

40 healthy lifestyle & healthy aging abstracts **september '15 newsletter**

(Adamson, Ensari et al. 2015; Adebamowo, Spiegelman et al. 2015; Anderson, Hildreth et al. 2015; Belsky, Caspi et al. 2015; Birkeland and Buch 2015; Brown, MacDonald et al. 2015; Chen, Van Assche et al. 2015; Daly, Delaney et al. 2015; Durso, Luttrell et al. 2015; Feiler and Kleinbaum 2015; Feldman 2015; Galen, Sharp et al. 2015; Ganna and Ingelsson 2015; Gurillo, Jauhar et al. 2015; Halland and Saito 2015; Hilimire, DeVlyder et al. 2015; Hogan, Catalino et al. 2015; Jonason, Baughman et al. 2015; Kallestad, Jacobsen et al. 2015; Kalokerinos, Greenaway et al. 2015; Kendler, Ohlsson et al. 2015; Kinderman, Tai et al. 2015; Koval, vanDellen et al. 2015; Lin, Wu et al. 2015; Mayordomo-Rodríguez, Meléndez-Moral et al. 2015; Morris, Tangney et al. 2015; Okuda, Picazo et al. 2015; Paunesku, Walton et al. 2015; Pimple, Shah et al. 2015; Reidlinger, Darzi et al. 2015; Saito, Inoue et al. 2015; Schroeder and Epley 2015; Sela, Weekes-Shackelford et al. 2015; Smillie, Wilt et al. 2015; Smith, Jones et al. 2015; Velotti and Garofalo 2015; Vine, Uiga et al. 2015; Wu, Schimmele et al. 2015; Zheng, Fehr et al. 2015; Zunick, Fazio et al. 2015)

Adamson, B. C., I. Ensari, et al. (2015). **"Effect of exercise on depressive symptoms in adults with neurologic disorders: A systematic review and meta-analysis."** *Archives of Physical Medicine and Rehabilitation* 96(7): 1329-1338. <http://www.sciencedirect.com/science/article/pii/S000399931500009X>

Objectives To review and quantify the effect of exercise on depression in adults with neurologic disorders. Data Sources CINAHL, Cochrane Register of Controlled Clinical Trials, EMBASE, ERIC, MEDLINE, PsycINFO, PubMed, and SPORTDiscus were searched, with the last search performed in May 2014. Study Selection Included were randomized controlled trials conducted in adults with a diagnosed neurologic disorder that compared an exercise intervention group with a control group and used depression as an outcome measure. Data Extraction Depression data were extracted independently by 2 authors. Methodological quality was assessed independently by 2 authors. Data Synthesis Forty-three full-length articles were reviewed, and 26 trials met our inclusion criteria. These trials represented 1324 participants with 7 different neurologic disorders: Alzheimer disease (n=4 trials), migraine (n=1), multiple sclerosis (n=13), Parkinson disease (n=2), spinal cord injury (n=1), stroke (n=2), and traumatic brain injury (n=3). Data measuring depression were extracted and effect sizes were computed for 23 trials. Results from a meta-analysis yielded an overall effect size of .28 (SE=.07; 95% confidence interval, .15-.41; P=.00) favoring a reduction in depression outcomes after an exercise intervention compared with the control condition. Of note, interventions that met physical activity guidelines yielded an overall effect of .38 compared with .19 for studies that did not meet physical activity guidelines. Conclusions This review provides evidence that exercise, particularly when meeting physical activity guidelines, can improve depressive symptoms in adults with neurologic disorders.

Adebamowo, S. N., D. Spiegelman, et al. (2015). **"Association between intakes of magnesium, potassium, and calcium and risk of stroke: 2 cohorts of us women and updated meta-analyses."** *The American Journal of Clinical Nutrition* 101(6): 1269-1277. <http://ajcn.nutrition.org/content/101/6/1269.abstract>

Background: Prospective data on the relation of magnesium, potassium, and calcium intakes with stroke risk are inconsistent, and to our knowledge, the effect of a combined mineral diet score has not been examined. Objective: We examined associations between intakes of magnesium, potassium, and calcium and risk of incident stroke in 86,149 women in the Nurses' Health Study (NHS) I and 94,715 women in the NHS II. Design: In this prospective cohort study, we calculated HRs of stroke by quintiles of intake for each mineral and for a combined diet score of all 3 minerals by using multivariate Cox proportional hazard models. In addition, we updated meta-analyses on dietary intakes of these minerals and risk of stroke. Results: During follow-up (30 y in the NHS I; 22 y in the NHS II) a total of 3780 incident stroke cases were documented. Pooled multivariate RRs of total stroke for women in the highest compared with the lowest quintiles were 0.87 (95% CI: 0.78, 0.97) for total magnesium, 0.89 (95% CI: 0.80, 0.99) for total potassium, and 0.97 (95% CI: 0.87, 1.09) for total calcium intake. Pooled RRs for women in the highest compared with the lowest quintiles of a combined mineral diet score were 0.72 (95% CI: 0.65, 0.81) for total stroke, 0.78 (95% CI: 0.66, 0.92) for ischemic stroke, and 0.80 (95% CI: 0.61, 1.04) for hemorrhagic stroke. In the updated meta-analyses of all prospective studies to date, the combined RR of total stroke was 0.87 (95% CI: 0.83, 0.92) for a 100-mg/d increase in magnesium intake, 0.91 (95% CI: 0.88, 0.94) for a 1000-mg/d increase in potassium intake, and 0.98 (95% CI: 0.94, 1.02) for a 300-mg/d increase in calcium intake. Conclusions: A combined mineral diet score was inversely associated with risk of stroke. High intakes of magnesium and potassium but not calcium were also significantly associated with reduced risk of stroke in women.

Anderson, C., J. A. Hildreth, et al. (2015). **"Is the desire for status a fundamental human motive? A review of the empirical literature."** *Psychol Bull* 141(3): 574-601. <http://www.ncbi.nlm.nih.gov/pubmed/25774679>

The current review evaluates the status hypothesis, which states that the desire for status is a fundamental motive. Status is defined as the respect, admiration, and voluntary deference individuals are afforded by others. It is distinct from related constructs such as power, financial success, and social belongingness. A review of diverse literatures lent support to the status hypothesis: People's subjective well-being, self-esteem, and mental and physical health appear to depend on the level of status they are accorded by others. People engage in a wide range of goal-directed activities to manage their status, aided by myriad cognitive, behavioral, and affective processes; for example, they vigilantly monitor the status dynamics in their social environment, strive to appear socially valuable, prefer and select social environments that offer them higher status, and react strongly when their status is threatened. The desire for status also does not appear to be a mere derivative of the need to belong, as some theorists have speculated. Finally, the importance of status was observed across individuals who differed in culture, gender, age, and personality, supporting the universality of the status motive. Therefore, taken as a whole, the relevant evidence suggests that the desire for status is indeed fundamental.

Belsky, D. W., A. Caspi, et al. (2015). **"Quantification of biological aging in young adults."** *Proceedings of the National Academy of Sciences*. <http://www.pnas.org/content/early/2015/07/01/1506264112.abstract>

Antiaging therapies show promise in model organism research. Translation to humans is needed to address the challenges of an aging global population. Interventions to slow human aging will need to be applied to still-young individuals. However, most human aging research examines older adults, many with chronic disease. As a result, little is known about aging in young humans. We studied aging in 954 young humans, the Dunedin Study birth cohort, tracking multiple biomarkers across three time points spanning their third and fourth decades of life. We developed and validated two methods by which aging can be measured in young adults, one cross-sectional and one longitudinal. Our longitudinal measure allows quantification of the pace of coordinated physiological deterioration across multiple organ systems (e.g., pulmonary, periodontal, cardiovascular, renal, hepatic, and immune function). We applied these methods to assess biological aging in young humans who had not yet

developed age-related diseases. Young individuals of the same chronological age varied in their "biological aging" (declining integrity of multiple organ systems). Already, before midlife, individuals who were aging more rapidly were less physically able, showed cognitive decline and brain aging, self-reported worse health, and looked older. Measured biological aging in young adults can be used to identify causes of aging and evaluate rejuvenation therapies. [Free full text available at <http://www.pnas.org/content/early/2015/07/01/1506264112.full.pdf%5D>].

Birkeland, I. and R. Buch (2015). "**The dualistic model of passion for work: Discriminate and predictive validity with work engagement and workaholism.**" *Motivation and Emotion* 39(3): 392-408. <http://dx.doi.org/10.1007/s11031-014-9462-x>

The purpose of this paper was to investigate the discriminant and predictive validity of the dualistic model of passion for work. Harmonious and obsessive passion was compared to work engagement and workaholism in two studies. Study 1 was cross-sectional and supported convergent and discriminant validity of the dualistic model using exploratory structural equation modeling and confirmatory factor analysis. Study 2 was cross-lagged and applied confirmatory factor analyses, as well as hierarchical linear modeling to test discriminant, convergent, and predictive validity of harmonious and obsessive passion for work. Predictive validity was supported for obsessive and harmonious passion with respect to wellbeing, but not with respect to performance. When controlling for work engagement and workaholism, harmonious passion was negatively related to burnout and positively related to life satisfaction. In contrast, obsessive passion related positively to burnout and negatively to life satisfaction. Only workaholism predicted variance in supervisor rated organizational citizenship behaviors (negatively related), and none of the included variables were associated with supervisor rated in-role performance.

Brown, J., R. MacDonald, et al. (2015). "**Are people who participate in cultural activities more satisfied with life?**" *Social Indicators Research* 122(1): 135-146. <http://dx.doi.org/10.1007/s11205-014-0678-7>

The influence of various aspects of life on wellbeing has been extensively researched. However, despite little empirical evidence, participation in leisure activities has been assumed to increase subjective wellbeing. Leisure is important because it is more under personal control than other sources of life satisfaction. This study asked whether people who participate in cultural leisure activities have higher life satisfaction than people who do not, if different types of leisure have the same influence on life satisfaction and if satisfaction is dependent on the frequency of participation or the number of activities undertaken. It used data from UKHLS Survey to establish associations between type, number and frequency of participation in leisure activities and life satisfaction. Results showed an independent and positive association of participation in sport, heritage and active-creative leisure activities and life satisfaction but not for participation in popular entertainment, theatre hobbies and museum/galleries. The association of reading hobbies and sedentary-creative activities and life satisfaction was negative. High life satisfaction was associated with engaging in a number of different activities rather than the frequency of participation in each of them. The results have implications for policy makers and leisure services providers, in particular those associated with heritage recreation. Subjective wellbeing measures, such as life satisfaction, and not economic measures alone should be considered in the evaluation of services. The promotion of leisure activities which are active and promote social interaction should be considered in programmes aimed at improving the quality of life.

Chen, B., J. Van Assche, et al. (2015). "**Does psychological need satisfaction matter when environmental or financial safety are at risk?**" *Journal of Happiness Studies* 16(3): 745-766. <http://dx.doi.org/10.1007/s10902-014-9532-5>

Grounded in self-determination theory, the present study addressed the question whether the relation between satisfaction of the psychological needs for relatedness, competence, and autonomy and well-being would be constrained by satisfaction of the need for safety. In Study 1, we investigated environmental safety in a sample of young adults (N = 224) in South Africa, a country known for its low public safety. In Study 2, we focused on financial safety within a socio-economically deprived adult Chinese sample (N = 357). Although safety satisfaction yielded a positive relation to well-being in both studies, satisfaction of the psychological needs contributed to well-being above and beyond safety satisfaction and its contribution was not dependent upon the level of safety satisfaction. Further, across both studies, individuals high in safety satisfaction desired less psychological need satisfaction. Supplementary analyses in Study 2 indicated that whereas financial safety yielded a positive relation to well-being, materialism yielded a negative association. Together, these results point to the important role of basic psychological need satisfaction beyond safety satisfaction in the prediction of well-being.

Daly, M., L. Delaney, et al. (2015). "**Childhood self-control and unemployment throughout the life span: Evidence from two british cohort studies.**" *Psychological Science* 26(6): 709-723. <http://pss.sagepub.com/content/26/6/709.abstract>

The capacity for self-control may underlie successful labor-force entry and job retention, particularly in times of economic uncertainty. Analyzing unemployment data from two nationally representative British cohorts (N = 16,780), we found that low self-control in childhood was associated with the emergence and persistence of unemployment across four decades. On average, a 1-SD increase in self-control was associated with a reduction in the probability of unemployment of 1.4 percentage points after adjustment for intelligence, social class, and gender. From labor-market entry to middle age, individuals with low self-control experienced 1.6 times as many months of unemployment as those with high self-control. Analysis of monthly unemployment data before and during the 1980s recession showed that individuals with low self-control experienced the greatest increases in unemployment during the recession. Our results underscore the critical role of self-control in shaping life-span trajectories of occupational success and in affecting how macroeconomic conditions affect unemployment levels in the population.

Durso, G. R. O., A. Luttrell, et al. (2015). "**Over-the-counter relief from pains and pleasures alike: Acetaminophen blunts evaluation sensitivity to both negative and positive stimuli.**" *Psychological Science* 26(6): 750-758. <http://pss.sagepub.com/content/26/6/750.abstract>

Acetaminophen, an effective and popular over-the-counter pain reliever (e.g., the active ingredient in Tylenol), has recently been shown to blunt individuals' reactivity to a range of negative stimuli in addition to physical pain. Because accumulating research has shown that individuals' reactivity to both negative and positive stimuli can be influenced by a single factor (an idea known as differential susceptibility), we conducted two experiments testing whether acetaminophen blunted individuals' evaluations of and emotional reactions to both negative and positive images from the International Affective Picture System. Participants who took acetaminophen evaluated unpleasant stimuli less negatively and pleasant stimuli less positively, compared with participants who took a placebo. Participants in the acetaminophen condition also rated both negative and positive stimuli as less emotionally arousing than did participants in the placebo condition (Studies 1 and 2), whereas nonevaluative ratings (extent of color saturation in each image; Study 2) were not affected by drug condition. These findings suggest that acetaminophen has a general blunting effect on individuals' evaluative and emotional processing, irrespective of negative or positive valence.

Feiler, D. C. and A. M. Kleinbaum (2015). **"Popularity, similarity, and the network extraversion bias."** *Psychological Science* 26(5): 593-603. <http://pss.sagepub.com/content/26/5/593.abstract>

Using the emergent friendship network of an incoming cohort of students in an M.B.A. program, we examined the role of extraversion in shaping social networks. Extraversion has two important implications for the emergence of network ties: a popularity effect, in which extraverts accumulate more friends than introverts do, and a homophily effect, in which the more similar are two people's levels of extraversion, the more likely they are to become friends. These effects result in a systematic network extraversion bias, in which people's social networks will tend to be overpopulated with extraverts and underpopulated with introverts. Moreover, the most extraverted people have the greatest network extraversion bias, and the most introverted people have the least network extraversion bias. Our finding that social networks were systematically misrepresentative of the broader social environment raises questions about whether there is a societal bias toward believing other people are more extraverted than they actually are and whether introverts are better socially calibrated than extraverts.

Feldman, R. (2015). **"The adaptive human parental brain: Implications for children's social development."** *Trends Neurosci* 38(6): 387-399. <http://www.ncbi.nlm.nih.gov/pubmed/25956962>

Although interest in the neurobiology of parent-infant bonding is a century old, neuroimaging of the human parental brain is recent. After summarizing current comparative research into the neurobiology of parenting, here I chart a global 'parental caregiving' network that integrates conserved structures supporting mammalian caregiving with later-evolving networks and implicates parenting in the evolution of higher order social functions aimed at maximizing infant survival. The response of the parental brain to bonding-related behavior and hormones, particularly oxytocin, and increased postpartum brain plasticity demonstrate adaptation to infant stimuli, childrearing experiences, and cultural contexts. Mechanisms of biobehavioral synchrony by which the parental brain shapes, and is shaped by, infant physiology and behavior emphasize the brain basis of caregiving for the cross-generation transmission of human sociality.

Galen, L., M. Sharp, et al. (2015). **"Nonreligious group factors versus religious belief in the prediction of prosociality."** *Social Indicators Research* 122(2): 411-432. <http://dx.doi.org/10.1007/s11205-014-0700-0>

Previous research has suggested that religious belief is associated with a range of prosocial behaviors such as social embeddedness and generosity. However, this literature has often conflated belief in God with group involvement and failed to control for demographic and social network effects. Rather than assessing prosociality by comparing religious group members with the unaffiliated, the present study also includes secular/nonreligious group members. Multiple regression analyses controlling for confounds diminishes many of the apparent differences between religious and nonreligious individuals. Belief in God itself accounts for approximately 1-2 % of the variance in social embeddedness domains and <1 % of the variance in the domains of outside-group charity and community volunteering. Belief in God is associated with homophily and parochial behavior such as within-group charitable donations and constrained contact with different others. These findings indicate that prosocial benefits are more related to general group membership equally available to religious and secular group members alike than they are to specifically religious content. Religious beliefs are related to within-group prosociality as well as homophily and parochialism directed to those outside the group.

Ganna, A. and E. Ingelsson (2015). **"5 year mortality predictors in 498 103 uk biobank participants: A prospective population-based study."** *Lancet*. <http://www.ncbi.nlm.nih.gov/pubmed/26049253>

(see <http://www.ubble.co.uk> for more information including a 'Risk Calculator') BACKGROUND: To our knowledge, a systematic comparison of predictors of mortality in middle-aged to elderly individuals has not yet been done. We investigated predictors of mortality in UK Biobank participants during a 5 year period. We aimed to investigate the associations between most of the available measurements and 5 year all-cause and cause-specific mortality, and to develop and validate a prediction score for 5 year mortality using only self-reported information. METHODS: Participants were enrolled in the UK Biobank from April, 2007, to July, 2010, from 21 assessment centres across England, Wales, and Scotland with standardised procedures. In this prospective population-based study, we assessed sex-specific associations of 655 measurements of demographics, health, and lifestyle with all-cause mortality and six cause-specific mortality categories in UK Biobank participants using the Cox proportional hazard model. We excluded variables that were missing in more than 80% of the participants and all cardiorespiratory fitness test measurements because summary data were not available. Validation of the prediction score was done in participants enrolled at the Scottish centres. UK life tables and census information were used to calibrate the score to the overall UK population. FINDINGS: About 500 000 participants were included in the UK Biobank. We excluded participants with more than 80% variables missing (n=746). Of 498 103 UK Biobank participants included (54% of whom were women) aged 37-73 years, 8532 (39% of whom were women) died during a median follow-up of 4.9 years (IQR 4.33-5.22). Self-reported health (C-index including age 0.74 [95% CI 0.73-0.75]) was the strongest predictor of all-cause mortality in men and a previous cancer diagnosis (0.73 [0.72-0.74]) was the strongest predictor of all-cause mortality in women. When excluding individuals with major diseases or disorders (Charlson comorbidity index >0; n=355 043), measures of smoking habits were the strongest predictors of all-cause mortality. The prognostic score including 13 self-reported predictors for men and 11 for women achieved good discrimination (0.80 [0.77-0.83] for men and 0.79 [0.76-0.83] for women) and significantly outperformed the Charlson comorbidity index (p<0.0001 in men and p=0.0007 in women). A dedicated website allows the interactive exploration of all results along with calculation of individual risk through an online questionnaire. INTERPRETATION: Measures that can simply be obtained by questionnaires and without physical examination were the strongest predictors of all-cause mortality in the UK Biobank population. The prediction score we have developed accurately predicts 5 year all-cause mortality and can be used by individuals to improve health awareness, and by health professionals and organisations to identify high-risk individuals and guide public policy. (See too comment at [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(15\)60578-5/fulltext-back-bib2](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)60578-5/fulltext-back-bib2)).

Gurillo, P., S. Jauhar, et al. (2015). **"Does tobacco use cause psychosis? Systematic review and meta-analysis."** *The Lancet Psychiatry* 2(8): 718-725. [http://dx.doi.org/10.1016/S2215-0366\(15\)00152-2](http://dx.doi.org/10.1016/S2215-0366(15)00152-2)

(Available in free full text) Background: Although the association between psychotic illness and cigarette smoking is well known, the reasons are unclear why people with psychosis are more likely to smoke than are the general population. We aimed to test several hypotheses. First, that daily tobacco use is associated with an increased risk of psychotic illness in both case-control and prospective studies. Second, that smoking is associated with an earlier age at onset of psychotic illness. Finally, that an earlier age at initiation of smoking is associated with an increased risk of psychosis. We also aimed to derive an estimate of the prevalence of smoking in patients presenting with their first episode of psychosis. Methods: We searched Embase, Medline, and PsycINFO and selected observational studies in which rates of smoking were reported in people with psychotic disorders, compared with controls. We calculated the weighted mean difference for age at onset of psychosis and age at initiation of smoking. For categorical outcomes, we calculated odds ratios from cross-sectional studies and risk ratios from prospective studies. Findings: Of 3717 citations retrieved, 61 studies comprising 72 samples met inclusion criteria. The overall sample included 14 555 tobacco users and 273 162 non-users. The prevalence of smoking in patients presenting with their first

episode of psychosis was 0.57 (95% CI 0.52–0.62; $p < 0.0001$). In case-control studies, the overall odds ratio for the first episode of psychosis in smokers versus non-smokers was 3.22 (95% CI 1.63–6.33), with some evidence of publication bias (Egger's test $p = 0.018$, Begg's test $p = 0.007$). For prospective studies, we calculated an overall relative risk of new psychotic disorders in daily smokers versus non-smokers of 2.18 (95% CI 1.23–3.85). Daily smokers developed psychotic illness at an earlier age than did non-smokers (weighted mean difference -1.04 years, 95% CI -1.82 to -0.26). Those with psychosis started smoking at a non-significantly earlier age than did healthy controls (-0.44 years, 95% CI -1.21 to 0.34). Interpretation: Daily tobacco use is associated with increased risk of psychosis and an earlier age at onset of psychotic illness. The possibility of a causal link between tobacco use and psychosis merits further examination.

Halland, M. and Y. A. Saito (2015). ***Irritable bowel syndrome: New and emerging treatments.***

Irritable bowel syndrome is one of the most common gastrointestinal disorders in developed nations. It is characterized by abdominal pain, altered bowel habits, and bloating. Several non-pharmacological and pharmacological agents, which target the peripheral gastrointestinal system and central nervous system, are used to treat the syndrome. The individual and societal impact of investigating and managing the syndrome is substantial, and despite newer treatments, many patients have unmet needs. Intense research at many international sites has improved the understanding of pathophysiology of the syndrome, but developing treatments that are effective, safe, and that have tolerable side effects remains a challenge. This review briefly summarizes the currently available treatments for irritable bowel syndrome then focuses on newer non-pharmacological and pharmacological therapies and recent evidence for older treatments. Recent guidelines on the treatment of irritable bowel syndrome are also discussed.

Hilimire, M. R., J. E. DeVlyder, et al. (2015). ***Fermented foods, neuroticism, and social anxiety: An interaction model.*** *Psychiatry Research* 228(2): 203-208. <http://dx.doi.org/10.1016/j.psychres.2015.04.023>

Animal models and clinical trials in humans suggest that probiotics can have an anxiolytic effect. However, no studies have examined the relationship between probiotics and social anxiety. Here we employ a cross-sectional approach to determine whether consumption of fermented foods likely to contain probiotics interacts with neuroticism to predict social anxiety symptoms. A sample of young adults ($N = 710$, 445 female) completed self-report measures of fermented food consumption, neuroticism, and social anxiety. An interaction model, controlling for demographics, general consumption of healthful foods, and exercise frequency, showed that exercise frequency, neuroticism, and fermented food consumption significantly and independently predicted social anxiety. Moreover, fermented food consumption also interacted with neuroticism in predicting social anxiety. Specifically, for those high in neuroticism, higher frequency of fermented food consumption was associated with fewer symptoms of social anxiety. Taken together with previous studies, the results suggest that fermented foods that contain probiotics may have a protective effect against social anxiety symptoms for those at higher genetic risk, as indexed by trait neuroticism. While additional research is necessary to determine the direction of causality, these results suggest that consumption of fermented foods that contain probiotics may serve as a low-risk intervention for reducing social anxiety (see too helpful discussion at Fountia - <http://www.fountia.com/social-anxiety-is-decreased-in-young-adults-who-eat-fermented-foods/>).

Hogan, C. L., L. I. Catalino, et al. (2015). ***Beyond emotional benefits: Physical activity and sedentary behaviour affect psychosocial resources through emotions.*** *Psychology & Health* 30(3): 354-369. <http://dx.doi.org/10.1080/08870446.2014.973410>

Physical activity is known to improve emotional experiences, and positive emotions have been shown to lead to important life outcomes, including the development of psychosocial resources. In contrast, time spent sedentary may negatively impact emotional experiences and, consequently, erode psychosocial resources. Two studies tested whether activity independently influenced emotions and psychosocial resources, and whether activity indirectly influenced psychosocial resources through emotional experiences. Using cross-sectional (Study 1a) and longitudinal (Study 1b) methods, we found that time spent physically active independently predicted emotions and psychosocial resources. Mediation analyses suggested that emotions may account for the relation between activity and psychosocial resources. The improved emotional experiences associated with physical activity may help individuals build psychosocial resources known to improve mental health. Study 1a provided first indicators to suggest that, in contrast, sedentary behaviour may reduce positive emotions, which could in turn lead to decrements in psychosocial resources. [Available in free full text from http://www.unc.edu/peplab/publications/Hogan_Catalino_Mata_Fredrickson_2015.pdf%5D].

Jonason, P. K., H. M. Baughman, et al. (2015). ***Dorian gray without his portrait: Psychological, social, and physical health costs associated with the dark triad.*** *Personality and Individual Differences* 78: 5-13. <http://www.sciencedirect.com/science/article/pii/S0191886915000288>

We examined how the Dark Triad (i.e., narcissism, psychopathy, and Machiavellianism) traits—as different social strategies—were associated with various health outcomes. In samples of American undergraduates ($N = 1389$), Australian high school students ($N = 2023$), and British undergraduates ($N = 280$), we examined the physical, social, and psychological costs associated with the Dark Triad traits. Narcissism was linked to few mental and physical ailments, suggesting it may provide a social buffer from negative health outcomes (Studies 1 and 2). Psychopathy (Studies 1 and 2) and Machiavellianism (Study 2) were linked to a number of psychological and physical health conditions. In addition, psychopathy was related to diminished life expectancy, whereas narcissism was related to enhanced life expectancy (Study 3). Our findings provide evidence that each of these personality traits is linked to various psychosocial tradeoffs and different methods of coping with stress and adaptive problems.

Kallestad, H., H. B. Jacobsen, et al. (2015). ***The role of insomnia in the treatment of chronic fatigue.*** *Journal of Psychosomatic Research* 78(5): 427-432. <http://www.sciencedirect.com/science/article/pii/S002239991400422X>

(Available in free full text) Background The definition of Chronic Fatigue Syndrome (CFS) overlaps with definitions of insomnia, but there is limited knowledge about the role of insomnia in the treatment of chronic fatigue. Aims To test if improvement of insomnia during treatment of chronic fatigue was associated with improved outcomes on 1) fatigue and 2) cortisol recovery span during a standardized stress exposure. Methods Patients ($n = 122$) with chronic fatigue received a 3.5-week inpatient return-to-work rehabilitation program based on Acceptance and Commitment Therapy, and had been on paid sick leave > 8 weeks due their condition. A physician and a psychologist examined the patients, assessed medication use, and SCID-I diagnoses. Patients completed self-report questionnaires measuring fatigue, pain, depression, anxiety, and insomnia before and after treatment. A subgroup ($n = 25$) also completed the Trier Social Stress Test for Groups (TSST-G) before and after treatment. Seven cortisol samples were collected during each test and cortisol spans for the TSST-G were calculated. Results A hierarchical regression analysis in nine steps showed that insomnia improvement predicted improvement in fatigue, independently of age, gender, improvement in pain intensity, depression and anxiety. A second hierarchical regression analysis showed that improvement in insomnia significantly predicted the cortisol recovery span after the TSST-G independently of improvement in fatigue. Conclusion Improvement in insomnia severity had a significant impact on both improvement in fatigue

and the ability to recover from a stressful situation. Insomnia severity may be a maintaining factor in chronic fatigue and specifically targeting this in treatment could increase treatment response.

Kalokerinos, E. K., K. H. Greenaway, et al. (2015). **"Reappraisal but not suppression downregulates the experience of positive and negative emotion."** *Emotion* 15(3): 271-275. <http://www.ncbi.nlm.nih.gov/pubmed/25286074>

The emotion regulation literature is growing exponentially, but there is limited understanding of the comparative strengths of emotion regulation strategies in downregulating positive emotional experiences. The present research made the first systematic investigation examining the consequences of using expressive suppression and cognitive reappraisal strategies to downregulate positive and negative emotion within a single design. Two experiments with over 1,300 participants demonstrated that reappraisal successfully reduced the experience of negative and positive affect compared with suppression and control conditions. Suppression did not reduce the experience of either positive or negative emotion relative to the control condition. This finding provides evidence against the assumption that expressive suppression reduces the experience of positive emotion. This work speaks to an emerging literature on the benefits of downregulating positive emotion, showing that suppression is an appropriate strategy when one wishes to reduce positive emotion displays while maintaining the benefits of positive emotional experience.

Kendler, K. S., H. Ohlsson, et al. (2015). **"Triparental families: A new genetic-epidemiological design applied to drug abuse, alcohol use disorders, and criminal behavior in a Swedish national sample."** *American Journal of Psychiatry* 172(6): 553-560. <http://ajp.psychiatryonline.org/doi/abs/10.1176/appi.ajp.2014.14091127>

Objective: The authors sought to clarify the sources of parent-offspring resemblance for drug abuse, alcohol use disorders, and criminal behavior, using a novel genetic-epidemiological design. Method: Using national registries, the authors identified rates of drug abuse, alcohol use disorders, and criminal behavior in 41,360 Swedish individuals born between 1960 and 1990 and raised in triparental families comprising a biological mother who reared them, a "not-lived-with" biological father, and a stepfather. Results: When each syndrome was examined individually, hazard rates for drug abuse in offspring of parents with drug abuse were highest for mothers (2.80, 95% CI=2.23-3.38), intermediate for not-lived-with fathers (2.45, 95% CI=2.14-2.79), and lowest for stepfathers (1.99, 95% CI=1.55-2.56). The same pattern was seen for alcohol use disorders (2.23, 95% CI=1.93-2.58; 1.84, 95% CI=1.69-2.00; and 1.27, 95% CI=1.12-1.43) and criminal behavior (1.55, 95% CI=1.44-1.66; 1.46, 95% CI=1.40-1.52; and 1.30, 95% CI=1.23-1.37). When all three syndromes were examined together, specificity of cross-generational transmission was highest for mothers, intermediate for not-lived-with fathers, and lowest for stepfathers. Analyses of intact families and other not-lived-with parents and stepparents showed similar cross-generation transmission for these syndromes in mothers and fathers, supporting the representativeness of results from triparental families. Conclusions: A major strength of the triparental design is its inclusion, within a single family, of parents who provide, to a first approximation, their offspring with genes plus rearing, genes only, and rearing only. For drug abuse, alcohol use disorders, and criminal behavior, the results of this study suggest that parent-offspring transmission involves both genetic and environmental processes, with genetic factors being somewhat more important. These results should be interpreted in the context of the strengths and limitations of national registry data.

Kinderman, P., S. Tai, et al. (2015). **"Causal and mediating factors for anxiety, depression and well-being."**

Background The relationship between well-being and mental ill health is complex; people may experience very low levels of well-being even in the absence of overt mental health problems. Aims This study tested the hypothesis that anxiety, depression and well-being have different causal determinants and psychological mediating mechanisms. Method The influence of causal and mediating factors on anxiety, depression and well-being were investigated in a cross-sectional online questionnaire survey hosted on a UK national broadcasting website. Results Multivariate conditional independence analysis of data from 27 397 participants revealed different association pathways for the two constructs. Anxiety and depression were associated with negative life events mediated by rumination; low levels of subjective well-being were associated with material deprivation and social isolation, mediated by adaptive coping style. Conclusions Our findings support the 'two continua' model of the relationship between psychological well-being and mental health problems, with implications for both treatment and prevention.

Koval, C. Z., M. R. vanDellen, et al. (2015). **"The burden of responsibility: Interpersonal costs of high self-control."** *J Pers Soc Psychol* 108(5): 750-766. <http://www.ncbi.nlm.nih.gov/pubmed/25915137>

The psychological literature on self-control has illustrated the many benefits experienced by people with high self-control, who are more successful both personally and interpersonally. In the current research, we explore the possibility that having high self-control also may have some interpersonal costs, leading individuals to become burdened by others' reliance. In Studies 1 and 2, we examined the effects of actors' self-control on observers' performance expectations and found that observers had higher performance expectations for actors with high (vs. low) self-control. In Study 3, we tested the effect of actors' self-control on work assigned to actors and found that observers assigned greater workloads to actors with high (vs. low) self-control. In Study 4, we examined how actors and observers differed in their assessments of the effort expended by high and low self-control actors and found that observers (but not actors) reported that high self-control actors expended less effort than low self-control actors. Finally, we found that people high (vs. low) in self-control reported greater burden from the reliance of coworkers (Study 5) and romantic partners (Study 6), and this tendency led them to feel less satisfied with their relationships (Study 6). Together, results from these studies provide novel evidence that individuals' self-control affects others' attitudes and behaviors toward them, and suggest that these interpersonal dynamics can have negative consequences for high self-control individuals.

Lin, S.-H., C.-h. Wu, et al. (2015). **"Unpacking the role of self-esteem in career uncertainty: A self-determination perspective."** *The Journal of Positive Psychology* 10(3): 231-239. <http://dx.doi.org/10.1080/17439760.2014.950178>

The aim of this study is to explain why students with high self-esteem have lower career uncertainty than students with low self-esteem. Based on self-determination theory, students with high self-esteem would have higher efficacy in making decisions, which would encourage them to choose a major for self-concordance, such as interest and ability, and increase their course involvement. Both factors are assumed to be related to lower career uncertainty. Data from a national survey of the Taiwan Higher Education Database within the Survey Research Data Archive from juniors at 92 colleges and universities in Taiwan (N = 7418) were analyzed to examine the model. Results supported the proposed model by showing that students with high self-esteem had lower career uncertainty because they chose a major for self-concordant reasons and had a strong motivation to learn, both of which contribute to lower career uncertainty.

Mayordomo-Rodríguez, T., J. Meléndez-Moral, et al. (2015). **"Coping strategies as predictors of well-being in youth adult."** *Social Indicators Research* 122(2): 479-489. <http://dx.doi.org/10.1007/s11205-014-0689-4>

This study aimed to determine the effects of two types of coping strategies on well-being in a sample of 405 young people using structural equation modeling. A survey research design was employed. Two constructs were measured: coping

strategies and well-being. Goodness of fit indices was analyzed to select, the best structural equation model of coping as a potential predictor of well-being, as measured by Ryff's well-being scales. Problem-focused coping positively predicted a significant portion of variance in well-being, while emotion-focused coping negatively predicted well-being. Religion as a coping strategy did not end up in the final model. The results' impact within the literature on youth well-being is discussed. It was concluded that young people do not typically use religion or magical thinking as coping strategies, and the use of negative auto-focused coping was associated with lower problem-focused coping.

Morris, M. C., C. C. Tangney, et al. (2015). **"Mind diet slows cognitive decline with aging."** *Alzheimer's & Dementia: The Journal of the Alzheimer's Association*. <http://dx.doi.org/10.1016/j.jalz.2015.04.011>

Background: The Mediterranean and dash diets have been shown to slow cognitive decline; however, neither diet is specific to the nutrition literature on dementia prevention. Methods: We devised the Mediterranean-Dietary Approach to Systolic Hypertension (DASH) diet intervention for neurodegenerative delay (MIND) diet score that specifically captures dietary components shown to be neuroprotective and related it to change in cognition over an average 4.7 years among 960 participants of the Memory and Aging Project. Results: In adjusted mixed models, the MIND score was positively associated with slower decline in global cognitive score ($\beta = 0.0092$; $P < .0001$) and with each of five cognitive domains. The difference in decline rates for being in the top tertile of MIND diet scores versus the lowest was equivalent to being 7.5 years younger in age. Conclusions: The study findings suggest that the MIND diet substantially slows cognitive decline with age. Replication of these findings in a dietary intervention trial would be required to verify its relevance to brain health.

Okuda, M., J. Picazo, et al. (2015). **"Prevalence and correlates of anger in the community: Results from a national survey."** *CNS Spectr* 20(2): 130-139. <http://www.ncbi.nlm.nih.gov/pubmed/25831968>

Introduction Little is known about the prevalence and correlates of anger in the community. METHODS: We used data derived from a large national sample of the U.S. population, which included more than 34,000 adults ages 18 years and older. We defined inappropriate, intense, or poorly controlled anger by means of self-report of the following: (1) anger that was triggered by small things or that was difficult to control, (2) frequent temper outbursts or anger that lead to loss of control, or (3) hitting people or throwing objects in anger. RESULTS: The overall prevalence of inappropriate, intense, or poorly controlled anger in the U.S. population was 7.8%. Anger was especially common among men and younger adults, and was associated with decreased psychosocial functioning. Significant and positive associations were evident between anger and parental factors, childhood, and adulthood adverse events. There were strong associations between anger and bipolar disorder, drug dependence, psychotic disorder, borderline, and schizotypal personality disorders. There was a dose-response relationship between anger and a broad range of psychopathology. CONCLUSIONS: A rationale exists for developing screening tools and early intervention strategies, especially for young adults, to identify and help reduce anger.

Paunesku, D., G. M. Walton, et al. (2015). **"Mind-set interventions are a scalable treatment for academic underachievement."** *Psychological Science* 26(6): 784-793. <http://pss.sagepub.com/content/26/6/784.abstract>

The efficacy of academic-mind-set interventions has been demonstrated by small-scale, proof-of-concept interventions, generally delivered in person in one school at a time. Whether this approach could be a practical way to raise school achievement on a large scale remains unknown. We therefore delivered brief growth-mind-set and sense-of-purpose interventions through online modules to 1,594 students in 13 geographically diverse high schools. Both interventions were intended to help students persist when they experienced academic difficulty; thus, both were predicted to be most beneficial for poorly performing students. This was the case. Among students at risk of dropping out of high school (one third of the sample), each intervention raised students' semester grade point averages in core academic courses and increased the rate at which students performed satisfactorily in core courses by 6.4 percentage points. We discuss implications for the pipeline from theory to practice and for education reform.

Pimple, P., A. J. Shah, et al. (2015). **"Angina and mental stress-induced myocardial ischemia."** *Journal of Psychosomatic Research* 78(5): 433-437. <http://www.sciencedirect.com/science/article/pii/S0022399915000422>

Objective Mental stress-induced myocardial ischemia is a common phenomenon in patients with coronary artery disease (CAD) and an emerging prognostic factor. Mental stress ischemia is correlated with ambulatory ischemia. However, whether it is related to angina symptoms during daily life has not been examined. Methods We assessed angina frequency (past month) in 98 post-myocardial infarction (MI) subjects (age 18–60 years) using the Seattle Angina Questionnaire. Patients underwent [^{99m}Tc]sestamibi SPECT perfusion imaging at rest, after mental stress, and after exercise/pharmacological stress. Summed scores of perfusion abnormalities were obtained by observer-independent software. A summed difference score (SDS), the difference between stress and rest scores, was used to quantify myocardial ischemia under both stress conditions. Results The mean age was 50 years, 50% were female and 60% were non-white. After adjustment for age, sex, smoking, CAD severity, depressive, anger, and anxiety symptoms, each 1-point increase in mental stress-SDS was associated with 1.73-unit increase in the angina frequency score (95% CI: 0.09–3.37) and 17% higher odds of being in a higher angina frequency category (OR: 1.17, 95% CI: 1.00–1.38). Depressive symptoms were associated with 12% higher odds of being in a higher angina frequency category (OR: 1.12, 95% CI: 1.03–1.21). In contrast, exercise/pharmacological stress-induced SDS was not associated with angina frequency. Conclusion Among young and middle-aged post-MI patients, myocardial ischemia induced by mental stress in the lab, but not by exercise/pharmacological stress, is associated with higher frequency of retrospectively reported angina during the day. Psychosocial stressors related to mental stress ischemia may be important contributory factor to daily angina.

Reidlinger, D. P., J. Darzi, et al. (2015). **"How effective are current dietary guidelines for cardiovascular disease prevention in healthy middle-aged and older men and women? A randomized controlled trial."** *The American Journal of Clinical Nutrition* 101(5): 922-930. <http://ajcn.nutrition.org/content/101/5/922.abstract>

(Available in free full text) Background: Controversy surrounds the effectiveness of dietary guidelines for cardiovascular disease (CVD) prevention in healthy middle-aged and older men and women. Objective: The objective was to compare effects on vascular and lipid CVD risk factors of following the United Kingdom dietary guidelines with a traditional British diet (control). Design: With the use of a parallel-designed randomized controlled trial in 165 healthy nonsmoking men and women (aged 40–70 y), we measured ambulatory blood pressure (BP) on 5 occasions, vascular function, and CVD risk factors at baseline and during 12 wk after random assignment to treatment. The primary outcomes were differences between treatments in daytime ambulatory systolic BP, flow-mediated dilation, and total cholesterol/HDL cholesterol. Secondary outcomes were differences between treatment in carotid-to-femoral pulse wave velocity, high-sensitivity C-reactive protein, and a measure of insulin sensitivity (Revised Quantitative Insulin Sensitivity Check Index). Results: Data were available on 162 participants, and adherence to the dietary advice was confirmed from dietary records and biomarkers of compliance. In the dietary guidelines group (n = 80) compared with control (n = 82), daytime systolic BP was 4.2 mm Hg (95% CI: 1.7, 6.6 mm Hg; $P < 0.001$) lower, the treatment effect on flow-mediated dilation [-0.62% (95% CI: -1.48% , 0.24%)] was not significant, the total cholesterol:HDL cholesterol ratio was 0.13 (95% CI: 0, 0.26; $P = 0.044$) lower, pulse wave velocity was 0.29 m/s (95% CI:

0.07, 0.52 m/s; $P = 0.011$) lower, high-sensitivity C-reactive protein was 36% (95% CI: 7%, 48%; $P = 0.017$) lower, the treatment effect on the Revised Quantitative Insulin Sensitivity Check Index [2% (95% CI: -2%, 5%)] was not significant, and body weight was 1.9 kg (95% CI: 1.3, 2.5 kg; $P < 0.001$) lower. Causal mediated effects analysis based on urinary sodium excretion indicated that sodium reduction explained 2.4 mm Hg (95% CI: 1.0, 3.9 mm Hg) of the fall in blood pressure. Conclusion: Selecting a diet consistent with current dietary guidelines lowers BP and lipids, which would be expected to reduce the risk of CVD by one-third in healthy middle-aged and older men and women. This study is registered at <http://www.isrctn.com> as 92382106.

Saito, E., M. Inoue, et al. (2015). **"Association of coffee intake with total and cause-specific mortality in a Japanese population: The Japan public health center-based prospective study."** *The American Journal of Clinical Nutrition* 101(5): 1029-1037. <http://ajcn.nutrition.org/content/101/5/1029.abstract>

Background: Despite the rising consumption of coffee worldwide, few prospective cohort studies assessed the association of coffee intake with mortality including total and major causes of death. Objective: We aimed to investigate the association between habitual coffee drinking and mortality from all causes, cancer, heart disease, cerebrovascular disease, respiratory disease, injuries, and other causes of death in a large-scale, population-based cohort study in Japan. Design: We studied 90,914 Japanese persons aged between 40 and 69 y without a history of cancer, cerebrovascular disease, or ischemic heart disease at the time of the baseline study. Subjects were followed up for an average of 18.7 y, during which 12,874 total deaths were reported. The association between coffee intake and risk of total and cause-specific mortality was assessed by using a Cox proportional hazards regression model with adjustment for potential confounders. Results: We showed an inverse association between coffee intake and total mortality in both men and women. HRs (95% CIs) for total death in subjects who consumed coffee compared with those who never drank coffee were 0.91 (0.86–0.95) for <1 cup/d, 0.85 (0.81–0.90) for 1–2 cups/d, 0.76 (0.70–0.83) for 3–4 cups/d, and 0.85 (0.75–0.98) for >5 cups/d (P -trend < 0.001). Coffee was inversely associated with mortality from heart disease, cerebrovascular disease, and respiratory disease. Conclusion: With this prospective study, we suggest that the habitual intake of coffee is associated with lower risk of total mortality and 3 leading causes of death in Japan.

Schroeder, J. and N. Epley (2015). **"The sound of intellect: Speech reveals a thoughtful mind, increasing a job candidate's appeal."** *Psychological Science* 26(6): 877-891. <http://pss.sagepub.com/content/26/6/877.abstract>

A person's mental capacities, such as intellect, cannot be observed directly and so are instead inferred from indirect cues. We predicted that a person's intellect would be conveyed most strongly through a cue closely tied to actual thinking: his or her voice. Hypothetical employers (Experiments 1–3b) and professional recruiters (Experiment 4) watched, listened to, or read job candidates' pitches about why they should be hired. These evaluators rated a candidate as more competent, thoughtful, and intelligent when they heard a pitch rather than read it and, as a result, had a more favorable impression of the candidate and were more interested in hiring the candidate. Adding voice to written pitches, by having trained actors (Experiment 3a) or untrained adults (Experiment 3b) read them, produced the same results. Adding visual cues to audio pitches did not alter evaluations of the candidates. For conveying one's intellect, it is important that one's voice, quite literally, be heard.

Sela, Y., V. A. Weekes-Shackelford, et al. (2015). **"Female copulatory orgasm and male partner's attractiveness to his partner and other women."** *Personality and Individual Differences* 79: 152-156. <http://www.sciencedirect.com/science/article/pii/S0191886915001002>

Women's copulatory orgasm may function to retain sperm from men with "good genes", one indicator of which is attractiveness, and one benefit of which is pathogen resistance. Women who perceive their partner to be more (vs. less) attractive are more likely to report orgasm at last copulation. Another benefit of male attractiveness to women is that he may sire offspring that will gain the heritable share of this advantage (i.e., "sexy sons"). Research has not addressed the "Sexy Sons" Hypothesis (e.g., as indicated by women's perception of other women's assessments of their partner's attractiveness) in regards to female copulatory orgasm. We secured self-reports from 439 women in a committed, heterosexual relationship and investigated the relationships between women's orgasm at last copulation and (1) women's assessments of their partner's attractiveness and (2) women's perceptions of other women's assessments of their partner's attractiveness. The results indicate that women mated to more (vs. less) attractive men are more likely to report orgasm at last copulation, and this relationship is mediated by women's perceptions of other women's assessments of their partner's attractiveness. We discuss the mediated relationship, note limitations of the research, and suggest future research directions.

Smillie, L. D., J. Wilt, et al. (2015). **"Quality of social experience explains the relation between extraversion and positive affect."** *Emotion* 15(3): 339-349. <http://www.ncbi.nlm.nih.gov/pubmed/25603131>

The personality trait extraversion is associated with higher positive affect, and individuals who behave in an extraverted way experience increased positive affect. Across 2 studies, we examine whether the positive affectivity of extraverts can be explained in terms of qualitative aspects of social experience resulting from extraverted (i.e., bold, assertive) behavior. In our first study ($N = 225$, 58% female), we found that social well-being, a broad measure of quality of social life (Keyes, 1998) was a significant mediator of the relation between trait extraversion and trait positive affect. This effect was specific to 1 aspect of social well-being-social contribution, one's sense of making an impact on one's social world. In our second study ($N = 81$, 75% female), we found that a momentary assessment of social well-being mediated the effect of experimentally manipulated extraverted behavior (in the context of 2 brief discussion tasks) on state positive affect. Furthermore, perceived contribution to the discussion tasks accounted for up to 70% of the effect of enacted extraversion on positive affect. This is the first identified mediator of the effect of enacted extraversion on positive affect. Implications and suggestions for extensions of this research are discussed.

Smith, H. E., C. J. Jones, et al. (2015). **"The effects of expressive writing on lung function, quality of life, medication use, and symptoms in adults with asthma: A randomized controlled trial."** *Psychosomatic Medicine* 77(4): 429-437. http://journals.lww.com/psychosomaticmedicine/Fulltext/2015/05000/The_Effects_of_Expressive_Writing_on_Lung.10.aspx

Objectives: Asthma is a chronic condition affecting 300 million people worldwide. Management involves adherence to pharmacological treatments such as corticosteroids and β -agonists, but residual symptoms persist. As asthma symptoms are exacerbated by stress, one possible adjunct to pharmacological treatment is expressive writing (EW). EW involves the disclosure of traumatic experiences which is thought to facilitate cognitive and emotional processing, helping to reduce physiological stress associated with inhibiting emotions. A previous trial reported short-term improvements in lung function. This study aimed to assess whether EW can improve lung function, quality of life, symptoms, and medication use in patients with asthma. Methods: Adults (18–45 years) diagnosed as having asthma requiring regular inhaled corticosteroids were recruited from 28 general practices in South East England ($n = 146$). In this double-blind randomized controlled trial, participants were allocated either EW or nonemotional writing instructions and asked to write for 20 minutes for 3 consecutive days. Lung function (forced expired volume in 1 second [FEV1]% predicted), quality of life (Mark's Asthma Quality of Life Questionnaire), asthma symptoms

(Wasserfallen Symptom Score Questionnaire), and medication use (inhaled corticosteroids and β -agonist) were recorded at baseline, 1, 3, 6, and 12 months. Results: Hierarchical linear modeling indicated no significant main effects between time and condition on any outcomes. Post hoc analyses revealed that EW improved lung function by 14% for 12 months for participants with less than 80% FEV1% predicted at baseline ($\beta = 0.93$, $p = .002$) whereas no improvement was observed in the control condition ($\beta = 0.10$, $p = .667$). Conclusions: EW seems to be beneficial for patients with moderate asthma (<80% FEV1% predicted). Future studies of EW require stratification of patients by asthma severity.

Velotti, P. and C. Garofalo (2015). **"Personality styles in a non-clinical sample: The role of emotion dysregulation and impulsivity."** *Personality and Individual Differences* 79: 44-49.

<http://www.sciencedirect.com/science/article/pii/S0191886915000811>

Theories of personality and personality disorders are increasingly considering the centrality of emotion regulation and its dimensions. Impulsivity as well is recognized as a personality trait underlying diverse symptom presentations. Although research in this field has mainly regarded borderline personality disorder, recent studies supported the association of both emotion dysregulation and impulsivity with personality styles across all clusters. In the present study, we sought to extend extant research by investigating the joint contribution of selected difficulties in emotion regulation and impulsivity to traits of four personality styles in a community sample ($N = 399$, mean age = 37.91, 56.6% males). In particular, we focused on depressive, masochistic, passive-aggressive and sadistic personality styles. Multiple regression analyses showed the unique association of several domains of emotion dysregulation with all personality styles examined. Nonacceptance of emotional response was significantly and positively related with scores of all personality styles. Lack of emotional awareness was also characteristic of different styles. Beyond these similarities, distinct patterns were able to distinguish between externalizing (sadistic and passive-aggressive), and internalizing (depressive and masochistic) traits. Beyond the role of emotion dysregulation, trait impulsivity was also related to masochistic, passive-aggressive, and sadistic traits, independently explaining a significant amount of additional variance.

Vine, S. J., L. Uiga, et al. (2015). **"Individual reactions to stress predict performance during a critical aviation incident."** *Anxiety, Stress, & Coping* 28(4): 467-477. <http://dx.doi.org/10.1080/10615806.2014.986722>

(Available in free full text) Background: Understanding the influence of stress on human performance is of theoretical and practical importance. An individual's reaction to stress predicts their subsequent performance; with a 'challenge' response to stress leading to better performance than a 'threat' response. However, this contention has not been tested in truly stressful environments with highly skilled individuals. Furthermore, the effect of challenge and threat responses on attentional control during visuomotor tasks is poorly understood. Design: Thus, this study aimed to examine individual reactions to stress and their influence on attentional control, among a cohort of commercial pilots performing a stressful flight assessment. Methods: Sixteen pilots performed an 'engine failure on take-off' scenario, in a high-fidelity flight simulator. Reactions to stress were indexed via self-report; performance was assessed subjectively (flight instructor assessment) and objectively (simulator metrics); gaze behavior data were captured using a mobile eye tracker, and measures of attentional control were subsequently calculated (search rate, stimulus driven attention, and entropy). Results: Hierarchical regression analyses revealed that a threat response was associated with poorer performance and disrupted attentional control. Conclusion: The findings add to previous research showing that individual reactions to stress influence performance and shed light on the processes through which stress influences performance. [Note excellent BPS Digest report on this study - <http://digest.bps.org.uk/2015/07/just-two-questions-predict-how-well.html> - including their comment: "A new study reports that, more than relevant facts such as age and years of experience, pilots' answers to two simple questions can more accurately forecast how they will respond to a stressful situation. Samuel Vine and his colleagues recruited 16 experienced commercial airline pilots (average age 35; two women) to complete a Bombardier Dash 8 flight simulator exercise. After they readied the plane for take-off, the pilots were told that the exercise would involve an engine failure occurring shortly after take off (widely considered one of the most stressful situations a pilot can face) and their task would be to land the plane safely. It was at this point that the two key questions were posed to the pilots: "How demanding do you expect the task to be?" & "How able are you to cope with the demands of the task?" The pilots scored their answer to each question on a scale of 1 (not at all) to 6 (extremely). The difference between the two provided a single measure of whether the pilots interpreted the forthcoming emergency as a challenge (when coping ability outweighs demands) or a threat (coping ability insufficient for the demands). The important finding was that this single measure accurately predicted how well the pilots subsequently coped with the engine failure during the flight simulation. Pilots who rated the upcoming situation as more of a threat tended to perform worse than those who rated it more as a challenge."]

Wu, Z., C. M. Schimmele, et al. (2015). **"Repartnering after widowhood."** *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 70(3): 496-507.

<http://psychsocgerontology.oxfordjournals.org/content/70/3/496.abstract>

Objectives. This study estimates the sex-specific prevalence of repartnering after widowhood. The main objective is to examine the competing choice between nonmarital cohabitation and remarriage as well as repartnering differentials. Methods. The study uses data from the 2007 Canadian General Social Survey and life table methods to illustrate gender and regional differences in the cumulative proportion of people aged 45 and older who repartner after widowhood. Proportional hazard models are used to examine how factors such as socioeconomic resources, region, demographic characteristics, and health associate with the risk of repartnering and repartnering preferences. Results. Most repartnering after widowhood occurs within ten years of this event or not at all. Ten years after widowhood, about 7% of widows and 29% of widowers have formed a new union. For both widows and widowers, the rate of remarriage is twice as high as the rate of cohabitation. The exception to this is the province of Quebec, where cohabitation is a more prevalent choice of repartnering than remarriage. There is a weak association between socioeconomic resources and both the risk of cohabitation and remarriage. Discussion. Our results confirm that constraints in marriage markets appear to contribute to a gender gap in the prevalence of repartnering after widowhood. Though the widowed prefer remarriage over cohabitation as a repartnering choice, there are important regional differences in repartnering that reflect cultural norms in the social acceptance of cohabitation. Socioeconomic disincentives to marriage do not appear to push the widowed into cohabitation.

Zheng, X., R. Fehr, et al. (2015). **"The unburdening effects of forgiveness: Effects on slant perception and jumping height."** *Social Psychological and Personality Science* 6(4): 431-438. <http://spp.sagepub.com/content/6/4/431.abstract>

Research shows that in the aftermath of conflict, forgiveness improves victims' well-being and the victim-offender relationship. Building on the research on embodied perception and economy of action, we demonstrate that forgiveness also has implications for victims' perceptions and behavior in the physical domain. Metaphorically, unforgiveness is a burden that can be lightened by forgiveness; we show that people induced to feel forgiveness perceive hills to be less steep (Study 1) and jump higher in an ostensible fitness test (Study 2) than people who are induced to feel unforgiveness. These findings suggest that forgiveness may lighten the physical burden of unforgiveness, providing evidence that forgiveness can help victims overcome the negative effects of conflict.

Zunick, P. V., R. H. Fazio, et al. (2015). **"Directed abstraction: Encouraging broad, personal generalizations following a success experience."** *J Pers Soc Psychol* 109(1): 1-19. <http://www.ncbi.nlm.nih.gov/pubmed/25984786>

People with negative self-views may fail to generalize appropriately from success experiences (e.g., Wood, Heimpel, Newby-Clark, & Ross, 2005). We drew on theories regarding self-views (Swann, Griffin, Predmore, & Gaines, 1987) and abstraction (Semin & Fiedler, 1991), as well as past linguistic framing work (e.g., Marigold, Holmes, & Ross, 2007, 2010; Salancik, 1974), to create a new technique to encourage people with negative self-views to generalize broadly from a success experience to the self-concept. We call this technique directed abstraction. In Experiment 1, participants with negative self-views who completed a directed abstraction writing task following success feedback regarding a novel laboratory task generalized more from that success, reporting higher ability levels and greater expectations of future success in the relevant domain. In Experiment 2, directed abstraction produced similar results (including more positive self-related affect, e.g., pride) after participants recalled a past public speaking success. In Experiment 3, participants high in fear of public speaking gave two speeches in a context designed to be challenging yet also to elicit successful performances. Directed abstraction helped these participants generalize from their success to beliefs about their abilities, expectations about the future, and confidence as a speaker. In Experiment 4, directed abstraction following success on a verbal task increased persistence in the face of failure on a subsequent verbal task. We discuss implications for understanding how and when people generalize from a success, compare directed abstraction to existing interventions, and suggest practical applications for this influence technique. [BPS Digest - <http://digest.bps.org.uk/2015/06/heres-technique-that-helps-self.html> - comments "Last week Kathleen finally put aside her fears about public speaking to give a presentation... and it went pretty well! But when you caught her at lunch today and asked if she wanted future opportunities to present, you found she was as pessimistic about her ability as ever. This story reflects an unfortunate truth: people with low self-belief are liable to hold onto negative assumptions about themselves despite concrete evidence of the contrary; that is, they fail to "generalise from success". Thankfully, in a new paper, psychologist Peter Zunick and his colleagues describe a technique, called directed abstraction, that can help the self-critical change their mindsets. Direct abstraction means stopping to consider how a specific success may have more general implications – this is the abstraction part – and also ensuring this thinking is directed towards how personal qualities were key to the success. Let's see what this means in practice. In a first study, 86 students guessed the number of dots flashed up on screen, and were given fake but convincing positive feedback on their performance. Half the students were then asked to explain how they completed the task, which kept their thoughts on a very concrete, specific level. The other half were prompted to engage in directed abstraction by completing the sentence: "I was able to score very high on the test because I am: ... " This query is not about how, but why – a more abstract consideration – and also focuses on the individual's own qualities. Engaging in directed abstraction appeared to give a particular boost to those participants who'd earlier reported believing they have low competence day to day: afterwards, they not only had more confidence in their estimation ability (than similarly self-critical control participants), they also believed they would do better at similar tasks (like guessing jelly beans in a jar) that they faced in the future. In another experiment, Zunick's research team sifted through hundreds of students to find 59 with low faith in their public speaking skills. Each of them was given a few minutes to prepare and then make a speech to camera on the topic of transition to college life, a fairly easy one to tackle. Each participant then watched themselves on video, with the experimenter offering reassuring feedback and implying that they did surprisingly well. The same participants then engaged in directed abstraction (or the control "how" query) before being thrown once more into the breach with a second speechmaking experience, this time on a tough topic, with no coddling feedback afterward – this was the real deal. Did the directed abstraction participants gain confidence from their early success that could survive a rockier second round? They did, reporting more confidence for future public speaking than their peers. The technique seems to be appropriate for a range of settings, although obviously it's only useful to use it following an event that can be reasonably seen as a success, otherwise it could backfire. And it's simple to use to help a friend or yourself, just by taking the time after a success to think through what it owes to your personal qualities. Then confidence can follow."]