

# 48 bhma abstracts, february '13

Forty eight abstracts covering a multitude of stress, health & wellbeing related subjects including healthy diet's protective effect against developing depression, mindfulness in schools, the benefits of practising kindness if you're socially anxious, the value of low-intensity interventions even for severe depression, non-celiac wheat sensitivity, the importance of friendship for both men & women, type of alcohol & cardiovascular benefit, exercise & reduced risk of dementia, Mediterranean diet & daily mood improvements, multivitamin-multimineral supplements' beneficial effect on mood but lack of effect on mortality, work stress & cancer, the value of graded return to work with musculoskeletal pain, and much more.

(Albrecht, Albrecht et al. 2012; Carroccio, Mansueto et al. 2012; de Witt Huberts, Evers et al. 2012; Kanter, Afifi et al. 2012; Akbaraly, Sabia et al. 2013; Alden and Trew 2013; Arch, Ayers et al. 2013; Barrera, Castro et al. 2013; Bartolini, Bilancini et al. 2013; Bobadilla, Metze et al. 2013; Bolton Jm and et al. 2013; Bower, Kontopantelis et al. 2013; Bujarski, O'Malley et al. 2013; Cable, Bartley et al. 2013; Caprariello and Reis 2013; Cella, White et al. 2013; Chambers, Schlenker et al. 2013; Chiva-Blanch, Arranz et al. 2013; Cowan and Little 2013; DeFina, Willis et al. 2013; Estruch, Ros et al. 2013; Ford, Jaceldo-Siegl et al. 2013; Goodwin, White et al. 2013; Hanssen, Peters et al. 2013; Heikkila, Nyberg et al. 2013; Huppert and So 2013; Imel, Hubbard et al. 2013; Ironson, O'Cleirigh et al. 2013; Iverson, Litwack et al. 2013; Jeste, Savla et al. 2013; Khandaker, Zimbron et al. 2013; Kok, Waugh et al. 2013; Long and Benton 2013; Lulkahatai and Saligan 2013; Macpherson, Pipingas et al. 2013; Matheson, Shepherd et al. 2013; Milyavskaya, Philippe et al. 2013; Morgan, Mackinnon et al. 2013; Pecina, Azhar et al. 2013; Seekles, Cuijpers et al. 2013; Shankar, Hamer et al. 2013; Shiri, Kausto et al. 2013; Smith and Freyd 2013; Smith, Béland et al. 2013; Suren, Roth et al. 2013; Thomas, Martin et al. 2013; van der Schaaf, Dusseldorp et al. 2013; Voncken and Dijk 2013)

Akbaraly, T. N., S. Sabia, et al. (2013). **"Adherence to healthy dietary guidelines and future depressive symptoms: Evidence for sex differentials in the Whitehall II study."** *Am J Clin Nutr* 97(2): 419-427.

<http://ajcn.nutrition.org/content/97/2/419.abstract>

(Free full text available) Background: It has been suggested that dietary patterns are associated with future risk of depressive symptoms. However, there is a paucity of prospective data that have examined the temporality of this relation. Objective: We examined whether adherence to a healthy diet, as defined by using the Alternative Healthy Eating Index (AHEI), was prospectively associated with depressive symptoms assessed over a 5-y period. Design: Analyses were based on 4215 participants in the Whitehall II Study. AHEI scores were computed in 1991–1993 and 2003–2004. Recurrent depressive symptoms were defined as having a Center for Epidemiologic Studies Depression Scale score  $\geq 16$  or self-reported use of antidepressants in 2003–2004 and 2008–2009. Results: After adjustment for potential confounders, the AHEI score was inversely associated with recurrent depressive symptoms in a dose-response fashion in women (P-trend < 0.001; for 1 SD in AHEI score; OR: 0.59; 95% CI: 0.47, 0.75) but not in men. Women who maintained high AHEI scores or improved their scores during the 10-y measurement period had 65% (OR: 0.35%; 95% CI: 0.19%, 0.64%) and 68% (OR: 0.32%; 95% CI: 0.13%, 0.78%) lower odds of subsequent recurrent depressive symptoms than did women who maintained low AHEI scores. Among AHEI components, vegetable, fruit, trans fat, and the ratio of polyunsaturated fat to saturated fat components were associated with recurrent depressive symptoms in women. Conclusion: In the current study, there was a suggestion that poor diet is a risk factor for future depression in women.

Albrecht, N. J., P. M. Albrecht, et al. (2012). **"Mindfully teaching in the classroom: A literature review."** *Australian Journal of Teacher Education* 37(12): Article 1. <http://ro.ecu.edu.au/ajte/vol37/iss12/1/>

(Free full text available) The practice of mindfulness is being used with increased frequency in schools around the world. In the current literature review we outline some of the core concepts and practices associated with mindfulness and discuss studies analysing the process of mindfulness teacher training. Preliminary research in this emerging field suggests that mindfulness has the potential to improve classroom management, teacher-student relationships and instructional strategies. Mindfulness instructors recommend that before teachers can feel comfortable and effectively teach mindfulness in the classroom they need to embody and practice mindfulness in their own lives. It is proposed that in order to improve our knowledge base in this area a critical synthesis and analysis of school-based mindfulness programs is required.

Alden, L. E. and J. L. Trew (2013). **"If it makes you happy: Engaging in kind acts increases positive affect in socially anxious individuals."** *Emotion* 13(1): 64-75. <http://www.ncbi.nlm.nih.gov/pubmed/22642341>

Social anxiety is associated with low positive affect (PA), a factor that can significantly affect psychological well-being and adaptive functioning. Despite suggestions that individuals with high levels of social anxiety would benefit from PA enhancement, the feasibility of doing so remains an unanswered question. Accordingly, in the current study, individuals with high levels of social anxiety (N = 142) were randomly assigned to conditions designed to enhance PA (Kind Acts), reduce negative affect (NA; Behavioral Experiments), or a neutral control (Activity Monitoring). All participants engaged in the required activities for 4 weeks and completed pretest questionnaires measuring mood and social goals, as well as weekly email ratings of mood, anxiety, and social activities. Both the pretest and weekly mood ratings revealed that participants who engaged in kind acts displayed significant increases in PA that were sustained over the 4 weeks of the study. No significant changes in PA were observed in the other conditions. The increase in hedonic functioning was not due to differential compliance, frequency of social activities, or an indirect effect of NA reduction. In addition, participants who engaged in kind acts displayed an increase in relationship satisfaction and a decrease in social avoidance goals, whereas no significant changes in these variables were observed in the other conditions. This study is the first to demonstrate that positive affect can be increased in individuals with high levels of social anxiety and that PA enhancement strategies may result in wider social benefits. The role of PA in producing those benefits requires further study.

Arch, J. J., C. R. Ayers, et al. (2013). **"Randomized clinical trial of adapted mindfulness-based stress reduction versus group cognitive behavioral therapy for heterogeneous anxiety disorders."** *Behaviour Research and Therapy* 51(4-5): 185-196. <http://www.sciencedirect.com/science/article/pii/S0005796713000144>

Objective To compare a mindfulness-based intervention with cognitive behavioral therapy (CBT) for the group treatment of anxiety disorders. Method One hundred five veterans (83% male, mean age = 46 years, 30% minority) with one or more DSM-IV anxiety disorders began group treatment following randomization to adapted mindfulness-based stress reduction (MBSR) or CBT. Results Both groups showed large and equivalent improvements on principal disorder severity thru 3-month follow up (ps < .001, d = -4.08 for adapted MBSR; d = -3.52 for CBT). CBT outperformed adapted MBSR on anxious arousal outcomes at follow up (p < .01, d = .49) whereas adapted MBSR reduced worry at a greater rate than CBT (p < .05, d = .64) and resulted in greater reduction of comorbid emotional disorders (p < .05, d = .49). The adapted MBSR group evidenced greater mood disorders and worry at Pre, however. Groups showed equivalent treatment credibility, therapist

adherence and competency, and reliable improvement. Conclusions CBT and adapted MBSR were both effective at reducing principal diagnosis severity and somewhat effective at reducing self-reported anxiety symptoms within a complex sample. CBT was more effective at reducing anxious arousal, whereas adapted MBSR may be more effective at reducing worry and comorbid disorders.

Barrera, M., F. G. Castro, et al. (2013). **"Cultural adaptations of behavioral health interventions: A progress report."** *Consult Clin Psychol* 81(2): 196-205. <http://www.ncbi.nlm.nih.gov/pubmed/22289132>

Objective: To reduce health disparities, behavioral health interventions must reach subcultural groups and demonstrate effectiveness in improving their health behaviors and outcomes. One approach to developing such health interventions is to culturally adapt original evidence-based interventions. The goals of the article are to (a) describe consensus on the stages involved in developing cultural adaptations, (b) identify common elements in cultural adaptations, (c) examine evidence on the effectiveness of culturally enhanced interventions for various health conditions, and (d) pose questions for future research. Method: Influential literature from the past decade was examined to identify points of consensus. Results: There is agreement that cultural adaptation can be organized into 5 stages: information gathering, preliminary design, preliminary testing, refinement, and final trial. With few exceptions, reviews of several health conditions (e.g., AIDS, asthma, diabetes) concluded that culturally enhanced interventions are more effective in improving health outcomes than usual care or other control conditions. Conclusions: Progress has been made in establishing methods for conducting cultural adaptations and providing evidence of their effectiveness. Future research should include evaluations of cultural adaptations developed in stages, tests to determine the effectiveness of cultural adaptations relative to the original versions, and studies that advance our understanding of cultural constructs' contributions to intervention engagement and efficacy.

Bartolini, S., E. Bilancini, et al. (2013). **"Did the decline in social connections depress Americans' happiness?"** *Social Indicators Research* 110(3): 1033-1059. <http://dx.doi.org/10.1007/s11205-011-9971-x>

During the last 30 years US citizens experienced, on average, a decline in reported happiness, social connections, and confidence in institutions. We show that a remarkable portion of the decrease in happiness is predicted by the decline in social connections and confidence in institutions. We carry out our investigation in three steps. First, we run a happiness regression that includes various indicators of social connections and confidence in institutions, alongside with own income, reference income, and the usual socio-demographic controls. We find that indicators of social connections and confidence in institutions are positively and significantly correlated with happiness. Second, we investigate the evolution of social connections and confidence in institutions over time, finding that they generally show a declining trend. Third, we calculate the variation in happiness over time as predicted by each of its statistically significant correlates, finding that the decrease in happiness is mainly predicted by the decline in social connections and by the growth in reference income. More precisely, the sum of the negative changes in happiness predicted by the reduction in social connections and the increase in reference income more than offsets the positive change predicted by the growth of household income. Also, the reduction in happiness predicted by the decline in confidence in institutions is non-negligible, although substantially smaller than the one predicted by either social connections or reference income.

Bobadilla, L., A. V. Metze, et al. (2013). **"Physical attractiveness and its relation to unprovoked and reactive aggression."** *Journal of Research in Personality* 47(1): 70-77. <http://www.sciencedirect.com/science/article/pii/S0092656612001390>

Studies have linked facial attractiveness to positive outcomes and unattractiveness to negative ones. However, no study has examined whether attractiveness and aggression are related, even though there is a relationship between unattractiveness and risk factors for aggression like neglect and bullying. In this study, 78 men and women engaged in unprovoked and reactive physical aggression tasks, and reactive derogation of a fictitious opponent. The participants were graded on attractiveness by a group of independent raters. The results indicated that for male participants, unattractiveness predicted unprovoked and reactive aggression as strongly as callous/unemotional psychopathic traits. Among female participants, attractiveness predicted derogation of the opponents more strongly than any psychopathic trait. Implications from gene-environment correlation and social role theory perspectives are discussed.

Bolton Jm, A. W. L. W. D. and et al. (2013). **"Parents bereaved by offspring suicide: A population-based longitudinal case-control study."** *JAMA Psychiatry* 70(2): 158-167. <http://dx.doi.org/10.1001/jamapsychiatry.2013.275>

Context Suicide bereavement remains understudied and poorly understood. Objectives To examine outcomes of parents bereaved by the suicide death of their offspring and to compare these with both nonbereaved parent controls and parents who had offspring die in a motor vehicle crash (MVC). Design Population-based case-control study. Suicide-bereaved parents were compared with nonbereaved matched control parents in the general population (n = 1415) and with MVC-bereaved parents (n = 1132) on the rates of physician-diagnosed mental and physical disorders, social factors, and treatment use in the 2 years after death of the offspring. Adjusted relative rates (ARRs) were generated by generalized estimating equation models and adjusted for confounding factors. Setting Manitoba, Canada. Participants All identifiable parents who had an offspring die by suicide between 1996 and 2007 (n = 1415). Main Outcome Measures Mental and physical disorders, social factors, and treatment use. Results Suicide bereavement was associated with an increased rate of depression (ARR, 2.14; 95% CI, 1.88-2.43), anxiety disorders (ARR, 1.41; 95% CI, 1.24-1.60), and marital breakup (ARR, 1.18; 95% CI, 1.13-1.23) in the 2 years after the suicide of an offspring, as compared with the 2 years prior to the death. Suicide-bereaved and MVC-bereaved parents had very few differences on predeath to postdeath outcomes. Depression rate increases were greater for MVC-bereaved parents (19.9%) compared with suicide-bereaved parents (15.9%; P = .005), whereas suicide-bereaved parents had higher rate increases of hospitalization for mental illness (P = .049). Suicide-bereaved parents were more likely than their MVC-bereaved counterparts to have depression (ARR, 1.30; 95% CI, 1.06-1.61), physical disorders (ARR, 1.32; 95% CI, 1.19-1.45), and low income (ARR, 1.34; 95% CI, 1.18-1.51) before their offspring's death. Conclusions Suicide bereavement is associated with adverse mental health and social outcomes. These consequences appear similar to those associated with MVC bereavement. Parents who lose offspring to suicide appear to be a vulnerable group even prior to their offspring's death.

Bower, P., E. Kontopantelis, et al. (2013). **"Influence of initial severity of depression on effectiveness of low intensity interventions: Meta-analysis of individual patient data."** *BMJ* 346: f540. <http://www.ncbi.nlm.nih.gov/pubmed/23444423>

OBJECTIVE: To assess how initial severity of depression affects the benefit derived from low intensity interventions for depression. DESIGN: Meta-analysis of individual patient data from 16 datasets comparing low intensity interventions with usual care. SETTING: Primary care and community settings. PARTICIPANTS: 2470 patients with depression. INTERVENTIONS: Low intensity interventions for depression (such as guided self help by means of written materials and limited professional support, and internet delivered interventions). MAIN OUTCOME MEASURES: Depression outcomes (measured with the Beck Depression Inventory or Center for Epidemiologic Studies Depression Scale), and the effect of initial depression severity on the effects of low intensity interventions. RESULTS: Although patients were referred for low intensity interventions, many had moderate to

severe depression at baseline. We found a significant interaction between baseline severity and treatment effect (coefficient -0.1 (95% CI -0.19 to -0.002)), suggesting that patients who are more severely depressed at baseline demonstrate larger treatment effects than those who are less severely depressed. However, the magnitude of the interaction (equivalent to an additional drop of around one point on the Beck Depression Inventory for a one standard deviation increase in initial severity) was small and may not be clinically significant. CONCLUSIONS: The data suggest that patients with more severe depression at baseline show at least as much clinical benefit from low intensity interventions as less severely depressed patients and could usefully be offered these interventions as part of a stepped care model.

Bujarski, S., S. S. O'Malley, et al. (2013). **"The effects of drinking goal on treatment outcome for alcoholism."** *J Consult Clin Psychol* 81(1): 13-22. <http://www.ncbi.nlm.nih.gov/pubmed/23231573>

OBJECTIVE: It is well known to clinicians and researchers in the field of alcoholism that patients vary with respect to drinking goal. The objective in this study was to elucidate the contribution of drinking goal to treatment outcome in the context of specific behavioral and pharmacological interventions. METHOD: Participants were 1,226 alcohol-dependent individuals enrolled in a large, multisite trial of combined behavioral intervention, acamprostate, and naltrexone. Drinking goal was coded as follows: (a) controlled drinking, (b) conditional abstinence, and (c) complete abstinence. RESULTS: Analysis revealed a main effect of drinking goal on percent days abstinent ( $p < .0001$ ), days to relapse to heavy drinking ( $p < .0001$ ), and global clinical outcome ( $p < .001$ ). These results were such that a goal of complete abstinence was associated with the best outcomes, followed by conditional abstinence; controlled drinking was associated with the poorest outcomes. Conversely, a main effect of drinking goal was observed on drinks per drinking day ( $p < .01$ ), such that controlled drinking was associated with fewer drinks per drinking day whereas complete abstinence was associated with the highest number of drinks per drinking day. Combined behavioral intervention performed better than medical management alone for participants whose drinking goal was not complete abstinence. CONCLUSION: These results suggest that drinking goal represents a highly predictive clinical variable and should be an integral part of the clinical assessment of patients with alcohol dependence. Assessment of patients' drinking goals may also help match patients to interventions best suited to address their goals and clinical needs.

Cable, N., M. Bartley, et al. (2013). **"Friends are equally important to men and women, but family matters more for men's well-being."** *J Epidemiol Community Health* 67(2): 166-171. <http://jech.bmj.com/content/67/2/166.abstract>

Background People with larger social networks are known to have better well-being; however, little is known about (1) the association with socio-demographic factors that may predict the size and composition of social networks and (2) whether the association with well-being is independent of pre-existing psychological health or socio-demographic factors. Methods The authors used information collected from 3169 men and 3512 women who were born in Great Britain in 1958. First, age on leaving full-time education, partnership and employment status at age 42 were used to predict the size and composition of cohort members' social networks at age 45 using ordered logistic regression. Second, using multiple linear regression, the associations between social network size by composition (relatives and friends) and psychological well-being at age 50 were assessed, adjusting for socio-demographic factors and psychological health at age 42. Results Not having a partner and staying in full-time education after age 16 was associated with a smaller kinship network in adults. Having a smaller friendship network at age 45 was associated with poorer psychological well-being among adults at age 50, over and above socio-demographic factors and previous psychological health. Additionally, having a smaller kinship network was associated with poorer psychological well-being among men. Conclusions Having a well-integrated friendship network is a source of psychological well-being among middle-aged adults, while kinship networks appear to be more important for men's well-being than for women's. These relationships are independent of education, material status and prior psychological health.

Caprariello, P. A. and H. T. Reis (2013). **"To do, to have, or to share? Valuing experiences over material possessions depends on the involvement of others."** *J Pers Soc Psychol* 104(2): 199-215. <http://www.ncbi.nlm.nih.gov/pubmed/23276272>

Recent evidence indicates that spending discretionary money with the intention of acquiring life experiences - events that one lives through - makes people happier than spending money with the intention of acquiring material possessions - tangible objects that one obtains and possesses. We propose and show that experiences are more likely to be shared with others, whereas material possessions are more prone to solitary use and that this distinction may account for their differential effects on happiness. In 4 studies, we present evidence demonstrating that the inclusion of others is a key dimension of how people derive happiness from discretionary spending. These studies showed that when the social-solitary and experiential-material dimensions were considered simultaneously, social discretionary spending was favored over solitary discretionary spending, whereas experiences showed no happiness-producing advantage relative to possessions. Furthermore, whereas spending money on socially shared experiences was valued more than spending money on either experiences enacted alone or material possessions, solitary experiences were no more valued than material possessions. Together, these results extend and clarify the basic findings of prior research and add to growing evidence that the social context of experiences is critical for their effects on happiness.

Carroccio, A., P. Mansueto, et al. (2012). **"Non-celiac wheat sensitivity diagnosed by double-blind placebo-controlled challenge: Exploring a new clinical entity."** *Am J Gastroenterol* 107(12): 1898-1906. <http://dx.doi.org/10.1038/ajg.2012.236>

OBJECTIVES: Non-celiac wheat sensitivity (WS) is considered a new clinical entity. An increasing percentage of the general population avoids gluten ingestion. However, the real existence of this condition is debated and specific markers are lacking. Our aim was thus to demonstrate the existence of WS and define its clinical, serologic, and histological markers. METHODS: We reviewed the clinical charts of all subjects with an irritable bowel syndrome (IBS)-like presentation who had been diagnosed with WS using a double-blind placebo-controlled (DBPC) challenge in the years 2001-2011. One hundred celiac disease (CD) patients and fifty IBS patients served as controls. RESULTS: Two hundred and seventy-six patients with WS, as diagnosed by DBPC challenge, were included. Two groups showing distinct clinical characteristics were identified: WS alone (group 1) and WS associated with multiple food hypersensitivity (group 2). As a whole group, the WS patients showed a higher frequency of anemia, weight loss, self-reported wheat intolerance, coexistent atopy, and food allergy in infancy than the IBS controls. There was also a higher frequency of positive serum assays for IgG/IgA anti-gliadin and cytometric basophil activation in "in vitro" assay. The main histology characteristic of WS patients was eosinophil infiltration of the duodenal and colon mucosa. Patients with WS alone were characterized by clinical features very similar to those found in CD patients. Patients with multiple food sensitivity were characterized by clinical features similar to those found in allergic patients. CONCLUSIONS: Our data confirm the existence of non-celiac WS as a distinct clinical condition. We also suggest the existence of two distinct populations of subjects with WS: one with characteristics more similar to CD and the other with characteristics pointing to food allergy.

Cella, M., P. D. White, et al. (2013). **"Cognitions, behaviours and co-morbid psychiatric diagnoses in patients with chronic fatigue syndrome."** *Psychological Medicine* 43(02): 375-380. <http://dx.doi.org/10.1017/S0033291712000979>

Background Specific cognitions and behaviours are hypothesized to be important in maintaining chronic fatigue syndrome (CFS). Previous research has shown that a substantial proportion of CFS patients have co-morbid anxiety and/or depression. This study aims to measure the prevalence of specific cognitions and behaviours in patients with CFS and to determine their association with co-morbid anxiety or depression disorders. Method A total of 640 patients meeting Oxford criteria for CFS were recruited into a treatment trial (i.e. the PACE trial). Measures analysed were: the Cognitive Behavioural Response Questionnaire, the Chalder Fatigue Scale and the Work and Social Adjustment Scale. Anxiety and depression diagnoses were from the Structured Clinical Interview for DSM-IV. Multivariate analysis of variance was used to explore the associations between cognitive-behavioural factors in patients with and without co-morbid anxiety and/or depression. Results Of the total sample, 54% had a diagnosis of CFS and no depression or anxiety disorder, 14% had CFS and one anxiety disorder, 14% had CFS and depressive disorder and 18% had CFS and both depression and anxiety disorders. Cognitive and behavioural factors were associated with co-morbid diagnoses; however, some of the mean differences between groups were small. Beliefs about damage and symptom focussing were more frequent in patients with anxiety disorders while embarrassment and behavioural avoidance were more common in patients with depressive disorder. Conclusions Cognitions and behaviours hypothesized to perpetuate CFS differed in patients with concomitant depression and anxiety. Cognitive behavioural treatments should be tailored appropriately.

Chambers, J. R., B. R. Schlenker, et al. (2013). **"Ideology and prejudice: The role of value conflicts."** *Psychological Science* 24(2): 140-149. <http://pss.sagepub.com/content/24/2/140.abstract>

In three studies, we tested whether prejudice derives from perceived similarities and dissimilarities in political ideologies (the value-conflict hypothesis). Across three diverse samples in Study 1, conservatives had less favorable impressions than liberals of groups that were identified as liberal (e.g., African Americans, homosexuals), but more favorable impressions than liberals of groups identified as conservative (e.g., Christian fundamentalists, businesspeople). In Studies 2 and 3, we independently manipulated a target's race (European American or African American) and political attitudes (liberal or conservative). Both studies found symmetrical preferences, with liberals and conservatives each liking attitudinally similar targets more than dissimilar targets. The amount of prejudice was comparable for liberals and conservatives, and the race of the target had no effect. In all three studies, the same patterns were obtained even after controlling for individual differences on prejudice-related dimensions (e.g., system justification, social-dominance orientation, modern racism). The patterns strongly support the value-conflict hypothesis and indicate that prejudice exists on both sides of the political spectrum.

Chiva-Blanch, G., S. Arranz, et al. (2013). **"Effects of wine, alcohol and polyphenols on cardiovascular disease risk factors: Evidences from human studies."** *Alcohol Alcohol*. <http://www.ncbi.nlm.nih.gov/pubmed/23408240>

Aims The aim of this review was to focus on the knowledge of the cardiovascular benefits of moderate alcohol consumption, as well as to analyze the effects of the different types of alcoholic beverages. Methods Systematic revision of human clinical studies and meta-analyses related to moderate alcohol consumption and cardiovascular disease (CVD) from 2000 to 2012. Results Heavy or binge alcohol consumption unquestionably leads to increased morbidity and mortality. Nevertheless, moderate alcohol consumption, especially alcoholic beverages rich in polyphenols, such as wine and beer, seems to confer cardiovascular protective effects in patients with documented CVD and even in healthy subjects. Conclusions In conclusion, wine and beer (but especially red wine) seem to confer greater cardiovascular protection than spirits because of their polyphenolic content. However, caution should be taken when making recommendations related to alcohol consumption.

Cowan, M. L. and A. C. Little (2013). **"The effects of relationship context and modality on ratings of funniness."** *Personality and Individual Differences* 54(4): 496-500. <http://www.sciencedirect.com/science/article/pii/S0191886912005028>

There is evidence to suggest that humour is an important part of mate choice and that humour may serve as an indicator of genetic quality. The current study investigated how rated funniness from a video clip was related to an individual's attractiveness as a short-term or long-term partner. We additionally tested for the presence of an attractiveness halo effect on humour ratings by comparing ratings of funniness from video clips, audio-only presentations, and photographs. We found that funniness was most strongly correlated with attractiveness for short-term relationships, especially in videos of males. We also found that attractiveness was related to funniness ratings differently across video, audio-only clips, and photographs. Relative to their rated funniness in the audio-only condition, with no appearance cues, attractive individuals were rated as funnier in video clips than less attractive individuals. An additional study demonstrated that ratings of flirtatiousness and funniness were strongly correlated. Perceived similarity between producing humour and flirting may explain why humour is more preferable in a short-term partner as flirting may be seen to signal proceptivity. The effects of attractiveness on humour judgement may also be explained by an association with flirtation as flirting may be most enjoyable when directed by attractive individuals.

de Witt Huberts, J. C., C. Evers, et al. (2012). **"Double trouble: Restrained eaters do not eat less and feel worse."** *Psychology & Health*: 1-15. <http://dx.doi.org/10.1080/08870446.2012.751106>

Objective: While high levels of dietary restraint do not appear to reflect actual caloric restraint, it has been found to be a risk factor for a wide array of maladaptive eating patterns. These findings raise the question what, if not caloric restriction, dietary restraint entails. We propose that the very finding that restrained eaters do not eat less than they intend to do can provide an answer. Based on this disparity between the intention to restrain oneself and actual behaviour, we therefore hypothesised that high levels of restraint are associated with eating-related guilt. Method: Three studies (N = 148) using unobtrusive measures of food intake; different restraint scales; and different measures of guilt tested whether restraint is related to eating-related guilt. Results: Results indicated that restraint was not associated with food intake, but instead was associated with increased levels of guilt after eating. Guilt was explicitly related to food intake. Moreover, the observed guilt could not be attributed to a general increase in negative affect. Conclusion: The results of these studies suggest that restraint is not an indicator of actual restricted food intake, but rather a reflection concerns about food and eating manifested in eating-related guilt.

DeFina, L. F., B. L. Willis, et al. (2013). **"The association between midlife cardiorespiratory fitness levels and later-life dementia: A cohort study."** *Annals of Internal Medicine* 158(3): 162-168. <http://dx.doi.org/10.7326/0003-4819-158-3-201302050-00005>

Background: Primary prevention of Alzheimer disease and other types of dementia (all-cause dementia) is an important public health goal. Evidence to date is insufficient to recommend any lifestyle change to prevent or delay the onset of dementia. Objective: To assess the association between objectively measured midlife cardiorespiratory fitness ("fitness") levels and development of all-cause dementia in advanced age. Design: Prospective, observational cohort study. Setting: Preventive medicine clinic. Patients: 19 458 community-dwelling, nonelderly adults who had a baseline fitness examination. Measurements: Fitness levels, assessed using the modified Balke treadmill protocol between 1971 and 2009, and incident all-cause dementia using Medicare Parts A and B claims data from 1999 to 2009. Results: 1659 cases of incident all-cause dementia occurred during 125 700 person-years of Medicare follow-up (median follow-up, 25 years [interquartile range, 19 to

30 years]). After multivariable adjustment, participants in the highest quintile of fitness level had lower hazard of all-cause dementia than those in the lowest quintile (hazard ratio, 0.64 [95% CI, 0.54 to 0.77]). Higher fitness levels were associated with lower hazard of all-cause dementia with previous stroke (hazard ratio, 0.74 [CI, 0.53 to 1.04]) or without previous stroke (hazard ratio, 0.74 [CI, 0.61 to 0.90]). Limitations: Dementia diagnoses were based on Medicare claims, and participants generally were non-Hispanic white, healthy, and well-educated and had access to preventive health care. This study evaluated fitness levels, so a specific exercise prescription cannot be generated from results and the findings may not be causal. Conclusion: Higher midlife fitness levels seem to be associated with lower hazards of developing all-cause dementia later in life. The magnitude and direction of the association were similar with or without previous stroke, suggesting that higher fitness levels earlier in life may lower risk for dementia later in life, independent of cerebrovascular disease.

Estruch, R., E. Ros, et al. (2013). **"Primary prevention of cardiovascular disease with a Mediterranean diet."** *N Engl J Med.* <http://www.nejm.org/doi/full/10.1056/NEJMoa1200303>

(Free full text available) Background Observational cohort studies and a secondary prevention trial have shown an inverse association between adherence to the Mediterranean diet and cardiovascular risk. We conducted a randomized trial of this diet pattern for the primary prevention of cardiovascular events. Methods In a multicenter trial in Spain, we randomly assigned participants who were at high cardiovascular risk, but with no cardiovascular disease at enrollment, to one of three diets: a Mediterranean diet supplemented with extra-virgin olive oil, a Mediterranean diet supplemented with mixed nuts, or a control diet (advice to reduce dietary fat). Participants received quarterly individual and group educational sessions and, depending on group assignment, free provision of extra-virgin olive oil, mixed nuts, or small nonfood gifts. The primary end point was the rate of major cardiovascular events (myocardial infarction, stroke, or death from cardiovascular causes). On the basis of the results of an interim analysis, the trial was stopped after a median follow-up of 4.8 years. Results A total of 7447 persons were enrolled (age range, 55 to 80 years); 57% were women. The two Mediterranean-diet groups had good adherence to the intervention, according to self-reported intake and biomarker analyses. A primary end-point event occurred in 288 participants. The multivariable-adjusted hazard ratios were 0.70 (95% confidence interval [CI], 0.54 to 0.92) and 0.72 (95% CI, 0.54 to 0.96) for the group assigned to a Mediterranean diet with extra-virgin olive oil (96 events) and the group assigned to a Mediterranean diet with nuts (83 events), respectively, versus the control group (109 events). No diet-related adverse effects were reported. Conclusions Among persons at high cardiovascular risk, a Mediterranean diet supplemented with extra-virgin olive oil or nuts reduced the incidence of major cardiovascular events.

Ford, P. A., K. Jaceldo-Siegl, et al. (2013). **"Intake of Mediterranean foods associated with positive affect and low negative affect."** *Journal of Psychosomatic Research* 74(2): 142-148. <http://www.sciencedirect.com/science/article/pii/S002239991200311X>

Objective To examine associations between consumption of foods typical of Mediterranean versus Western diets with positive and negative affect. Nutrients influence mental states yet few studies have examined whether foods protective or deleterious for cardiovascular disease affect mood. Methods Participants were 9255 Adventist church attendees in North America who completed a validated food frequency questionnaire in 2002–6. Scores for affect were obtained from the Positive and Negative Affect Schedule questionnaire in 2006–7. Multiple linear regression models controlled for age, gender, ethnicity, BMI, education, sleep, sleep squared (to account for high or low amounts), exercise, total caloric intake, alcohol and time between the questionnaires. Results Intake of vegetables ( $\beta = 0.124$  [95% CI 0.101, 0.147]), fruit ( $\beta = 0.066$  [95% CI 0.046, 0.085]), olive oil ( $\beta = 0.070$  [95% CI 0.029, 0.111]), nuts ( $\beta = 0.054$  [95% CI 0.026, 0.082]), and legumes ( $\beta = 0.055$  [95% CI 0.032, 0.077]) were associated with positive affect while sweets/desserts ( $\beta = -0.066$  [95% CI  $-0.086$ ,  $-0.046$ ]), soda ( $\beta = -0.025$  [95% CI  $-0.037$ ,  $-0.013$ ]) and fast food frequency ( $\beta = -0.046$  [95% CI  $-0.062$ ,  $-0.030$ ]) were inversely associated with positive affect. Intake of sweets/desserts ( $\beta = 0.058$  [95% CI 0.037, 0.078]) and fast food frequency ( $\beta = 0.052$  [95% CI 0.036, 0.068]) were associated with negative affect while intake of vegetables ( $\beta = -0.076$  [95% CI  $-0.099$ ,  $-0.052$ ]), fruit ( $\beta = -0.033$  [95% CI  $-0.053$ ,  $-0.014$ ]) and nuts ( $\beta = -0.088$  [95% CI  $-0.116$ ,  $-0.060$ ]) were inversely associated with negative affect. Gender interacted with red meat intake ( $P \leq .001$ ) and fast food frequency ( $P \leq .001$ ) such that these foods were associated with negative affect in females only. Conclusions Foods typical of Mediterranean diets were associated with positive affect as well as lower negative affect while Western foods were associated with low positive affect in general and negative affect in women.

Goodwin, L., P. D. White, et al. (2013). **"Life course study of the etiology of self-reported irritable bowel syndrome in the 1958 British birth cohort."** *Psychosomatic Medicine* 75(2): 202-210. <http://www.psychosomaticmedicine.org/content/75/2/202.abstract>

Objective Irritable bowel syndrome (IBS) is a common gastrointestinal disorder with unknown etiology. This is the first study to use a life course approach to examine premorbid risk markers for self-reported IBS in a UK birth cohort. Methods Cohort study using the 1958 British birth cohort, which included 98.7% of births in 1 week in England, Wales, and Scotland. The outcome was self-reported IBS by the age of 42 years, classified with onset after 24 years and onset after 34 years. Childhood psychopathology was assessed by the Rutter scales, and adulthood psychopathology was assessed by the Malaise Inventory. Results The prevalence of self-reported IBS in this cohort was 8.4% by 42 years (95% confidence interval [CI] = 8.2–8.6). In multivariate analyses, being female (odds ratio [OR] = 2.00, 95% CI = 1.67–2.36), reporting 1 week to 1 month of school absence for ill health at 16 years (OR = 1.27, 95% CI = 1.03–1.56) and psychopathology at 23 years (OR = 1.25, 95% CI = 1.01–1.54) and 33 years (OR = 2.20, 95% CI = 1.74–2.76) were associated with an increased odds for IBS. Prospectively measured childhood adversity showed no significant association. Conclusions This is the first study to show a long-term prospective link between premorbid psychopathology and later self-reported IBS, in agreement with previous findings on chronic fatigue syndrome. There is no evidence that prospective measures of childhood adversity are risk markers for IBS, and there is weak evidence that prospective measures of childhood illness at 16 years are risk markers for IBS, differing to results from the same cohort for psychopathology, chronic fatigue syndrome, and chronic widespread pain. This study also does not replicate the findings of retrospective studies examining the etiology of IBS.

Hanssen, M. M., M. L. Peters, et al. (2013). **"Optimism lowers pain: Evidence of the causal status and underlying mechanisms."** *Pain* 154(1): 53-58. <http://www.sciencedirect.com/science/article/pii/S0304395912004770>

Previous studies have demonstrated a relation between dispositional optimism and lower pain sensitivity, but the causal status of this link remains unclear. This study sought to test the causal status by experimentally inducing a temporary optimistic state by means of writing about and visualizing a future best possible self. In addition, we explored pain expectations and (situational) pain catastrophizing as possible underlying mechanisms of the link between optimism and pain. Seventy-nine university students participated in a cold pressor task (CPT). Before the CPT, half of them received the optimism manipulation and the other half a control manipulation. Induced optimism was related to lower pain intensity ratings during the CPT compared to the control group, thereby experimentally confirming causality. This effect was not explained by pain-related expectations about the task. Situational pain catastrophizing, however, did seem to mediate the relation between optimism and pain. This

study is novel in that it confirms the causal status of optimism towards pain. Additionally, the results reveal that positive interventions might provide a useful alternative in reducing pain catastrophizing as an extremely relevant target in pain treatment.

Heikkilä, K., S. T. Nyberg, et al. (2013). **"Work stress and risk of cancer: Meta-analysis of 5700 incident cancer events in 116,000 European men and women."** *BMJ* 346: f165. <http://www.ncbi.nlm.nih.gov/pubmed/23393080>

**OBJECTIVE:** To investigate whether work related stress, measured and defined as job strain, is associated with the overall risk of cancer and the risk of colorectal, lung, breast, or prostate cancers. **DESIGN:** Meta-analysis of pooled prospective individual participant data from 12 European cohort studies including 116,056 men and women aged 17-70 who were free from cancer at study baseline and were followed-up for a median of 12 years. Work stress was measured and defined as job strain, which was self reported at baseline. Incident cancers (all n=5765, colorectal cancer n=522, lung cancer n=374, breast cancer n=1010, prostate cancer n=865) were ascertained from cancer, hospital admission, and death registers. Data were analysed in each study with Cox regression and the study specific estimates pooled in meta-analyses. Models were adjusted for age, sex, socioeconomic position, body mass index (BMI), smoking, and alcohol intake. **RESULTS:** A harmonised measure of work stress, high job strain, was not associated with overall risk of cancer (hazard ratio 0.97, 95% confidence interval 0.90 to 1.04) in the multivariable adjusted analyses. Similarly, no association was observed between job strain and the risk of colorectal (1.16, 0.90 to 1.48), lung (1.17, 0.88 to 1.54), breast (0.97, 0.82 to 1.14), or prostate (0.86, 0.68 to 1.09) cancers. There was no clear evidence for an association between the categories of job strain and the risk of cancer. **CONCLUSIONS:** These findings suggest that work related stress, measured and defined as job strain, at baseline is unlikely to be an important risk factor for colorectal, lung, breast, or prostate cancers.

Huppert, F. A. and T. T. C. So (2013). **"Flourishing across Europe: Application of a new conceptual framework for defining well-being."** *Social Indicators Research* 110(3): 837-861. <http://dx.doi.org/10.1007/s11205-011-9966-7>

(Free full text available) Governments around the world are recognising the importance of measuring subjective well-being as an indicator of progress. But how should well-being be measured? A conceptual framework is offered which equates high well-being with positive mental health. Well-being is seen as lying at the opposite end of a spectrum to the common mental disorders (depression, anxiety). By examining internationally agreed criteria for depression and anxiety (DSM and ICD classifications), and defining the opposite of each symptom, we identify ten features of positive well-being. These combine feeling and functioning, i.e. hedonic and eudaimonic aspects of well-being: competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationships, resilience, self esteem, and vitality. An operational definition of flourishing is developed, based on psychometric analysis of indicators of these ten features, using data from a representative sample of 43,000 Europeans. Application of this definition to respondents from the 23 countries which participated in the European Social Survey (Round 3) reveals a four-fold difference in flourishing rate, from 41% in Denmark to less than 10% in Slovakia, Russia and Portugal. There are also striking differences in country profiles across the 10 features. These profiles offer fresh insight into cultural differences in well-being, and indicate which features may provide the most promising targets for policies to improve well-being. Comparison with a life satisfaction measure shows that valuable information would be lost if well-being was measured by life satisfaction. Taken together, our findings reinforce the need to measure subjective well-being as a multi-dimensional construct in future surveys.

Imel, Z. E., R. A. Hubbard, et al. (2013). **"Patient-rated alliance as a measure of therapist performance in two clinical settings."** *J Consult Clin Psychol* 81(1): 154-165. <http://www.ncbi.nlm.nih.gov/pubmed/23231576>

**OBJECTIVE:** The ability to form a strong therapeutic alliance is considered a foundational skill across psychotherapies. Patient-rated measures of the alliance are now being used to make judgments about a therapist's tendency to build alliances with their patients. However, whether a patient-rated alliance measure provides a useful index of a therapist's tendency to have strong alliances is not clear. **METHOD:** We examined therapist differences in patient ratings of the alliance obtained from an HMO that included 2 samples--an internal HMO clinic (n = 3287, 3781 ratings, therapist n = 72) and an independent practice (IP) based sample (n = 1320, 1690 ratings, therapist n = 93). First, we estimated the amount of variability in alliance scores due to therapist, including the consistency of estimated differences across 2 samples and using a cross-validation strategy. Second, we used a multivariate multilevel model to examine the convergent and discriminant validity of therapist differences in patient alliance ratings in items theoretically related (e.g., satisfaction) and unrelated (e.g., patient ratings of scheduling staff) to the therapist and alliance. **RESULTS:** Therapists accounted for between 1.74% and 6.93% of the variability in alliance ratings, with greater differences among IP therapists. Therapist differences were generally stable and unaffected by case mix. In addition, therapist differences in alliance were correlated with therapist differences in similar items but were relatively unrelated to theoretically distinct items. **CONCLUSIONS:** Therapist differences in the alliance were small but, with a sufficient number of ratings, may provide reliable information regarding a therapist's tendency to form strong alliances with their patients.

Ironson, G., C. O'Leirigh, et al. (2013). **"Gender-specific effects of an augmented written emotional disclosure intervention on posttraumatic, depressive, and HIV-disease-related outcomes: A randomized, controlled trial."** *J Consult Clin Psychol* 81(2): 284-298. <http://www.ncbi.nlm.nih.gov/pubmed/23244367>

**Objective:** Trauma histories and symptoms of PTSD occur at very high rates in people with HIV and are associated with poor disease management and accelerated disease progression. The authors of this study examined the efficacy of a brief written trauma disclosure intervention on posttraumatic stress, depression, HIV-related physical symptoms, and biological markers of HIV disease progression. **Method:** HIV-infected men and women were randomized to four 30-min expressive writing sessions in either a treatment (trauma writing) or an attention control (daily events writing) condition. The disclosure intervention augmented the traditional emotional disclosure paradigm with probes to increase processing by focusing on trauma appraisals, self-worth, and problem solving. Outcomes were assessed at baseline, 1-, 6-, and 12-month follow-up. **Results:** Hierarchical linear modeling (N = 244, intent-to-treat analyses) revealed no significant treatment effects for the group as a whole. Gender by treatment group interactions were significant such that women in the trauma-writing group had significantly reduced posttraumatic stress disorder (PTSD) symptoms (p = .017), depression (p = .009), and HIV-related symptoms (p = .022) compared with their controls. In contrast, men in the trauma-treatment condition did not improve more than controls on any outcome variables. Unexpectedly, men in the daily-event-writing control group had significantly greater reductions in depression than men in the trauma-writing group. Treatment effects were magnified in women when the analysis was restricted to those with elevated PTSD symptoms at baseline. **Conclusions:** A brief (4-session) guided written emotional disclosure intervention resulted in significant and meaningful reductions in PTSD, depression, and physical symptoms for women with HIV, but not for men.

Iverson, K. M., S. D. Litwack, et al. (2013). **"Predictors of intimate partner violence revictimization: The relative impact of distinct PTSD symptoms, dissociation, and coping strategies."** *Journal of Traumatic Stress* 26(1): 102-110. <http://dx.doi.org/10.1002/jts.21781>

(Free full text available) Psychological distress and coping strategies following intimate partner violence (IPV) victimization may impact survivors' risk for future IPV. The current study prospectively examined the impact of distinct posttraumatic stress disorder (PTSD) symptom clusters (reexperiencing, avoidance, numbing, and hyperarousal), dissociation, and coping strategies (engagement and disengagement coping) on IPV revictimization among recently abused women. Women (N = 69) who were seeking services for IPV and experienced their most recent episode of physical IPV between 2 weeks and 6 months prior to study enrollment completed measures of physical IPV, psychological distress, and coping strategies at baseline and at 6-month follow-up. The women averaged 36 years of age and 67% of the sample was African American. Separate Poisson regression analyses revealed that PTSD hyperarousal symptoms, dissociation, engagement coping, and disengagement coping each significantly predicted physical IPV revictimization at the 6-month follow-up (with effect sizes ranging from a 1.20–1.34 increase in the likelihood of Time 2 physical IPV with a 1 SD increase in the predictor). When these significant predictors were examined together in a single Poisson regression model, only engagement and disengagement coping were found to predict physical IPV revictimization such that disengagement coping was associated with higher revictimization risk (1.29 increase in the likelihood of Time 2 physical IPV with one SD increase in disengagement coping) and engagement coping was associated with lower revictimization risk (1.30 decrease in the likelihood of Time 2 physical IPV with one SD increase in engagement coping). The current findings suggest that coping strategies are important and potentially malleable predictors of physical IPV revictimization. (*Note: "Coping is another important process that may be related to revictimization ... Coping refers generally to cognitive and behavioral efforts to manage internal and external stressors that are perceived as taxing or exceeding an individual's resources ... Researchers have differentiated between "engagement" and "disengagement" forms of coping: engagement coping refers to proactive steps to manage the abuse and its consequences and includes strategies such as problem-solving, cognitive restructuring, emotional expression and eliciting social support; whereas disengagement coping refers to more passive attempts at coping and encompasses strategies such as problem avoidance, wishful thinking, self-criticism, and social withdrawal ... In the aftermath of IPV, women may understandably avoid abuse-related triggers in an effort to reduce experiencing overwhelming and painful emotions. Therefore, in the short-term, disengagement coping may be viewed as a helpful coping strategy. Overemphasis on wishful thinking, social withdrawal, or avoidant coping, however, can result in a sense of detachment, which may increase risk for PTSD symptoms and dissociation as well as revictimization."*)

Jeste, D. V., G. N. Savla, et al. (2013). **"Association between older age and more successful aging: Critical role of resilience and depression."** *Am J Psychiatry* 170(2): 188-196.

<http://ajp.psychiatryonline.org/Article.aspx?ArticleID=1478351>

**OBJECTIVE:** There is growing public health interest in understanding and promoting successful aging. While there has been some exciting empirical work on objective measures of physical health, relatively little published research combines physical, cognitive, and psychological assessments in large, randomly selected, community-based samples to assess self-rated successful aging. **METHOD:** In the Successful AGing Evaluation (SAGE) study, the authors used a structured multicohort design to assess successful aging in 1,006 community-dwelling adults in San Diego County, ages 50-99 years, with oversampling of people over 80. A modified version of random-digit dialing was used to recruit subjects. Evaluations included a 25-minute telephone interview followed by a comprehensive mail-in survey of physical, cognitive, and psychological domains, including positive psychological traits and self-rated successful aging, scaled from 1 (lowest) to 10 (highest). **RESULTS:** The mean age of the respondents was 77.3 years. Their mean self-rating of successful aging was 8.2, and older age was associated with a higher rating, despite worsening physical and cognitive functioning. The best multiple regression model achieved, using all the potential correlates, accounted for 30% of the variance in the score for self-rated successful aging and included resilience, depression, physical functioning, and age (entering the regression model in that order). **CONCLUSIONS:** Resilience and depression had significant associations with self-rated successful aging, with effects comparable in size to that for physical health. While no causality can be inferred from cross-sectional data, increasing resilience and reducing depression might have effects on successful aging as strong as that of reducing physical disability, suggesting an important role for psychiatry in promoting successful aging.

Kanter, M., T. Afifi, et al. (2012). **"The impact of parents "friending" their young adult child on facebook on perceptions of parental privacy invasions and parent-child relationship quality."** *Journal of Communication* 62(5): 900-917. <http://dx.doi.org/10.1111/j.1460-2466.2012.01669.x>

This study examined whether a parent "friending" his/her child on Facebook.com influenced the parent-child relationship and perceptions of parental privacy invasions. One hundred and eighteen parent-young adult child dyads were randomly assigned to an experimental group where the parent was asked to create a Facebook account, "friend" his/her child, and use the account over 2 months or a control group where the parent did not have a Facebook account. Having a parent on Facebook did not result in perceptions of greater privacy invasions, but was associated with decreased conflict in the parent-child relationship. When the parent and child had a more conflicted relationship prior to the parent joining Facebook, the parent's presence on Facebook also enhanced the child's closeness with the parent.

Khandaker, G. M., J. Zimbron, et al. (2013). **"Prenatal maternal infection, neurodevelopment and adult schizophrenia: A systematic review of population-based studies."** *Psychological Medicine* 43(02): 239-257.

<http://dx.doi.org/10.1017/S0033291712000736>

Background Disruption of foetal development by prenatal maternal infection is consistent with a neurodevelopmental model of schizophrenia. Whether specific prenatal infections are involved, their timing and the mechanisms of any effect are all unknown. We addressed these questions through a systematic review of population-based studies. Method Electronic and manual searches and rigorous quality assessment yielded 21 studies that included an objective assessment of individual-level prenatal maternal infection and standardized psychotic diagnoses in adult offspring. Methodological differences between studies necessitated a descriptive review. Results Results for prenatal maternal non-specific bacterial, respiratory or genital and reproductive infection differed between studies, which reported up to a two- to fivefold increased risk of schizophrenia. Evidence for herpes simplex virus type 2 (HSV-2) and *Toxoplasma gondii* was mixed; some studies reported up to a doubling of schizophrenia risk. Prenatal HSV-1 or cytomegalovirus (CMV) infections were not associated with increased risk. Exposure to influenza or other infections during early pregnancy may be more harmful than later exposure. Increased proinflammatory cytokines during pregnancy were also associated with risk. Prenatal infection was associated with structural and functional brain abnormalities relevant to schizophrenia. Conclusions Prenatal exposure to a range of infections and inflammatory responses may be associated with risk of adult schizophrenia. Larger samples, mediation and animal models should be used to investigate whether there is a 'sensitive period' during development, and the effects of prenatal infections on neurodevelopment. Inclusion of genetic and immunological information should help to elucidate to what extent genetic vulnerability to schizophrenia may be explained by vulnerability to infection.

Kok, B. E., C. E. Waugh, et al. (2013). **"Meditation and health: The search for mechanisms of action."** *Social and Personality Psychology Compass* 7(1): 27-39. <http://dx.doi.org/10.1111/spc3.12006>

(Free full text available) Psychological interest in the impact of mental states on biological functioning is growing rapidly, driving a need for new methods for inducing mental states that last long enough, and are sufficiently impactful, to have significant effects on physical health. The many traditions of meditative practice are one potential pathway for studying mind-body interactions. The purpose of this review is to introduce personality and social psychologists to the field of meditation research. Beginning with a brief introduction to meditation and the heterogeneity of meditative practices, we showcase research linking meditative practice to changes in immune and cardiovascular functioning and pain perception. We then discuss theoretical and empirical evidence that meditation works by inducing changes in psychological capacities such as emotion regulation and self-regulation or through repeated induction of specific mental states such as love or meta-cognitive awareness. At the frontier of the science of meditation is the need to empirically test whether meditation-driven changes in cognitive and affective processes are the cause of improvements in physical health. Emerging challenges in meditation research include a need for large studies using randomized controlled and dual-blind designs with active control groups and an increased focus on measuring mechanisms of action as well as outcomes. Meditation represents a potentially powerful tool for generating new knowledge of mind-body interactions.

Long, S.-J. and D. Benton (2013). **"Effects of vitamin and mineral supplementation on stress, mild psychiatric symptoms, and mood in nonclinical samples: A meta-analysis."** *Psychosomatic Medicine* 75(2): 144-153. <http://www.psychosomaticmedicine.org/content/75/2/144.abstract>

Objective Biochemical processes in the brain affect mood. Minor dietary inadequacies, which are responsible for a small decline in an enzyme's efficiency, could cumulatively influence mood states. When diet does not provide an optimal intake of micronutrients, supplementation is expected to benefit mood. This meta-analysis evaluated the influence of diet supplementation on mood in nonclinical samples. Methods Databases were evaluated and studies were included if they considered aspects of stress, mild psychiatric symptoms, or mood in the general population; were randomized and placebo-controlled; evaluated the influence of multivitamin/mineral supplements for at least 28 days. Eight studies that met the inclusion criteria were integrated using meta-analysis. Results Supplementation reduced the levels of perceived stress (standard mean difference [SMD] = 0.35; 95% confidence interval [CI] = 0.47–0.22;  $p = .001$ ), mild psychiatric symptoms (SMD = 0.30; 95% CI = 0.43–0.18;  $p = .001$ ), and anxiety (SMD = 0.32; 95% CI = 0.48–0.16;  $p < .001$ ), but not depression (SMD = 0.20; 95% CI = 0.42–0.030;  $p < .089$ ). Fatigue (SMD = 0.27; 95% CI = 0.40–0.146;  $p < .001$ ) and confusion (SMD = 0.225; 95% CI = 0.38–0.07;  $p < .003$ ) were also reduced. Conclusions Micronutrient supplementation has a beneficial effect on perceived stress, mild psychiatric symptoms, and aspects of everyday mood in apparently healthy individuals. Supplements containing high doses of B vitamins may be more effective in improving mood states. Questions about optimal levels of micronutrient intake, optimal doses, and active ingredients arise.

Lukkahatai, N. and L. N. Saligan (2013). **"Association of catastrophizing and fatigue: A systematic review."** *Journal of Psychosomatic Research* 74(2): 100-109. <http://www.sciencedirect.com/science/article/pii/S0022399912003157>

Abstract Objective Catastrophizing is an exaggerated negative evaluation and attention to specific symptoms such as pain or fatigue. A number of studies consistently support the significant role of catastrophizing in pain. However, the role of catastrophizing in fatigue is less frequently investigated. This article provides a critical review of published studies investigating this association. Methods Using the keyword "Fatigue AND Catastrophizing", we performed a search in PubMed, SCOPUS, PsycINFO, and EMBASE. Results Fourteen studies were reviewed and all except one were found to provide empirical support for an association between high catastrophizing and high fatigue. Most of these reviewed articles also show the large impact of catastrophizing on fatigue severity. Two longitudinal studies found that fatigue catastrophizing level before cancer treatment is a significant predictor of post-treatment fatigue. Studies also demonstrated that persons who had higher scores for catastrophizing recalled fatigue more accurately than those with lower scores. Conclusion In spite the differences of its definition and the measurements used, a similar significant association between catastrophizing and fatigue was reported. Because this observation was based on 14 studies with limited types of patients, further studies are recommended to examine the role of catastrophizing in fatigue from other clinical populations and to investigate its utility as a behavioral marker for central fatigue.

Macpherson, H., A. Pipingas, et al. (2013). **"Multivitamin-multimineral supplementation and mortality: A meta-analysis of randomized controlled trials."** *Am J Clin Nutr* 97(2): 437-444. <http://ajcn.nutrition.org/content/97/2/437.abstract>

Background: Multivitamins are the most commonly used supplement in the developed world. Recent epidemiologic findings suggest that multivitamin use increases the risk of mortality. Objective: We aimed to determine whether multivitamin-multimineral treatment, used for primary or secondary prevention, increases the risk of mortality in independently living adults. Design: We performed a meta-analysis of randomized controlled trials. Multiple electronic databases were systematically searched from March to October 2012. Randomized controlled primary or secondary prevention trials were considered for inclusion. Eligible trials investigated daily multivitamin-multimineral supplementation for  $\geq 1$  y. Cohorts described as institutionalized or as having terminal illness (tertiary prevention) were excluded. The number of deaths and the sample size of each study arm were extracted independently by 2 researchers. Twenty-one articles were included in the analysis, which generated a total pooled sample of 91,074 people and 8794 deaths. These trials were pooled in a meta-analysis, and the outcomes were expressed as RRs and 95% CIs. Results: The average age of the pooled sample was 62 y, and the average duration of supplementation was 43 mo. Across all studies, no effect of multivitamin-multimineral treatment on all-cause mortality (RR: 0.98; 95% CI: 0.94, 1.02) was observed. There was a trend for a reduced risk of all-cause mortality across primary prevention trials (RR: 0.94; 95% CI: 0.89, 1.00). Multivitamin-multimineral treatment had no effect on mortality due to vascular causes (RR: 1.01; 95% CI: 0.93, 1.09) or cancer (RR: 0.96; 95% CI: 0.88, 1.04). No statistical evidence of heterogeneity or publication bias was observed. Conclusion: Multivitamin-multimineral treatment has no effect on mortality risk.

Matheson, S. L., A. M. Shepherd, et al. (2013). **"Childhood adversity in schizophrenia: A systematic meta-analysis."** *Psychological Medicine* 43(02): 225-238. <http://dx.doi.org/10.1017/S0033291712000785>

Background Childhood adversity is a putative risk factor for schizophrenia, although evidence supporting this suggestion is inconsistent and controversial. The aim of this review was to pool and quality assess the current evidence pertaining to childhood adversity in people with schizophrenia compared to other psychiatric disorders and to non-psychiatric controls. Method Included were case-control, cohort and cross-sectional studies. Medline, EMBASE and PsycINFO databases were searched. Study reporting was assessed using the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist and pooled evidence quality was assessed by the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach. Results Twenty-five studies met inclusion criteria. Moderate to high quality evidence suggests increased rates of childhood adversity in schizophrenia compared to controls [odds ratio (OR) 3.60,  $p < 0.00001$ ]. Increased childhood adversity was also reported in schizophrenia compared to anxiety disorders (OR 2.54,  $p = 0.007$ ), although the effect was not significant in the subgroup analysis of five studies assessing only sexual abuse. No differences in rates of childhood adversity were found between schizophrenia and affective psychosis, depression and personality disorders whereas decreased rates of childhood adversity were found in schizophrenia relative to dissociative disorders and post-traumatic stress

disorder (OR 0.03,  $p < 0.0001$ ). Conclusions This is the first meta-analysis to report a medium to large effect of childhood adversity in people with schizophrenia and to assess specificity for schizophrenia. Further research is required that incorporates longitudinal design and other potentially causal variables to assess additive and/or interactive effects.

Milyavskaya, M., F. L. Philippe, et al. (2013). **"Psychological need satisfaction across levels of experience: Their organization and contribution to general well-being."** *Journal of Research in Personality* 47(1): 41-51. <http://www.sciencedirect.com/science/article/pii/S0092656612001560>

(Free full text available) The present research examines the interrelation between psychological need satisfaction at the general, domain-specific, and episodic levels of experience, and the extent to which need satisfaction at each level predicts general well-being independently of the other levels. Results show evidence for both top-down and bottom-up effects of need satisfaction across three levels of experience and provide support for a heterarchical model of need satisfaction. Psychological need satisfaction at three distinct levels of experience independently contributes to general well-being both measured concurrently and prospectively. Overall, the present research provides a theoretical and empirical model of the organization of need satisfaction across multiple levels of experience. This supports the importance of assessing need satisfaction at multiple levels of experience.

Morgan, A. J., A. J. Mackinnon, et al. (2013). **"Behavior change through automated e-mails: Mediation analysis of self-help strategy use for depressive symptoms."** *Behaviour Research and Therapy* 51(2): 57-62. <http://www.sciencedirect.com/science/article/pii/S0005796712001726>

Objective To evaluate whether automated e-mails promoting effective self-help strategies for depressive symptoms were effective in changing self-help behavior, and whether this improved depression outcomes. Method 568 adults with sub-threshold depression participated in a randomized controlled trial and provided complete data. A series of 12 e-mails promoting the use of evidence-based self-help strategies was compared with e-mails providing non-directive depression information. Depression symptoms were assessed with the Patient Health Questionnaire depression scale (PHQ-9) and use of self-help strategies was assessed at baseline and post-intervention. We hypothesized that those receiving the self-help e-mails would increase their use of evidence-based self-help and this would be associated with improvements in depression. Mediation analyses were conducted using a non-parametric bootstrapping procedure. Results Total use of the self-help strategies promoted in the e-mails significantly mediated the effect of the intervention on depressive symptoms ( $B = -0.75$ ,  $SE = 0.16$ , 95% CI:  $-1.06$  to  $-0.48$ ). The direct effect of the intervention on depressive symptoms was much smaller and not significant when the mediation path was included. The majority of the individual strategies also had a significant indirect effect on depressive symptoms. Conclusions In adults with sub-threshold depression, automated e-mails based on behavior change principles can successfully increase use of self-help strategies, leading to a reduction in depressive symptoms.

Pecina, M., H. Azhar, et al. (2013). **"Personality trait predictors of placebo analgesia and neurobiological correlates."** *Neuropsychopharmacology* 38(4): 639-646. <http://www.ncbi.nlm.nih.gov/pubmed/23187726>

Personality traits have been shown to interact with environmental cues to modulate biological responses including treatment responses, and potentially having a role in the formation of placebo effects. Here, we assessed psychological traits in 50 healthy controls as to their capacity to predict placebo analgesic effects, placebo-induced activation of mu-opioid neurotransmission and changes in cortisol plasma levels during a sustained experimental pain challenge (hypertonic saline infused in the masseter muscle) with and without placebo administration. Statistical analyses showed that an aggregate of scores from Ego-Resiliency, NEO Altruism, NEO Straightforwardness (positive predictors) and NEO Angry Hostility (negative predictor) scales accounted for 25% of the variance in placebo analgesic responses. Molecular imaging showed that subjects scoring above the median in a composite of those trait measures also presented greater placebo-induced activation of mu-opioid neurotransmission in the subgenual and dorsal anterior cingulate cortex (ACC), orbitofrontal cortex, insula, nucleus accumbens, amygdala and periaqueductal gray (PAG). Endogenous opioid release in the dorsal ACC and PAG was positively correlated with placebo-induced reductions in pain ratings. Significant reductions in cortisol levels were observed during placebo administration and were positively correlated with decreases in pain ratings, mu-opioid system activation in the dorsal ACC and PAG, and as a trend, negatively with NEO Angry Hostility scores. Our results show that personality traits explain a substantial proportion of the variance in placebo analgesic responses and are further associated with activations in endogenous opioid neurotransmission, and as a trend cortisol plasma levels. This initial data, if replicated in larger sample, suggest that simple trait measures easily deployable in the field could be utilized to reduce variability in clinical trials, but may also point to measures of individual resiliency in the face of aversive stimuli such as persistent pain and potentially other stressors.

Seekles, W., P. Cuijpers, et al. (2013). **"Psychological treatment of anxiety in primary care: A meta-analysis."** *Psychological Medicine* 43(02): 351-361. <http://dx.doi.org/10.1017/S0033291712000670>

Abstract Background Guidelines and mental healthcare models suggest the use of psychological treatment for anxiety disorders in primary care but systematic estimates of the effect sizes in primary care settings are lacking. The aim of this study was to examine the effectiveness of psychological therapies in primary care for anxiety disorders. Method The Cochrane Central Register of Controlled Trials (CENTRAL), EMBASE, Medline, PsycINFO and Pubmed databases were searched in July 2010. Manuscripts describing psychological treatment for anxiety disorders/increased level of anxiety symptoms in primary care were included if the research design was a randomized controlled trial (RCT) and if the psychological treatment was compared with a control group. Results In total, 1343 abstracts were identified. Of these, 12 manuscripts described an RCT comparing psychological treatment for anxiety with a control group in primary care. The pooled standardized effect size (12 comparisons) for reduced symptoms of anxiety at post-intervention was  $d = 0.57$  [95% confidence interval (CI) 0.29-0.84,  $p = 0.00$ , the number needed to treat (NNT) = 3.18]. Heterogeneity was significant among the studies ( $I^2 = 58.55$ ,  $Q = 26.54$ ,  $p < 0.01$ ). The quality of studies was not optimal and missing aspects are summarized. Conclusions We found a moderate effect size for the psychological treatment of anxiety disorders in primary care. Several aspects of the treatment are related to effect size. More studies are needed to evaluate the long-term effects given the chronicity and recurrent nature of anxiety.

Shankar, A., M. Hamer, et al. (2013). **"Social isolation and loneliness: Relationships with cognitive function during 4 years of follow-up in the English longitudinal study of ageing."** *Psychosomatic Medicine* 75(2): 161-170. <http://www.psychosomaticmedicine.org/content/75/2/161.abstract>

Objective This study aims to evaluate the impact of social isolation and loneliness, individually and simultaneously, on cognitive function in older adults during a 4-year period, using data from the English Longitudinal Study of Ageing, and to evaluate if these associations are moderated by educational level. Methods Data on social isolation, loneliness, and cognitive function (verbal fluency, immediate recall, and delayed recall) were obtained at baseline. Follow-up measures on cognitive function were obtained 4 years later for 6034 participants (mean age at baseline = 65.6 years). Regression analyses were used to evaluate the association between baseline isolation, loneliness, and cognitive function at follow-up. Interactions between social isolation, loneliness, and educational level were also evaluated. Results Baseline isolation was significantly associated with

decreases in all cognitive function measures at follow-up ( $\beta = -.05$  to  $-.03$ ,  $p < .001$ ), independently of baseline scores, whereas loneliness was associated with poorer immediate recall ( $\beta = -.05$ ,  $p < .001$ ) and delayed recall ( $\beta = -.03$ ,  $p = .02$ ). There was a significant interaction between educational level and both isolation ( $p = .02$ ) and loneliness ( $p = .01$ ) for delayed recall, such that isolation and loneliness were associated with poorer recall only among those with low levels of education. Conclusions Loneliness and isolation are associated with poorer cognitive function among older adults. Interventions to foster social connections may be particularly beneficial for individuals with low levels of education.

Shiri, R., J. Kausto, et al. (2013). **"Health-related effects of early part-time sick leave due to musculoskeletal disorders: A randomized controlled trial."** *Scand J Work Environ Health* 39(1): 37-45. <http://www.ncbi.nlm.nih.gov/pubmed/22538838>

OBJECTIVE: Previously we reported that early part-time sick leave enhances return to work (RTW) among employees with musculoskeletal disorders (MSD) - see <http://www.ncbi.nlm.nih.gov/pubmed/22033811>. This paper assesses the health-related effects of this intervention. METHODS: Patients aged 18-60 years who were unable to perform their regular work due to MSD were randomized to part- or full-time sick leave groups. In the former, workload was reduced by halving working time. Using validated questionnaires, we assessed pain intensity and interference with work and sleep, region-specific disability due to MSD, self-rated general health, health-related quality of life (measured via EuroQol), productivity loss, depression, and sleep disturbance at baseline, 1, 3, 8, 12, and 52 weeks. We analyzed the repeated measures data (171-356 observations) with the generalized estimating equation approach. RESULTS: The intervention (part-time sick leave) and control (full-time sick leave) groups did not differ with regard to pain intensity, pain interference with work and sleep, region-specific disability, productivity loss, depression, or sleep disturbance. The intervention group reported better self-rated general health (adjusted  $P=0.07$ ) and health-related quality of life (adjusted  $P=0.02$ ) than the control group. In subgroup analyses, the intervention was more effective among the patients whose current problem began occurring  $<6$  weeks before baseline and those with  $\leq 30\%$  productivity loss at baseline. CONCLUSIONS: Our findings showed that part-time sick leave did not exacerbate pain-related symptoms and functional disability, but improved self-rated general health and health-related quality of life in the early stage of work disability due to MSD.

Smith, C. P. and J. J. Freyd (2013). **"Dangerous safe havens: Institutional betrayal exacerbates sexual trauma."** *Journal of Traumatic Stress* 26(1): 119-124. <http://dx.doi.org/10.1002/jts.21778>

(Free full text available) Research has documented the profound negative impact of betrayal within experiences of interpersonal trauma such as sexual assault (Freyd, 1994, 1996; Freyd, DePrince, & Gleaves, 2007). In the current study of college women ( $N = 345$ , 79% Caucasian; mean age = 19.69 years,  $SD = 2.55$ ), we examined whether institutional failure to prevent sexual assault or respond supportively when it occurs may similarly exacerbate posttraumatic symptomatology—what we call "institutional betrayal." Almost half (47%) of the women reported at least one coercive sexual experience and another 21% reported no coercion, but at least one unwanted sexual experience (total reporting unwanted sexual experiences,  $N = 233$ ). Institutional betrayal (e.g., creating an environment where these experiences seemed more likely, making it difficult to report these experiences) was reported across different unwanted sexual experiences (47% and 45% of women reporting coercion and no coercion, respectively). Those women who reported institutional betrayal surrounding their unwanted sexual experience reported increased levels of anxiety ( $R^2 = .10$ ), trauma-specific sexual symptoms ( $R^2 = .17$ ), dissociation ( $R^2 = .11$ ), and problematic sexual functioning ( $R^2 = .12$ ). These results suggest that institutions have the power to cause additional harm to assault survivors.

Smith, K. J., M. Béland, et al. (2013). **"Association of diabetes with anxiety: A systematic review and meta-analysis."** *Journal of Psychosomatic Research* 74(2): 89-99. <http://www.sciencedirect.com/science/article/pii/S0022399912003339>

Objectives Anxiety has been shown to be associated with poor outcomes in people with diabetes. However, there has been little research which has specifically examined whether diabetes mellitus is associated with an increased likelihood of comorbid anxiety. The aim of this systematic review and meta-analysis was to determine whether people with diabetes are more likely to have anxiety disorders or elevated anxiety symptoms than people who do not have diabetes. Methods A systematic review was performed by three independent reviewers who searched for articles that examined the association between anxiety and diabetes in adults 16 or older. Those studies that met eligibility criteria were put forward for meta-analysis using a random-effects model. Results A total of twelve studies with data for 12,626 people with diabetes were eligible for inclusion in the systematic review and meta-analysis. Significant and positive associations were found for diabetes with both anxiety disorders, 1.20 (1.10–1.31), and elevated anxiety symptoms, 1.48 (1.02–1.93). The pooled OR for all studies that assessed anxiety was 1.25 (1.10–1.39). Conclusions Results from this meta-analysis provide support that diabetes is associated with an increased likelihood of having anxiety disorders and elevated anxiety symptoms.

Suren, P., C. Roth, et al. (2013). **"Association between maternal use of folic acid supplements and risk of autism spectrum disorders in children."** *JAMA* 309(6): 570-577. <http://jama.jamanetwork.com/article.aspx?articleid=1570279>

IMPORTANCE: Prenatal folic acid supplements reduce the risk of neural tube defects in children, but it has not been determined whether they protect against other neurodevelopmental disorders. OBJECTIVE: To examine the association between maternal use of prenatal folic acid supplements and subsequent risk of autism spectrum disorders (ASDs) (autistic disorder, Asperger syndrome, pervasive developmental disorder-not otherwise specified [PDD-NOS]) in children. DESIGN, SETTING, AND PATIENTS: The study sample of 85,176 children was derived from the population-based, prospective Norwegian Mother and Child Cohort Study (MoBa). The children were born in 2002-2008; by the end of follow-up on March 31, 2012, the age range was 3.3 through 10.2 years (mean, 6.4 years). The exposure of primary interest was use of folic acid from 4 weeks before to 8 weeks after the start of pregnancy, defined as the first day of the last menstrual period before conception. Relative risks of ASDs were estimated by odds ratios (ORs) with 95% CIs in a logistic regression analysis. Analyses were adjusted for maternal education level, year of birth, and parity. MAIN OUTCOME MEASURE: Specialist-confirmed diagnosis of ASDs. RESULTS: At the end of follow-up, 270 children in the study sample had been diagnosed with ASDs: 114 with autistic disorder, 56 with Asperger syndrome, and 100 with PDD-NOS. In children whose mothers took folic acid, 0.10% (64/61,042) had autistic disorder, compared with 0.21% (50/24,134) in those unexposed to folic acid. The adjusted OR for autistic disorder in children of folic acid users was 0.61 (95% CI, 0.41-0.90). No association was found with Asperger syndrome or PDD-NOS, but power was limited. Similar analyses for prenatal fish oil supplements showed no such association with autistic disorder, even though fish oil use was associated with the same maternal characteristics as folic acid use. CONCLUSIONS AND RELEVANCE: Use of prenatal folic acid supplements around the time of conception was associated with a lower risk of autistic disorder in the MoBa cohort. Although these findings cannot establish causality, they do support prenatal folic acid supplementation.

Thomas, G., R. Martin, et al. (2013). **"Leading groups: Leadership as a group process."** *Group Processes & Intergroup Relations* 16(1): 3-16. <http://qpi.sagepub.com/content/16/1/3.abstract>

(Available in free full text) Although leadership is fundamentally a social psychological (and group) phenomenon, interest in the social psychology of leadership has waxed and waned over the years. The present article briefly reviews this chequered history and then discusses recent theoretical and empirical developments that extend the study of social cognition and social identity to the domain of leadership. In addition, we consider how the eight empirical articles that constitute this Special Issue relate to, and further, the study of leadership as a group process, and conclude by identifying fertile areas for future research.

van der Schaaf, P. S., E. Dusseldorp, et al. (2013). **"Impact of the physical environment of psychiatric wards on the use of seclusion."** *British Journal of Psychiatry* 202(2): 142-149. <http://bjp.rcpsych.org/content/202/2/142.abstract>

**Background** The physical environment is presumed to have an effect on aggression and also on the use of seclusion on psychiatric wards. Multicentre studies that include a broad variety of design features found on psychiatric wards and that control for patient, staff and general ward characteristics are scarce. **Aims** To explore the effect of design features on the risk of being secluded, the number of seclusion incidents and the time in seclusion, for patients admitted to locked wards for intensive psychiatric care. **Method** Data on the building quality and safety of psychiatric as well as forensic wards (n = 199) were combined with data on the frequency and type of coercive measures per admission (n = 23 868 admissions of n = 14 834 patients) on these wards, over a 12-month period. We used non-linear principal components analysis (CATPCA) to reduce the observed design features into a smaller number of uncorrelated principal components. Two-level multilevel (logistic) regression analyses were used to explore the relationship with seclusion. Admission was the first level in the analyses and ward was the second level. **Results** Overall, 14 design features had a significant effect on the risk of being secluded during admission. The 'presence of an outdoor space', 'special safety measures' and a large 'number of patients in the building' increased the risk of being secluded. Design features such as more 'total private space per patient', a higher 'level of comfort' and greater 'visibility on the ward', decreased the risk of being secluded. **Conclusions** A number of design features had an effect on the use of seclusion and restraint. The study highlighted the need for a greater focus on the impact of the physical environment on patients, as, along with other interventions, this can reduce the need for seclusion and restraint.

Voncken, M. J. and K. F. L. Dijk (2013). **"Socially anxious individuals get a second chance after being disliked at first sight: The role of self-disclosure in the development of likeability in sequential social contact."** *Cognitive Therapy and Research* 37(1): 7-17. <http://dx.doi.org/10.1007/s10608-012-9449-4>

Socially anxious individuals (SAs) not only fear social rejection, accumulating studies show that SAs are indeed judged as less likeable after social interaction with others. This study investigates if SAs already make a more negative impression on others in the very first seconds of contact. The study further investigates the development of likeability and the role of self-disclosure herein in two sequential social interactions: first after an unstructured waiting room situation and next after a 'getting acquainted' conversation. Results showed that high SAs (n = 24) elicited a more negative first impression than low SAs (n = 22). Also, although high SAs improved from the first to the second task, they were rated as less likeable after both interactions. The level of self-disclosure behaviour was the strongest predictor for the development of likeability during the sequential social tasks. The absence of an interaction between group and self-disclosure in predicting the development of likeability suggests that this is true for both groups. Thus, high SAs can improve their negative first impression if they are able to increase their self-disclosure behaviour. However, SAs showed a decreased level of self-disclosure behaviour during both social interactions. Targeting self-disclosure behaviour may improve the negative impression SAs elicit in others.