical activity levels. During this time, adolescents' capacity for decision making is increasing, however, parents remain influential in shaping many of their behaviours. This study aimed to explore parents' views of adolescent health behaviours and identify ways in which parental involvement can be incorporated into adolescent health behaviour change interventions.
Methods: Twenty-eight parents with adolescents participated in explorative qualitative interviews to understand their perspectives on adolescent health behaviours. Data were analysed using inductive thematic analysis.
Results: Five themes were identified: (1)'How I see my role' describes parents' view of their own household duties and level of control over their adolescent; (2)'What's important to me and why' describes parents' past experiences and motivations for improving their own and their family's health; (3)'Factors outside the home that influence their behaviours' describes changing exposure to external factors that are having increasing influence on adolescents' health behaviours as they age; (4)'What my adolescent wants' describes parental perceptions of what their adolescent asks for and factors that will encourage engagement with healthier behaviours; (5)'Negotiating control' describes the changing dynamics between parents and their adolescents.
Conclusions and implications: Parents offer support in varying ways and have changing levels of control and input to their adolescents' lives over time. Finding ways to incorporate parental support into interventions targeting adolescents, in a manner that is acceptable to adolescents, has the potential to improve the engagement levels with and effectiveness of such interventions.

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By: patricia.auger.chum@ssss.gouv.qc.ca, Miss Patricia Auger

Impact of a web-based self-management intervention on quality of life of people with epilepsy: Results of a pilot randomized controlled trial

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Background: Epilepsy management relies heavily on individual skills. Existing digital interventions focus primarily on treatment and seizure tracking. A web-based educational intervention was developed to support self-management among people with epilepsy (PWE). The intervention consists of a series of short video clips that address knowledge acquisition, problem solving, medication management, symptoms monitoring, and safety promotion.
Methods: A pilot randomized controlled trial (RCT) was conducted in an outpatient setting to evaluate the intervention's efficacy among adult patients with Internet access. A convenience sample of 75 patients was randomized between an experimental group that received the intervention (EG, n=37) and a control group referred to websites (CG, n=38). Outcomes measured were self-management, knowledge, and quality of life (QoL). These were measured at baseline and one and three months later with a self-administered questionnaire. Analyses of variance were conducted to assess difference from baseline for both groups.
Results: Mean age of participants was 40 years (range: 18–73); 45% were female. They received their diagnosis from less than 1 year earlier to 60 years earlier. At baseline, 96% took antiepileptic medication, 48% reported medication side-effects, and 48% had had one or more seizures in the past month. A significant inter-group difference from baseline emerged: EG participants experienced greater improvement in overall QoL compared with CG participants, LSMEANS (95% CI): 0.411 (-0.06, 0.76).
Conclusions and implications: The web-based intervention shows promise in terms of usefulness in enhancing QoL among PWE. QoL appears to be a sensitive and responsive patient-reported outcome for PWE.

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Women's Health during Phases of Hormone Transition in the Life Course: On Psychobiological Predictors of Psychopathology and Resilience

Decision: Accepted, Symposium
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By: schmalenbergerkatja@gmail.com, Katja Schmalenberger

Toward the reliable and valid diagnosis of DSM-5 premenstrual dysphoric disorder: Advances based on three within-person studies

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Background: Premenstrual dysphoric disorder (PMDD) is a new DSM-5 diagnosis characterized by the cyclical emergence of five or more symptoms in the luteal phase of the menstrual cycle, with symptom remission in the follicular phase. Diagnosis is based on daily symptom ratings across at least two cycles. This talk presents three studies on the reliability and validity of these diagnostic criteria.
Methods: Study 1 develops and initially validates a standardized scoring system for making DSM-5 PMDD diagnoses using daily ratings (i.e., Carolina Premenstrual Assessment Scoring System; C-PASS). Study 2 clarifies the type and number of symptoms best predicting premenstrual impairment and study 3 identifies temporal subtypes of PMDD symptoms. In all studies, naturally-cycling females recruited for retrospectively reported premenstrual symptoms completed daily PMDD symptom and functional impairment reports for 1–4 cycles (N_{study1}=200; N_{study2}=267; N_{study3}=74).
Results: Analyses revealed an excellent agreement of the C-PASS diagnosis with expert clinical diagnosis (study 1). The optimal number of symptoms for predicting clinically significant premenstrual impairment was four. Cognitive (and not emotional) symptoms were the most robust predictors of impairment (study 2). Also, three temporal PMDD subtypes with varying symptom onset and clearance were identified (study 3).
Conclusions and implications: The C-PASS reliably and validly standardizes and streamlines the complex, multilevel PMDD diagnosis. Additional work is needed to determine whether cognitive symptoms in PMDD should receive greater attention, and to revisit the usefulness of the five-symptom diagnostic threshold. Finally, experimental work is needed to investigate possible pathophysiologic differences in temporal subtypes, and whether unique treatment approaches are needed.

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By: e.morton@strath.ac.uk, Dr Liza Morton

'When I put it on I don't feel like me anymore': the impact of wearing the hospital gown

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Background: The importance of personalised and dignified care is increasingly being recognised in healthcare policy and practice. Despite recent drives to empower patients with person centred health care provisions, the institutionalised acceptance of the hospital gown persists. Research has yet to explore the impact of wearing the hospital gown on patients' wellbeing.
Methods: Two studies were carried out to consider the impact of the hospital gown on wellbeing among adults with and without chronic health conditions. The first study consisted of conducting in-depth, semi-structured interviews ($n = 10$) with adults living with life-long chronic health conditions and thematic analysis was used to identify the themes. The second study was a cross-sectional, online survey exploring adults' views ($n = 928$) and experiences of wearing the hospital gown.
Results: Qualitative analysis (study 1) identified the following themes:(1) symbolic embodiment of the 'sick' role, (2) relinquishing control to medical professionals, and (3) emotional and physical vulnerability. Quantitative analysis (study 2) of the online survey data indicated that the majority of adults reported wearing the hospital gown despite feeling uncertain that it was a medical necessity. Its design was considered to be not fit for purpose. Adults reported feeling exposed, self-conscious, and uncomfortable while wearing the hospital gown; essentially lacking in dignity.
Conclusions and implications: These findings suggest that hospital gowns may contribute towards patients experiencing an increased sense of exposure, discomfort, disempowerment and embarrassment. Dehumanising aspects of care, as symbolically represented by the hospital gown, may adversely impact on patient wellbeing increase distress.

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IBy: sherri.gorin@gmail.com, dr Sherri Sheinfeld Gorin

Increasing detection, hpv immunizations, and screening behaviors for cervical cancer elimination: international perspectives

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4 Pan American Health Organization (PAHO)

Background: Cervical cancer is the second most common cancer of women worldwide. In developed countries where organized cervical screening programs have been implemented, mortality from cervical cancer has decreased, although incidence may not have similarly diminished. High risk types of HPV are necessary though not sufficient causes of the vast majority of cervical cancers. In addition, HPV is responsible for more than 90% of anal cancers, about 70% of vaginal and vulvar cancers, and more than 60% of penile cancers. About 70% of cancers of the oropharynx may be linked to HPV. While vaccines against HPV have been approved for use in more than 100 countries, full coverage has been slow and uneven. In Scotland, routine vaccination of girls aged 12-13 years with the bivalent HPV vaccine has led to a dramatic reduction in preinvasive cervical disease.Routine HPV testing has replaced routine Pap smears in the Australian NCSP. Novel self-sampling cervical cancer approaches for under-screened women offer promise.Even in countries with national cervical cancer screening and HPV vaccination programs, however, cervical cancer control, and eventual elimination, relies on a multipronged approach of early detection, age-relevant HPV immunization, screening, effective treatment and followup. **Aims**. The aims of this symposium are to: (1) examine the psychosocial barriers and supports to cervical cancer screening, including primary HPV testing, in the several UK and Australian population-based programs; (3) describe the rates of HPV inoculation (initiation and completion) across the UK, with particular attention to variations by racial/ethnic and SES subgroups; (3) explore the feasibility and effectiveness of emerging self-sampling approaches to HPV DNA detection to reduce cervical cancer worldwide.
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Psychosocial impact of primary HPV testing: 12 months into the renewal of the Australian National Cervical Screening Program

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Background/Purpose: Women have shown concerns about changes to the National Cervical Screening Program (NCSP) but tend to overlook the change from a two-yearly Pap test to a five-yearly human papillomavirus (HPV) test, which is the basis for many of the changes made to the program. We examined the psychosocial impact of primary HPV test results in women screened under the renewed NCSP.
Methods: Women in Australia aged 25 – 74 years who received cervical screening since December 2017 were recruited through a market research company and completed an online survey. Primary outcome measures were anxiety and general distress. Qualitative interviews were conducted with a sample of these women testing HPV+, HPV-, or don't know.
Results: 1004 women completed the survey. Most women tested HPV negative (80.9%), with 6.5% testing HPV positive; 12.6% did not know their result. Women testing HPV positive were more anxious (53.03 vs 43.58, $p<0.001$), distressed (3.94 vs 2.52, $p=0.004$), concerned about their test result (5.02 vs 2.37, $p<0.001$), showed greater distress about their test result (7.06 vs 4.74, $p<0.001$) and cancer worry (quite or very worried 35.4% vs 11.6%, $p<0.001$) than women testing HPV negative. Women testing HPV positive had greater knowledge of HPV (9.25 vs 6.62, $p<0.001$) and HPV testing (2.44 vs 1.30, $p<0.001$) than women testing HPV negative.
Qualitative findings from 26 of these 1004 women, showed women had some understanding that the HPV virus is detected earlier than abnormal cells and that HPV is common. Some expressed positive attitudes towards the primary HPV test and were not anxious about less frequent screening. Most women envisaged the changes would have minimal impact on their screening behaviour. Women mainly wanted more information about the changes and the possible results from the new primary HPV test. Anxiety about being at 'increased risk' was more apparent in women who were HPV positive without history of abnormal results.
Conclusions/Implications: Receiving an HPV positive result as part of the revised NCSP significantly raised anxiety, general distress, concern and distress about test results in women. These findings suggest the need to develop ways to mitigate this impact in women receiving HPV positive test results.

Submission ID: 600
Symposium ID and title if part of symposium: 60

Self-screening approaches to increase cervical cancer participation in diverse US populations

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Background: Rural white women, African Americans, and Mideastern-North African women in the US experience screening levels as low as 25%. These women are passive non-participants who are more likely to be unmarried, with little formal education, low income, and experienced unfriendly reproductive medical care. The US Affordable Care Act (ACA) legislated no out of pocket cost for all cancer screenings; yet, while breast cancer screening did not change and colon cancer screening increased with cost removal, cervical cancer screening decreased. This indicates that other types of barriers to cervical cancer screening exist. One of these potential barriers is the physician directed, speculum-based office exam. Vaginal self-screening for HPV DNA detection has been studied in a wide variety of global populations, but it has not been tested in the diverse communities with low participation in the US.

Methods. Two age-based strata (30-45, 46-65 years) of racially diverse under-screened groups of women are recruited from the midwestern US. Each population group is randomized by age stratum to either a single self-sampling device or all devices.

Findings. A mixed method approach provides reasons for usage preferability that are specific each of the three diverse cultures; and probes reasons for not screening.

Conclusions and Implications. The findings will inform the development and testing of novel self-sampling approaches for under-screened women.

Submission ID: 603
Symposium ID and title if part of symposium: 60

Long-term Impacts of the National Cervical Cancer Screening and School-Based Human Papillomavirus (HPV) Inoculation Programmes in Scotland

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Background. Scotland has had an organised cervical screening programme, the Scottish Cervical Cancer Screening Programme (SCSP) since 1989; a single computerised system for supporting cervical screening was introduced in 2007. HPV immunisation was introduced through school-based routine and catch-up programmes in 2008. The primary screening test was changed to Hr-HPV testing in March 2020, delivered from two laboratories. Following the introduction of organised screening, the incidence of invasive cervical carcinoma fell steadily until 2003, after which there was a slowly rising trend. This has recently reversed. The initial fall has been attributed to organised screening but the trend since 2003 is not yet fully understood.

Methods. Data collected from the UK and the SCSP will be used to describe the characteristics of the SCSP and the effects of the introduction of computerisation and immunisation.

Results. A steady decline in the uptake of screening will be demonstrated from the data routinely collected by the SCSP. The effects of Hr-HPV immunisation will be described using SCSP data, updated in July 2019, including on screening uptake, HPV prevalence, disease rates, colposcopy at both first and subsequent screens. The cervical carcinoma trend will be explored.

Conclusions. Organised screening is associated with a reduction in invasive cervical carcinoma, and this is influenced by the accuracy of the population register and uptake. Hr-HPV immunisation is associated with a substantial and sustained effect on all aspects of cervical cancer prevention. The implications of the SCSP registry findings for reducing cervical cancer worldwide will be discussed.

Submission ID: 604
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 2nd December, 2019
By: jasonmit@hawaii.edu, Dr. Jason Mitchell

HIV/STI testing outcome results from a pilot randomized controlled trial of an eHealth HIV prevention toolkit intervention with HIV-negative male couples

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Background/Purpose: HIV-negative male couples have low testing rates, despite their engagement in HIV risk-related behaviors. We developed and pilot tested an eHealth HIV prevention toolkit intervention via a 6-month pilot RCT to increase HIV-negative male couples' HIV/STI testing rates.

Methods: Of 149 HIV-negative male couples, 81 couples received the educational control and 68 couples received the intervention. Follow-up assessments occurred every 3 months after baseline. HIV/STI testing rates and future likelihood were captured at each assessment. Descriptive statistics analyzed dyadic data at each assessment.

Results: Most men had been tested for HIV/STIs (84%/72%) since their relationship started. Few couples had partners test for HIV/STIs over time. At 3- and 6-months, fewer men in the intervention had tested for HIV versus the control (16% vs. 22%, P=0.42; 11% vs. 24%, P=0.03). At 3- and 6-months, fewer men in the intervention had tested for STIs versus the control (9% vs. 20%,P=0.04; 11% vs. 19%, P=0.16). Overall, men's likelihood to test for HIV/STIs was 'somewhat unlikely' to 'undecided' over time and did not differ by trial arm.

Conclusions and implications: Use of an educational control may partly explain these results. Perceived risk for HIV/STIs may also help explain these findings. A future iteration of the intervention ought to encourage at-risk HIV-negative male couples to test for HIV/STIs by embedding an electronic algorithm to collect perceived HIV/STI risk and sexual behavior data to provide them with a tailored HIV/STI testing frequency.

Submission ID: 605
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 2nd December, 2019
By: thesportdr@gmail.com, Sean Mullen

Differences in Mobile Health App Motives and Usage among Individuals with and without Chronic Conditions

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Background: The purpose of this study was to understand potential differences in mobile health (mHealth) app usage, relevant motives and behaviors between adults living with and without chronic conditions.

Method: An online survey consisting of established and novel questionnaires was administered twice over a one-month period. The baseline

sample consisted of 122 North American adult mHealth app users (68.9% women; *M* age = 38.2 years; 59% completed follow-up) and group differences were assessed via independent sample t-tests.
Results: Findings revealed that participants living with 1+ chronic condition (N=27; 44.4% indicated living with a lung condition) were more likely to be older (*Ms* = 43.7 vs. 36.6, $p < .05$) than those without chronic conditions (N=95), but no other differences were found in demographics, physical activity, or quality of life. At baseline, higher mean scores suggested that adults with chronic conditions felt more controlled by food, were more likely to use apps "to make better [health] decisions," and were more likely to continue using apps that "schedule appointments" or "collect information to relay to a physician/medical professional," compared to the healthy adults. In addition, the adults with chronic conditions also reported more frequent daily use of apps that assist with "my exercise program" (at baseline) and "my mental health/stress management" (follow-up).
Conclusions and implications: In conclusion, initiation and maintenance motivation regarding mHealth usage may be important targets for interventionists. More research is needed to determine the utility and efficacy of mHealth apps, and the characteristics that promote prolonged engagement among individuals with and without chronic conditions.

Submission ID: 606
Symposium ID and title if part of symposium:
Decision: Accepted, Short Oral
Last updated: 3rd December, 2019
By: szhu@ucsd.edu, Shu-Hong Zhu

When placebo works better than active: An RCT

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Background: Smokers prescribed nicotine replacement therapy (NRT) to quit smoking generally need to go to the pharmacy to fill the prescription, as is the case for most medications. This study tests the hypothesis that smokers will have a higher quit rate if NRT is sent directly to their home, even if it was placebo NRT.
Methods: Smokers (n=4,200) calling a state tobacco quitline were randomly assigned to 3 groups: Group 1 were to obtain nicotine patches by themselves, Group 2 were sent placebo patches directly from the quitline by express mail, and Group 3 were sent active patches from the quitline by express mail. The hypothesis was that the quit rates would be ordered as follows: Group 3 > Group 2 > Group 1.
Results: By 7 months, the rate of attempting to quit smoking were not different between Groups 3 and 2, and both were significantly higher than for Group 1. The rates of successfully quitting smoking for 6-month were ordered as hypothesized: Group 3 > Group 2 > Group 1; the rates were 10.6%, 8.4%, and 5.8% for three groups, respectively, in an intent-to-treat analysis. All a priori hypothesized paired comparisons (3 vs. 1, 2 vs. 1) were statistically significant.
Conclusions and implications: This is the first study to show a large effect for placebo NRT. This effect was achieved mainly by stimulating quit attempts, and this effect was sufficiently strong to outperform the usual-care practice of sending smokers to obtain active NRT from a pharmacy for themselves. Implications for population cessation will be discussed.

Submission ID: 607
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 3rd December, 2019
By: caitlin.liddelow@postgrad.curtin.edu.au, Ms Caitlin Liddelow

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A qualitative application of temporal self-regulation theory to understand adherence to simple and complex medication regimens

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Background: Medication adherence is a global health concern, and variables of temporal self-regulation theory (TST) have been shown to be important in improving adherence. This qualitative study aims to explore how TST can help explain medication adherence in people's daily lives, and whether there are differences in the adherence to simple and complex medication regimens.
Methods: Twenty-nine participants from Australia engaged in semi-structured interviews based on TST (intention, behavioural prepotency, self-regulation), and other variables important to adherence. Interviews were analysed using thematic analysis.
Results: Six themes were identified (Routines, External Supports, Cost, Sense of Agency, Adverse Outcomes, and Weighing Up Pros and Cons), with partial support for TST (specifically intention, past behaviour, cues and planning). Four themes not related to TST were also identified. Individuals with more complex medication regimens spoke of the importance of routines, planning, and knowledge-seeking, whereas those with simpler regimens spoke of the importance of visual cues.
Conclusions and implications: TST may be useful for identifying some variables important in medication adherence, however, additional factors were also identified. For simple regimens, future research should focus on the manipulation of visual cues. For complex regimens, health professionals should consider supporting the use of medication management apps to assist in planning and ensuring a consistent routine.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 3rd December, 2019
By: nigamrishi@rediffmail.com, Dr Rishi Kumar Nigam

Nutritional health assessment of elderly indian diabetics: A biochemical and socio-behavioral analysis

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BACKGROUND: Prevalence of Diabetes mellitus has reached epidemic proportions globally of which developing countries are likely to bear maximum burnt in 21st century. Along with this, elderly population is also gaining very sizable proportion. Aging causes physical, physiological, and psychological changes which leads to changed needs and require constant and regular health supervision and the diabetes a metabolic disorder in conjunction adds to various health problems . Looking at their specialized nutritional and psychosocial needs, the study of elderly diabetics was done to assess their nutritional status and psychosocial behavior.
METHODS: For a case controlled study, 45 diabetic elderly of both genders was selected from geriatric health camps in Bhopal city of India along with control group of 45 non-diabetic elderly. To compare nutritional status and health assessment, mini nutritional assessment chart and anthropometrics measures like BMI, and waist circumference, clinical frailty scale were used. Biochemical parameters like serum protein, cholesterol and HbA1c were assessed and correlated with anthropometric and behavioral measures (Geriatric Depression Scale) in both the groups.
RESULTS: Results were analyzed in line with Indian lifestyle and dietary habits shows that 77% of diabetic elderly have high waist

circumference and 63% are overweight or obese, 82% suffers from hypercholesterolemia quite higher to control group. 65% of Diabetics are. mild to moderately frail. A positive correlation with HbA1c and depression score (r= -988)was found.
CONCLUSIONS AND IMPLICATIONS: Elderly Indian diabetics are having central obesity with higher cholesterol levels and are likely to be more prone to frailty and depression.

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Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 3rd December, 2019
By: marie.kotzur@glasgow.ac.uk, Dr Marie Kotzur

Assessing barriers to self-completed fit colorectal cancer screening and potential solutions: a cross-sectional study

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Background/ purpose: Screening can reduce deaths from colorectal cancer (CRC) if the people invited participate. In Scotland, uptake of CRC screening using faecal immunochemical tests (FIT) is 64%. We aimed to identify key barriers and solutions experienced by people invited to complete the FIT to inform the development of a volitional help-sheet (VHS).
Methods: We purposively sampled adults (n=9482) aged 50-74, from deprived and affluent neighbourhoods, who had and had not completed the FIT to be mailed a questionnaire assessing demographics, intention to complete the FIT, perceived FIT barriers and acceptability of solutions. FIT barriers and solutions were selected from existing VHS content and our qualitative research. Data analyses included Mann-Whitney tests, chi-square, and frequency analyses.
Results: We received 2751 completed questionnaires (response rate 29%), 2392 from screening participants and 359 from screening non-participants. Although, screening non-participants endorsed barriers (Median=35) more often than screening participants (Median=33; U=165212.00, p≤.001), screening participants and non-participants most frequently endorsed the same six barriers: procrastination, forgetting to do the FIT, being unfamiliar with the FIT, fear of the results, screening anxiety, belief that the FIT is messy. For each of the six barriers, respondents agreed on the most acceptable solutions, including self-prompting and action planning.
Conclusions and implications: Our results indicate key barriers to completing the FIT that people encounter and potential solutions that could be acceptable to people who are not completing the FIT. Together with the theoretical evidence this study will inform the content of a VHS to support CRC screening.

Submission ID: 610
Symposium ID and title if part of symposium: 50

New insights from different perspectives into the aetiology of and interventions for frequent persistent physical symptoms

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Decision: Accepted, Symposium
Last updated: 3rd December, 2019
By: ana_pinto691@hotmail.com, Ms Ana Margarida Pinto

Body and mind cross-talk: An integrative model for fibromyalgia

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Background/Purpose: Despite progress in the field over the years, a comprehensive account of fibromyalgia is still lacking. A shift from simplistic conceptualizations, based exclusively on either mechanistic or psychological explanations, to more holistic models capturing the dynamic interaction and crosstalk between bottom-up and top-down processes is warranted to help advance our understanding and management of fibromyalgia. This study aimed at synthesizing the current knowledge in fibromyalgia and developing an integrative model of fibromyalgia capable of bringing together different lines of research.
Methods: A theoretically derived model was developed based on a narrative review of the existing literature on fibromyalgia. The model was strengthened and refined based on the know-how and clinical insights of an interdisciplinary panel of experts in fibromyalgia.
Results: We propose that dysregulation of the affect regulation systems is an influencing mechanism in fibromyalgia. It is characterized by a hyperactive threat-protection system and an underdeveloped soothing system. Such dysregulation, which is etiologically multidetermined, primes towards greater perceived salience and dangerousness (due to an overactive salience network) of everyday events and cross-amplifies alarm signals, such as pain.
Conclusions and Implications: The proposed model provides a comprehensive account of fibromyalgia that may prove useful in informing the course of empirical research and action in fibromyalgia and in optimizing current treatment approaches. This model provides new avenues for studying the interconnectedness of systems, offers insight about the processes that should be targeted by psychosocial interventions and fosters interdisciplinarity. Further research is warranted to test and refine the model.

Submission ID: 611
Symposium ID and title if part of symposium:
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Last updated: 3rd December, 2019
By: patricia.auger.chum@ssss.gouv.qc.ca, Miss Patricia Auger

Barriers and enablers to implementing a web-based health behaviour change intervention for people living with hiv: The perceptions of key stakeholders

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Background: A web-based tailored intervention was developed to support health behaviour changes (smoking cessation, physical activity, healthy eating) in people living with HIV (PLHIV). Intervention implementation planning requires a concerted approach that valorises the experiences of the stakeholders involved in providing or receiving HIV care.
Methods: An exploratory qualitative study was conducted to explore the key stakeholders' perceptions regarding the barriers and enablers to implementing the intervention in real-world settings. Health and social service practitioners and end-users (PLHIV) took part in two focus groups that aimed to 1) discuss the barriers and enablers to implementation; and 2) identify strategies for implementing and adopting the intervention. Field notes and transcripts were subjected to thematic analysis.
Results: Fourteen participants took part in the focus groups. Technology-related barriers (e.g., access, digital literacy) were perceived to hinder implementation efforts. Healthcare providers' competing demands made referring the intervention to their patients challenging. However, the intervention was perceived as complementary to current practices to address health behaviour changes at a time when resources are in short supply. Regarding strategies for implementation and adoption, participants mentioned different ways to encourage PLHIV to use the intervention (e.g., technology access points, publicity) and to help professionals integrate the intervention in their professional practice (e.g., training).
Conclusions: This study allowed for a better understanding of barriers and enablers that can help to set up optimal conditions for integrating the intervention in healthcare delivery. This insight will serve to lay down the groundwork for the co-construction of a strategic implementation plan.

Submission ID: 612
Symposium ID and title if part of symposium:
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Last updated: 3rd December, 2019
By: a.m.thomaidou@fsw.leidenuniv.nl, Mia Thomaidou

Learning mechanisms in nocebo hyperalgesia: The role of conditioning and attenuation processes

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Background/purpose: Nocebo hyperalgesia is a clinically relevant phenomenon and may be formed as a result of associative learning, implemented by classical conditioning. This study aimed to explore distinct nocebo conditioning methods and their consequences on the attenuation of nocebo hyperalgesia.
Methods: Healthy participants (N = 140) were recruited and randomized to the following nocebo hyperalgesia induction groups: conditioning with continuous reinforcement (CRF), conditioning with partial reinforcement (PRF), and a sham-conditioning control group. Additionally, counterconditioning was compared to extinction for the attenuation of nocebo hyperalgesia. During induction, participants experienced increased thermal pain in 100% of nocebo trials in the CRF groups, while in only 70% of nocebo trials in the PRF groups. During evocation, pain stimulation was equivalent across all trials. During attenuation, pain stimulation was decreased on nocebo trials relative to control trials for the counterconditioning groups, while pain remained equivalent across all trials for the extinction groups.
Results: Both PRF and CRF significantly induced nocebo hyperalgesia, but CRF was a more potent nocebo induction method, as compared to PRF. Counterconditioning was more effective than extinction in attenuating nocebo hyperalgesia. Neither CRF nor PRF resulted in resistance to extinction. However, compared to CRF, conditioning with PRF resulted in more resistance to counterconditioning.
Conclusions and Implications: These findings demonstrate that the more ambiguous learning method of PRF can induce nocebo hyperalgesia and may potentially explain the treatment resistance and chronification seen in clinical practice. Further research could explore whether attenuation with counterconditioning is generalizable to clinical settings.

Submission ID: 613
Symposium ID and title if part of symposium:
Decision: Accepted, Oral
Last updated: 3rd December, 2019
By: jfoulds@psu.edu, Professor Jonathan Foulds

Effects of electronic cigarettes on smoking cessation in smokers with no plans to quit: A randomized placebo-controlled trial

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Background/purpose: This randomized placebo-controlled trial examined the effects on quitting smoking of electronic cigarettes (ECIGs) containing different nicotine concentrations in cigarette smokers with no plans to quit.
Methods: Current smokers (N=520; ≥10 cigarettes/day [CPD]) interested in reducing cigarette intake were randomized to one of four 6-month conditions and received either an ECIG paired with 0, 8 or 36 mg/ml nicotine liquid (double-blind) or a cigarette-shaped plastic tube (CIG-SUB). Self-reported CPD and exhaled carbon monoxide (CO) were measured at all study visits. The main outcome was intent-to-treat 7-day cigarette abstinence, biochemically confirmed by exhaled CO of <10ppm at visit 10 (6 months after randomization).
Results: At baseline, participants were on average 46 years old, 41% male, 67% White and smoked 19 CPD. At visit 10, significantly more participants in the 36mg/ml group (10.8%) than in the 0 mg/ml group (0.8%) and the CIG-SUB group (3%) were abstinent (Fisher's Exact Tests, p=0.0007 and 0.025). The 8mg/ml group had an intermediate quit rate (4.6%). The mean exhaled CO among self-reported quitters was <3ppm for all groups. All 14 in the 36mg/ml group who were abstinent at visit 10 were using their assigned product when they first achieved abstinence, an average of 95 days earlier.
Conclusions and implications: When smokers seeking to reduce smoking try ECIGs, few initially quit. However, if smokers continue to use an ECIG with high nicotine delivery over 6 months, a greater proportion succeed in completely switching to ECIGs, as compared with placebo or no ECIG.

Submission ID: 614
Submission I45
Symposium ID and title if part of symposium:
Decision: Accepted, Poster
Last updated: 4th December, 2019
By: lai_peng_ho@ttsh.com.sg, Ms Lai Peng Priscilla Ho

Finding a way to live with HIV: Lived experiences of heterosexual men and women living with HIV in Singapore through the lens of identity theory

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Background/purpose: Current chronic illness frameworks and most research on HIV and identity work favour the incorporation of an illness identity into the self as a successful adaptation to illness. Alternative ways of adapting to HIV have not been explored or given credence. Moreover, present chronic illness frameworks may not adequately explain the illness experience of people living with HIV, as HIV straddles the spheres of both chronic and infectious diseases. Despite consensus among scholars that HIV and chronic illness impact the self and identity, there is a lack of conceptual and definitional clarity of identity and identity work, which results in knowledge gaps about the mechanisms involved. Identity theory, which is derived from symbolic interactionism and its concepts of identity salience and self-verification, provides greater explanatory power of the illness experience and identity work of people living with HIV.
Methods: As the HIV population in Singapore is predominantly Chinese, the study focused on the experiences of Chinese heterosexual men and women in the context of a modern yet conservative collectivistic society. The sample for this qualitative study was purposively selected from patients attending an infectious disease outpatient clinic at a healthcare facility. The semi-structured interviews were transcribed verbatim and analysed using thematic analysis proposed by Braun and Clarke.
Results: Findings gleaned from the 25 participants – 12 men and 13 women – revealed that they found meaning and purpose in their normative identities which helped them find a way to live with an unwanted medical condition.

Submission ID: 615
Symposium ID and title if part of symposium: 50

New insights from different perspectives into the aetiology of and interventions for frequent persistent physical symptoms

Decision: Accepted, Symposium
Last updated: 4th December, 2019
By: lena.sarter@staff.uni-marburg.de, Mrs Lena Sarter

Predictors of treatment outcome in cognitive behavioral therapies for patients with somatic symptom disorder: A systematic review and meta-analysis

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Background/purpose: Cognitive behavioral therapy (CBT) is the best evaluated psychological treatment for somatic symptom disorder (SSD). However, little is known about factors that predict the outcomes of CBT. This systematic review and meta-analysis aimed to identify the pre-treatment characteristics of participants that are associated with treatment outcomes in CBT for SSD.
Methods: We searched Web of Science, PsychInfo, PubMed and sources of grey literature. From the initial 2,700 hits, 47 studies were included in a systematic review, of which 24 studies were also considered in a meta-analysis using the random-effects-model. An assessment of study quality was conducted. Our primary outcome domain was symptom severity (post treatment); our secondary outcome domain was symptom disability (post treatment).
Results: Symptom severity ($r=0.25$ [0.10, 0.40], $k=9$, $p\leq 0.01$), depressive symptoms ($r=0.24$ [0.03, 0.43], $k=6$, $p\leq 0.05$), physical functioning ($r=-0.23$ [-0.36, -0.08], $k=8$, $p\leq 0.01$), mental functioning ($r=-0.17$ [-0.30, -0.03], $k=2$, $p\leq 0.05$) and self-efficacy ($r=-0.17$ [−0.26, −0.08], $k=5$, $p\leq 0.001$) at baseline correlated significantly with post-treatment symptom severity. Similar effect sizes were identified in the secondary outcome domain. Moderator analyses demonstrated that associations between predictors and the outcome domains were increased in shorter compared to longer treatments, and in patients with chronic fatigue syndrome.
Conclusions and implications: The results indicate that initial symptom severity and depressive symptoms are associated with worse treatment outcomes. Physical functioning, mental functioning and self-efficacy at baseline are associated with better treatment outcomes. Limitations were the small number of studies included in meta-analysis and indications of publication bias.

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Symposium ID and title if part of symposium: 50

New insights from different perspectives into the aetiology of and interventions for frequent persistent physical symptoms

Decision: Accepted, Symposium
Last updated: 4th December, 2019
By: anja.feneberg@univie.ac.at, MSc Anja Feneberg

The effects of listening to music on somatic symptoms and stress: A comparative ambulatory assessment study with two patient samples

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Background/purpose: Patients with somatic symptom disorder (SSD) and those with depression (DEP) frequently suffer from persistent somatic complaints causing severe impairment in everyday life. Listening to music has been shown to reduce psychological symptoms and levels of biological stress markers. However, the effects of music on somatic symptoms and stress-related biomarkers in the daily lives of patients with SSD and DEP have not been investigated.
Methods: Twenty-nine women with SSD and 29 women with DEP reported the intensity of and impairment by somatic symptoms using preprogrammed iPods at five fixed time points each day for 14 consecutive days. They also indicated momentary stress and any deliberate music listening behavior since the previous data entry and provided saliva samples for the analysis of salivary cortisol and alpha amylase.
Results: Hierarchical linear models revealed that listening to music predicted reduced subjective stress ($UC=-.15$, $p=.03$), while musical valence (ranging from sad to happy) predicted reduced intensity of ($UC=-0.14$, $p=.03$) and impairment by ($UC=-0.16$, $p=.02$) somatic symptoms in both patient samples. Cross-level interactions indicated that listening to music for reasons of activation ($UC=-0.66$, $p=.02$) and distraction ($UC=-0.47$, $p=.008$) were associated with decreased cortisol levels in patients with DEP.

Conclusions and implications: This study is the first to provide evidence for the beneficial effects of listening to music on somatic symptoms in patients with SSD and DEP while considering the underlying biopsychological mechanisms. The results from this study will help to inform the development of music interventions targeting stress and somatic symptoms in everyday life.

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Decision: Accepted, Poster
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By: andrew.geers@utoledo.edu, Dr. Andrew Geers

Changing expectations for blood donation vasovagal reactions with a comparative base-rate manipulation

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Background/purpose: Individuals overestimate the likelihood of vasovagal reactions (VVR; e.g., fainting, weakness) during blood donation, which may reduce donations. Providing accurate base-rate information of VVRs improves donation perceptions and intentions. Building from the psychological literature on assimilation and contrast effects, the present study tested whether VVR expectations and donation intentions could be improved by providing VVR base-rate information along with base rates for: (1) similarly rare; or (2) more common, health problems.
Methods: Participants (N=99) were randomly assigned to four conditions. Control participants estimated blood donation VVRs without base-rate information. Participants in the accurate VVR information condition were provided accurate VVR base-rate information. Participants in a low base-rate condition were provided both the accurate base rate of VVRs and base rates for rare health problems. Participants in a high base-rate condition were provided both the accurate base rate of VVRs and base rates of more common health problems. Finally, VVR expectations and donation intentions were measured.
Results: A one-way ANOVA, with condition as a four-level independent variable, yielded a significant effect of condition on expectations for VVRs, F(2, 95)=4.57, p=.005. Tukey post-tests indicated that participants in the low base-rate condition expected blood donation to result in fewer VVRs than participants in the control and accurate VVR information conditions (all p<.05). No differences were found in donation intentions.
Conclusions and implications: Presenting VVR base rates within the context of similarly rare health problems can reduce expectations of VVRs. Future research should test if lower VVR expectations increases blood donation.

Submission ID: 619
Symposium ID and title if part of symposium: 50
New insights from different perspectives into the aetiology of and interventions for frequent persistent physical symptoms
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Last updated: 5th December, 2019
By: maria.kleinstaeuber@otago.ac.nz, Dr Maria Kleinstäuber

Aetiological understanding of fibromyalgia, irritable bowel, chronic fatigue syndrome and somatoform disorders: A systematic umbrella review

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Background/purpose: To optimize clinical management of functional somatic syndromes (FSS), such as fibromyalgia syndrome (FMS), irritable bowel syndrome (IBS) and chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME), and somatic symptom disorders (SSD, previously somatoform disorders), better conceptualizations are urgently needed. Therefore, we aimed to systematically assess aetiological views on FSS and SSD within the scientific literature.
Methods: Electronic databases (PubMed, Web of Science, Embase, PsychINFO) were searched for narrative and systematic reviews with and without meta-analyses that focused on any research into the aetiological factors of FMS, IBS, CFS/ME and SSD in adult populations. The review is registered with PROSPERO, CRD42017053596.
Results: 234 reviews (118 narrative, 116 systematic) were included; most of them investigated IBS. Across diagnoses, biological aetiological factors were addressed in 90%, psychological in 39%, social in 16% and healthcare factors in 4% of the reviews. Multidimensional biopsychosocial models were proposed in a minority of reviews (IBS: 10%, FMS: 7%, CFS/ME: 19%). The methodological quality of the systematic reviews was generally low (low or critically low: 59%; moderate: 34%; high: 7%). Eight high-quality systematic reviews identified a few specific aetiological factors, but the evidence does not allow implications to be drawn about their role in the clinical management of FSS or SSD.
Conclusions and implications: Research into the aetiological factors that explain FSS or SSD diverges substantially across medical specialties, and investigations of the contribution of social or healthcare aetiological factors are still scarce. Future research should strive for higher scientific standards and to broaden perspectives on these health conditions.

Submission ID: 620
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Last updated: 5th December, 2019
By: j.fynn@uea.ac.uk, Mrs Judith Fynn

The value of partnerships and networks in practice-based evaluation

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Background/purpose: Evaluation of real-world behaviour change interventions can generate practice-relevant evidence and facilitate translation and scale-up of effective interventions. The formation of partnerships and networks is one strategy that has been advocated to improve the rigour of practice-based evaluation and dissemination, yet there is little evidence on their working. This study aimed to investigate the role of partnerships in evaluation practices, as part of a wider study of Sport England's Get Healthy Get Active programme, which funded 30 physical activity interventions that were delivered and evaluated through local partnerships.
Methods: We carried out a qualitative study to explore stakeholder's reflections of the evaluation process and partnership working. We conducted semi-structured interviews with 33 key informants, including

practitioners, evaluation partners and funders from 12 of the projects. Thematic analysis was used to identify key themes.
Results: Access to knowledge, skills and expertise was a key benefit of partnership working. Differences in stakeholders' objectives and expectations for the evaluation and resources were identified as challenges. Cross-sector partnerships were seen as a catalyst for organisational learning and change; however, the degree to which partnership working was embedded and the nature of the relationships influenced the extent of individual or organisational learning and partnership sustainability.
Conclusions and implications: Partnerships can improve programme evaluation and dissemination, yet there is a need to further develop partnership models to fully realise the benefits associated with their working. In particular, systems and practices that facilitate initiation and embedding of cross-sector and inter-organisational partnerships are needed.

Submission ID: 621
Symposium ID and title if part of symposium: 37

Women's Health during Phases of Hormone Transition in the Life Course: On Psychobiological Predictors of Psychopathology and Resilience

Decision: Accepted, Symposium
Last updated: 5th December, 2019
By: isporomaa@gmail.com, Inger Sundström Poromaa

Progesterone antagonist as treatment of premenstrual dysphoric disorder

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Background/purpose: Premenstrual dysphoric disorder (PMDD) is a mood disorder with an onset of functionally impairing or distressing mood and physical symptoms in the late luteal phase of the menstrual cycle. Hallmark symptoms include mood lability, irritability, anxiety and depression. The disorder affects roughly five percent of women of reproductive age and has a moderate heritability. As progesterone is only present in the luteal phase, PMDD is commonly regarded as a disorder caused by the variation in (or mere presence of) progesterone levels. The purpose of this randomized, double-blinded, placebo-controlled study was to explore the efficacy of a selective progesterone receptor modulator (ulipristal acetate) in the treatment of PMDD.
Methods: 98 women with PMDD were included in the trial, randomized to receive 5mg ulipristal acetate or placebo daily for three 4-week treatment cycles. The primary outcome was the change in mean luteal phase scores on the Daily Report of Severity of Problems (DRSP) scale, which women filled out throughout the study.
Results: Preliminary analyses suggest a superior treatment effect of ulipristal acetate as early as the second treatment cycle. The mean difference in the total luteal phase DRSP score was -11 (95% CI -19 to -3) and -12 (95% CI -20 to -3) during the second and third treatment cycles, respectively.
Conclusions and implications: This proof-of-concept study emphasizes the role of progesterone for PMDD and suggests that progesterone antagonists in a daily regime can be used as treatment for the syndrome.

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New insights from different perspectives into the aetiology of and interventions for frequent persistent physical symptoms

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Last updated: 5th December, 2019
By: eva.huettenrauch@staff.uni-marburg.de, M.Sc. Eva Hüttenrauch

Neurofeedback to reduce tinnitus-related distress – does frequency specificity matter? Results of a randomized controlled trial

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Background/purpose: Chronic tinnitus affects up to 10 percent of the population and is frequently associated with emotional distress. Although cognitive behavioural therapy is considered as gold standard, it is not sufficiently effective for all patients. As studies show an association between tinnitus and altered brain activity, neurofeedback has been suggested. The aim of the current study was to test the specific effect of alpha/delta ratio training (NF-A) compared to beta/theta ratio training (NF-B).
Methods: 90 tinnitus patients were randomly assigned to NF-A (n=31), NF-B (n=28) or a diary control (n=31). Both neurofeedback conditions consisted of 10 sessions over four weeks. NF-A participants trained to increase alpha and decrease delta activity; NF-B participants trained to increase beta and decrease theta activity. The primary outcome, tinnitus distress, was assessed with the Tinnitus Handicap Inventory (THI) at pre- and post-treatment.
Results: Our sample (mean age 50.92 years, SD=13.24; 64.4% male) exhibited moderate tinnitus distress (THI: M=37.27, SD=17.60). A 3x2-factorial ANOVA (condition x time) for the THI indicated a significant main effect of time (F(1,87)=34.09, p<.001), but no significant time x condition interaction (F(2,87)=2.59, p=.08). Univariate analyses showed that tinnitus distress improved significantly in both neurofeedback groups and the diary control group from pre- to post-treatment (all p<.05).
Conclusions and implications: The alpha/delta neurofeedback was not significantly superior to the comparison and control conditions; however, the trends in group differences were in the expected direction. The differential efficacy of training different frequency bands and the potential for tinnitus treatment will be discussed.

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By: heather.mccuaigedge@forces.gc.ca, Dr Heather McCuaig Edge

Trends in pre-military sexually transmitted infections and associated risk behaviours in Canadian Armed Forces recruits

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Background/purpose: Sexually transmitted infections (STIs) have historically been problematic for military personnel. Recent reports indicating that rates of STIs among young male Canadian Armed Forces (CAF) members are higher than civilians prompt a need to better understand CAF members' reported rates of STIs and their behavioural risk factors for STIs.

Methods: This study examined the prevalence of self-reported pre-military sexual behaviours (i.e., number of sexual partners and frequency of condom use) and history of STI diagnosis among CAF recruits attending basic military training using the Recruit Health Questionnaire (RHQ). Data came from 50,603 recruits who participated in the RHQ between 2003 and 2018 (84.9% male, 78.6% non-commissioned member candidates, 64.9% aged between 17 and 24 years).
Results: Among sexually active recruits, the proportion who had more than one sexual partner in the previous year increased from 30.5% in 2003 (95% CI 27.8-33.4) to 35.5% in 2018 (95% CI 34.0-37.0). Of recruits who were not in an exclusive relationship at the time, the proportion who reported always using a condom decreased from 50.8% in 2003 (95% CI 46.4-55.1) to 40.2% in 2018 (95% CI 38.3-42.2). Overall, 5.5% (95% CI 5.3-5.7) reported ever having received a STI diagnosis. Demographic differences by age and sex were also found.
Conclusions and implications: These observations provide an indication of pre-enlistment STI risk behaviours and STI history among CAF recruits, and may provide an insight into avenues for targeted interventions and health promotion programming, such as education and screening initiatives.

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Last updated: 5th December, 2019
By: phallonmwaba@gmail.com, Phallon Mwaba

Hypertension prevention in Sub-Saharan Africa: A participatory approach to intervention development in Zambia

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Background/purpose: Hypertension, like other non-communicable diseases, is becoming a major public health problem for Sub-Saharan Africa (SSA). Its increasing prevalence is driven by an epidemiological transition with more people leading unhealthy lifestyles, including poor diet and physical inactivity. This study aimed to explore the use of participatory methods with an urban community in Zambia in co-developing a culturally-sensitized hypertension prevention intervention.
Methods: Five co-development workshops (four with local residents [each N=12] and one with local stakeholders [N=9], including a health worker, community leader and seven church leaders) built on a previous evidence review and qualitative study that had identified potential hypertension risk factors to target. Audio recordings and detailed fieldnotes iteratively informed identification of priority risk factors, the intervention delivery format and setting, and finalization of the core components.
Results: The resident workshops suggested that salt intake, diet quality and physical inactivity should be targeted in an 8-week group-based intervention delivered through churches: *"nearly all residents belong to a church"*. Stakeholders identified community health workers and church leaders as delivery facilitators. The core components were agreed and refined in close consultation with residents. These included linguistic and cultural adaptations of SMART goal setting and self-monitoring tools, which were iteratively tested and refined to reflect the local socio-cultural context.
Conclusions and implications: Participatory methods succeeded in engaging local residents and stakeholders in the development of a culturally-sensitized 8-week, group-based hypertension prevention lifestyle intervention for delivery through churches in Zambia. The intervention is now undergoing pilot testing in one urban church.

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Last updated: 6th December, 2019
By: nadia.vieyra@gmail.com, Nadia Vieyra

Death notification in a Mexican emergency department: An observational study

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Background/purpose: Death notification is a frequent and stressful task in emergency departments. Few protocols exist that describe formal training to improve death notifications – one of these is the GRIEV_ING mnemotechnic. There are several limitations in previous research into the delivery of death notifications, in part because most emergency physician competence evaluations are done in simulated environments where conditions are far from reality. Likewise, research has been conducted in different cultural settings from those of Spanish-speaking populations. The aim of this study was to identify the competence of emergency physicians when delivering death notifications in a General Hospital in Mexico City.
Methods: We conducted an observational analytical study in which 52 death notifications were observed. A behavioral observational record based on the GRIEV_ING protocol was used to evaluate physician competence.
Results: Doctors performed only 48% of suggested behaviors. Around 74% of death notifications were given in a non-private place. The most frequent behaviors observed were aimed at providing information about the clinical aspects of death, with physicians being attentive and not rushed in their interaction with the survivor. Less frequently observed behaviors were: making sure the survivor understood the medical information; providing contact information; and giving additional information.
Conclusions and implications: This is the first study in a Mexican context where the delivery of death notifications in an emergency department was observed in a real-life setting. The results will inform the development of death notification training programs tailored to the physical and cultural conditions of the Mexican health system.

Submission ID: 626
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Last updated: 6th December, 2019
By: nida.ali@univie.ac.at, Dr. Nida Ali

Investigating the effect of fatigue on HPA axis functioning in chronically stressed individuals

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Background/purpose: Individuals suffering from chronic fatigue have been found to experience significantly more stress compared to healthy individuals. However, not everyone experiencing chronic levels of stress becomes fatigued, indicating that inherent individual differences exist in stress sensitivity and risk for fatigue. While both chronically tressed and fatigued patients show hypoactivity of the hypothalamic-pituitary-adrenal (HPA) axis, it is not known whether differential patterns of HPA axis dysfunction exist in chronically stressed individuals with varying levels of fatigue.
Methods: 61 chronically stressed (CS; 38.31±14.00 years) and 55 low-stress (LS; 37.90±14.37 years) women were exposed to a psychosocial laboratory stressor. Salivary cortisol measures were assessed throughout the study. Fatigue was assessed using the Multidimensional Fatigue Inventory.
Results: The results revealed overall that CS had significantly lower cortisol levels and higher fatigue compared to LS (both $p<.05$). Within the CS group, increasing levels of fatigue were not associated with changes in cortisol. In the LS group, however, there was an inverse relationship between fatigue and cortisol, with increasing levels of fatigue associated with lower cortisol ($p<.05$).
Conclusions and implications: Our findings indicate that in the CS group, stress-related hypoactivity of the HPA axis may have resulted in a floor effect for cortisol, such that increasing levels of fatigue, in addition to existing chronic stress, did not have cumulative effects on the already blunted HPA axis. This was in contrast to the LS group, where fatigue had important effects on HPA axis functioning, such that decreases in cortisol were observed as fatigue levels increased.

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By: nadine.skoluda@univie.ac.at, Dr. Nadine Skoluda

The presence of others differentially impacts acute psychobiological stress responses in men and women

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The presence of others differentially impacts acute psychobiological stress responses in men and women

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Background/purpose: The psychosocial stress response is determined by two important factors: whether the stressor occurs in the presence of others; and the gender of the participant. Here we aimed to systematically investigate how both factors interact and impact biological and psychological stress responses during a psychosocial stressor.
Methods: 124 participants (23.67±3.05 years; 62 women) were exposed to a stressor alone (TSST-1; n=42), and in groups of 3 (TSST-3; n=42) or 5 (TSST-5; n=40). Visual analog scales (VAS) assessing subjective stress, and salivary samples assessing cortisol and alpha-amylase were collected throughout the study.
Results: Using a HLM approach, time and gender significantly predicted all stress measures (all $p<.05$). There was no significant effect of group (TSST-1, TSST-3 and TSST-5) on stress markers. However, when comparing TSST-1 and TSST-G (TSST-3 and 5 combined), there was a significant time x gender x group interaction for cortisol and VAS (both $p<.05$), but not for alpha-amylase. Within-gender analyses revealed significantly higher VAS responses in TSST-1 compared to TSST-G in men ($p <.05$). In women, significantly higher cortisol responses in TSST-G were observed compared to TSST-1 ($p<.01$).
Conclusions and implications: Our findings indicate gender-specific group size effects on acute stress responses. Men and women appear to differ in their psychobiological stress responses, depending on whether they face a psychosocial stressor alone or in the company of others.

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Last updated: 6th December, 2019
By: hannah.long@manchester.ac.uk, Miss Hannah Long

Investigating the suitability of the critical appraisal skills programme (CASP) qualitative checklist tool for appraising study quality in qualitative evidence synthesis (QES)

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Background/purpose: QES is increasingly recognised as valuable for informing healthcare policy and practice in evidence-based medicine. The CASP tool is the most commonly-used criteria-based tool for appraising study quality in QES. Some consider use of criteria-based tools to be best practice. Others believe these tools reflect limited understanding of qualitative research and are inappropriate for application across the qualitative methodological spectrum. We will reflect on and discuss the suitability and usability of CASP.
Methods: We used CASP to appraise study quality in a systematic review and QES of women's experiences of receiving a false positive breast screening test result.
Results: Particular CASP features may impact its interpretation, the appraisal results and subsequent synthesis. CASP suggested 'hints' easily became an inadvertent and incomplete checklist. Answers to CASP questions were often more complex and nuanced than delineated responses allowed for. There was insufficient consideration of the extent to which a study's theoretical underpinnings were clear, consistent and conceptually coherent. We developed a novel question to address this. Quality appraisal was useful for assigning greater weight in our thematic synthesis to findings from studies determined to be of higher quality.
Conclusions and implications: Using structured tools to appraise qualitative research can be of value, but it is important these tools are appropriately applied. We present guidance to support and improve future appraisals using CASP. We offer possible tool modifications, suggestions to potential challenges for researchers, a novel approach to incorporating appraisal results in the synthesis and areas for methodological development.

Submission ID: 631
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Last updated: 6th December, 2019
By: clement.k12@fms.edu, Mr Clement Joy Kingsly

The role of pictorial warnings on cigarette packets in tobacco cessation: A survey of cigarette smokers in Chennai, India

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Background/purpose: Warning labels on cigarette packages are meant to communicate smoking-associated risks. This study was designed to examine the perceptions of cigarette smokers in India of the effectiveness of cigarette packet pictorial warning labels on tobacco cessation.
Methods: A questionnaire was distributed to 800 current smokers attending an outpatient department of a college hospital in the city of Chennai. Statistical analysis explored associations between socioeconomic status and perceived effectiveness of different attributes of warning labels on cigarette packets in helping current smokers to quit.
Results: 48% smokers perceived that text warnings alone were an efficient way to create awareness. 56% emphasized the importance of pictorial warnings and the size of the label. 43% felt that cigarette packet warning labels would help them quit smoking.
Conclusions and implications: Many current smokers agree that warning labels are an effective way of improving awareness about the ill effects of smoking. However, the size, area covered and the positioning of the picture on cigarette packets needs to be reviewed to improve the quit rate.

Submission ID: 632
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Last updated: 6th December, 2019
By: marypreethij@gmail.com, Mrs Mary Preethi Joseph

Smoking habits and awareness of anti-smoking legislation among the general public in Haryana, India.

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Background/purpose: India is the world's third largest tobacco-growing country. Despite the harmful effects of tobacco chewing and smoking being widely known, many people start smoking during adolescence, largely because they believe that smoking will enhance their social acceptability and image. This study aimed to assess tobacco/smoking habits and awareness of anti-smoking legislation among the general public in Gurgaon, Haryana, India.
Methods: A cross sectional survey with 14 questions related to tobacco/smoking habits and awareness of anti-smoking acts legislation was administered to members of the general public, sampled at random. Anti-tobacco counselling was provided and followed.
Results: The study population consisted of 400 individuals, 84.7% male and 15.3% females. Among male respondents, 78.6% indulged in some form of tobacco usage. The most common reason provided for using tobacco was pleasure (40.5%), and friends were cited as the most important social influence on tobacco/smoking habits (by 53.1%), followed by parents and siblings. Over a third (36.2%) of respondents reported second-hand tobacco exposure in their workplace. Over half (54.8%) were aware of legislation banning smoking in public places, and only 8.6% reported that they smoked in public places.

Submission ID: 633
Symposium ID and title if part of symposium: 34

Cannabis Use in Vulnerable Populations: International Perspectives from Laboratory to Field Studies

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Last updated: 6th December, 2019
By: t.p.freeman@bath.ac.uk, Dr Tom Freeman

Cannabis use disorders in first episode psychosis: the multicentre EUGEI study

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Background/purpose: Continued cannabis use following a first episode of psychosis is consistently linked to poorer clinical outcomes, such as increased risk of relapse, faster latency to relapse and a longer duration of inpatient stay. However, the prevalence of cannabis use disorders and their association with patterns of use are poorly understood.
Methods: Using the European network of national schizophrenia networks studying Gene-Environment interactions (EUGEI), cases with first-episode psychosis and matched controls were recruited from 10 sites in the UK, Netherlands, France, Spain and Italy.
Results: 27% of the 304 first-episode psychosis cases using cannabis in the last year met the criteria for DSM-IV dependence, compared to 2.3% of the 400 matched controls reporting past year use. After adjusting for age, gender, ethnicity, education, age of first cannabis use, and cigarette use, first-episode psychosis cases had an increased risk of dependence when compared to controls, and a stronger relationship between patterns of use and dependence. At the highest level of consumption (daily use of cannabis ≥10% Tetrahydrocannabinol [THC]), first episode psychosis patients had a 184-fold (95% CI 63-537) increased risk of dependence compared to rare users, while risk of dependence for high compared with rare usage showed a 77-fold (95% CI 7-848) increase in controls.
Conclusions and implications: The risk of cannabis use disorders and their dose-response relationship with THC are stronger in people with first-episode psychosis compared to matched controls.

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By: mitchell.research@gmail.com, Kirstin Mitchell

Can influential students diffuse sexual health messages via their school friendship networks? A feasibility trial of the STASH intervention

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Background/purpose: Effective sex education is key to promoting lifelong sexual health. Peer-led approaches have potential to augment school-based sex education, but many interventions fail to capitalise on the mechanisms of social influence. The STASH trial examined the acceptability and feasibility of a school-based, peer-led intervention in which influential peers spread messages via their social networks. The STASH intervention was adapted from ASSIST (an effective peer-led smoking intervention based on Diffusion of Innovation Theory). Students (aged 14-16) nominated as influential by their peers were recruited and trained as peer supporters (PS). PS delivered sexual health messages to their friends via conversations and using Facebook to share content from a bespoke website; they were supported by follow-up sessions and via Facebook.
Methods: A non-randomised feasibility trial in six Scottish secondary schools. Outcome evaluation involved baseline, follow-up (6 months) and control questionnaires. Process evaluation involved PS questionnaires, PS activities observations and monitoring logs, and interviews with trainers, teachers, PS and students.
Results: 104 students were trained as PS; just over half of those nominated by their peers. Role retention was very high (97%), as was exposure to STASH activities (58% of year group). Activities were delivered with

good fidelity and were acceptable to students and stakeholders. PS were active, representative of their year group and well connected within their social networks. Carefully-managed social media use augmented PS conversations.
Conclusions and implications: STASH is feasible and acceptable within the context of Scottish secondary schools. The results support continuation to a full-scale evaluation.

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SAFETEL: a randomised controlled feasibility trial of a safety planning intervention to reduce suicidal behaviour

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Background/purpose: At present there are no evidence-based interventions that can be administered in hospital settings following general hospital admission after a suicide attempt. This study aimed to determine whether a safety planning intervention with follow-up telephone support (SAFETEL) is feasible and acceptable to patients admitted to hospital following a suicide attempt.
Methods: The study was a feasibility trial with an embedded process evaluation (including patient and staff interviews). Participants were recruited from four NHS hospitals in Scotland and randomised to receive either the SAFETEL intervention + treatment as usual (n=80) or treatment as usual alone (n=41). The primary outcomes included: recruitment rates; acceptability of the intervention to participants and intervention staff; feasibility of delivery in this setting; intervention adherence; and feasibility of collecting self-harm readmission to hospital outcome data.
Results: 121 patients were recruited. The intervention was feasible to deliver and acceptable to patients, and outcome data were feasible to collect. 79/80 safety plans were completed and 82.5% of participants completed the minimum intervention dose (SP+1 follow up call). Thematic analysis of participant interviews revealed three overarching themes: importance of intervention flexibility; importance of continuity of support between hospital and longer-term care; and autonomy in the self-directed nature of the intervention. A number of other key sub-themes were identified and will be discussed in this presentation.
Conclusions and implications: The intervention and outcome data collection methods were feasible and acceptable. The study achieved pre-set progression criteria. These results will inform the design of the future definitive trial.

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Competing priorities and smoking outcomes among homeless smokers enrolled in the Power to Quit study: Does motivational interviewing have a modulatory effect on smoking outcomes among homeless smokers with competing priorities?

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Background/purpose: Smoking rates remain persistently high among the homeless, many of whom are willing to quit, but may have high levels of competing priorities (CPs). We aimed to examine CPs and their effect on quitting and other smoking-related outcomes in 430 homeless smokers enrolled in a motivational-interviewing (MI) smoking cessation randomised controlled trial (treatment arm n=216; control n=214). Six MI sessions were delivered over eight weeks.
Methods: We assessed CPs (including accessing food, a place to sleep and restrooms) using a 4-point scale adapted from the RAND Course of Homelessness study. Using stratified analyses, we examined the relationship between CP levels (none/low/high) and 26-week smoking outcomes.
Results: Many (42.2%) participants had high CP levels and were more depressed (p=0.0019) and more dependent on nicotine (p=0.0001), alcohol (p=0.0134) and drugs (p=0.043). Few smokers, 9.3% in the intervention arm vs. 5.1% in the control arm, had successfully quit at week 26: and the between-group difference was not statistically significant. No differences were observed in CO-verified quitting between the three CP levels. However, compared to high CP controls, more high CP smokers in the treatment arm reported increased confidence to quit (85% vs 70%; p=0.043).
Conclusions and implications: Our findings suggest that among smokers with high levels of competing needs, MI may have a modulatory effect on intermediate outcomes such as confidence to quit. Given the small proportion of quitters, further research on the impact of MI on smoking cessation among the homeless is warranted.

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The effect of music listening style on pain and stress

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Background/purpose: Listening to music is a novel non-pharmacological tool in pain and stress management. Since the role of the music listening style is largely unexplored in how music may exert a potentially beneficial effect on pain and stress, this study aimed to investigate whether pain and stress responses to an acute pain paradigm differ in music empathizers (ME) and music systemizers (MS). Since male and female ME/MS might respond differently, the role of gender was also investigated.
Methods: ME and MS listened to auditory stimuli during a cold pressor test (CPT) on three separate days (day 1: researcher-selected music, day 2: participant-selected music, day 3: sound of lapping water, in randomized order). Pain intensity, pain tolerance, subjective acute stress, salivary alpha-amylase (sAA) and salivary cortisol were repeatedly measured. Data were analysed using multilevel modelling.
Results: Preliminary analyses (n=56; age: M=24.2, SD=3.9) showed no differences between ME and MS in pain intensity, pain tolerance and sAA after CPT. ME and MS differed in subjective stress (ME>MS;

p=0.044) and cortisol levels after CPT (MS>ME; p=0.005). Male MS and female ME showed higher cortisol levels after CPT than female MS and male ME (p<.001). Final analysis is subject to completion of the data set.
Conclusions and implications: Our preliminary findings suggest that music listening styles did not affect pain processing. However, they might modulate individual pain-related stress responses and thus provide novel information on individual differences in coping with pain and stress.

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By: drolukemiodukoya@yahoo.com, Kemi Odukoya

Body, Soul and Spirit, an adaptation of two evidence-based interventions to promote physical activity and healthy eating among adults in churches in Lagos, Nigeria: A three-arm cluster randomized controlled pilot trial

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Background/purpose: Evidence-based interventions (EBI) using community-engaged approaches to address physical inactivity and unhealthy eating abound in high-income countries, but are comparatively sparse in low and middle-income countries, where mortality from non-communicable diseases is greater. This paper describes the protocol for the cultural adaptation and pilot testing of a combination of two EBI in church-based settings in Lagos, Nigeria. We also describe the development of an additional component (faith-based text messages) for inclusion into one of the treatment arms.
Methods: This study will assess the design and implementation of a three-arm cluster-randomized pilot trial in 12 randomly selected Anglican churches. First, we will culturally adapt the two EBI's with church members to form a multifaceted combined intervention: Body Soul and Spirit (BSS). The second arm (BSS Plus) will retain all BSS components plus deliver faith-based text messages via mobile phones. The outcome measures will include participant recruitment and retention, program participation and satisfaction and data collection completion rates. The outcomes for the proposed definitive trial will be number of servings of fruit and vegetables per day and minutes of moderate to vigorous physical activity per day assessed at baseline, and at 3- and 6-month follow-up. Implementation outcomes will be assessed using qualitative and quantitative methods.
Results: The results will be available.
Conclusions and implications: The study will enhance understanding of how best to design and implement behavioural interventions in church-based settings using community-based participatory approaches. It will also inform the design and conduct of a definitive randomized controlled trial.

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By: gzarate-gonzalez@ucmerced.edu, PhD Student Gilda Zarate-Gonzalez

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Will tobacco price increases lead more smokers to vape? Results from a discrete choice experiment amongst US adults

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Background/purpose: E-cigarette (vaping) use has increased dramatically in recent years. While switching to vaping might benefit cigarette smokers, there is a risk of increased use by current non-smokers. Little is known about the conditions under which current smokers would be willing to switch to vaping, or the factors that might attract non-smokers to vaping. This study reports a discrete choice experiment identifying the factors influencing vaping among smokers and non-smokers.
Methods: 525 adults, aged 18-88 years, made 16 choices between two alternatives that differed in the type of tobacco product, place to smoke, kick or satisfaction, cost, addictiveness, smell and long-term health risks. Results were analysed for the entire sample and stratified by non-smokers, light smokers and heavy smokers.
Results: Non-smokers (60%) preferred e-cigarettes over all the other tobacco products (willingness to pay of $1.34 compared with cigarettes). Non-smokers showed a strong aversion to the addictiveness of the products. Light and heavy smokers differed primarily in their attitude toward health risks, with heavy smokers being relatively insensitive to long-term health risks compared to light smokers. Cost was a particularly important factor for non-smokers. Marginal analysis suggested smokers were relatively insensitive to price increases alone, with a $4 price surge increasing the probability of vaping by only 12%.
Conclusions and implications: Vaping is attractive for non-smokers when the perceived health risks are low, suggesting that behavior change campaigns should focus on the health risks. These results also suggest that it may be difficult to get smokers to shift to vaping.

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The effect of personality on work-family conflict and facilitation of working mothers

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Background/purpose: A working mother has two roles: work and family. This can lead to conflict and facilitation between work and family. This study aimed to examine the effect of personality on conflict (family-work conflict and work-family conflict) and facilitation (work-family facilitation and family-work facilitation) between work and family roles.
Methods: 141 working mothers completed a questionnaire measuring personality, conflict and facilitation between work and family roles . Personality was assessed using the Big Five model consisting of extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. Questions on work-family conflict and facilitation assessed spill-over between work and family roles. The reliability of instrument in this study is shown by Cronbach's alpha scores ranging from 0.516 to 0.788.
Results: Regression analysis showed a significant negative correlation of conscientiousness (B=-0.252, SE=0.106, p=.019) and a significant positive correlation of neuroticism (B=0.194, SE=0.078, p=0.014) with work-family conflicts. Furthermore, there were significant positive correlations between neuroticism (B=0.191, SE=0.067, p=0.005) and openness to experience (B=0.142, SE=0.064, p=.03) and family-work conflicts.
Conclusions and implications: The findings can be considered as the basis for selection and development, specifically for employees with working mother status.

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By: dorothycns@cuhk.edu.hk, Dr Dorothy Ngo Sheung Chan

Evidence-based cervical cancer prevention intervention on improving the Pap test uptake among South Asian women in Hong Kong

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Background/purpose: To present recommendations from the development of evidence-based cervical cancer prevention interventions to improve Pap test uptake among South Asian women in Hong Kong.
Methods: Before developing the interventions, the authors conducted a systematic review revealing that knowledge, attitudes, perceptions and services provided by healthcare organisations affected Pap test uptake. It also revealed that culture-related factors, such as modesty and language, influenced perceived barriers to screening. The review findings together with the Ecological model, guided the development of an explanatory model that was tested in an exploratory study examining the factors influencing Pap test uptake among South Asian women.
Results: Consistent with the review findings, the study confirmed that language and modesty have a significant interaction with perceived barriers to screening in South Asian women. Knowledge, perceived benefits of screening, cancer fatalism and availability of test clinics were also associated with Pap test uptake. Three emerging recommendations are therefore to provide: 1) information about the availability of female healthcare providers; 2) navigation assistance by community health workers to enhance access to clinics; and 3) education on the prevention of cervical cancer and benefits of Pap testing.
Conclusion and implications: The recommendations are intended to serve as a reference for healthcare professionals to implement as appropriate in community settings to promote Pap test uptake among South Asian clients.

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By: dorothycns@cuhk.edu.hk, Dr Dorothy Ngo Sheung Chan

Development of an explanatory model to explore cervical cancer screening behaviour amongst Indian women in Hong Kong

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Background/purpose: To develop an explanatory model to examine the factors associated with Indian women's cervical cancer screening behavior.
Methods: An exploratory study testing a hypothetical path model informed by the Ecological model with factors identified from a systematic review. A survey of 257 Indian women collected data on socio-demographics, knowledge, attitude and perceptions, acculturation, cultural barriers and cancer fatalism. Path analysis of the hypothesized model was conducted by Mplus Version 7.4. The ratio of chi square divided by degree of freedom (x2/df) and goodness-of-fit indices (including the root mean square error of approximation [RMSEA]), the comparative fit index (CFI) and the Tucker Lewis Index (TLI) were used to assess the overall model fit.
Results: Pap test uptake rate was 37%. The final path model generated an acceptable model fit with x2/df=1.42, RMSEA=0.040, CFI=0.97 and TLI=0.96. Multi-level factors showing direct or indirect association with screening behavior included: at the intra-personal level – perceived benefits of and self-efficacy for screening, household income, history of childbirth and knowledge; at the interpersonal level – friends' recommendations; at the organizational level – availability of clinics for testing, having a primary care provider and health center doctor recommendations; and at the community level – crisis orientation, language, acculturation and duration of residence.
Conclusion and implications: Multi-level factors influenced Indian women's cervical cancer screening behavior. The findings provide valuable information for development of a culturally relevant intervention to promote screening uptake among Indian women.

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Development of a national Distress Brief Intervention

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Background/purpose: Mental health problems, including self-harm and suicide, are major public health concerns. Following national strategic commitments to improve response and follow-up support for adults presenting to frontline services in emotional distress, this study describes the development and implementation of the first national 'Distress Brief Intervention' for frontline services in Scotland.
Methods: A systematic approach based on the Intervention Mapping protocol was used to develop and account for the complexity of intervention. Data/information sources comprised: literature and evidence review; programme partner and stakeholder consultations (n=18); semi-structured interviews/focus-groups with frontline services staff and adults with experience of distress (n = 63); training evaluations.
Results: We developed a time-limited, two-level, complex intervention for adults experiencing emotional distress, provided by 'frontline' statutory services (primary and acute healthcare, police and ambulatory) and third-sector community organisations in Scotland. Intervention components included competency-based training programmes, protocols and guidance for providers, and distress management and behavioural change toolkits. During development, 538 intervention providers (n=485 frontline; n=53 third sector) completed training programmes in four pilot areas. Training evaluations from 388 intervention providers indicated significantly greater confidence following training on key competencies (e.g., 'Understanding distress': pre-training mean=6.10, SD=2.21 vs. post-training mean=8.46, SD=1.36, p<0.001). Over 1500 providers are now trained and 5000 individuals have received the Distress Brief Intervention. An independent evaluation to determine effectiveness is ongoing.
Conclusions and implications: A national Distress Brief Intervention was systematically developed and implemented. Challenges included implementing a standardised intervention and training across complex service settings.

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By: h.scobie.1@research.gla.ac.uk, Ms Hannah Scobie

Does recruitment via GP letter or community advertisement to cancer screening influence uptake across socioeconomic groups? Exploring recruitment methods in the Early detection of Cancer of the Lung Scotland (ECLS) trial

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Background/purpose: People are frequently invited to participate in cancer screening directly by their health care provider. However, this approach results in inequalities, with uptake of cancer screening being lower in those from more deprived groups. The evidence on the impact of community advertisement on cancer screening uptake across socioeconomic groups is limited. The ECLS trial invited 12,243 people at high risk of developing lung cancer to a lung cancer screening trial. Participants were recruited in two distinct ways, via: i) a letter from their GP; or ii) community advertisement. The primary aim of this study was to explore if recruitment method influenced uptake by socioeconomic status. The secondary aim was to explore any psychosocial differences among those recruited by the two recruitment methods.
Methods: A secondary analysis of ECLS trial data was conducted. The data included socioeconomic status (Scottish Index of Multiple Deprivation) and psychosocial measures (e.g. illness perceptions) from the study questionnaire (n=11,164). Univariate and multivariate analyses were conducted.
Results: People recruited via community advertisement lived in significantly less deprived areas than those recruited via GP letter (OR 0.67 [0.55-0.81]). Those recruited by community advertisement were more likely to agree that their actions could control their risk of lung cancer (92.2%) compared to those recruited via their GP (89.0%).
Conclusions and implications: Community advertisement for cancer screening recruited more people from less deprived areas than GP letters and was therefore not effective in reducing inequalities in screening uptake.

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The impact of marital status on cognitive behavioral stress management and perceived stress in men with advanced prostate cancer

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Background/purpose: Men with advanced prostate cancer (APC) experience a host of challenges during and after treatment, which result in high stress levels. Heightened perceived stress has been linked with negative patient outcomes, such as poor health-related quality of life. Cognitive behavioral stress management (CBSM) is a psychosocial intervention designed to decrease stress, but little is known about how marital status impacts treatment efficacy. This study examined marital status as a moderator of CBSM's effect on stress.
Methods: Men with APC were randomized to a 10-week CBSM intervention or health promotion (HP) program. Measures included the Perceived Stress Scale and sociodemographic questions. An ANCOVA was conducted to examine effects of marital status and condition on perceived stress post-intervention.
Results: Participants (n=147) were mostly non-Hispanic white (60.5%), older (M age=69.15 years), well-educated (29.3% with a graduate degree) and about 25% had an annual income of $100k+. Groups did not differ at baseline. Controlling for baseline stress, cancer stage, education, race, ethnicity, income and age, marital status moderated the effect of intervention on perceived stress at 1-year (F(1,135)=5.196, p<.05) such that married men benefitted significantly more from CBSM than HP. There was no main effect of intervention or marital status on perceived stress (F(1,135)=.687, p=.41; F(1,135)=.193, p=.66).
Conclusions and implications: Marital status may bolster the effects of CBSM for married men and is an important factor to consider in the development of psychosocial interventions. Further research is necessary to understand the mechanisms by which marital status may confer benefits.

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By: katharina.stiehl@kl.ac.at, MSc Katharina Stiehl

Co-development of an interactive digital intervention for and with young adolescents

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Background/purpose: Early adolescence is crucial for development of the key social-emotional and cognitive skills that underpin mental wellbeing. This development is influenced by adolescents' interaction with their social environment. The transition from primary to secondary school is one of the most challenging periods. Coping with this transition in a way that facilitates appropriate skill development is therefore of primary importance. Digital interventions allow adolescents to learn about skills in a playful environment and in the absence of authority figures. Graphic novels are a popular and engaging tool used successfully in education.
Methods: A three-phase design process was used to develop a digital psycho-educative graphic novel to improve early adolescents' coping skills during primary-secondary school transition. First, a qualitative study with 886 students explored early adolescents' fears related to school transition and potential strategies to overcome these. Next, relevant literature was examined, and last, a series of consultations with early adolescents was conducted to further refine the content.
Results: In the qualitative data, descriptions of fears and strategies were mainly at a behavioural level. For the fears, four major thematic clusters were identified (fear of being alone; peer victimisation; victimisation by the authorities; and academic failure). There was disagreement about the utility of different strategies. The literature review revealed the importance of improving metacognition and emotion regulation skills. The co-development was used to show, discuss and adapt different strategies and their consequent outcomes in the novel.
Conclusions and implications: This three-phase design may increase acceptability and feasibility of the intervention.

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Stress and coping through adventure programming

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Background/purpose: Swimming lessons are part of the Physical Education (PE) curriculum in Norway. Some schools give lessons outside in the cold water, which can be stressful, thus providing an opportunity to investigate stress and coping in adventure programming. By understanding the leadership experiences of PE teachers, we may be able to improve swimming skills, and also to describe best leadership practice. The aim of this study was to investigate how teachers in primary school facilitate adventure lessons outside and how they cope with this stressful situation. The cognitive activation theory of stress was used as an analytical tool to identify teachers' stress coping mechanisms.
Methods: A qualitative study of primary school pupils (n=35) taking part in adventure activities. All activities were videotaped, and individual interviews with teachers and the school principal were conducted. Interviews were analyzed in NVivo using systematic text condensation, and analytic summaries were combined with video observation data.
Results: Teachers reported that logistics were their main stressor in relation to minimising risk. However, they perceived this as a positive stress that contributed to increased energy and commitment. They also reported positive outcome expectancy (i.e. they expected to be able to cope with the situation) and they anticipated their experience would make them even more capable of managing complex and challenging activity environments in future.
Conclusions and implications: The identification of stress and coping mechanisms in adventure programming is relevant in understanding teachers' leadership and how to engage pupils in learning in complex environments.

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Heart rate variability and major depression: a meta-analysis

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Background/purpose: Major depression (MD) is a risk factor for cardiovascular disease. Reduced heart rate variability (HRV) has been observed in MD and might be one physiological factor that mediates this association. The purpose of this study was to provide up-to-date random-effects meta-analyses of studies which compare resting-state measures of HRV in unmedicated adults with MD and controls.
Methods: A database search considered English and German literature to July 2018.
Results: A total of 21 studies including 2250 patients and 1982 controls were extracted. Significant differences between patients and controls were found for (i) frequency domains such as HF-HRV (Hedges' g = −0.318; 95% CI −0.388 to −0.247), LF-HRV (Hedges' g = −0.195; 95% CI −0.332 to −0.059), LF/HF-HRV (Hedges' g = 0.195; 95% CI 0.086 to 0.303) and VLF-HRV (Hedges' g = −0.096; 95% CI −0.179 to −0.013), and (ii) time-domains such as IBI (Hedges' g = −0.163; 95% CI −0.304 to −0.022), RMSSD (Hedges' g = −0.462; 95% CI −0.612 to −0.312) and SDNN (Hedges' g = −0.266; 95% CI −0.431 to −0.100).
Conclusions and implications: Our findings demonstrate that all HRV measures were lower in MD than in healthy controls and thus strengthen evidence for lower HRV as a potential cardiovascular risk factor in MD.

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By: paulina.schenk.13@ucl.ac.uk, Ms Paulina Schenk

Development of an ontology of the mechanisms of action of behaviour change interventions

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Background/purpose: There is considerable overlap between putative mechanisms of action (MoAs) found in different theories of behaviour change. This can inhibit efficient evidence accumulation regarding how behaviour change interventions achieve their effects. Ontologies (knowledge structures that specify entities and their relationships) provide controlled vocabularies for fields and can be codified in computer readable format, providing a basis for computational reasoning about behaviour change evidence. We aimed to develop an ontology of mechanisms of action of behaviour change interventions.
Methods: We developed the MoA Ontology in four steps: (1) The constructs of 83 behavioural theories were extracted and MoAs identified from these constructs; (2) MoAs were grouped based on shared attributes; (3) Groupings were converted into classes in an ontology with a hierarchical structure, drawing on relevant entities from related ontologies; (4) The clarity of class labels and definitions and the appropriateness of the structure of the draft ontology were reviewed by experts in behavioural science, and the ontology revised accordingly.
Results: 1062 MoAs were identified from 1733 constructs in 83 theories. 104 groups of MoAs were generated. The resulting MoA Ontology has seven hierarchical levels and includes 202 MoA classes. Upper-level classes include: bodily process, mental process, cognitive representation, bodily disposition, mental disposition and opportunity.
Conclusions and implications: By organising and providing a common vocabulary to describe MoAs of behaviour change interventions, the MoA ontology should increase the efficiency of gathering evidence and accumulating knowledge about behaviour change and behaviour change theories.

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Explaining placebo effects in clinical practice: Does 'Pavlov' ring a bell?

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Background/purpose: Despite increasing knowledge about placebo effects and their beneficial impact on treatment outcomes, strategies that employ these mechanisms remain scarce. An important aspect of utilizing placebo effects in clinical practice is to determine how individuals can be informed about placebo effects. Because there is a large variability in how placebo effects are explained in clinical trials and practice, it remains unclear what type of explanation serves best for optimal benefit. The primary aim of this study is to compare different type of placebo explanations based on their underlying mechanisms (e.g. expectations, trust, classical conditioning) and investigate how this information is received by healthy controls. Secondly, current placebo knowledge, attitudes and beliefs will be investigated to expand the knowledge on information strategies, and facilitate future application of placebo effects in clinical practice.

Methods: 444 healthy controls completed an online questionnaire assessing general knowledge about placebos, preference for placebo explanations, and acceptance towards placebos in treatment. Placebo explanations were based on underlying mechanisms such as classical conditioning, expectations, brain mechanisms, mind and body connection, social learning, trust and transparency. Demographic factors and factors associated with placebo effects (optimism, anxiety) were taken into account to determine their influence on explanation preference.

Results: The results will be available.

Conclusions and implications: This study will give a clearer indication of how placebo effects can be explained in practice and of current perspectives on placebo effects.

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The protective effects of emotional and tangible support on adolescent resistance to peer invitations to use marijuana

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Background/purpose: Legislative and normative shifts surrounding marijuana use (MU) may shape adolescents’ decisions to accept or refuse MU invitations from peers, making refusal agency an important issue to understand. We sought to measure adolescent agency to refuse MU invitations from peers and its association with the availability of emotional and tangible support. Youth with low support may feel particularly unable to refuse peer invitations, with implications for focusing preventive interventions.

Methods: We surveyed adolescents in grades 7-10 in schools to collect information about substance use, MU risk perceptions, parental attitudes, availability of emotional and tangible support, and socio-demographics. Logistic regression examined the influence of support on ability to resist a close friend’s invitation to MU.

Results: Participants (N=4577) were aged 13.6 years on average (SD=1.2), 49.6% female, 62.5% white non-Hispanic, with 49.6% and 59.2% reporting always having someone to rely for social and tangible support, respectively. In models adjusted for socio-demographic characteristics, past-year MU, parental attitudes towards MU and perceptions of risks of monthly MU on teenagers’ health, we found adolescents with strong emotional support were 1.61 times as likely to report being able to resist peer influence (95% CI 1.41-1.83). Likewise, participants with strong tangible support were 1.56 times as likely to report being able to resist peer influence (95% CI 1.37-1.79).

Conclusions and implications: Having emotional and tangible resources strengthens adolescent agency to resist peer influence. Interventions to bolster these support systems may be a promising path to mitigate the normalization of marijuana consumption and decrease substance use.

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Measurement of food insecurity among people with comorbid depression and hiv in south africa

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Background/ purpose: Food insecurity is a major structural barrier to HIV care globally, and in peri-urban areas surrounding Cape Town, South Africa, where approximately 80% of urban households are moderately or severely food insecure. Food insecurity has been associated with lower medication adherence as measured by viral load, and poorer survival rates, and worse mental health. However, there are few locally validated measures of food insecurity among people with HIV (PWH).

Method: Participants (N=266) were PWH receiving care from primary care clinics in Khayelitsha, a peri-urban settlement in Cape Town, who screened positive for depression and had unsuppressed viral loads. Participants completed a self-report assessment battery, which included the 9-item Household Food Insecurity Access Scale (HFIAS, isiXhosa-translated).

Results: Most participants were severely (n=172, 65%) or moderately (n=52, 20%) food insecure in the past 30 days. Revised parallel analysis suggested a 3-factor structure, which did not adequately fit the data. However, a restrictive bi-factor model was examined, such that all items loaded on a general factor (food insecurity) and each item loaded on one of three specific additional factors, which adequately fit the data (CFI=0.985, SRMR=0.02). The three specific factors identified were: anxiousness/insufficient quality (4 items); limited food intake (2 items); and no food intake (3 items). Reliability was adequate (w=.91).

Conclusions and implications: This specific factor structure among a sample of PWH with depression will enable a more accurate and specific examination of a common structural barrier to care, food insecurity, with important mental health and disease outcomes.

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Evaluating the effectiveness of and user experiences with a smartphone application for the self-management of chronic pain

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Background: Chronic pain can detrimentally impact an individual's life. Receiving appropriate self-management support is critical to manage chronic pain and increase quality of life (QoL). Chronic pain management apps, which employ self-management techniques, are widespread and have shown promising results for users in reducing pain and improving psychosocial impact of pain. However, no known research has explored user experiences with pain-management apps. Therefore, a multimethod study was conducted to evaluate the effectiveness and acceptability of the FibroMapp pain-management app amongst individuals living with chronic pain.
Method: The effectiveness of FibroMapp was evaluated in 26 adults with chronic pain by comparing baseline pain intensity and QoL to levels of pain and QoL at two-week and four-week follow-up periods of using FibroMapp. Using semi-structured interviews, the user experiences with FibroMapp were explored in a subsample of 15 adults who had used the app for at least 2 weeks.
Results: There were small non-statistically significant improvements following two or four-weeks of FibroMapp use. Inductive thematic analysis of the semi-structured interviews revealed that FibroMapp was acceptable to users, with generally positive feedback on app suitability, usability and utility. Three main themes identified users' perceived benefits of FibroMapp: heightened reflection, medication adherence, and ease of use.
Conclusions and Implications: FibroMapp may be an acceptable and beneficial app for those living with chronic pain through identifying patterns in pain as well improving medication adherence and communication with healthcare professionals. Larger studies are now warranted to explore longer-term effectiveness and cost-effectiveness.

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Portuguese adolescents with and without food addiction: Differences regarding internet and smartphone addiction

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Background/Purpose: Both internet and smartphone addiction have been shown to have significant prevalence among youth. Both problematic uses are associated with social, psychological, and school-related impairment. Given the characteristics of internet and smartphone misuse (requiring a sedentary behaviour; used in an isolated manner), this study explored if these behavioural patterns are more severe in adolescents with another addiction pattern: food addiction.
Methods: Overall, 473 adolescents (12-18 years old; $M=14.08$; $SD=1.78$) filled in the Internet Addiction Test (IAT), the Smartphone Addiction Scale (SAS) and the Yale Food Addiction Scale (YFAS). Variables of internet use and eating behaviour while using screens were also explored. After identifying adolescents with food addiction, a sub-sample of adolescents with no food addiction was randomly selected (matched by sex). Both Student's t-test and categorical logistic regression were performed.
Results: Overall, 63 students (25 girls and 38 boys) presented food addiction and were compared with participants with no food addiction. Students with food addiction presented higher severity of both internet ($t(124)=-3.829$; $p<.001$) and smartphone addictions ($t(124)=-2.479$; $p=.015$). In the regression model, a more severe score in smartphone addiction predicted the presence of food addiction ($B_{SAS}=.087$; $X^2_{Wald}(1)=7.225$; $p=.007$).
Conclusions and implications: Adolescents with food addiction might have other addiction-related patterns, especially problematic smartphone use, when considering other variables concurrently. The concomitance of these might reinforce the dysfunctional behaviours. Clinical interventions focusing on technology-related addictions might benefit from assessing eating behaviours while using screens, since both behaviours might strengthen one another.

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What doesn't work? Exploring the perceived unsuccessful weight loss strategies in adults, through mixed-methods methodology

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Background/purpose: Strategies associated with unsuccessful weight loss are rarely disseminated. Since weight regain is frequent among adults who have lost weight, it is important to explore which strategies are perceived as ineffective. This study explores which strategies are perceived as unsuccessful in long-term weight decrease, among Portuguese adults with successful weight loss (SWL) or with obesity (O).
Methods: Overall, 107 participants were interviewed: 54 with a SWL (i.e., lost at least 9% of initial body weight and maintained it for at least 12 months) and 53 with obesity ($\text{BMI} \geq 30\text{kg/m}^2$). The audio-taped interviews were later transcribed and analysed through both Content and Thematic Analysis (using both deductive and inductive approaches), by a team of researchers, and using the software MAXQDA. Socio-demographics and weight loss method (e.g. surgical) were assessed.
Results: Among individuals with a SWL, three main non-successful weight loss strategies were mentioned: use of pills, dieting without specification, and formal social support from physicians. Participants with obesity emphasised dieting without specification, formal social support from physicians and from nutritionists. Determinants of unsuccessful weight loss were also found in both samples: loss and regain cycle (SWL; O), the lack of motivation due to lack of results (SWL), and financial difficulties (O).
Conclusions and implications: Exploring previous strategies which have been perceived as ineffective, especially at the beginning of a weight loss treatment, might prevent drop-outs and give an opportunity to tackle beliefs (either functional or dysfunctional) associated with the lack of success of previous strategies.

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Perception of prenatal alcohol exposure risk among polish women of child bearing age - preventive needs assessment

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Background/ purpose: Despite the growing evidence of negative consequences of prenatal alcohol exposure (PAE), drinking during

pregnancy is the leading cause of birth defects and child developmental disorders in the EU. The present study aims to better understand why some women not addicted to alcohol drink alcohol when pregnant.
Method: The focus group interviews were conducted in 2019 in Warsaw and Płock. The respondents were women (24-39 years old), not abstaining from alcohol, who were divided into four groups by current pregnancy (yes/no) and attitude towards alcohol use during pregnancy (accepted/not accepted).
Results: The mapping of risk and protective factors during pregnancy indicated high variability of the perception of alcohol abstinence: from "it is mandatory" to "exaggeration". In the respondents' perception, women completely refraining from alcohol during pregnancy are a little bit "barmy" or fanatic. General knowledge about the health consequences of PAE for a child is rather limited, based mainly on the Internet and popular opinion, including significant misconceptions. Women with some personal experience with Fetal Alcohol Syndrome or who have met a midwife/gynecologist especially concerned about PAE are better informed. The engagement of health professionals in the prevention of PAE is perceived as insufficient and clear medical guidelines on alcohol use during pregnancy are missing.
Conclusions and implications: More effective advocacy, including accessible and comprehensible presentation of research evidence and involvement of medical authorities is needed to reduce the prevalence of alcohol exposed pregnancies. These findings will inform the communication strategy implemented in Poland within the EU-funded pilot project "FAR SEAS".

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Prevalence and characteristics of pictures in cancer screening communication: Content analysis of cancer screening information materials produced in the UK

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Background/ purpose: Cancer screening provides a vital route for improving cancer survival and patient quality of life. Printed materials remain the main mode for disseminating information about cancer screening to invitees in the UK. Including pictures in print communication can impact message reception, interpretation and retention. Health communication guidelines promote the use of pictures in printed information but lack consideration of the multidimensional nature of pictures. The aim of this study was to produce a systematic and theory-orientated assessment of the use of pictures in cancer screening information materials.
Methods: A content analysis of pictures present in all published information materials produced for invitees to any of the UK nationally coordinated cancer screening programmes and publicly available in 2019 (n=44). The coding manual was informed by a literature review, piloted and revised, and assessed for construct validity via inter-coder reliability testing. The following domains have been coded for: principal representation, people, objects, settings, principal function, screening topics, screening messages, reader's point of view, tone, production, colour, markings, picture-text relationship, and image form.
Results: Most print materials followed health communications guidelines by including visual information. Pictures were twice as likely to be used to demonstrate what something looked like than to convey a message. Messages most often covered procedural information or potential outcomes of screening rather than experiential information or decision-making strategies.
Conclusions and implications: The findings provide insight for both health communication researchers and practitioners as to the different types of pictures they may want to study or use in the cancer screening context.

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Sleep disturbances and the speed of multimorbidity development in old age: Results from a longitudinal population-based study

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Background/purpose: Sleep disturbances are prevalent among older adults and are associated with various individual diseases. The goal of this study was to investigate whether sleep disturbances are associated with the speed of multimorbidity development among older adults.
Methods: The study population was derived from the Swedish National study on Aging and Care in Kungsholmen (SNAC-K), an ongoing population-based study among older adults aged 60 or above (N=3363 at baseline). The current study included a sub-sample (n=1189) without multimorbidity at baseline (i.e. <2 chronic disease) and with data for the main exposure. Baseline sleep disturbances were assessed using the Comprehensive Psychiatric Rating Scale, and categorized into three groups (no, slight and moderate-severe sleep disturbances). The total number of chronic conditions at baseline and at the follow-ups was obtained from clinical examinations, medical records, laboratory results, drugs/treatments, and register linkages.
Results: Moderate-severe sleep disturbances at baseline were associated with a higher speed of chronic disease accumulation throughout the nine-year follow-up (ß per year=0.142, p=0.008), and the direction and magnitude of the association remained stable regardless of potential confounders. No significant interactions were found with age and sex. Regarding specific groups of chronic diseases, a significant positive association was found between moderate-severe sleep disturbances and neuropsychiatric (ß per year=0.040, p=0.024) and musculoskeletal (ß per year=0.038, p=0.025) disease accumulation, but not with cardiovascular diseases.
Conclusion and implications: The finding that sleep disturbances are associated with faster chronic disease accumulation points towards the importance of early detection and treatment of sleep disturbances to reduce chronic multimorbidity among older adults.

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Improving general practitioner daily office practice: Working smarter, not harder by using lean thinking

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Background purpose: In the era of increasing the cost and demand for healthcare services, running the primary healthcare clinic by the general practitioner (GP) in an efficient way is a necessity. A key challenge for any healthcare organisation is ensuring the achievement of the best value for money from the patient's perspective by having an efficient system. This requires reduced variation, errors, and waste within the daily practice.
Method: In this case study, lean thinking, which is a set of practices and principles that originate from Toyota manufacture was adapted. Tools such as process map, root cause analysis, 5S, and others were applied in one GP clinic, aiming to identify the different wastes within the daily practice.
Results: Several wastes were identified, and corrective action was recommended. More than 50% of the GP time was non-added-value to the patient. Examples of the recognised waste include searching for people, supplies and information; redundant information gathering; missing or inaccurate information; slow computerised system; waiting for patient records, information and test results; excessive movement of people.
Conclusions and implications: The GP practice can be enhanced by improving the physical clinic layout, the computerised informatics system, the appointment system, the prescription management, and the integration of different departments practice. In conclusion, improving office practice by using lean thinking is worthwhile and to appreciate their full potentials, it needs to be adopted as a holistic approach. Lean thinking is not an on and off project, it is a continuous improvement that should be impeded within the daily practice of the healthcare workers.

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By: mcwg178@uowmail.edu.au, Mr Melvin Goh

Efficacy of a brief health risk communication intervention: An online randomised controlled trial

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Background/ purpose: The increasing prevalence of diabetes globally is driven by rising numbers of people living with Type 2 diabetes (T2D), which is largely the result of an unhealthy lifestyle. Effective risk communication could lead to behavioural change; however, gaps in health services preclude at-risk individuals from receiving such interventions. Brief internet interventions may function as an alternative through offering users a brief risk assessment and subsequent lifestyle recommendations. The aim of this study is to assess the feasibility and efficacy of a brief online health risk communication intervention on changing behavioural intentions. While health risk communication interventions have proved efficacious in the general population, it has not been adequately tested as a brief online intervention tool.
Methods: Participants are recruited through Amazon Mechanical Turk (MTurk) and redirected to Qualtrics to complete the survey. Following completion of the demographic and screening items, qualified participants will be randomly assigned to either the personalised or generalised T2D risk presentation condition, and subsequently the gain-framed or loss-framed health message condition.
Results: A 2x2 analysis of variance tests (ANOVAs) using general linear model will be used to examine the main effects of message frames and the interaction effects on behavioural intentions. Effect sizes will be calculated using the means and SDs of each experimental group.
Conclusions and implications: The outcomes of the trial and the feasibility of the brief online risk communication intervention will be discussed. We will also briefly introduce the future directions along this same line of research.

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Impact of correctable visual impairment on vision-related quality of life in elderly singaporeans: The population health and eye disease profile in elderly singaporeans (pioneer) study

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Background/ purpose: There is a paucity of contemporary Asian data on the impact of correctable visual impairment (CVI) on vision-related quality of life (VRQoL). We aimed to address this knowledge gap in elderly Singaporeans ≥60 years.
Methods: In this population-based, cross-sectional study, CVI was defined as visual acuity >6/12 resulting from under-corrected refractive error (improvement of ≥2 lines in presenting and best-corrected visual acuity) and/or presence of untreated cataract. The Brief Impact of Vision Impairment Questionnaire (B-IVI) was used to assess overall VRQoL, together with its two component subscales: visual functioning (VF), and emotional well-being (EWB). 'Poor' VRQoL, VF, and EWB were defined as scores below the sample median. Multivariable modified Poisson models were used to assess the association between CVI and poor B-IVI indices, adjusting for age, gender, ethnicity, low socioeconomic status, and presence of concomitant eye conditions.
Results: In a preliminary sample of 549 participants (mean age ± *SD*: 72.6 ± 8.3 years; 52.1% females), individuals with CVI were at higher risk of having poor VRQoL (risk ratio [95% *CI*]: 1.58 [1.01, 1.68], *p*=.042) and VF (1.30 [1.06, 2.35], *p*=.026), but not EWB (1.29 [0.95, 1.77], *p*=.106), compared to those without VI.
Conclusion: In our population of elderly Singaporeans, presence of CVI was associated with 58% and 30% higher risk of having poor VRQoL and VF, respectively. Our results highlight the need for public health interventions to promote spectacle wear and cataract surgery uptake among the elderly in order to minimize the impact on VRQoL and reduce visual disability.

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By: sugandha.k.gupta@gmail.com, Sugandha Gupta

Barriers to meeting physical activity guidelines among south-asian americans

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BACKGROUND/ PURPOSE: Engaging in physical activity (PA) is beneficial for health; however, some demographic subgroups, including

South-Asian Americans, are not engaging in PA levels recommended by the World Health Organization (WHO). We report levels of PA in an understudied cultural group, South-Asian Americans, and identify barriers to meeting WHO guidelines (at least 150 minutes of moderate PA per week).

METHOD: Data were collected from self-report questionnaires of 87 employed South-Asian American adults (69% male; *M* age=39 [*SD*=8]) attending a preventive care visit. Amount of time spent engaging in moderate and vigorous PA during the week and weekends was measured.

RESULTS: Weekday PA varied widely (*M*=345 min, *SD*=217, Range = 0-1170). The majority of participants (85%) reported PA levels that meet WHO guidelines. Barriers to meeting guidelines included lack of time (48.3%), finding PA boring (10.0%), preferring to spend time with family or friends (14.9%), and aches or pains (4.6%). Compared to those who met WHO guidelines, participants who did not meet the guidelines more often reported that they found PA boring (χ^2=6.0, p=0.01) and had aches and pains (χ^2=4.1, p=0.04).

CONCLUSIONS: Despite the fact that most participants in this sample of healthy South-Asian Americans met WHO guidelines, barriers to PA persist. Understanding these barriers will inform development of culturally-anchored behavioural interventions. For example, activities with friends and families in a cultural setting (e.g., a mosque) may increase interest.

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By: elissa.weitzman@childrens.harvard.edu, Dr. Elissa Weitzman

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The protective effects of having a trusted adult to talk to in school: Baseline evidence from a policy intervention to deliver screening, brief intervention and referral to treatment for substance use in schools statewide

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Introduction/Purpose: Delivering private, verbal screening, brief intervention, and referral to treatment (SBIRT) for substance use may increase the proportion of adolescents with an adult in their lives with whom they can talk about serious problems, a national health objective that may protect youths' physical, psychological and behavioural health. We quantified associations among this attachment and health outcomes for youth before exposure to SBIRT under a novel policy change requiring universal school-SBIRT.

Methods: Anonymous e-surveys of middle/high school youth at 25 schools. Comparison of youth who do/do not have a trusted adult confidante in school across self-rated health, past year use of alcohol, marijuana, e-cigarettes, depression, and anxiety, using descriptive statistics and multivariate logistic regression.

Results: Of n=4,657 participants (average age 13.6 years (SD=1.2), 49% female, 61.8% white non-Hispanic), 58.1% reported having a trusted adult in school, 61.2% reported excellent/very good health, 19.8% and 15.0% screened positive for depression and anxiety respectively, 16.5%, 8.7%, and 10.3% report past-year use of alcohol, marijuana, and e-cigarettes respectively. Compared to youth without a trusted adult confidante in school, youth with one are more likely to report excellent/very good health (AOR 1.67; 95%CI 1.48-1.90), less likely to report (AOR; 95%CI) depression (0.54; 0.54-0.63), anxiety (0.52; 0.44-0.62), past year use of: alcohol, (0.67; 0.57-0.79), marijuana (0.69; 0.55-0.85), e-cigarettes (0.60; 0.49-0.74).

Conclusion: Having a trusted adult in school is protective of physical, psychological and behavioural health, underscoring the importance of policy interventions to strengthen youth/adult ties. Future quasi-experimental evaluation will measure effects of school-SBIRT on ties and outcomes.

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The effects of knowledge, attitude, and subjective norms on intention to obtain the hpv vaccine: A longitudinal study

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Background/ purpose: There is a wide dearth of study examining the HPV vaccine uptake rate in Indonesia. To date, cervical cancer is one of the most prevalent cancers and the vaccine uptake rate is relatively low in Indonesia. The HPV vaccine is related to first-time sexual engagement. However, sexual activities are not openly discussed in Indonesia. This longitudinal study aimed to evaluate the effects of HPV-related knowledge, attitude, and subjective norms on intention (proxy as future behaviour) to obtain the HPV vaccine.

Methods: One hundred and twenty-four participants (25 males; M age = 21.2, SD = 2.15) were recruited online in this longitudinal study; approximately six months gap between T1 and T2. A 14-item questionnaire from Catalano et al. (2017) assessed attitude (7 items), subjective norms (4 items), and intention (3 items). Instrument to assess HPV-related knowledge (32 items) was combined from those of Chiang, et al. (2016) and Marlow, et al. (2016). Higher score denoted a more positive view or more knowledge. Multiple regression analyses were used.

Results: At T1, the model (R^2= 0.63, *p*<0.01) and the three predictors: subjective norm (β=0.61, *p*<0.01), attitude (β=0.27, *p*<0.01), and knowledge (β=0.18, *p*=0.05) were significant in predicting intention. At T2, subjective norm (β=0.32, *p*<0.01) and attitude (β=0.26, *p*=0.05) from T1 were significant in predicting intention (R^2= 0.26, *p*<0.01).

Conclusions and implications: Subjective norms and attitude were significant predictors for intention at the initial intake and six months later. Intervention targeting subjective norms and attitude were recommended to increase intention in obtaining HPV vaccine.

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The prospective relationship between accumulation of overtime working hours and workers' health

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Background/Purpose: One of the targets of the Work Style Reform Policy that was begun in April 2019 in Japan is to help end the practice of long working hours. The overtime cap is set at 45 hours per month. We investigated the prospective relationship between accumulated overtime of 45 hours or longer per month for 6 months and workers' physical health.
Methods: The study included 6,806 workers of a Japanese company (response rate = 86.6%). Data of monthly working hours during the fiscal year 2016 and the annual health check-up in fiscal years 2016 and 2017 were collected from the company records. The accumulated overtime was defined as the frequency of months (i.e., 0 to 6) with 45 hours or more overtime for 6 months from October 2016 to March 2017. Two multivariate logistic regression analysis models were examined: adjusted for sex, age, job category, work pattern, and employment type (model 1), and adjusted for model 1 and the respective value of health check-up in the previous year (model 2).
Results: The accumulated overtime was significantly associated with BMI, systolic blood pressure, and low-density lipoprotein cholesterol (LDL) in model 1, and the relationship remained significant only for LDL in model 2. Odds ratios were 1.32 for twice, 1.61/ 1.44/ 1.46 for four/ five/ six times, indicating increased ratio of abnormal LDL with the increased frequency of prior 6 months with ≥ overtime 45 hours.
Conclusions and Implications: The present findings suggest that LDL may be sensitive to the accumulation of overtime.

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By: mxr1940@miami.edu, Graduate Student in Clinical Psychology Molly Ream

Elucidating mechanisms of quality of life disparities among hispanic women with breast cancer: An examination of disease stage, coping, and affect

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Background/purpose: Compared to non-Hispanic White (NHW) women, Hispanic women with breast cancer (BCa) are more likely to be diagnosed at later stages of disease and experience reduced quality of life (QOL) following diagnosis. We hypothesized that the increased demands of later-stage disease results in a perceived inability to cope and greater distress for Hispanic women in comparison to NHW women, resulting in decreased QOL.
Methods: Hispanic (51%) and NHW (49%) women (N=198) with newly diagnosed stage 0-III BCa in Miami were enrolled in two trials between 2006-2019. A multiple group structural equation modelling approach was applied to baseline measures of coping confidence (Measure of Current Status Scale), negative affect (Affect Balance Scale), QOL (Functional Assessment of Cancer Therapy – Breast), and stage (dichotomized as early (stages 0-1, *n*=141) and more advanced (stages 2-3, *n*=57) disease).
Results: Stage predicted QOL for both Hispanic (*B(SE)*=-2.88 (.71), *p*=<.001) and NHW (*B(SE)*=-1.57 (.59), p=.01) women. There were significant differences between Hispanic and NHW women on the path from disease stage to 1) coping confidence and 2) negative affect, such that later disease stage predicted coping confidence (*B(SE)*= -2.39(1.11), *p*=.03) and negative affect (*B(SE)*= .39(.14), *p*=.007) amongst Hispanic, but not NHW, women. Negative affect mediated the relationship between stage and QOL for Hispanic women only (*B(SE)*= -1.25(.50), *p*=.01).
Conclusion. This data supports our theory that Hispanic women experience worse emotional distress at later stage disease than do NHW women, in turn impacting QOL.

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Using a sugar sweetened beverage tax to reduce young adults' consumption: A discrete choice analysis

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Background/purpose: Sugar sweetened beverage (SSB) taxes can reduce consumption but may increase consumption of non-taxed sweetened beverages. In addition, SSB taxes can be unpopular, with support depending on factors such as attitudes toward taxation among the targeted population and how the tax revenues are to be used. This study examined the likely effectiveness of an SSB tax among a predominantly young, Latino population in California.
Methods: 315 (68% Hispanic) individuals between the ages of 18 – 25 completed a Discrete Choice Experiment (DCE) involving 16 choice sets of two options. The options varied on five drink attributes (drink, cost, amount of sugar, use of funds, time required). A conditional logistic regression model estimated the results for the entire sample and for low and high SSB consumers. Willingness to pay was determined for each group.
Results: Low SSB Consumers (69% of the sample) valued all beverages more than soda, especially water. High SSB consumers also reported valuing water more than sodas, but also juice. Time was also an important attribute influencing beverage consumption decisions. Marginal analysis reports on the impact of an SSB tax on consumption of sugar taking into account substitution to other sweetened beverages and distance required to get non sweetened beverages such as water.
Conclusion and implications: The results suggest the impact of SSB taxes may be significantly mitigated by substitution to other sweetened beverages, but that making water more widely available may mitigate these impacts.

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By: eajanio@uci.edu, Ms. Emily Janio

Unidas por la vida (united for life): influence of a weight loss and diabetes self-management intervention on the frequency of hypoglycemic events

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Background/purpose: Among individuals with diabetes, both severe and non-severe hypoglycemic events can exacerbate diabetes-related morbidity. These events may cause fear of recurrence that impairs illness self-management, such as adherence to glucose-reducing medications. Latinos have an elevated risk for Type 2 diabetes and fear of hypoglycemia. Thus, developing methods to reduce the frequency of hypoglycemic events in this population is imperative.
Methods: Eighty-eight Latina mothers with type 2 diabetes were enrolled in *Unidas por la Vida*, a 16-week intervention promoting weight loss and diabetes control. Mothers were assigned to complete the intervention with an adult daughter at risk for diabetes or to be in a usual care condition. Mothers reported the frequency of experienced hypoglycemic events and their perceived overall control of their diabetes. Blood samples were collected to measure 2-3 month average level of blood sugar control (i.e. hemoglobin A1c (HbA1c)).
Results: Participation in the intervention was associated with a decrease in frequency of minor hypoglycemic events; however, this was only true for mothers who reported higher diabetes control at baseline. Control was measured using both a self-report item (B=1.6, p=0.05) and an objective measure (HbA1c; at a trend-level (B=-0.4, p=0.07)).
Conclusions and implications: The intervention appeared to play a role in reducing the frequency of minor hypoglycemic events, but these benefits were limited to women who reported greater overall control of their diabetes. Extending intervention benefits to women with poorer control of their diabetes is an important goal for future research.

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By: staadr@gmail.com, Adrienne dr Stauder

Burnout and offensive behaviours among health care workers in Hungary

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Background/ purpose: Connections between offensive behaviours, burnout and health among health care workers.
Methods: 1308 health care workers (1107 women, 201 men) completed the Hungarian version of the Copenhagen Psychosocial Questionnaire II including questions on offensive behaviours and perpetrators, and scales on stress, burnout, and sleeping problems. The short Beck Depression Inventory and PHQ15 for subjective somatic symptoms were also included.
Results: 62,4% of women and 55,3% of men experienced any offensive behaviour (bullying, sexual harassment, threats of violence or physical violence). Frequent (weekly or more) exposure was 13,5% and 11,6%, respectively. Prevalence was the highest among nurses (any 69,7% / frequent 17,4%); rates were 55.8/10,4% among physicians; 52,5/12,5% among psychologists and 57,1/11,9% among "other health care workers". The perpetrators were most frequently the superior and co-workers for bullying; patients for threats of violence or physical violence, and both co-workers and patients for sexual harassment. Exposure to any offensive behaviour was associated with higher stress, burnout, mental and somatic symptom scores. Those scores were higher in the "frequently bullied" group and when the perpetrator was an "insider" (superior or co-worker). Younger people, women and employees lower in the hierarchy were more at risk.
Conclusions and implications: Our results draw attention to the high prevalence of offensive behaviours within the health care teams, highlighting that not only offensive behaviours might have negative health consequences, but also that high stress and burnout levels might increase the occurrence of offensive behaviours, therefore interventions both at individual and organisational level might be necessary.

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Using an online canteen ordering system to improve school lunch purchases: 12-month outcomes of the 'click & crunch' cluster RCT

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Background/ purpose: Online canteen ordering systems are increasingly popular in Australian schools and they represent a substantial opportunity for public health nutrition. This trial assessed the effectiveness of the 'Click & Crunch' intervention in improving the nutritional i) quality and ii) content of primary school students' online lunch orders after 12-months.
Methods: A cluster RCT involving 17 non-government schools. Intervention schools received changes to the layout and presentation of their online menu (e.g. menu labelling, item repositioning, tailored feedback, and incentives), whereas control schools received no changes. Intervention effectiveness was determined by comparing the average proportion of 'Everyday' menu items, and the average energy (kJ), saturated fat (g), sugar (g) and sodium (mg) content of student lunch orders, based on collected purchasing data. Each data collection period lasted for one term (10 weeks). Follow up occurred 12-months after baseline data collection commenced.
Results: Over the baseline period 29,983 orders were placed for 3,441 students. Preliminary analysis indicates that there was a non-significant increase in the proportion of 'Everyday' foods purchased, and non-significant decreases in the kilojoule, saturated fat, sodium and sugar content of intervention students' online lunch orders relative to controls. However, subgroup analysis by student grade revealed significant differences suggesting the intervention was more effective for younger vs older students in terms of sugar (-2.3g, p=0.02) and 'Everyday' foods (+4.6%, p=0.04).
Conclusions and implications: Further investigation is warranted into how to successfully embed behaviour change strategies in existing online systems with population reach.

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Workplace incivility and medical errors in Japan

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Background/ purpose: Although various variables have been found as risk factors of medical errors, the effect of workplace climate, including interpersonal relationships, is still unknown. The current study thus aimed to investigate this association using a longitudinal study design.
Methods: A one-year follow-up study was conducted among employees in two college hospitals in Japan. Both baseline and follow-up questionnaire inquired about demographic and occupational characteristics, workplace incivility, and medical errors including medical accidents, clinical incidents, or near misses during the past year. We used the Modified Workplace Incivility Scale to measure two types of incivility: 1) experiencing uncivil behaviours from working members such as supervisors, colleagues, or subordinates and 2) doing uncivil behaviours to them (i.e., instigated workplace incivility).
Results: A total of 1,482 participants returned baseline questionnaires (response rate: 55.7%) and 881 workers returned follow-up questionnaires one-year later (follow-up rate: 59.4%). Mean age of the participants was 37.5 years and the majority were females and nurses/midwives. The average number of medical errors during the past year was 1.8 per person. The results of logistic regression analyses revealed that participants who experienced moderate incivility were at increased risk of experiencing at least one medical error during the past year (Odds Ratio [OR]: 1.70 [95%CI = 1.11 to 2.59]) after adjusting for gender, age, and occupation. On the other hand, experiencing high workplace incivility or instigated workplace incivility did not associate with medical errors at follow-up.
Conclusions and implications: Experiencing workplace incivility might be associated with the occurrence of medical errors in the future.

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By: daisyle@email.gwu.edu, Daisy Le

Viral hepatitis in the washington-baltimore metropolitan area: An updated study of prevalence and impact from 2016-2018

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Background/purpose: While the majority of viral hepatitis is experienced in the developing world, migration of people from high prevalence countries contributes to health outcomes in the United States. The purpose of this study was to estimate the prevalence of hepatitis B virus (HBV) and hepatitis C virus (HCV) infection in foreign-born immigrants living in the Baltimore-Washington metropolitan area.
Methods: This study used cross-sectional data from 7418 individuals screened at community events held from 2016 to 2018. Descriptive statistics were generated to describe the screening results. Positive results for HBV infection (HBsAg+) and HCV infection (HCVAb+) were analysed according to age, gender, and country of birth.
Results: Of 7418, the majority of participants were born in Asia (66.5%). The prevalence of infection was 4.9% for HBV and 3.3% for HCV in Asia-born immigrants compared to 4.6% for HBV and 1.4% for HCV in Africa-born immigrants. Among participants who were Asia-born, prevalence of HBV infection was highest for those from Vietnam (6.7%) compared to the Philippines (6.1%), Mongolia (6%), Cambodia (5.6%), China (5.5%), and Burma (4.9%). Among participants who were Africa-born, prevalence of HBV was highest for those from Ghana (6.2%) and Cameroon (5.4%), followed by Sierra Leone (4.9%) and Nigeria (4%). The highest HCV prevalence occurred among those from Mongolia (10.07%) and Burma (5.48%) in Asia and those from Cameroon (5.60%) and Sierra Leone (1.59%) in Africa.
Conclusions and implications: This study suggests that screening data are disaggregated by country of birth, then improvements can be made to programs for prevention, earlier diagnosis, and linkage to care.

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By: nregas@uc.cl, Ms Nadia Egas

Leisure-time physical activity or joint effect of physical activity and sedentary behaviour for relation to stress with obesity in chilean adults

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Background/purpose: To investigate the associations between stress and obesity (BMI) and the role of combined categories of moderate-to-vigorous physical activity with sedentary behaviour (MVPA/SB) and leisure-time physical activity (Lt-PA).
Methods: Overall, 6233 participants (mean age 48.91 years and 62.9 % women) from the cross-sectional Chilean National Health Survey 2016–2017 were included in this study. MVPA and SB were measured using the Global Physical Activity Questionnaire_Short Form. Four categories were computed using MVPA/SB specific cut-offs (High-SB/Active, Low-SB/Active, High-SB/Inactive, Low-SB/Inactive'). Stress and Lt-PA were measured with three and one questions, respectively.
Results: Stress was positively, and MVPA/SB and Lt-PA were negatively associated with BMI after adjusting by age, sex, educational level, and healthy diet. Lt-PA and MVPA/SB were negatively associated with stress. Structural equation models revealed that Lt-PA partially mediated the relationship between stress and BMI, as shown by the indirect effect (B = .030; p< .001) and the direct effect (B = -.464; p< .001) of Lt-PA on BMI. Lt-PA accounted for 21% of the association between stress and BMI. The mediation model was valid and showed an adjusted goodness of fit. Complementary analysis showed the Lt-PA and MVPA/SB were associated with markers of adiposity and cardiovascular risk.
Conclusions and implications: Our findings highlight the importance of increasing free-time physical activity to decrease obesity. The absence of mediation with MVPA/SB on relationship between stress and obesity, and the association with markers of cardiovascular risk highlights the necessity of improving the measurement of this combine to movement patterns.

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By: j.p.a.van.lennep@fsw.leidenuniv.nl, Mr. Hans van Lennep

Pavlovian and other learning techniques; what works best to facilitate placebo analgesia? – A research protocol

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Background/purpose: Placebo analgesia can be established by means of different learning techniques, with most evidence existing for classical (Pavlovian) conditioning, observational learning, and verbal suggestions. Although evidence has been found that all three learning techniques can impact placebo analgesia, not all studies show consistent results. Within the current study protocol, we aim to examine each learning mechanism in itself and in combination to shed more light on how to best induce placebo analgesia and minimize placebo extinction. We will also investigate possible mediators (e.g., anxiety, trust, and expectancy) that influence placebo effects and study personality characteristics and genetics which might predict susceptibility to placebo effects.

Methods: An 8x2 between- and within-subject design will be used with eight conditions consisting of an individual application or a combination of the three different learning techniques (verbal suggestions, conditioning, and observational learning) or a natural history condition. Within each group, participants will view and experience either a control or a placebo heat stimulation and receive information regarding these stimulations according to their allocated condition. Participants will undergo a conditioning and a testing phase. In the testing phase, the difference between placebo and control stimuli is used to calculate the amount of placebo analgesia and extinction. Questionnaires and DNA material will be obtained to study the influence of predictor variables and genetics in the placebo effect.

Conclusions and implications: We hypothesize that combining all three learning techniques will evoke the strongest placebo effect and most effectively will lower the amount of extinction.

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Are eating disorders a culture-bound syndrome? findings from a study of eating disorders and disordered eating attitudes among a sample of female undergraduates in nigeria

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Background/purpose: Our study set out to determine the prevalence of disordered eating attitudes (DEAs) and eating disorders and their correlates among female undergraduates of two tertiary institutions in Nigeria.Eating disorders have been reported to be uncommon in sub-Saharan Africa such that some authors suggested they constitute a culture-bound syndrome. There is however paucity of research into this subject matter in our environment.

Methods: We interviewed 440 female participants using a socio-demographic questionnaire, the Eating Attitude Test (EAT-26), MINI and 12-item General Health Questionnaire (GHQ-12).

Results: Mean age of participants was 20.80 (±3.3) years, 15 (3.4%) were married. The average weight, height and BMI was 59.21 (±11.43) kg, 1.63 (±0.064) metres and 22.24 (±3.82) respectively. One hundred and sixty-two (36.8%) participants were students of a polytechnic, while the remainder (59.1%) were university undergraduates. The average EAT-26 score was 12.8 (±9.3), while the respondents had a GHQ-12 score of 2.22 (±2.3). Ninety-eight (21.8%) of the respondents were categorised as having DEAs, 149 (33.9%) were categorised as having psychological distress based on the GHQ-12, while none of the respondents were categorised as having anorexia nervosa or bulimia nervosa. The only variable associated with disordered eating attitudes was the institution of study (X^2 = 8.89, p=0.012).

Conclusions and implications: While eating disorders seem to be uncommon among our study population, disordered eating attitudes are prevalent. The findings from our study suggest a need for further research into the concept of eating disorders in our environment with the possibility of specific/culturally sensitive diagnostic criteria.

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Occupational stress: Job insecurity and health-related outcomes among women and men with a high education

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Background/purpose: Job insecurity has emerged as a new occupational stressor with variable-oriented research showing that employee perceptions of job insecurity are associated with negative health-related consequences, including poorer health and impaired psychological well-being. Besides more perceived job insecurity being an issue, particular combinations of job insecurity perceptions may also be associated with different consequences. Using a person-oriented approach, this study aimed to investigate if different patterns of job insecurity can be identified and whether these patterns are associated with different experiences of health and well-being.

Methods: Working women and men with a higher education and living in Sweden were invited to a questionnaire study and asked to provide self-reports of job insecurity, health, and psychological well-being. In total 1348 responses were analysed using pattern analysis followed by group comparisons (ANOVAs).

Results: Distinct patterns were identified and labelled 1) *Secure*, 2) *Secure; quality-concerned*, 3) *Insecure: employment-concerned*, and 4) *Insecure*. Comparisons of profiles showed significant differences in health and psychological well-being suggesting that the *Insecure* may be most vulnerable to adverse health-related consequences of perceived job insecurity.

Conclusions and implications: Taken together, different job insecurity patterns may be associated with distinct experiences of health and psychological well-being. The findings add to the understanding of job insecurity as an occupational stressor and may be relevant for developing a sustainable working life.

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By: margaret.allman-farinelli@sydney.edu.au, Professor Margaret Allman-Farinelli

The long-term maintenance of dietary change after nutritional interventions in adolescents: A systematic review

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Background/purpose: The global prevalence of overweight and obesity among children has resulted in the implementation of many healthy eating interventions. Weight loss and maintenance have been intensively studied by systematic reviews, but there does not appear to be a review concerning the maintenance of long-term dietary changes. The objective of this systematic review was to determine whether the successful dietary changes made by adolescents after a healthy eating intervention are maintained beyond six months.

Methods: The population studied was defined as healthy children aged 10 to 18 years-old; the intervention had to include education and counselling to eat healthier foods and/or limit unhealthy foods and be a minimum of three months duration; the comparator was no or minimal intervention, the primary outcome was a change in one or multiple aspects of diet from end of intervention to last follow up and the study design was randomized controlled trials (RCTs). Six databases were searched from January 1995 to March 2019. All steps of screening of articles, data extraction and assessment of study quality with the Cochrane Risk of Bias Tool were conducted in duplicate.
Results: From 4296 articles retrieved only five interventions met selection criteria, four of which were cluster RCTS and the other a conventional RCT. Four studies were school-based and one community-based. Only two interventions were successful long term. One was a reduction in sugar-sweetened beverages and the other a reduction in discretionary desserts and snacks.
Conclusions and implications: The evidence base is small, and it is suggested interventionists include longer follow-ups in future.

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By: , (Not registered)

Network analysis of associations between clinical variables and psychological symptoms in testing and identifying targets in rheumatoid arthritis therapy (titrate) dataset

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Background/purpose: This study tests the feasibility of a network analysis approach to examine associations between clinical variables and mental health symptoms in rheumatoid arthritis (RA).
Methods: A subsample of 137 from 158 was used and the symptoms included are from the Patient Health Questionnaire (PHQ9), Generalised Anxiety Disorder Scale (GAD7), inflammatory markers, joint counts, pain, fatigue, Total Power Doppler (TPD) and others. Network analysis was conducted based on regularised correlations between variables using R-package *qgraph*.
Results: TPD and fatigue is highest for betweenness centrality, indicating they provide the shortest pathway between symptoms, therefore act as key variables linking everything. Fatigue and pain had the highest closeness centrality, illustrating that they have the shortest path with other symptoms, and capture the influence of both inflammation and mental health. Inflammatory symptoms have weak connections with psychological symptoms, however the high betweenness centrality score for TPD suggests that it is still vital in how the connection operates. GAD1 and PHQ2 also have the highest expected influence score, showing how influential mental health is in regard to RA patients.
Conclusions and implications: Inflammation in RA does not have a strong influence on mental health, while pain and fatigue appears to be the biggest influencing factors because of their short distance to both psychological and inflammatory symptoms. Symptoms of mental health were all strongly connected, but low mood and high anxiety provides the main connection between clinical and psychological variables. This indicates mood as potentially a key variable, which is easy to monitor in routine care.

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By: martinhagger@gmail.com, Martin Hagger

Identifying and classifying behaviour and motivation change techniques based on self-determination theory

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Background/purpose: While evidence suggests that interventions based on self-determination theory can be effective in motivating adoption and maintenance of health-related behaviours, and in promoting adaptive psychological outcomes, the motivational techniques that comprise the content of these interventions have not been comprehensively identified or described. The aim of the present study was to develop a classification system of the techniques that comprise self-determination theory interventions, with satisfaction of psychological needs as an organizing principle.
Method: Candidate techniques were identified through a comprehensive review of self-determination theory interventions and nomination by experts. The study team developed a preliminary list of candidate techniques accompanied by labels, definitions, and function descriptions of each. Each technique was aligned with the most closely related psychological need satisfaction construct (autonomy, competence, or relatedness). Using an iterative expert consensus procedure, participating experts (N=18) judged each technique on the preliminary list for redundancy, essentiality, uniqueness, and the proposed link between the technique and basic psychological need.
Results: The procedure produced a final classification of 21 motivation and behaviour change techniques (MBCTs). Redundancies between final MBCTs against techniques from existing behaviour change technique taxonomies were also checked.
Conclusions and implications: The classification system is the first formal attempt to systematize self-determination theory intervention techniques. The classification is expected to enhance consistency in descriptions of self-determination theory-based interventions in health contexts and assist in facilitating synthesis of evidence on interventions based on the theory. The classification is also expected to guide future efforts to identify, describe, and classify the techniques that comprise self-determination theory-based interventions in multiple domains.

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By: p.mcnamee@abdn.ac.uk, Dr Paul McNamee

The cost-effectiveness of a volunteer lifestyle coaching weight reduction programme for women attending routine breast cancer screening – results from the actwell trial

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Background/purpose: There are several health impacts and large health care costs associated with overweight and obesity, including additional risk of developing type 2 diabetes, cardiovascular disease, breast and other cancers. These risks suggest a need to develop effective and cost-effective weight management programmes to reduce the prevalence of overweight and obesity. We report the cost-effectiveness of a novel volunteer-led 12-month weight management programme (“ActWELL”) initiated in breast cancer screening centres across Scotland.

Methods: The cost-effectiveness of the ActWELL programme is measured relative to usual care, adopting the perspective of the National Health Service, using data from a four centre, 1:1 parallel group randomised controlled trial (n=560). We identify, measure and value health care resource use and health-related quality of life (using EQ-5D-5L) data at baseline, three months and 12-month follow-up amongst women aged between 50-70 years of age with Body Mass Index >25kg/m^2 who attended routine breast cancer screening clinics and agreed to participate in the trial. The incremental cost per quality adjusted life year (QALY) gained over 12 months is calculated using the ratio of the difference in the mean costs and mean QALY across all participants. Primary analysis is conducted on an intention-to-treat basis and performed for participants with complete data on resource use and EQ-5D-5L values. Additional analysis is also reported for missing data and the robustness of results tested using sensitivity analysis.
Results: Results will be available and presented.
Conclusions and Implications: The main conclusions and implications for policy and practice will be discussed.

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Behavioral medicine oriented physiotherapy in the context of return-to-work coordination for chronic pain

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Background/purpose: Effective interventions for return to work (RTW) are needed for individuals with chronic pain on long-term sick leave. Involvement of the workplace seems to be crucial, whereas questions remain about best integration of rehabilitation programs. The aim of this study was to develop an intervention protocol with a combined workplace intervention and work-directed physical exercise intervention, and evaluate its feasibility and effect on personal target activities at work.
Methods: Five participants with chronic pain (>90 days) on part-time sick leave (>30 days) were included in a series of single case experimental design studies. Data on work ability, pain and target activities were collected daily and weekly for baseline, the intervention period and at 2-month follow-up. The intervention consisted of RTW-coordination and workplace intervention, and a work-directed physical exercise intervention, based on a behavioural medicine approach with identification of target activities at work, structured exercise and tailored behavioural skills training. Implementation and effect on target activities were evaluated based on repeated outcome measures and data on intervention delivery and adherence.
Results: Results on participant's target activities will be presented. In addition, intervention protocol components will be exemplified.
Conclusions and implications: This study provides an example RTW intervention, with behaviour change actions targeting both context at the workplace and, most importantly, tailored behaviour skills training. It builds on earlier research about implementation of acquired skills in daily activities, which has not earlier been evaluated when focusing on ability to work. Pilot results and feasibility conclusions will be discussed.

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Last updated: 9th December, 2019
By: fiona.riordan@ucc.ie, Dr Fiona Riordan

Feasibility of a theory-based implementation intervention to improve attendance at diabetic retinopathy screening: a cluster randomised pilot trial in primary care

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Background/purpose: Despite evidence that diabetic retinopathy screening (DRS) is effective, uptake remains sub-optimal in many countries, including Ireland. We investigated the feasibility of an intervention to improve uptake of Ireland's national DRS programme, Diabetic Retina Screen, among patients with type 1 or type 2 diabetes.
Methods: We conducted a cluster randomised pilot trial, embedded process evaluation, and cost analysis in general practice. The intervention comprises *both* professional-level components (a staff briefing and training, a practice audit of patient screening status, professional electronic prompt, and practice reimbursement) and patient-level components (practice-endorsed reminders and an information leaflet delivered opportunistically face-to-face, and systematically by phone and letter). Patient registration and attendance were measured at baseline and after six months. Interviews with staff (n=9) and patients (n=10) explored their perspectives on the intervention. Micro-costing was used to estimate the cost of intervention delivery.
Results: At six months, 22/71 (31%) of baseline non-attenders in intervention practices subsequently attended screening compared to 15/87 (17%) in control practices. Enablers of feasibility included practice culture and capacity to protect time, existing systems and staff skills, and workarounds to improve intervention 'fit'. The total delivery cost across intervention practices (patients=363) was €2,509, averaging €627 per practice and €6.91 per audited patient. Continuation criteria supported proceeding to a definitive trial.
Conclusions and implications: While the intervention is feasible in primary care, consideration should be given to how best to facilitate local tailoring. A definitive trial of clinical and cost effectiveness is required with preliminary results suggesting a positive impact on uptake.

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By: s.b.vanbeurden@exeter.ac.uk, Ms Samantha van Beurden

Targeting automaticity processes to reduce alcohol consumption. is it possible, and how?

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Background/purpose: Alcohol consumption is a leading risk factor in disease and injury burden and affects both the individual and those in their surroundings. To support individuals in changing their drinking behaviour, it may be useful to look at the automaticity processes involved in the consumption of alcohol. This systematic review aimed to (i) identify the range of individual-level techniques used to modify or manage automaticity processes to reduce alcohol consumption and (ii) describe the underlying mechanisms targeted.

Methods: Studies were eligible if they: (a) were peer-reviewed evaluations of an intervention or technique to modify or otherwise manage automaticity processes to reduce alcohol consumption, (b) reported a behavioural outcome (i.e., alcohol consumption) and were published in English from 1998, and (c) included descriptions of the targeted mechanisms.

Results: Thirty-four studies were included, evaluating 12 distinct techniques. Techniques targeting automaticity processes directly were: (a) attentional bias training, (b) approach-avoidance training, (c) inhibition training, and (d) cue-exposure. Techniques engaging the reflective processes to override or compete with the impulsive processes included: (a) visuospatial loading, (b) mindfulness-based strategies, (c) implementation intentions, and (d) cognitive behavioural therapy.

Conclusions and implications: A range of techniques were identified illustrating that automaticity processes could be targeted in a variety of ways to support reductions in drinking behaviour. However, underlying processes are not always reported and where they are, there is inconsistency in how they are described and referred to. A consensus about the terminology used and (clearer) reporting of the targeted mechanisms is required to advance this field.

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By: susan.ahern@ucc.ie, Ms Susan Ahern

A micro-costing of the development of an intervention to facilitate implementation and uptake of diabetic retinopathy screening

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Background/purpose: Despite growing interest in implementation science and the field's processes and outcomes, few economic studies have considered the costs incurred before implementation. Programme costs can accrue long before implementation begins, yet economic analysis of intervention development is rarely performed. Against this backdrop we aim to retrospectively cost the development of a multifaceted intervention to improve diabetic retinopathy screening uptake.

Methods: The intervention development process incorporates audit of screening uptake, interviews with patients and healthcare professionals, a consensus study with stakeholders, and the development of intervention materials. Employing micro-costing techniques, both direct and indirect costs associated with this development process will be identified, measured, and valued (2018, Euro).

Results: We are producing one of the first micro-costings of the development of an intervention in the implementation science field. Ongoing collection of costs includes postal invitations, telephone calls, printing, transcription services, travel, consumables, venue hire, catering, and opportunity costs of interviewees and researchers' time.

Conclusions and implications: The fact that all stages of implementation require resources and thus have associated costs has received little consideration to date. With ever growing demands on finite health budgets, costs should be captured and analysed from the early stages of intervention development to inform efficient resource allocation for both ongoing programme development and public health policy investment decisions. Data from this micro-costing will provide insight into the cost of intervention development and inform economic analysis of the pilot trial of the intervention.

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By: jantinevdhelder@gmail.com, MSc. Jantine van den Helder

Digitally supported dietary counselling increases protein intake in community-dwelling older adults: subgroup analysis of the vitamin RCT

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Background/purpose: For prevention of sarcopenia and functional decline in community-dwelling older adults, a higher daily protein intake is needed. A new e-health strategy for dietary counselling was used with the aim to increase total daily protein intake to optimal levels (minimal 1.2 g/kg/day, optimal 1.5 g/kg/day) through use of regular food products.

Methods: The VITAMIN (VITal Amsterdam older adults IN the city) RCT included 245 community-dwelling older adults (age ≥ 55y): control, exercise, and exercise plus dietary counselling (protein) group. The dietary counselling intervention was based on behaviour change and personalization. Dietary intake was measured by a 3d dietary record at baseline, after 6-month intervention and 12-month follow-up. The primary outcome was average daily protein intake (g/kg/day). Sub-group analysis and secondary outcomes included daily protein distribution, sources, product groups. A Linear Mixed Models (LMM) of repeated measures was performed with STATA v13.

Results: Mean age of the 224 subjects was 72.0(6.5) years, a BMI of 26.0(4.2). The LMM showed a significant effect of time and time*group ($p<0.001$). The dietary counselling group showed higher protein intake than either control (1.41 vs 1.13 g/kg/day; β +0.32; $p<0.001$) or exercise group (1.41 vs 1.11 g/kg/day; β +0.33; $p<0.001$) after 6-month intervention and 12-month follow-up.

Conclusions and implications: This study shows digitally supported dietary counselling improves protein intake sufficiently in community-dwelling older adults with use of regular food products. Protein intake increase by personalised counselling with e-health is a promising strategy for dieticians.

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By: jantinevdhelder@gmail.com, MSc. Jantine van den Helder

Implementation of blended and combined exercise and nutrition programs for older adults: Perspective of allied health professionals in the Amsterdam metropolitan region

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Purpose: Inter-professional collaboration and adaptation of e-health are necessary to implement innovative exercise and nutrition interventions in health practice. The aims of this qualitative study were 1) determine the relevant factors related to successful inter-professional collaboration, and 2) determine the relevant factors for implementation and susceptibility of our blended interventions in older adults, by allied health professionals in the Amsterdam metropolitan region.

Methods: This explorative qualitative study was the next step in implementation, subsequent to the VITAMIN RCT. We combined fourteen semi-structured interviews with dietitians with two focus-groups of mixed exercise and physiotherapists. After each focus group and interview, the two researchers evaluated and discussed the statements, factors and common beliefs in relation to the research questions. Transcripts were analyzed with MAXQDA software and open, axial and selective coding was adapted.

Results: In current practice inter-professional collaboration is not common, mainly due to lacking knowledge about the other profession. Location is a facilitator, as well is previous experience. External factors as higher financial compensation to implement inter-professional work meetings, were defined as possible facilitator to collaboration. Main encouraging factors related to blended interventions were timesaving consults, ability to reach immobile older adults and cost saving healthcare. Main barrier was a lack of e-health literacy in older adults.

Conclusions: This study shows that the exercise and nutrition professionals have a positive attitude towards future implementation of these types of blended and combined interventions for older adults. Furthermore, inter-professional collaboration is a point of attention in our regional allied healthcare system.

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For healthcare professionals, with healthcare professionals: Co-creation approaches used to design interventions to support patients and healthcare professionals.

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By: pamela.rackow@stir.ac.uk, Dr Pamela Rackow

Co-creating an intervention and training approach for asthma nurses to deliver an intervention to support medication adherence in young people with asthma

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Background: Asthma affects 1 in 11 young people the UK. Asthma nurses play a crucial role in supporting patients and delivering interventions because medication adherence is low, especially in young people. They go through a challenging developmental phase and are gradually taking over responsibility for their treatment. To facilitate this and to support young people with asthma and their families, we are co-developing an intervention that targets adherence to preventer medication. Asthma nurses deliver it and therefore, intervention materials as well as a training were co-produced with them.

Methods: Interviews with health-care professionals (HCPs) were conducted and analyzed using content analysis. HCPs provided feedback on intervention materials, how to amend them, and on the overall structure. These results are being used to amend intervention materials and to produce a training manual to be used by asthma nurses. The latter is being done in co-production with a nurse.

Results: Interviews revealed that the intervention content needs to be shortened so that it can be delivered within the NHS. Condescending language should be removed, and the content should be more focused on the family so that it is easier for families to integrate it in their daily routine. For the training manual it seems crucial to have several brief training sessions that can be delivered online to make them fit within the nurses' busy schedules.

Conclusions and implications: Co-producing interventions and trainings with and for NHS staff allows for designing them in a way that fits within the boundaries of health care systems.

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By: , (Not registered)

Home presenteeism: Perceived functional limitation for performing domestic work among generally healthy working-aged females in Finland

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Background/Purpose: Home presenteeism refers to a situation, where a person due to health limitation feels hindered from performing domestic work. The aim of the study was to assess the prevalence and determinants of home presenteeism among a population of Finnish female municipal employees.

Methods: The study is a cross-sectional cohort study conducted in 2015. The participants (n=595) were female employees with a mean age of 48 years (SD 10) of the personnel of the city of Pori, Finland. Of the principal study variables home presenteeism was assessed with a question: "Evaluate, how much your ill-health has affected performing domestic work during the past month?" Health-related quality of life was determined by the EuroQol questionnaire and work engagement by the Utrecht Work Engagement Scale.

Results: In stepwise multiple regression analysis, health-related quality of life ($p<0.001$) showed the strongest inverse association with home presenteeism. In addition, the rate of home presenteeism showed a negative relationship with years of education ($p=0.006$), work engagement ($p<0.001$) and high and moderate ($p<0.005$) leisure time physical activity, while a positive association was observed with the number of chronic diseases ($p<0.001$).

Conclusions and implications: Home presenteeism is a common phenomenon also among generally healthy working-aged women. Low level

of home presenteeism is associated with health-related factors and strong work engagement. From a behavioral medicine perspective, more research on the effects of the phenomenon is needed.

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By: mllabre@miami.edu, Dr. Maria Llabre

Blood pressure reactivity and recovery from an emotion processing task in English versus Spanish

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Background/purpose: Hispanics in the US have lower rates of cardiovascular disease morbidity and mortality than expected from their risk factor profile. Given the role of stress in cardiovascular reactivity, we asked whether this paradox is partly the result of processing stress reactions in Spanish, a language with a rich emotion lexicon. We compared blood pressure reactivity and recovery in bilingual participants who performed an emotion writing task in Spanish or English. We hypothesized participants randomized to the Spanish vs the English language condition would demonstrate greater reactivity and more rapid blood pressure recovery.
Methods: Bilingual university students were randomized to a session conducted in either Spanish or English, with instructions to think and write in that language. Participants were connected to a blood pressure monitor and instructed to think about their most stressful or traumatic experience for 3 min and write about their emotional reactions for 20 min, after a 15 min baseline. Participants then rested for 15 min. Systolic and diastolic blood pressures were obtained during the baseline, thinking, writing and recovery phases. Participants completed questionnaires before and after the writing phase.
Results: Data from N = 120 participants, mostly female of average age, approximately 20 years, will be presented. Latent growth modeling will be used to estimate the pattern of change during the reactivity and recovery. Change parameters will be compared between the English and Spanish conditions and as a function of language use variables.
Conclusions and implications: Findings will be interpreted in the context of the role of language in the paradox.

Submission ID: 702
Symposium ID and title if part of symposium: 40

Stigma matters: Stigma reduction interventions for improving global cancer outcomes

Decision: Accepted, Offered Poster
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By: , (Not registered)

Developing a tool to measure intersectional stigma related to HIV and cervical cancer

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Background: Women living with HIV (WLWH) have an increased risk of developing cervical cancer, yet are often underscreened compared to the general population. The risk is compounded in high incidence regions, such as sub-Saharan Africa, where rates of cervical cancer and HIV are among the highest in the world. As programs start to integrate human papillomavirus (HPV) based screening programs into HIV care or in regions with high HIV prevalence, we seek to understand intersectional stigma related to HIV, HPV and cervical cancer and determine its potential to impact engagement in care.
Methods: Women in the general population, WLWH, HIV providers and community health volunteers in Kisumu, Kenya participated in in-depth interviews to understand their attitudes toward and experience with the three health states. Interview data were analysed using grounded theory, and results were used to develop a framework for intersectional stigma.
Results: Preliminary findings revealed low awareness of HPV, associations between HPV and poor hygiene, and fear of death related to cervical cancer. The research team used this framework to develop a checklist to measure stigma related to HPV and Cervical Cancer. A series of vignettes were developed to measure intersectional stigma between HPV and HIV, and between Cervical Cancer and HIV. These items will undergo validation with cognitive testing and standard psychometric properties evaluation, followed by pilot testing within an HIV-care program in Western Kenya.
Conclusions and implications: After validation, the team will administer the survey to 300 WLWH to measure stigma levels and association with engagement in HIV care and cervical cancer screening.

Submission ID: 703
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Stigma matters: Stigma reduction interventions for improving global cancer outcomes

Decision: Accepted, Offered Poster
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By: , (Not registered)

Cancer stigma and intervention implications in resource limited settings: An Indian case study

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Background/purpose: Stigma and discrimination result in psychological distress, delay in accessing care, and treatment abandonment. While there are multiple efforts underway globally to understand and reduce HIV stigma, there is limited research into the drivers of cancer stigma.
Methods: Qualitative interviews were conducted with 25 oncology professionals, 20 cancer patients and 20 patients diagnosed with both cancer and HIV, as well as their family members (n=40) in the South Indian state of Karnataka. Topics included communication, treatment decisions, and fears and experiences of stigma and discrimination. Translated transcripts were analyzed using NVivo software.
Results: We identified six themes. 1) Disclosure and collusion: Family members frequently insisted physicians withhold diagnoses and prognosis from the patient, fearing that knowledge would result in loss of hope and treatment refusal. Nurses and family members reported withholding information to “fill the patient with courage.” 2) Stigma fears: Family members expressed concern that cancer diagnosis would result in discrimination, including jeopardizing marriage proposals. 3) Late presentation: Gynecological cancers have additional stigma, leading to delayed presentations. 4) Shame: Patients were concerned their diagnosis was

associated with “bad behaviors”. 5) Lack of resources: Treatment decisions were based on family finances and location, rather than prognosis; 6) Futile treatment: Pursuit of ineffective treatment is common, with huge financial loss to the family.
Conclusions and implications: Multi-level interventions are needed to reduce cancer stigma in India. Clinic-level interventions should include patients, family members and clinic staff to reduce collusion and improve health literacy. Community-level interventions are needed to reduce misconceptions.

Submission ID: 704
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Stigma matters: Stigma reduction interventions for improving global cancer outcomes

Decision: Accepted, Offered Poster
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By: , (Not registered)

Informing a global perspective on cancer stigma: US NCI investments in cancer stigma research

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Background/ Purpose: Successful characterization of cancer stigma among various populations has the potential to inform effective interventions targeted at combatting the social ignominy. Instances of social discrediting range from misconceptions about cancer treatment that prevent early detection to biases due to physical changes of cancer survivors, such as alopecia, mastectomy or colostomy. Cancer stigmas not only pose substantial challenges to disease control, they also increase global disparities in health outcomes. This portfolio analysis aims to characterize the scope of NCI-funded research related to cancer stigma.
Methods: The IMPAC II database was queried to retrieve NCI-funded grants related to cancer stigma between FY10-FY18. Relevant abstracts were reviewed to confirm project fell within the cancer stigma research framework. Global cancer research grants were then stratified by (1) Common Scientific Outline (CSO); (2) cancer site; and (3) international components.
Results: A detailed review of the data uncovered 49 distinct NCI-funded projects that address cancer stigma. The majority (44) were coded to CSO code ‘Cancer Control, Survivorship and Outcomes.’ Additionally, nearly half of the projects focused on breast (12) or lung (9) cancer. All grants were awarded to US institutions, six of which included foreign collaborators. The majority of NCI-funded stigma grants have also been research Grants, suggesting that preliminary exploration continues to define the field of cancer stigma.
Conclusion and implications: Building a knowledge base on the major contributors to cancer stigma and the social construct’s impact on disease is critical to improved cancer treatment outcomes. A lack of tools to measure stigma across contexts and cultures, however, creates challenges to articulating standardized data that could highlight global disparities. Inclusion of global cancer stigma research will help expand the understanding of cultural, social, and contextual aspects of cancer stigma. Global cancer stigma research may also provide insight into understanding and improving cancer care for underserved U.S. subpopulations.

Elimination of cervical cancer as a public health problem

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Background: In 2020, the WHO launched the Global strategy to accelerate the elimination of cervical cancer as a public health problem. The strategy promotes the implementation of combined measures aimed at cervical cancer elimination. It is subjected to the achievement of the 90-70-90 targets, consisting of 90% coverage for HPV vaccine among adolescent girls, screening 70% of women for cervical cancer or pre-cancerous lesions by a high-performance test, and timely treatment of 90% of women with pre-cancerous lesions or cancer. Aligned with the CxCA elimination strategy, in 2018, PAHO Member States endorsed a regional plan of action to eliminate CxCa, joining a regional initiative to eliminate a wide range of communicable diseases and their consequences by 2030.
Associations between HPV and HIV infections are significant and well documented. The risk of acquiring HIV infection is higher in women infected with HPV, whereby women living with HIV (WLHIV) are more prone to persistent infection with high-risk HPV types. WLHIV tend to develop pre-cancerous cervical lesions at a younger age and may subsequently progress to CxCa, more frequently than women without HIV. CxCa is considered an AIDS-defining disease in WLHIV, a high-risk population group for which in LAC, there are scanty epidemiology data and information related to policies and availability of cervical cancer services tailored to WLHIV.
Aim: To generate the information needed to prioritize cervical cancer prevention and control in WLWHIV, we conducted a literature review combined with an assessment of policies and practices in LAC countries.
Results: Despite limitations of available data, the weighted prevalence of high-risk HPV among WLHIV in LAC was 51.0% (42.8-59.1, 95%CI, I2 = 97,4%), with higher rates occurring in younger women. Although no association was found between ART and high-risk HPV prevalence, women with lower CD4 count (< 200 cells/mm3) showed a 4-fold probability of HPV infection (OR 4,86; 95% CI: 2,21 a 10,65). Similarly, WLHIV also presented a higher risk of pre-cancerous lesions and cancer. The assessment of existing policies revealed that only a few countries prioritize HPV vaccination and cervical cancer screening among WLHIV. Data on vaccination coverage among WLHIV are not available, and only four countries had data on cervical cancer screening coverage. In a survey conducted by ICW-Latina, most WLHIV interviewed reported adequate access to cancer screening services but low coverage with the HPV vaccine.
Conclusions/Recommendations: These findings highlight the persistence of major gaps in response to HIV/HPV coinfection and cervical cancer among WLHIV in LAC, both in terms of health policies and the provision of services. There is an urgency to transform these public health lacunae into opportunities to accelerate the implementation of elimination measures, beginning with joint advocacy efforts alongside representatives of affected communities.