# 48 bhma abstracts, march '13

Forty eight abstracts covering a multitude of stress, health & wellbeing related subjects including measuring mindfulness, therapists crying in therapy, how personality changes, cognitive refocusing for insomnia, chewing gum & mental quickness, how oral contraceptives change women's mate preferences, parenthood & mental health, the benefits of grief rituals, meat consumption & mortality, caffeine use & reduction in traffic accidents, using placebos to enhance cognitive ability, and much more.

(Vlahovic, Roberts et al. 2012; Weger and Loughnan 2012; Aghajafari, Nagulesapillai et al. 2013; Bergomi, Tschacher et al. 2013; Blume-Marcovici, Stolberg et al. 2013; Boyce, Wood et al. 2013; Burnett 2013; Chang, Huang et al. 2013; Cohen, Greenberg et al. 2013; Crowe, Appleby et al. 2013; Danner-Vlaardingerbroek, Kluwer et al. 2013; Eisenberger 2013; Ferrari, Somerville et al. 2013; Galanter 2013; Gallegos, Hoerger et al. 2013; Gellis, Arigo et al. 2013; Gloria, Faulk et al. 2013; Ha and Kim 2013; Hirano, Obata et al. 2013; Jaremka, Glaser et al. 2013; Lambert, Fincham et al. 2013; Lin, Yaffe et al. 2013; Lin, Erekosima et al. 2013; Little, Burriss et al. 2013; Ma-Kellams and Blascovich 2013; Mannes 2013; Mckenzie and Carter 2013; Murray 2013; Norton and Gino 2013; Overmier and Murison 2013; Pereira and Coelho 2013; Pinquart, Feußner et al. 2013; Pitt, Lowe et al. 2013; Plant, Barker et al. 2013; Preckel, Lipnevich et al. 2013; Ravitz, Lancee et al. 2013; RCP 2013; Rohrmann, Overvad et al. 2013; Sauer, Walach et al. 2013; Schneider, Eerland et al. 2013; Schry and White 2013; Sharwood, Elkington et al. 2013; Sonuga-Barke, Brandeis et al. 2013; Strelan, McKee et al. 2013; Tay, Tan et al. 2013; Trépanier, Fernet et al. 2013; Usmani, Chai-Coetzer et al. 2013; Yang, Wu et al. 2013)

Aghajafari, F., T. Nagulesapillai, et al. (2013). ***"Association between maternal serum 25-hydroxyvitamin d level and pregnancy and neonatal outcomes: Systematic review and meta-analysis of observational studies."*** BMJ 346: f1169. http://www.bmj.com/content/346/bmj.f1169

OBJECTIVE: To assess the effect of 25-hydroxyvitamin D (25-OHD) levels on pregnancy outcomes and birth variables. DESIGN: Systematic review and meta-analysis. DATA SOURCES: Medline (1966 to August 2012), PubMed (2008 to August 2012), Embase (1980 to August 2012), CINAHL (1981 to August 2012), the Cochrane database of systematic reviews, and the Cochrane database of registered clinical trials. STUDY SELECTION: Studies reporting on the association between serum 25-OHD levels during pregnancy and the outcomes of interest (pre-eclampsia, gestational diabetes, bacterial vaginosis, caesarean section, small for gestational age infants, birth weight, birth length, and head circumference). DATA EXTRACTION: Two authors independently extracted data from original research articles, including key indicators of study quality. We pooled the most adjusted odds ratios and weighted mean differences. Associations were tested in subgroups representing different patient characteristics and study quality. RESULTS: 3357 studies were identified and reviewed for eligibility. 31 eligible studies were included in the final analysis. Insufficient serum levels of 25-OHD were associated with gestational diabetes (pooled odds ratio 1.49, 95% confidence interval 1.18 to 1.89), pre-eclampsia (1.79, 1.25 to 2.58), and small for gestational age infants (1.85, 1.52 to 2.26). Pregnant women with low serum 25-OHD levels had an increased risk of bacterial vaginosis and low birthweight infants but not delivery by caesarean section. CONCLUSION: Vitamin D insufficiency is associated with an increased risk of gestational diabetes, pre-eclampsia, and small for gestational age infants. Pregnant women with low 25-OHD levels had an increased risk of bacterial vaginosis and lower birth weight infants, but not delivery by caesarean section.

Bergomi, C., W. Tschacher, et al. (2013). ***"Measuring mindfulness: First steps towards the development of a comprehensive mindfulness scale."*** Mindfulness (N Y) 4(1): 18-32. http://dx.doi.org/10.1007/s12671-012-0102-9

The present study describes the development of and results obtained from the first version of a new mindfulness scale: the Comprehensive Inventory of Mindfulness Experiences beta (CHIME-β). The aim of the present analysis was to investigate two relevant open questions in mindfulness assessment: (1) the coverage of aspects of mindfulness and (2) the type of interrelationships among these aspects. A review of the aspects of mindfulness assessed by eight currently available mindfulness questionnaires led to the identification of nine aspects of mindfulness. The CHIME-β was constructed in order to cover each of these aspects in a balanced way. Initially, principal component and confirmatory factor analyses, as well as reliability and validity analyses, were performed in the entire sample (n = 313) of individuals from the general population and mindfulness-based stress reduction (MBSR) groups. The factor structure that emerged from this analysis was further investigated in meditation-trained individuals (n = 144) who had just completed an MBSR intervention. Results suggested a four-factor structure underlying the nine aspects proposed. The relationship between these mindfulness factors appears to be influenced by the degree of meditation experience. In fact, the mindfulness factors showed a greater interconnectedness among mediation-trained participants. Finally, data suggest that a non-avoidant stance plays a central role in mindfulness, while the capacity to put inner experiences into words may be related to mindfulness rather than a component of the construct.

Blume-Marcovici, A. C., R. A. Stolberg, et al. (2013). ***"Do therapists cry in therapy? The role of experience and other factors in therapists' tears."*** Psychotherapy (Chic). http://www.ncbi.nlm.nih.gov/pubmed/23398034

The subject of therapist's crying in therapy (TCIT) has been virtually ignored in the literature, with only 1 qualitative dissertation and 3 case studies devoted to the topic. This mixed-method survey study explored therapists' experiences with and attitude toward TCIT. Six hundred eighty-four U.S. psychologists and trainees filled out the survey online, revealing that 72% of therapists report having cried in therapy in their role as therapist. Data analysis indicated that the act of crying in therapy has less to do with personality or demographic factors (i.e., Big Five traits, sex, empathy) and more to do with the unique aspects of the therapy itself and the therapist's identity in the therapeutic context (theoretical orientation, clinical experience, affective tone of the session). Clinicians with more experience, who are older, cried more in therapy than novice clinicians, despite lower crying frequency in daily life, suggesting that more experienced therapists feel more comfortable allowing themselves to experience and/or express such emotions in therapy sessions. Psychodynamic therapists reported slightly higher rates of TCIT than cognitive-behavioral therapists despite no difference in crying in daily life. Despite significant differences in crying rates in daily life, male and female clinicians report similar rates of TCIT. Data regarding the relationship between TCIT and Big Five personality traits, empathy, and perceived consequences of TCIT are reported. *(The excellent BPS Research Digest - http://www.bps-research-digest.blogspot.co.uk/2013/03/older-more-experienced-therapists-cry.html - comments "How often do therapists cry in therapy and does it matter? For a profession that trades in emotions, you'd think these questions would have been tackled before. But as Amy Blume-Marcovici and her colleagues point out in their new paper, the issue has been strangely neglected. There's been plenty of research on crying medics, yet all we know about crying therapists comes from an ethics paper published in the 80s (56.5% of therapists said they'd cried in front of a client), and an unpublished qualitative study of ten psychodynamic psychotherapists for a doctoral thesis completed in the 90s. From their survey of 684 US psychological therapists - 75% women; age range 22 to 85; 35% CBT, 23% eclectic with psychodynamic emphasis, 19% eclectic without psychodynamic emphasis - Blume-Marcovici's group found that 72% of the sample had cried in therapy ever. Among these*

*criers, 30% had cried in the last four weeks. Looking at the correlates of being a therapist who cries in therapy, it was older, more experienced therapists and those with a psychodynamic approach, who were more likely to be criers. Surprisingly perhaps, female therapists were no more likely to cry in therapy than male therapists, despite the fact that they reported crying more often in daily life than the men. This mismatch between crying in everyday life and crying in therapy was a consistent theme. Older therapists too cried less often in daily life than younger therapists, despite more crying with clients. Also, whereas crying in daily life is typically associated with negative emotion, in therapy it was associated not just with the therapists experiencing sadness (reported by 75% during their last therapy cry), but also with "feeling touched" (63%), warmth (33%), gratitude (15%) and joy (12%). "This suggests that tears that occur in the therapy situation are different in nature than tears shed in daily life," the researchers said. However, it's worth noting that, at their last time of crying in therapy, the therapists believed their clients were experiencing negative emotions like sadness, grief and powerlessness. Therapist personality was only weakly related to crying, with openness being the most relevant trait. More agreeable and extraverted therapists also showed a tendency towards crying more. The personality questionnaire used in this study was extremely brief, so it's tricky to read too much into these results. Ditto for therapist empathy, which showed an association with crying tendency, but not frequency or proneness, possibly due to the limitations of the empathy scale that was used. This research provides no objective data on the effect on clients of having a crying therapist. However, the therapists' belief was that their crying was either inconsequential (53.5%) or that it had changed their relationship with their client for the better (45.7%). Less than one per cent felt it had harmed their client. Referring to the literature on therapist self-disclosure, the researchers speculated that perhaps therapist crying has a positive impact when the therapist-client relationship is already strong, but can threaten that relationship when it is weak or negative. Blume-Marcovici and her colleagues called for more research on this neglected topic, and particularly for future studies to investigate the effect of therapist crying on client outcomes. They said their initial results are "meaningful" because they challenge the idea that "therapist crying in therapy is occurring due to the therapist being overwhelmed by intense negative emotions that arise in therapy, and instead signals a moment of potentially positive emotional connection, even if amid painful negative affect."*

Boyce, C. J., A. M. Wood, et al. (2013). ***"Is personality fixed? Personality changes as much as "variable" economic factors and more strongly predicts changes to life satisfaction."*** Social Indicators Research 111(1): 287-305. http://dx.doi.org/10.1007/s11205-012-0006-z

Personality is the strongest and most consistent cross-sectional predictor of high subjective well-being. Less predictive economic factors, such as higher income or improved job status, are often the focus of applied subjective well-being research due to a perception that they can change whereas personality cannot. As such there has been limited investigation into personality change and how such changes might bring about higher well-being. In a longitudinal analysis of 8625 individuals we examine Big Five personality measures at two time points to determine whether an individual's personality changes and also the extent to which such changes in personality can predict changes in life satisfaction. We find that personality changes at least as much as economic factors and relates much more strongly to changes in life satisfaction. Our results therefore suggest that personality can change and that such change is important and meaningful. Our findings may help inform policy debate over how best to help individuals and nations improve their well-being.

Burnett, D. (2013). ***Nothing personal: The questionable myers-briggs test***. Guardian. http://www.guardian.co.uk/science/brain-flapping/2013/mar/19/myers-briggs-test-unscientific

(Free full text available) Burnett writes "I was recently reviewing some psychological lectures for my real job. One of these was on personality tests. The speaker mentioned the Myers-Briggs test, explaining that, while well known (I personally know it from a Dilbert cartoon) the Myers-Briggs test isn't recognised as being scientifically valid so is largely ignored by the field of psychology. I tweeted this fact, thinking it would be of passing interest to a few people. I was unprepared for the intensity of the replies I got. I learned several things that day. 1. The Myers-Briggs Type Indicator (MBTI) is used by countless organisations and industries, although one of the few areas that doesn't use it is psychology, which says a lot. 2. Many people who have encountered the MBTI in the workplace really don't have a lot of positive things to say about it. 3. For some organisations, use of the MBTI seemingly crosses the line into full-blown ideology. So how did something that apparently lacks scientific credibility become such a popular and accepted tool?"

Chang, J.-H., C.-L. Huang, et al. (2013). ***"The psychological displacement paradigm in diary-writing (pdpd) and its psychological benefits."*** Journal of Happiness Studies 14(1): 155-167. http://dx.doi.org/10.1007/s10902-012-9321-y

The present study aimed to investigate the psychological displacement paradigm in diary-writing (PDPD) had both immediate and short-term psychological benefits. Participants were randomly assigned to write about their recent negative life experiences two times a week for 2 weeks in PDPD group or comparison group. Results revealed that the PDPD group displayed a decrease in negative emotion and an increase in positive emotion immediately after each writing session; they also showed an increase in psychological well-being relative to the comparison group for at least 2 weeks. Implications for PDPD are discussed.

Cohen, R. M., J. M. Greenberg, et al. (2013). ***"Incorporating multidimensional patient-reported outcomes of symptom severity, functioning, and quality of life in the individual burden of illness index for depression to measure treatment impact and recovery in mdd."*** JAMA Psychiatry 70(3): 343-350. http://dx.doi.org/10.1001/jamapsychiatry.2013.286

Context The National Institute of Mental Health Affective Disorders Workgroup identified the assessment of an individual's burden of illness as an important need. The Individual Burden of Illness Index for Depression (IBI-D) metric was developed to meet this need.Objective To assess the use of the IBI-D for multidimensional assessment of treatment efficacy for depressed patients. Design, Setting, and Patients Complete data on depressive symptom severity, functioning, and quality of life (QOL) from depressed patients (N = 2280) at entry and exit of level 1 of the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) study (12-week citalopram treatment) were used as the basis for calculating IBI-D and self-rating scale changes. Results Principal component analysis of patient responses at the end of level 1 of STAR*D yielded a single principal component, IBI-D, with a nearly identical eigenvector to that previously reported. While changes in symptom severity (Quick Inventory of Depressive Symptomatology–Self Report) accounted for only 50% of the variance in changes in QOL (Quality of Life Enjoyment and Satisfaction Questionnaire–Short Form) and 47% of the variance in changes in functioning (Work and Social Adjustment Scale), changes in IBI-D captured 83% of the variance in changes in QOL and 80% in functioning, while also capturing 79% of the variance in change in symptom severity (Quick Inventory of Depressive Symptomatology–Self Report). Most importantly, the changes in IBI-D of the 36.6% of remitters who had abnormal QOL and/or functioning (mean [SD], 2.98 [0.35]) were significantly less than the changes in IBI-D of those who reported normal QOL and functioning (IBI-D = 1.97; t = 32.6; P < 10−8) with an effect size of a Cohen d of 2.58. In contrast, differences in symptom severity, while significant, had a Cohen d of only 0.78. Conclusions Remission in depressed patients, as defined by a reduction in symptom severity, does not denote normal QOL or functioning. By incorporating multidimensional patient-reported outcomes, the IBI-D provides a single

measure that adequately captures the full burden of illness in depression both prior to and following treatment; therefore, it offers a more accurate metric of recovery.

Crowe, F. L., P. N. Appleby, et al. (2013). ***"Risk of hospitalization or death from ischemic heart disease among british vegetarians and nonvegetarians: Results from the epic-oxford cohort study."*** Am J Clin Nutr 97(3): 597-603. http://ajcn.nutrition.org/content/97/3/597.abstract

Background: Few previous prospective studies have examined differences in incident ischemic heart disease (IHD) risk between vegetarians and nonvegetarians. Objective: The objective was to examine the association of a vegetarian diet with risk of incident (nonfatal and fatal) IHD. Design: A total of 44,561 men and women living in England and Scotland who were enrolled in the European Prospective Investigation into Cancer and Nutrition (EPIC)–Oxford study, of whom 34% consumed a vegetarian diet at baseline, were part of the analysis. Incident cases of IHD were identified through linkage with hospital records and death certificates. Serum lipids and blood pressure measurements were available for 1519 noncases, who were matched to IHD cases by sex and age. IHD risk by vegetarian status was estimated by using multivariate Cox proportional hazards models. Results: After an average follow-up of 11.6 y, there were 1235 IHD cases (1066 hospital admissions and 169 deaths). Compared with nonvegetarians, vegetarians had a lower mean BMI [in kg/m2; −1.2 (95% CI: −1.3, −1.1)], non-HDL-cholesterol concentration [−0.45 (95% CI: −0.60, −0.30) mmol/L], and systolic blood pressure [−3.3 (95% CI: −5.9, −0.7) mm Hg]. Vegetarians had a 32% lower risk (HR: 0.68; 95% CI: 0.58, 0.81) of IHD than did nonvegetarians, which was only slightly attenuated after adjustment for BMI and did not differ materially by sex, age, BMI, smoking, or the presence of IHD risk factors. Conclusion: Consuming a vegetarian diet was associated with lower IHD risk, a finding that is probably mediated by differences in non-HDL cholesterol, and systolic blood pressure.

Danner-Vlaardingerbroek, G., E. S. Kluwer, et al. (2013). ***"Knock, knock, anybody home? Psychological availability as link between work and relationship."*** Personal Relationships 20(1): 52-68. http://dx.doi.org/10.1111/j.1475-6811.2012.01396.x

This research investigated how negative and positive residuals of the workday spill over into the partner relationship. To unravel the mechanism of this spillover, this study introduces the concept of "psychological availability," which refers to the individual's ability and motivation to direct psychological resources at the partner. A survey was conducted among 313 Dutch dual-earner couples with children, using dyadic data analysis to analyze both partners simultaneously in 1 model. Psychological availability mediated the link between negative and positive work-related residuals (i.e., work-related negative mood, exhaustion, rumination and work-related positive mood and vigor, respectively) and marital behavior. The findings suggest that partners' workday residuals spill over into the marital relationship through being more or less psychologically available for each other.

Eisenberger, N. I. (2013). ***"Social ties and health: A social neuroscience perspective."*** Curr Opin Neurobiol. http://www.ncbi.nlm.nih.gov/pubmed/23395461

Research over the last several decades has shown that the health of the body is intimately tied to the strength of our social connections, but why? This article reviews evidence from affective and social neuroscience suggesting that, because of the importance of social ties for mammalian survival, threats to social connection are processed by some of the same neural regions that process basic threats to survival and consequently trigger physiological threat responses that have negative health implications. Likewise, social support is processed by some of the same neural regions that process safety or protection from basic threats and inhibit these same health-relevant physiological threat responses.

Ferrari, A. J., A. J. Somerville, et al. (2013). ***"Global variation in the prevalence and incidence of major depressive disorder: A systematic review of the epidemiological literature."*** Psychological Medicine 43(03): 471-481. http://dx.doi.org/10.1017/S0033291712001511

Background Summarizing the epidemiology of major depressive disorder (MDD) at a global level is complicated by significant heterogeneity in the data. The aim of this study is to present a global summary of the prevalence and incidence of MDD, accounting for sources of bias, and dealing with heterogeneity. Findings are informing MDD burden quantification in the Global Burden of Disease (GBD) 2010 Study. Method A systematic review of prevalence and incidence of MDD was undertaken. Electronic databases Medline, PsycINFO and EMBASE were searched. Community-representative studies adhering to suitable diagnostic nomenclature were included. A meta-regression was conducted to explore sources of heterogeneity in prevalence and guide the stratification of data in a meta-analysis. Results The literature search identified 116 prevalence and four incidence studies. Prevalence period, sex, year of study, depression subtype, survey instrument, age and region were significant determinants of prevalence, explaining 57.7% of the variability between studies. The global point prevalence of MDD, adjusting for methodological differences, was 4.7% (4.4–5.0%). The pooled annual incidence was 3.0% (2.4–3.8%), clearly at odds with the pooled prevalence estimates and the previously reported average duration of 30 weeks for an episode of MDD. Conclusions Our findings provide a comprehensive and up-to-date profile of the prevalence of MDD globally. Region and study methodology influenced the prevalence of MDD. This needs to be considered in the GBD 2010 study and in investigations into the ecological determinants of MDD. Good-quality estimates from low-/middle-income countries were sparse. More accurate data on incidence are also required.

Galanter, C. A. (2013). ***"Limited support for the efficacy of nonpharmacological treatments for the core symptoms of ADHD."*** American Journal of Psychiatry 170(3): 241-244. http://dx.doi.org/10.1176/appi.ajp.2012.12121561

(Free full text available) Attention deficit hyperactivity disorder (ADHD) is a common disorder affecting 7%–9% of children and adolescents. ADHD can be associated with significant morbidity, including school failure, difficulties with peer relationships, and family conflict. A majority of youths with ADHD also have co-occurring psychiatric disorders, the most common being oppositional defiant disorder, anxiety disorders, and learning disabilities, which lead to further impairment and which affect treatment choices. Treatment for ADHD should start with a comprehensive assessment and treatment plan that may include a multimodal, multidisciplinary approach. Stimulant medication is the first-line treatment for uncomplicated ADHD because of its demonstrated efficacy. However, families often have concerns about starting and continuing with medication (5). One recent study that used data from a Medicaid managed behavioral health system found that 45% of children with newly diagnosed ADHD did not begin with medication treatment. The article by Sonuga-Barke et al. in this issue provides clinicians with information on the efficacy of nonpharmacological treatments to help them make evidence-based recommendations to families.

Gallegos, A. M., M. Hoerger, et al. (2013). ***"Toward identifying the effects of the specific components of mindfulness-based stress reduction on biologic and emotional outcomes among older adults."*** J Altern Complement Med. http://www.ncbi.nlm.nih.gov/pubmed/23383976

Abstract Objectives: The objectives of this study were to examine the effects of specific Mindfulness-Based Stress Reduction (MBSR) activities (yoga, sitting and informal meditation, body scan) on immune function, circulating insulin-like growth factor (IGF)-1 concentrations, and positive affect among older adults. Design: The study design comprised longitudinal analyses of data from subjects in an 8-week MBSR program. Setting: The study was conducted at a University-affiliated health center. Subjects: This study involved 100 community-dwelling older adults. Inclusion criteria were as follows: >/=65 years of age and English-speaking. Intervention: This was an 8-week MBSR program. Outcome measures: Interleukin (IL)-6 and IGF-1 levels were assayed from blood collected at postintervention assessments. Participants were immunized postintervention with keyhole limpet hemocyanin (KLH), and immunoglobulin (Ig)M and IgG KLH-specific antibody responses were measured prior to immunization as well as 3 weeks and 24 weeks postintervention. Participants completed a 10-item measure of positive affect at study entry and postintervention. Results: Participants maintained weekly practice logs documenting participation in yoga, sitting meditation, informal meditation, and body scan. More practice of yoga was associated with higher post-treatment IGF-1 levels and greater improvement in positive affect from study entry to postintervention. Sitting meditation was positively associated with post-treatment IGF-1. Greater use of body scanning was associated with reduced antigen-specific IgM and IgG 3 weeks postintervention but not 24 weeks. No associations were found between MBSR activities and IL-6 levels. Conclusions: Practice of MBSR activities, particularly yoga, could provide benefits for specific aspects of physiologic function and positive affect. Changes in adaptive immunity in older adult MBSR practitioners warrant further study.

Gellis, L. A., D. Arigo, et al. (2013). ***"Cognitive refocusing treatment for insomnia: A randomized controlled trial in university students."*** Behavior Therapy 44(1): 100-110. http://www.sciencedirect.com/science/article/pii/S0005789412000883

(Free full text available) This investigation assessed the efficacy of a technique specifically designed to change the style and content of presleep thoughts in order to reduce nighttime cognitive arousal and decrease insomnia severity. This investigation, termed "cognitive refocusing treatment for insomnia" (CRT-I), previously improved sleep in a small sample of veterans with primary insomnia. In this investigation, university students with poor sleep were randomly assigned to attend either one session of CRT-I and sleep hygiene education (SH: n = 27) or one session of only SH (n = 24). Insomnia severity (assessed by the Insomnia Severity Index) and nighttime arousal (assessed by the Pre-Sleep Arousal Scale) were measured at baseline and 1 month posttreatment. A significant Group × Time interaction for insomnia severity suggested more improved sleep over time for those receiving CRT-I + SH. A trend for a Group × Time interaction showed decreased cognitive arousal over time among those receiving CRT-I. These findings provide preliminary support for the efficacy of CRT-I for insomnia treatment among college students. Continued study of CRT-I in a community-based sample appears warranted.

Gloria, C. T., K. E. Faulk, et al. (2013). ***"Positive affectivity predicts successful and unsuccessful adaptation to stress."*** Motivation and Emotion 37(1): 185-193. http://dx.doi.org/10.1007/s11031-012-9291-8

This study examined adaptation to work stress among public school teachers (n = 267). Regression analyses tested whether positive affect predicted successful and unsuccessful adaptation to stress (viz., resilience and burnout, respectively) after controlling for demographic characteristics and work stress. Positive affect was largely correlated with resilience ($r = .65$, $p < .001$) and burnout ($r = -.57$, $p < .001$). The regression of resilience showed that positive affect had a direct effect ($\beta = .66$, $p < .001$) and the total model explained 44 % of the variance (R 2 Change = 37 %). In the regression of burnout, positive affect also had a direct effect ($\beta = -.41$, $p < .001$) and the total model explained 52 % of the variance (R 2 Change = 14 %). Further analyses found no significant interaction between work stress and positive affect, but revealed that positive affect completely mediated the effect of work stress on resilience. Results provide support for the broaden-and-build theory of positive emotions, particularly the theory's building and undoing effects.

Ha, S. E. and S. Kim (2013). ***"Personality and subjective well-being: Evidence from South Korea."*** Social Indicators Research 111(1): 341-359. http://dx.doi.org/10.1007/s11205-012-0009-9

Although the statistically significant relationship between personality traits and subjective well-being (i.e., self-reported happiness and life satisfaction) is well-known in the field of positive psychology, some scholars still cast doubt on the external validity of this finding and the strength of personality dimensions vis-à-vis other individual-level determinants of subjective well-being such as income, employment status, marital status, self-reported health, and so on. Using a nationally representative, face-to-face survey fielded in South Korea in 2009, we find that personality traits (measured by the Five-factor Model)—particularly, Emotional Stability and Extraversion—are positively associated with happiness and life satisfaction, after controlling for other covariates. The effects of personality traits are often on par with, and sometimes even greater than, those of other well-known determinants.

Hirano, Y., T. Obata, et al. (2013). ***"Effects of chewing on cognitive processing speed."*** Brain and Cognition 81(3): 376-381. http://www.sciencedirect.com/science/article/pii/S027826261200173X

In recent years, chewing has been discussed as producing effects of maintaining and sustaining cognitive performance. We have reported that chewing may improve or recover the process of working memory; however, the mechanisms underlying these phenomena are still to be elucidated. We investigated the effect of chewing on aspects of attention and cognitive processing speed, testing the hypothesis that this effect induces higher cognitive performance. Seventeen healthy adults (20–34 years old) were studied during attention task with blood oxygenation level-dependent functional (fMRI) at 3.0 T MRI. The attentional network test (ANT) within a single task fMRI containing two cue conditions (no cue and center cue) and two target conditions (congruent and incongruent) was conducted to examine the efficiency of alerting and executive control. Participants were instructed to press a button with the right or left thumb according to the direction of a centrally presented arrow. Each participant underwent two back-to-back ANT sessions with or without chewing gum, odorless and tasteless to remove any effect other than chewing. Behavioral results showed that mean reaction time was significantly decreased during chewing condition, regardless of speed-accuracy trade-off, although there were no significant changes in behavioral effects (both alerting and conflict effects). On the other hand, fMRI analysis revealed higher activations in the anterior cingulate cortex and left frontal gyrus for the executive network and motor-related regions for both attentional networks during chewing condition. These results suggested that chewing induced an increase in the arousal level and alertness in addition to an effect on motor control and, as a consequence, these effects could lead to improvements in cognitive performance.

Jaremka, L. M., R. Glaser, et al. (2013). ***"Attachment anxiety is linked to alterations in cortisol production and cellular immunity."*** Psychological Science 24(3): 272-279. http://pss.sagepub.com/content/24/3/272.abstract

Although evidence suggests that attachment anxiety may increase risk for health problems, the mechanisms underlying these effects are not well understood. In the current study, married couples (N = 85) provided saliva samples over 3 days and blood samples on two occasions. Participants with higher attachment anxiety produced more cortisol and had fewer numbers of CD3+ T cells, CD45+ T cells, CD3+CD4+ helper T cells, and CD3+CD8+ cytotoxic T cells than participants with lower attachment anxiety. Higher cortisol levels were also related to fewer numbers of CD3+, CD45+, CD3+CD4+, and CD3+CD8+

cells, which is consistent with research showing that cortisol alters the cellular immune response. These data suggest that attachment anxiety may have physiological costs, and they provide a glimpse into the pathways through which social relationships affect health. The current study also extends attachment theory in an important new direction by demonstrating the utility of a psychoneuroimmunological approach to the study of attachment anxiety, stress, and health.

Lambert, N., F. D. Fincham, et al. (2013). ***"Shifting toward cooperative tendencies and forgiveness: How partner-focused prayer transforms motivation."*** Personal Relationships 20(1): 184-197. http://dx.doi.org/10.1111/j.1475-6811.2012.01411.x

Several studies tested whether partner-focused prayer shifts individuals toward cooperative tendencies and forgiveness. In Studies 1 and 2, participants who prayed more frequently for their partner were rated by objective coders as less vengeful. Study 3 showed that, compared to partners of targets in the positive partner thought condition, the romantic partners of targets assigned to pray reported a positive change in their partner's forgiveness. In Study 4, participants who prayed following a partner's "hurtful behavior" were more cooperative with their partners in a mixed-motive game compared to participants who engaged in positive thoughts about their partner. In Study 5, participants who prayed for a close relationship partner reported higher levels of cooperative tendencies and forgiveness.

Lin, F. R., K. Yaffe, et al. (2013). ***"Hearing loss and cognitive decline in older adults."*** JAMA Internal Medicine 173(4): 293-299. http://dx.doi.org/10.1001/jamainternmed.2013.1868

Background  Whether hearing loss is independently associated with accelerated cognitive decline in older adults is unknown.Methods  We studied 1984 older adults (mean age, 77.4 years) enrolled in the Health ABC Study, a prospective observational study begun in 1997-1998. Our baseline cohort consisted of participants without prevalent cognitive impairment (Modified Mini-Mental State Examination [3MS] score, ≥80) who underwent audiometric testing in year 5. Participants were followed up for 6 years. Hearing was defined at baseline using a pure-tone average of thresholds at 0.5 to 4 kHz in the better-hearing ear. Cognitive testing was performed in years 5, 8, 10, and 11 and consisted of the 3MS (measuring global function) and the Digit Symbol Substitution test (measuring executive function). Incident cognitive impairment was defined as a 3MS score of less than 80 or a decline in 3MS score of more than 5 points from baseline. Mixed-effects regression and Cox proportional hazards regression models were adjusted for demographic and cardiovascular risk factors.Results  In total, 1162 individuals with baseline hearing loss (pure-tone average >25 dB) had annual rates of decline in 3MS and Digit Symbol Substitution test scores that were 41% and 32% greater, respectively, than those among individuals with normal hearing. On the 3MS, the annual score changes were −0.65 (95% CI, −0.73 to −0.56) vs −0.46 (95% CI, −0.55 to −0.36) points per year (P = .004). On the Digit Symbol Substitution test, the annual score changes were −0.83 (95% CI, −0.94 to −0.73) vs −0.63 (95% CI, −0.75 to −0.51) points per year (P = .02). Compared to those with normal hearing, individuals with hearing loss at baseline had a 24% (hazard ratio, 1.24; 95% CI, 1.05-1.48) increased risk for incident cognitive impairment. Rates of cognitive decline and the risk for incident cognitive impairment were linearly associated with the severity of an individual's baseline hearing loss.  Conclusions  Hearing loss is independently associated with accelerated cognitive decline and incident cognitive impairment in community-dwelling older adults. Further studies are needed to investigate what the mechanistic basis of this association is and whether hearing rehabilitative interventions could affect cognitive decline.

Lin, S. Y., N. Erekosima, et al. (2013). ***"Sublingual immunotherapy for the treatment of allergic rhinoconjunctivitis and asthma: A systematic review."*** JAMA 309(12): 1278-1288. http://dx.doi.org/10.1001/jama.2013.2049

Importance  Allergic rhinitis affects up to 40% of the US population. To desensitize allergic individuals, subcutaneous injection immunotherapy or sublingual immunotherapy may be administered. In the United States, sublingual immunotherapy is not approved by the Food and Drug Administration. However, some US physicians use aqueous allergens, off-label, for sublingual desensitization.Objective  To systematically review the effectiveness and safety of aqueous sublingual immunotherapy for allergic rhinoconjunctivitis and asthma.Evidence Acquisition  The databases of MEDLINE, EMBASE, LILACS, and the Cochrane Central Register of Controlled Trials were searched through December 22, 2012. English-language randomized controlled trials were included if they compared sublingual immunotherapy with placebo, pharmacotherapy, or other sublingual immunotherapy regimens and reported clinical outcomes. Studies of sublingual immunotherapy that are unavailable in the United States and for which a related immunotherapy is unavailable in the United States were excluded. Paired reviewers selected articles and extracted the data. The strength of the evidence for each comparison and outcome was graded based on the risk of bias (scored on allocation, concealment of intervention, incomplete data, sponsor company involvement, and other bias), consistency, magnitude of effect, and the directness of the evidence.Results  Sixty-three studies with 5131 participants met the inclusion criteria. Participants' ages ranged from 4 to 74 years. Twenty studies (n = 1814 patients) enrolled only children. The risk of bias was medium in 43 studies (68%). Strong evidence supports that sublingual immunotherapy improves asthma symptoms, with 8 of 13 studies reporting greater than 40% improvement vs the comparator. Moderate evidence supports that sublingual immunotherapy use decreases rhinitis or rhinoconjunctivitis symptoms, with 9 of 36 studies demonstrating greater than 40% improvement vs the comparator. Medication use for asthma and allergies decreased by more than 40% in 16 of 41 studies of sublingual immunotherapy with moderate grade evidence. Moderate evidence supports that sublingual immunotherapy improves conjunctivitis symptoms (13 studies), combined symptom and medication scores (20 studies), and disease-specific quality of life (8 studies). Local reactions were frequent, but anaphylaxis was not reported.Conclusions and Relevance  The overall evidence provides a moderate grade level of evidence to support the effectiveness of sublingual immunotherapy for the treatment of allergic rhinitis and asthma, but high-quality studies are still needed to answer questions regarding optimal dosing strategies. There were limitations in the standardization of adverse events reporting, but no life-threatening adverse events were noted in this review.

Little, A. C., R. P. Burriss, et al. (2013). ***"Oral contraceptive use in women changes preferences for male facial masculinity and is associated with partner facial masculinity."*** Psychoneuroendocrinology. http://www.ncbi.nlm.nih.gov/pubmed/23528282

Millions of women use hormonal contraception and it has been suggested that such use may alter mate preferences. To examine the impact of oral contraceptive (pill) use on preferences, we tested for within-subject changes in preferences for masculine faces in women initiating pill use. Between two sessions, initiation of pill use significantly decreased women's preferences for male facial masculinity but did not influence preferences for same-sex faces. To test whether altered preference during pill use influences actual partner choice, we examined facial characteristics in 170 age-matched male partners of women who reported having either been using or not using the pill when the partnership was formed. Both facial measurements and perceptual judgements demonstrated that partners of women who used the pill during mate choice have less masculine faces than partners of women who did not use hormonal contraception at this time. Our data (A) provide the first experimental evidence that initiation of pill use in women causes changes in facial preferences and (B) documents downstream effects of these changes on real-life partner selection. Given that hormonal contraceptive use is widespread, effects of pill use on the

processes of partner formation have important implications for relationship stability and may have other biologically relevant consequences.

Ma-Kellams, C. and J. Blascovich (2013). ***"Does "science" make you moral? The effects of priming science on moral judgments and behavior."*** PLoS ONE 8(3): e57989. http://dx.doi.org/10.1371%2Fjournal.pone.0057989

(Free full text available) Background: Previous work has noted that science stands as an ideological force insofar as the answers it offers to a variety of fundamental questions and concerns; as such, those who pursue scientific inquiry have been shown to be concerned with the moral and social ramifications of their scientific endeavors. No studies to date have directly investigated the links between exposure to science and moral or prosocial behaviors. Methodology/Principal Findings: Across four studies, both naturalistic measures of science exposure and experimental primes of science led to increased adherence to moral norms and more morally normative behaviors across domains. Study 1 (n = 36) tested the natural correlation between exposure to science and likelihood of enforcing moral norms. Studies 2 (n = 49), 3 (n = 52), and 4 (n = 43) manipulated thoughts about science and examined the causal impact of such thoughts on imagined and actual moral behavior. Across studies, thinking about science had a moralizing effect on a broad array of domains, including interpersonal violations (Studies 1, 2), prosocial intentions (Study 3), and economic exploitation (Study 4). Conclusions/Significance: These studies demonstrated the morally normative effects of lay notions of science. Thinking about science leads individuals to endorse more stringent moral norms and exhibit more morally normative behavior. These studies are the first of their kind to systematically and empirically test the relationship between science and morality. The present findings speak to this question and elucidate the value-laden outcomes of the notion of science.

Mannes, A. E. (2013). ***"Shorn scalps and perceptions of male dominance."*** Social psychological and personality science 4(2): 198-205. http://spp.sagepub.com/content/4/2/198.abstract

Three studies contribute to the literature on dominance and nonverbal behavior (Ellyson & Dovidio, 1985) by examining how a man's choice to shave his head influences person perception. In Study 1, men with shaved heads were rated as more dominant than similar men with full heads of hair. In Study 2, men whose hair was digitally removed were perceived as more dominant, taller, and stronger than their authentic selves. Study 3 extends these results with nonphotographic stimuli and demonstrates how men experiencing natural hair loss may improve their interpersonal standing by shaving. Theories of signaling, norm violation, and stereotypes are examined as explanations for the effect. Practical implications for men's psychological, social, and economic outlooks are also discussed.

Mckenzie, S. K. and K. Carter (2013). ***"Does transition into parenthood lead to changes in mental health? Findings from three waves of a population based panel study."*** J Epidemiol Community Health 67(4): 339-345. http://jech.bmj.com/content/67/4/339.abstract

Background Longitudinal studies specifically looking at the transition into parenthood and changes in mental health in the general population are scarce. This study aimed to investigate the impact of transition into parenthood on mental health and psychological distress using longitudinal survey data.Methods The analysis used three waves from the longitudinal Survey of Family, Income and Employment. Parenthood was classified as first time parent (first and only child <12 months at interview date), subsequent parent (child <12 months and other children in the family), existing parent (no children <12 months but other existing children in the family) and not a parent. We used fixed effects generalised linear modelling, controlling for all time-invariant and time-varying sources of confounding in a sample of 6670 adults within families.Results After adjusting for confounding from time-varying partner status, area deprivation, labour force status and household income, those who became first time parents reported an increase in mental health (β 1.22, 95% CI −0.06 to 2.50; mean=83.8, SD=14.1) and a decrease in psychological distress (β −0.70 95% CI −1.10 to −0.29; mean=13.4, SD=5.0). Subsequent parents reported a decrease in psychological distress (β −0.60 95% CI −0.95 to −0.24).Conclusions Our findings suggest that a transition into parenthood for the first time leads to changes in mental health and psychological distress. Understanding the relationship between becoming a parent and mental health outcomes is important given that parental mental health is integral to effective parenting.

Murray, A. (2013). ***"Physical inactivity – getting Scotland on the move."*** British Journal of Sports Medicine 47(4): 191-192. http://bjsm.bmj.com/content/47/4/191.short

Scotland helped invent inactivity. It is believed that Scotland has been inhabited for over 12 000 years. These early settlers were hunter-gatherers, sustaining regular physical activity in their search for food. Scots take pride in their proud history of innovation and invention. To medicine, we have contributed penicillin, insulin and the ECG. Scots also contributed the three best friends of the couch potato; the telephone, the refrigerator and the television, unwittingly sowing the seeds for one of the biggest public health challenges of the 21st century: physical inactivity. Steven Blair's research has shown that low cardiorespiratory fitness is responsible for the largest attributable fraction of all-cause mortality. Karim Khan framed these data to emphasise that deaths attributable to low fitness exceeded those due to obesity, diabetes and smoking ('smokadiabesity') combined. The WHO looked at global health risks and found that over 3 million people each year die due to physical inactivity making physical inactivity the fourth leading cause of preventable death. It is accepted that increasing physical activity levels is beneficial both to preventing and managing cardiovascular conditions, diabetes, cancer and depression as well as promoting a better quality of life. The current state of play in Scotland. Is this global problem relevant to Scotland, or do we have bigger fish to fry in our infamous deep fat fryers? WHO data from 2008 show that the UK is one of only seven countries worldwide, where fewer than 40% of adults reach minimum recommendations for physical activity. The 2010 Scottish Health Survey found that 39% of adults achieved a minimum of 30 min activity five times per week, while 72% of children reached 60 min of activity daily. These figures were based on self-reported activity levels.

Norton, M. I. and F. Gino (2013). ***"Rituals alleviate grieving for loved ones, lovers, and lotteries."*** J Exp Psychol Gen. http://www.ncbi.nlm.nih.gov/pubmed/23398180

Three experiments explored the impact of mourning rituals - after losses of loved ones, lovers, and lotteries - on mitigating grief. Participants who were directed to reflect on past rituals or who were assigned to complete novel rituals after experiencing losses reported lower levels of grief. Increased feelings of control after rituals mediated the link between use of rituals and reduced grief after losses, and the benefits of rituals accrued not only to individuals who professed a belief in rituals' effectiveness but also to those who did not. Although the specific rituals in which people engage after losses vary widely by culture and religion-and among our participants - our results suggest a common psychological mechanism underlying their effectiveness: regained feelings of control. *(The BPS Research Digest - http://www.bps-research-digest.blogspot.co.uk/2013/03/rituals-bring-comfort-even-for-non.html - comments "People around the world often perform rituals as a way to cope with sad events. The rules can be contradictory - for instance, Tibetan Buddhists think it's disrespectful to cry near the deceased, while Catholic Latinos believe the opposite. Beneath this variety, a new paper by Michael Norton and Francesca Gino, suggests there is a shared psychological mechanism - a comforting sense of increased control. Moreover, the researchers report that even non-believers can benefit (pdf via author website). Norton and Gino began by asking 247*

*participants recruited online (average age 33; 42 per cent were male) to write about a bereavement they'd experienced in the past, or a relationship that had ended. Half of them were additionally asked to write about a coping ritual they'd performed at the time. The main result here was that the participants who recalled their ritual reported feeling less grief about their loss. This was explained by their greater feelings of control, and wasn't to do with the simple fact they'd written more than the other participants. Relying on reminiscence in this way is obviously problematic from a research perspective, so for a follow-up Norton and Gino invited 109 students to their lab. Groups of 9 to 15 students were told that one of them would win a $200 prize, and to intensify the situation they were asked to write about what it would mean to them to win, and how they'd use the cash. One student was duly awarded the money and left. Half the remaining participants were then instructed to perform a 4-stage ritual: they drew their feelings about losing on a piece of paper, sprinkled salt on the drawing, tore it up, then counted to ten. The others acted as controls and simply drew their feelings on the paper. The key finding was that the ritual students subsequently reported experiencing less upset and anger than the controls at the fact they hadn't won the money, and this was largely explained by their greater feelings of control. Crucially, the comfort of the ritual was unaffected by how often participants reported conducting rituals in their lives or whether or not they believed in the power of rituals. It seems there's something about the process of going through a multi-stepped procedure that provokes in people feelings of control, above and beyond the role played by any associated religious or mystical beliefs. A third and final study was similar and clarified some issues - reading that some people sit in silence after a loss, and then sitting in silence themselves, did not bring comfort to participants who lost out in a lottery for $200. Reading that some people perform rituals after a loss also brought no comfort, unless the participants then went on to perform a ritual themselves. Norton and Gino said they did not mean to imply that human and monetary loss are equivalent, but they do think rituals may bring comfort in both situations via the shared mechanism of an increased sense of control. They added that more research was needed on the impact of specific forms of ritual in different contexts, but for now their results offered preliminary support "for Durkheim's contention that 'mourning is left behind, thanks to the mourning itself'; the rituals of mourning in which our participants engaged hastened the decline of the feeling of mourning that accompanies loss." An important caveat the researchers mentioned is that this research was with participants who are mentally well and so it doesn't speak to the issue of rituals that become dysfunctional and all consuming, as can happen in obsessive compulsive disorder. Norton and Gino's paper complements a study published last year that looked at people's beliefs about the factors likely to increase ritual efficacy, including repetition and number of procedural steps.")*

Overmier, J. B. and R. Murison (2013). ***"Restoring psychology's role in peptic ulcer."*** Applied Psychology: Health and Well-Being 5(1): 5-27. http://dx.doi.org/10.1111/j.1758-0854.2012.01076.x

(Free full text available) This paper reviews the history of the transition from the belief that gastrointestinal ulcers are caused primarily by psychological factors to the current state of belief that they are caused primarily by infection and argues that neither is fully accurate. We argue that psychological factors play a significant role as predisposing to vulnerability, modulating of precipitation, and sustaining of gastric ulceration. We review data that challenge the assumption of a simple infectious disease model and adduce recent preclinical data that confirm the predisposing, modulatory, and sustaining roles for psychological factors. We note that others, too, are now challenging the adequacy of the contemporary simple bacterial infection model. We hope to replace the competition between psychology and medicine with cooperation in understanding and treating patients suffering gastric ulceration and ulcer.

Pereira, M. and F. Coelho (2013). ***"Work hours and well being: An investigation of moderator effects."*** Social Indicators Research 111(1): 235-253. http://dx.doi.org/10.1007/s11205-012-0002-3

The relationship between work hours and subjective well being is marked by contradictory findings, thereby implying that it is far from being completely understood. A study of moderator effects can help explain variations in results across studies and, thus, overcome inconsistencies in past research. Accordingly, the current study aims to enlighten the relationship between work hours and well being by investigating how a number of variables moderate this relationship. To develop the research hypotheses concerning the moderator effects, this study relies mostly on social identity theory. Overall, the results suggest that work hours, per se, do not have a significant relationship with individual well being. Rather, their effects seem to depend on a number of issues, namely concerned with individuals' objective characteristics, as well as their social identities.

Pinquart, M., C. Feußner, et al. (2013). ***"Meta-analytic evidence for stability in attachments from infancy to early adulthood."*** Attachment & Human Development 15(2): 189-218. http://dx.doi.org/10.1080/14616734.2013.746257

The present meta-analysis integrates results from 127 papers on attachment stability towards mothers and fathers, respectively, from infancy to early adulthood. More than twenty-one thousand attachments (n = 21,072) and 225 time intervals were explored, ranging from half a month to 29 years (348 months). An overall coefficient of r = .39 between times T1 and T2 was obtained, reflecting a medium-sized stability of attachment security. However, no significant stability was found in intervals larger than 15 years. Coefficients are higher for time intervals of less than two years compared to time spans of more than five years, if attachments were assessed beyond infancy using representational rather than behavioral measures and if normal middle class as opposed to at-risk samples were involved. Furthermore, securely attached children at risk were less likely to maintain attachment security whereas insecurely attached children at risk most likely maintained insecurity.

Pitt, V., D. Lowe, et al. (2013). ***"Consumer-providers of care for adult clients of statutory mental health services."*** Cochrane Database Syst Rev 3: CD004807. http://www.ncbi.nlm.nih.gov/pubmed/23543537

BACKGROUND: In mental health services, the past several decades has seen a slow but steady trend towards employment of past or present consumers of the service to work alongside mental health professionals in providing services. However the effects of this employment on clients (service recipients) and services has remained unclear.We conducted a systematic review of randomised trials assessing the effects of employing consumers of mental health services as providers of statutory mental health services to clients. In this review this role is called 'consumer-provider' and the term 'statutory mental health services' refers to public services, those required by statute or law, or public services involving statutory duties. The consumer-provider's role can encompass peer support, coaching, advocacy, case management or outreach, crisis worker or assertive community treatment worker, or providing social support programmes. OBJECTIVES: To assess the effects of employing current or past adult consumers of mental health services as providers of statutory mental health services. SEARCH METHODS: We searched the Cochrane Central Register of Controlled Trials (CENTRAL, The Cochrane Library 2012, Issue 3), MEDLINE (OvidSP) (1950 to March 2012), EMBASE (OvidSP) (1988 to March 2012), PsycINFO (OvidSP) (1806 to March 2012), CINAHL (EBSCOhost) (1981 to March 2009), Current Contents (OvidSP) (1993 to March 2012), and reference lists of relevant articles. SELECTION CRITERIA: Randomised controlled trials of current or past consumers of mental health services employed as providers ('consumer-providers') in statutory mental health services, comparing either: 1) consumers versus professionals employed to do the same role within a mental health service, or 2) mental health services with and without consumer-providers as an adjunct to the service. DATA COLLECTION AND ANALYSIS: Two review authors independently selected studies and extracted data. We contacted trialists for additional information. We conducted analyses using a random-effects model, pooling studies that measured the same outcome to provide a summary estimate of the effect across studies. We describe findings for

each outcome in the text of the review with considerations of the potential impact of bias and the clinical importance of results, with input from a clinical expert. MAIN RESULTS: We included 11 randomised controlled trials involving 2796 people. The quality of these studies was moderate to low, with most of the studies at unclear risk of bias in terms of random sequence generation and allocation concealment, and high risk of bias for blinded outcome assessment and selective outcome reporting.Five trials involving 581 people compared consumer-providers to professionals in similar roles within mental health services (case management roles (4 trials), facilitating group therapy (1 trial)). There were no significant differences in client quality of life (mean difference (MD) -0.30, 95% confidence interval (CI) -0.80 to 0.20); depression (data not pooled), general mental health symptoms (standardised mean difference (SMD) -0.24, 95% CI -0.52 to 0.05); client satisfaction with treatment (SMD -0.22, 95% CI -0.69 to 0.25), client or professional ratings of client-manager relationship; use of mental health services, hospital admissions and length of stay; or attrition (risk ratio 0.80, 95% CI 0.58 to 1.09) between mental health teams involving consumer-providers or professional staff in similar roles.There was a small reduction in crisis and emergency service use for clients receiving care involving consumer-providers (SMD -0.34 (95%CI -0.60 to -0.07). Past or present consumers who provided mental health services did so differently than professionals; they spent more time face-to-face with clients, and less time in the office, on the telephone, with clients' friends and family, or at provider agencies.Six trials involving 2215 people compared mental health services with or without the addition of consumer-providers. There were no significant differences in psychosocial outcomes (quality of life, empowerment, function, social relations), client satisfaction with service provision (SMD 0.76, 95% CI -0.59 to 2.10) and with staff (SMD 0.18, 95% CI -0.43 to 0.79), attendance rates (SMD 0.52 (95% CI -0.07 to 1.11), hospital admissions and length of stay, or attrition (risk ratio 1.29, 95% CI 0.72 to 2.31) between groups with consumer-providers as an adjunct to professional-led care and those receiving usual care from health professionals alone. One study found a small difference favouring the intervention group for both client and staff ratings of clients' needs having been met, although detection bias may have affected the latter. None of the six studies in this comparison reported client mental health outcomes.No studies in either comparison group reported data on adverse outcomes for clients, or the financial costs of service provision. AUTHORS' CONCLUSIONS: Involving consumer-providers in mental health teams results in psychosocial, mental health symptom and service use outcomes for clients that were no better or worse than those achieved by professionals employed in similar roles, particularly for case management services.There is low quality evidence that involving consumer-providers in mental health teams results in a small reduction in clients' use of crisis or emergency services. The nature of the consumer-providers' involvement differs compared to professionals, as do the resources required to support their involvement. The overall quality of the evidence is moderate to low. There is no evidence of harm associated with involving consumer-providers in mental health teams.Future randomised controlled trials of consumer-providers in mental health services should minimise bias through the use of adequate randomisation and concealment of allocation, blinding of outcome assessment where possible, the comprehensive reporting of outcome data, and the avoidance of contamination between treatment groups. Researchers should adhere to SPIRIT and CONSORT reporting standards for clinical trials.Future trials should further evaluate standardised measures of clients' mental health, adverse outcomes for clients, the potential benefits and harms to the consumer-providers themselves (including need to return to treatment), and the financial costs of the intervention. They should utilise consistent, validated measurement tools and include a clear description of the consumer-provider role (eg specific tasks, responsibilities and expected deliverables of the role) and relevant training for the role so that it can be readily implemented. The weight of evidence being strongly based in the United States, future research should be located in diverse settings including in low- and middle-income countries.

Plant, D. T., E. D. Barker, et al. (2013). ***"Intergenerational transmission of maltreatment and psychopathology: The role of antenatal depression."*** Psychological Medicine 43(03): 519-528. http://dx.doi.org/10.1017/S0033291712001298

(Free full text available) Background Maternal experience of childhood maltreatment and maternal antenatal depression are both associated with offspring childhood maltreatment and offspring adjustment problems. We have investigated the relative impact of maternal childhood maltreatment and exposure to depression in utero on offspring maltreatment and psychopathology. Method The sample included 125 families from the South London Child Development Study. A prospective longitudinal design was used. Data on maternal childhood maltreatment, maternal antenatal depression (36 weeks of pregnancy), offspring childhood maltreatment (age 11 years) and offspring adolescent antisocial behaviour and depression (ages 11 and 16 years) were obtained from parents and offspring through clinical interview. Results Mothers who experienced childhood maltreatment were significantly more likely to be depressed during pregnancy [odds ratio (OR) 10.00]. Offspring of mothers who experienced only childhood maltreatment or only antenatal depression were no more at risk of being maltreated or having psychopathology; however, offspring of mothers who experienced both maternal childhood maltreatment and antenatal depression were exposed to significantly greater levels of childhood maltreatment and exhibited significantly higher levels of adolescent antisocial behaviour compared with offspring not so exposed. Furthermore, maternal childhood maltreatment accounted for a significant proportion of the variance in offspring childhood maltreatment in only those offspring exposed to depression in utero. Conclusions Maternal childhood maltreatment and maternal antenatal depression are highly associated. The co-occurrence of both insults significantly increases the risk of offspring adversity. The antenatal period is an optimum period to identify vulnerable women and to provide interventions.

Preckel, F., A. A. Lipnevich, et al. (2013). ***"Morningness-eveningness and educational outcomes: The lark has an advantage over the owl at high school."*** British Journal of Educational Psychology 83(1): 114-134. http://dx.doi.org/10.1111/j.2044-8279.2011.02059.x

Background. Chronotype refers to individuals' preference for morning or evening activities. Its two dimensions (morningness and eveningness) are related to a number of academic outcomes. Aims. The main goal of the study was to investigate the incremental validity of chronotype as a predictor of academic achievement after controlling for a number of traditional predictors. In so doing, a further aim was ongoing validation of a chronotype questionnaire, the Lark-Owl Chronotype Indicator. Sample. The sample comprised 272 students attending 9th and 10th grades at five German high schools. Data was also obtained from 132 parents of these students. Method. Students were assessed in class via self-report questionnaires and a standardized cognitive test. Parents filled out a questionnaire at home. The incremental validity of chronotype was investigated using hierarchical linear regression. Validity of the chronotype questionnaire was assessed by correlating student ratings of their chronotype with behavioural data on sleep, food intake, and drug consumption and with parent ratings of chronotype. Results. Eveningness was a significant (negative) predictor of overall grade point average (GPA), math–science GPA, and language GPA, after cognitive ability, conscientiousness, need for cognition, achievement motivation, and gender were held constant. Validity evidence for the chronotype measure was established by significant correlations with parent-ratings and behavioural data. Conclusions. Results point to the possible discrimination of adolescents with a proclivity towards eveningness at school. Possible explanations for the relationship between chronotype and academic achievement are presented. Implications for educational practice are also discussed.

Ravitz, P., W. J. Lancee, et al. (2013). ***"Improving physician-patient communication through coaching of simulated encounters."*** Acad Psychiatry 37(2): 87-93. http://www.ncbi.nlm.nih.gov/pubmed/23475235

OBJECTIVE Effective communication between physicians and their patients is important in optimizing patient care. This project tested a brief, intensive, interactive medical education intervention using coaching and standardized psychiatric patients to teach physician-patient communication to family medicine trainees. METHODS Twenty-six family medicine trainees (9 PGY1, 11 PGY2, 6 fellows) from five university-affiliated hospitals conducted four once-weekly, 30-minute videotaped interviews with "difficult" standardized patients. After each interview, trainees received 1 hour of individual coaching that incorporated self-assessment and skills-teaching from experienced psychiatrists. Two follow-up interviews with standardized patients occurred 1 week and an average of 6 months post-intervention. Trainee self-reported physician-patient communication efficacy was measured as a control 1 month before the intervention; during the month of the intervention; and an average of 6 months after the intervention. Coach-rated physician-patient communication competence was measured each week of the intervention. RESULTS Improvements in physician-patient communication were demonstrated. Self-efficacy for physician-patient communication improved significantly during the intervention, in contrast to no improvement during the control period (i.e., training-as-usual). This improvement was sustained during the follow-up period. CONCLUSIONS This innovative educational intervention was shown to be highly effective in improving trainee communication competence and self-efficacy. Future applications of this brief model of physician training have potential to improve communication competence and, in turn, can improve patient care.

RCP (2013). ***Whole-person care: From rhetoric to reality (achieving parity between mental and physical health)***, Royal College of Psychiatrists "Occasional Papers"**:** 1-96.

(Free full text available) In our society mental health does not receive the same attention as physical health. People with mental health problems frequently experience stigma and discrimination, not only in the wider community but also from services. This is exemplified in part by lower treatment rates for mental health conditions and an underfunding of mental healthcare relative to the scale and impact of mental health problems. There is an ambition for the NHS to put mental health on a par with physical health. However, the concept of parity in this context is not always well understood. In this report, an expert working group defines 'parity of esteem' in detail, and examines why parity between mental and physical health does not currently exist and how it might be achieved in practice. *(Jacqui Wise in the BMJ - http://www.bmj.com/content/346/bmj.f1973 - comments: "A report from the Royal College of Psychiatrists calls for parity between mental health and physical health—with equivalent levels of access to treatment and agreed standards on waiting times and crisis care. It points out that people with a severe mental illness have a reduction in life expectancy of between 15 and 20 years. It says that a "mental health treatment gap" exists, with only a minority of people with mental health problems, except those with psychosis, receiving any intervention. For example, only 24% of people with a common mental disorder and 28% of people with post-traumatic stress disorder get treatment, far less than the 91% of people with high blood pressure and 78% of people with heart disease. The report, which was commissioned by the Department of Health for England and the NHS Commissioning Board Authority, calls for greater funding for mental health services. Mental illness is responsible for the largest part of the disease burden in the United Kingdom, at 23%, whereas cardiovascular disease and cancer are each responsible for 16%. Only 11% of the NHS budget was spent on NHS services to treat mental health problems in 2010-11. The report calls on the government and the NHS Commissioning Board to work together to ensure parity between mental and physical health. The report also says there must be a greater focus on improving the physical health of people with mental health disorders. It calls on healthcare commissioners to focus on reducing smoking among people with mental illness and to act to reduce the high prevalence of type 2 diabetes and cardiovascular disease in psychiatric patients treated with antipsychotic drugs.").*

Rohrmann, S., K. Overvad, et al. (2013). ***"Meat consumption and mortality - results from the European prospective investigation into cancer and nutrition."*** BMC Medicine 11(1): 63. http://www.biomedcentral.com/1741-7015/11/63

(Free full text available) BACKGROUND: Recently, some US cohorts have shown a moderate association between red and processed meat consumption and mortality supporting the results of previous studies among vegetarians. The aim of this study was to examine the association of red meat, processed meat, and poultry consumption with risk of early death in the European Prospective Investigation into Cancer and Nutrition (EPIC). METHODS:Included in the analysis were 448,568 men and women without prevalent cancer, stroke, or myocardial infarction, and with complete information on diet, smoking, physical activity and body mass index, who were between 35 and 69 years old at baseline. Cox proportional hazards regression was used to examine the association of meat consumption with all-cause and cause-specific mortality. RESULTS:Until June 2009, 26,344 deaths were observed. After multivariate adjustment, a high consumption of red meat was related to higher all-cause mortality (HR=1.14, 95% CI 1.01-1.28, 160+ vs. 10-19.9 g/day), and the association was stronger for processed meat (HR=1.44, 95% CI 1.24-1.66, 160+ vs. 10-19.9 g/day). After correction for measurement error, higher all-cause mortality remained significant only for processed meat (HR=1.18, 95% CI 1.11-1.25, per 50 g/d). We estimated that 3.3% (95% CI 1.5-5.0%) of deaths could be prevented if all participants had a processed meat consumption of less than 20 g per day. Significant associations with processed meat intake were observed for cardiovascular diseases, cancer, and 'other causes of death'. The consumption of poultry was not related to all-cause mortality. CONCLUSIONS:The results of our analysis support a moderate positive association between processed meat consumption and mortality in particular due to cardiovascular diseases, but also cancer.

Sauer, S., H. Walach, et al. (2013). ***"Assessment of mindfulness: Review on state of the art."*** Mindfulness (N Y) 4(1): 3-17. http://dx.doi.org/10.1007/s12671-012-0122-5

Although alternative methods have been proposed, mindfulness is predominantly measured by means of self-assessment instruments. Until now, several scales have been published and to some degree also psychometrically validated. The number of scales reflects the widespread research interest. While some authors have started to compare the underlying concepts and operationalizations of these scales, up to now no overview has been presented describing, contrasting, and evaluating the different methodological approaches towards measuring mindfulness including questionnaires and alternative approaches. In light of this, the present article summarizes the state of mindfulness measurement. Recommendations on how current measurement practice may be improved are provided, as well as recommendations as to what measurement instruments are deemed to be most appropriate for a particular research context.

Schneider, I. K., A. Eerland, et al. (2013). ***"One way and the other: The bidirectional relationship between ambivalence and body movement."*** Psychological Science 24(3): 319-325. http://pss.sagepub.com/content/24/3/319.abstract

Prior research exploring the relationship between evaluations and body movements has focused on one-sided evaluations. However, people regularly encounter objects or situations about which they simultaneously hold both positive and negative views, which results in the experience of ambivalence. Such experiences are often described in physical terms: For example, people say they are "wavering" between two sides of an issue or are "torn." Building on this observation, we designed two studies to explore the relationship between the experience of ambivalence and side-to-side movement, or wavering. In Study 1, we used a Wii Balance Board to measure movement and found that people who are experiencing ambivalence move from side to side more than people who are not experiencing ambivalence. In Study 2, we induced body movement to explore

the reverse relationship and found that when people are made to move from side to side, their experiences of ambivalence are enhanced.

Schry, A. R. and S. W. White (2013). ***"Sexual assertiveness mediates the effect of social interaction anxiety on sexual victimization risk among college women."*** Behavior Therapy 44(1): 125-136. http://www.sciencedirect.com/science/article/pii/S0005789412001116

Sexual victimization is prevalent among college women and is associated with adverse psychological consequences. Social anxiety, particularly related to interpersonal interaction, may increase risk of sexual victimization among college women by decreasing sexual assertiveness and decreasing the likelihood of using assertive resistance techniques. This study examined social interaction anxiety as a risk factor for sexual victimization. College women (n = 672) completed online measures of social interaction anxiety, sexual assertiveness, and sexual victimization experiences. Social interaction anxiety was significantly positively related to likelihood of experiencing coerced sexual intercourse, and significant indirect effects, via decreased sexual refusal assertiveness, were found for both coerced sexual intercourse and rape. Social anxiety may be an important psychological barrier to assertive resistance during risky sexual situations, and developers of risk reduction programs for college women should consider including methods to help women overcome their social anxiety in order to successfully use assertive resistance techniques.

Sharwood, L. N., J. Elkington, et al. (2013). ***"Use of caffeinated substances and risk of crashes in long distance drivers of commercial vehicles: Case-control study."*** BMJ 346: f1140. http://www.bmj.com/content/346/bmj.f1140

OBJECTIVE: To determine whether there is an association between use of substances that contain caffeine and the risk of crash in long distance commercial vehicle drivers. DESIGN: Case-control study. SETTING: New South Wales (NSW) and Western Australia (WA), Australia. PARTICIPANTS: 530 long distance drivers of commercial vehicles who were recently involved in a crash attended by police (cases) and 517 control drivers who had not had a crash while driving a commercial vehicle in the past 12 months. MAIN OUTCOME MEASURE: The likelihood of a crash associated with the use of substances containing caffeine after adjustment for factors including age, health disorders, sleep patterns, and symptoms of sleep disorders as well as exposures such as kilometres driven, hours slept, breaks taken, and night driving schedules. RESULTS: Forty three percent of drivers reported consuming substances containing caffeine, such as tea, coffee, caffeine tablets, or energy drinks for the express purpose of staying awake. Only 3% reported using illegal stimulants such as amphetamine ("speed"); 3,4 methylenedioxymethamphetamine (ecstasy); and cocaine. After adjustment for potential confounders, drivers who consumed caffeinated substances for this purpose had a 63% reduced likelihood of crashing (odds ratio 0.37, 95% confidence interval 0.27 to 0.50) compared with drivers who did not take caffeinated substances. CONCLUSIONS: Caffeinated substances are associated with a reduced risk of crashing for long distance commercial motor vehicle drivers. While comprehensive mandated strategies for fatigue management remain a priority, the use of caffeinated substances could be a useful adjunct strategy in the maintenance of alertness while driving.

Sonuga-Barke, E. J., D. Brandeis, et al. (2013). ***"Nonpharmacological interventions for adhd: Systematic review and meta-analyses of randomized controlled trials of dietary and psychological treatments."*** Am J Psychiatry 170(3): 275-289. http://www.ncbi.nlm.nih.gov/pubmed/23360949

OBJECTIVE: Nonpharmacological treatments are available for attention deficit hyperactivity disorder (ADHD), although their efficacy remains uncertain. The authors undertook meta-analyses of the efficacy of dietary (restricted elimination diets, artificial food color exclusions, and free fatty acid supplementation) and psychological (cognitive training, neurofeedback, and behavioral interventions) ADHD treatments. METHOD: Using a common systematic search and a rigorous coding and data extraction strategy across domains, the authors searched electronic databases to identify published randomized controlled trials that involved individuals who were diagnosed with ADHD (or who met a validated cutoff on a recognized rating scale) and that included an ADHD outcome. RESULTS: Fifty-four of the 2,904 nonduplicate screened records were included in the analyses. Two different analyses were performed. When the outcome measure was based on ADHD assessments by raters closest to the therapeutic setting, all dietary (standardized mean differences=0.21-0.48) and psychological (standardized mean differences=0.40-0.64) treatments produced statistically significant effects. However, when the best probably blinded assessment was employed, effects remained significant for free fatty acid supplementation (standardized mean difference=0.16) and artificial food color exclusion (standardized mean difference=0.42) but were substantially attenuated to nonsignificant levels for other treatments. CONCLUSIONS: Free fatty acid supplementation produced small but significant reductions in ADHD symptoms even with probably blinded assessments, although the clinical significance of these effects remains to be determined. Artificial food color exclusion produced larger effects but often in individuals selected for food sensitivities. Better evidence for efficacy from blinded assessments is required for behavioral interventions, neurofeedback, cognitive training, and restricted elimination diets before they can be supported as treatments for core ADHD symptoms.

Strelan, P., I. A. N. McKee, et al. (2013). ***"For whom do we forgive? A functional analysis of forgiveness."*** Personal Relationships 20(1): 124-139. http://dx.doi.org/10.1111/j.1475-6811.2012.01400.x

(Free full text available) We propose that people forgive to serve particular functions, depending on the extent to which forgiveness is intended to benefit the self, the offender, and their relationship. Three studies on personally experienced transgressions in valued relationships (Ns = 233, 239, and 83) indicate that victims are more likely to forgive for the sake of the self and the relationship than for an offender. Relationship focus is associated with increased benevolence and relationship quality and decreased revenge and avoidance. Offender focus is associated with nonvengeful motivations. Self focus is associated with avoidance and lower relationship closeness; in the immediate aftermath of a transgression, it is also related to unforgiving responses and reduced relationship satisfaction. The findings have important implications for forgiveness theorizing and application.

Tay, L., K. Tan, et al. (2013). ***"Social relations, health behaviors, and health outcomes: A survey and synthesis."*** Applied Psychology: Health and Well-Being 5(1): 28-78. http://dx.doi.org/10.1111/aphw.12000

(Free full text available) The primary goal of this paper is to summarise current evidence on social relations and health, specifically how social integration and social support are related to health behaviors and health outcomes, using results from published reviews. Our analysis revealed that social relations are beneficial for health behaviors such as chronic illness self-management and decreased suicidal tendency. The salutary effects of general measures of social relations (e.g. being validated, being cared for, etc.) on health behaviors (e.g. healthy diet, physical activity, smoking, alcohol abuse) are weaker, but specific measures of social relations targeting corresponding health behaviors are more predictive. There is growing evidence that social relations are predictive of mortality and cardiovascular disease, and social relations play an equally protective role against both the incidence and progression of cardiovascular disease. On the other hand, evidence was mixed for the association between social relations and cancer. We discuss these findings and potential areas for future research such as other dimensions of social relations, support–receiver interactions, and observer ratings of social relations.

Trépanier, S.-G., C. Fernet, et al. (2013). ***"The moderating role of autonomous motivation in the job demands-strain relation: A two sample study."*** Motivation and Emotion 37(1): 93-105. http://dx.doi.org/10.1007/s11031-012-9290-9

Although job demands are known to be detrimental to employees' psychological health, research suggests that certain individual characteristics moderate this relationship to some extent. This two-sample study investigated whether autonomous motivation moderates the relationship between specific job demands (role overload, role ambiguity, and role conflict) and psychological distress. Hierarchical multiple regression analyses showed clear moderating effects, indicating that highly autonomously motivated employees experience less psychological distress in the presence of job demands than their less autonomously motivated counterparts. Theoretical and practical implications are discussed in light of the job demands–strain perspective and self-determination theory.

Usmani, Z. A., C. L. Chai-Coetzer, et al. (2013). ***"Obstructive sleep apnoea in adults."*** Postgraduate Medical Journal 89(1049): 148-156. http://pmj.bmj.com/content/89/1049/148.abstract

(Free full text available) Obstructive sleep apnoea (OSA) is characterised by repetitive closure of the upper airway, repetitive oxygen desaturations and sleep fragmentation. The prevalence of adult OSA is increasing because of a worldwide increase in obesity and the ageing of populations. OSA presents with a variety of symptoms the most prominent of which are snoring and daytime tiredness. Interestingly though, a significant proportion of OSA sufferers report little or no daytime symptoms. OSA has been associated with an increased risk of cardiovascular disease, cognitive abnormalities and mental health problems. Randomised controlled trial evidence is awaited to confirm a causal relationship between OSA and these various disorders. The gold standard diagnostic investigation for OSA is overnight laboratory-based polysomnography (sleep study), however, ambulatory models of care incorporating screening questionnaires and home sleep studies have been recently evaluated and are now being incorporated into routine clinical practice. Patients with OSA are very often obese and exhibit a range of comorbidities, such as hypertension, depression and diabetes. Management, therefore, needs to be based on a multidisciplinary and holistic approach which includes lifestyle modifications. Continuous positive airway pressure (CPAP) is the first-line therapy for severe OSA. Oral appliances should be considered in patients with mild or moderate disease, or in those unable to tolerate CPAP. New, minimally invasive surgical techniques are currently being developed to achieve better patient outcomes and reduce surgical morbidity. Successful long-term management of OSA requires careful patient education, enlistment of the family's support and the adoption of self-management and patient goal-setting principles.

Vlahovic, T. A., S. Roberts, et al. (2012). ***"Effects of duration and laughter on subjective happiness within different modes of communication."*** Journal of Computer-Mediated Communication 17(4): 436-450. http://dx.doi.org/10.1111/j.1083-6101.2012.01584.x

Media naturalness theory and social information processing theory make competing predictions regarding the effectiveness of different modes of communication at creating and maintaining emotionally intense social relationships. We explored how the duration of interaction and the form of laughter influenced happiness in communication modes with different levels of media naturalness. Forty-one participants completed a 14-day contact diary, recording interactions across face-to-face, Skype, telephone, instant messaging, texting, and e-mail/social network sites. Increases in duration of interaction positively predicted happiness only for face-to-face interactions, offering partial support for the media naturalness hypothesis. Laughter positively predicted happiness in all but one of the communication modes, with real and symbolic laughter having similar effects, a result consistent with the social information processing theory.

Weger, U. W. and S. Loughnan (2012). ***"Mobilizing unused resources: Using the placebo concept to enhance cognitive performance."*** The Quarterly Journal of Experimental Psychology 66(1): 23-28. http://dx.doi.org/10.1080/17470218.2012.751117

People have significant psychological resources to improve their well-being and performance, but these resources often go unused and could be better harnessed. In the medical domain, it is well established that these resources can be mobilized under certain conditions, for example in the context of the placebo effect. Here we explored whether the placebo principle can be used to enhance cognitive performance. To do so, we employed a modified placebo induction?a bogus priming method that we told participants would unconsciously enhance their knowledge and that they should hence trust their skills in an upcoming knowledge test. Participant performance was indeed enhanced, compared to a group that did not think the priming process would improve their knowledge. The study documents the relevance of the placebo effect outside the medical and therapeutic setting. *(The BPS Research Digest - http://www.bps-research-digest.blogspot.co.uk/2013/03/the-mastermind-effect-psychologists.html - comments "Believing a treatment will work, even if in reality it is entirely inert, can lead to profound beneficial changes. This is the wonder of the placebo effect and most of us have heard it discussed in relation to helping people with physical ailments. Less explored is the potential the effect could have in other contexts. There are some examples, such as a paper published two years ago by Sophie Parker showing that memory performance was enhanced when participants thought they'd taken a cognition-enhancing drug, even though they hadn't. However, this still has parallels with a medical placebo because of the use of a sham drug. Now Ulrich Weger and Stephen Loughnan have gone a step further, by showing that a drug-free placebo intervention boosted the general knowledge performance of a group of students. Pub quizzes might never be the same again! The researchers started by showing 20 participants the answer on-screen to several multiple-choice test items, just prior to the arrival of each of the questions (examples included Pi, and the painter of La Guernica). Next, the researchers gradually reduced the time the answers were presented, until they became completely invisible. This was to demonstrate the principle of subliminal presentation and laid the ground for the experiment proper. For the real test, involving a new set of 20 questions, Weger and Loughnan told the same participants that for each test item, the correct answer would be presented to them subliminally beforehand, just as in the earlier demonstration. "We further advised them that although they could no longer consciously recognise what was written, their unconscious would still be able to pick up the correct answer," the researchers explained, adding that they told the participants to go with their intuition because "on some level you already know the answer". In reality, however, no answers were presented subliminally, just random letter strings. The researchers call this a "bogus priming method". Participants gave their answers via a paper sheet. The key finding is that the test performance of the placebo participants significantly outstripped the performance of a control group of twenty students who undertook the test prelims, but were not told the answers would be shown to them subliminally during the test proper (average 9.85 correct out of 20 vs. 8.37 correct; a large effect size of d=0.813). The average age of the 40 participants was 20 years and there were 32 women. The priming placebo effect held when controlling for participant age and gender. What was going on? The placebo intervention "cannot have expanded the individual's knowledge or storage capacities," the researchers said. "What is more likely to have happened is a weakening of inhibitory mechanisms that normally impair performance on a task - for example, self-incapacitating anxieties that previously taxed cognitive resources." The placebo might also have "primed a success orientation," the researchers said, which may have affected the participants' behaviour accordingly, including increasing their persistence. Weger and Loughnan are excited about the possibilities their placebo approach might have for testing people's performance in situations where their anxiety might otherwise interfere with achieving their true potential. The real life benefits of this new test-*

*performance placebo will likely depend on the duration of its effect, something the researchers plan to test in future research. Another issue for applying these findings in real life is whether the effect still occurs when people know the trick (at least one previous study has documented a placebo effect that can work without deception). The researchers are optimistic - "we speculate that even the one-off realisation to have skills and resources that the participant was not previously aware of can be a significant insight that may alter the individual's self-perception and self-talk." Skeptics will no doubt be concerned about the small size of the sample in the current study and the narrow demonstration of the effect. There's clearly a need for replications! As Weber and Loughnan acknowledged, we also need to know more about the mechanisms underlying the improved test performance.")*

Yang, Q., X. Wu, et al. (2013). ***"Diverging effects of clean versus dirty money on attitudes, values, and interpersonal behavior."*** J Pers Soc Psychol 104(3): 473-489. http://www.ncbi.nlm.nih.gov/pubmed/23127377

Does the cue of money lead to selfish, greedy, exploitative behaviors or to fairness, exchange, and reciprocity? We found evidence for both, suggesting that people have both sets of meaningful associations, which can be differentially activated by exposure to clean versus dirty money. In a field experiment at a farmers' market, vendors who handled dirty money subsequently cheated customers, whereas those who handled clean money gave fair value (Experiment 1). In laboratory studies with economic games, participants who had previously handled and counted dirty money tended toward selfish, unfair practices-unlike those who had counted clean money or dirty paper, both of which led to fairness and reciprocity. These patterns were found with the trust game (Experiment 2), the prisoner's dilemma (Experiment 4), the ultimatum game (Experiment 5), and the dictator game (Experiment 6). Cognitive measures indicated that exposure to dirty money lowered moral standards (Experiment 3) and reduced positive attitudes toward fairness and reciprocity (Experiments 6-7), whereas exposure to clean money had the opposite effects. Thus, people apparently have 2 contradictory sets of associations (including behavioral tendencies) to money, which is a complex, powerful, and ubiquitous aspect of human social life and cultural organization.