

# **30 depression-relevant abstracts**

## **september '15 newsletter**

(Adamson, Ensari et al. 2015; Adler, Strunk et al. 2015; Anderson, Heywood-Everett et al. 2015; Bai, Su et al. 2015; Bianchi, Schonfeld et al. 2015; Braun, Strunk et al. 2015; Chan, Lo et al. 2015; Farrell and Deacon 2015; Finkelstein, Macdonald et al. 2015; Finkelstein, Macdonald et al. 2015; Firth, Barkham et al. 2015; Harvey, Soehner et al. 2015; Hawton, Witt et al. 2015; Hyphantis, Kotsis et al. 2015; Imamura, Kawakami et al. 2015; Lavretsky, Reinlieb et al. 2015; Lee and Harvey 2015; Liao and Wei 2015; Moradveisi, Huibers et al. 2015; Nelson 2015; Okuda, Picazo et al. 2015; Panayiotou, Leonidou et al. 2015; Parker, McCraw et al. 2015; Rudd, Bryan et al. 2015; Saavedra Pérez, Ikram et al. 2015; Schoenmaker, Juffer et al. 2015; Tajika, Ogawa et al. 2015; van der Voort, van Meijel et al. 2015; van Sloten, Sigurdsson et al. 2015; Williams, Harfmann et al. 2015)

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

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

Adler, A. D., D. R. Strunk, et al. (2015). **"What changes in cognitive therapy for depression? An examination of cognitive therapy skills and maladaptive beliefs."** *Behav Ther* 46(1): 96-109. <http://www.ncbi.nlm.nih.gov/pubmed/25526838>

This study examined effortful cognitive skills and underlying maladaptive beliefs among patients treated with cognitive therapy (CT) for depression. Depressed patients (n=44) completed cognitive measures before and after 16 weeks of CT. Measures included an assessment of CT skills (Ways of Responding Scale; WOR), an implicit test of maladaptive beliefs (Implicit Association Test; IAT), and a self-report questionnaire of maladaptive beliefs (Dysfunctional Attitude Scale; DAS). A matched sample of never-depressed participants (n=44) also completed study measures. Prior to treatment, depressed patients endorsed significantly more undesirable cognitions on the WOR, IAT, and DAS compared with never-depressed participants. Patients displayed improvement on the WOR and DAS over the course of treatment, but showed no change on the IAT. Additionally, improvements on the WOR and DAS were each related to greater reductions in depressive symptoms. Results suggest that the degree of symptom reduction among patients participating in CT is related to changes in patients' acquisition of coping skills requiring deliberate efforts and reflective thought, but not related to reduced endorsement of implicitly assessed maladaptive beliefs.

Anderson, N., S. Heywood-Everett, et al. (2015). **"Faith-adapted psychological therapies for depression and anxiety: Systematic review and meta-analysis."** *Journal of Affective Disorders* 176: 183-196. <http://www.sciencedirect.com/science/article/pii/S0165032715000233>

Abstract Background Incorporating faith (religious or spiritual) perspectives into psychological treatments has attracted significant interest in recent years. However, previous suggestion that good psychiatric care should include spiritual components has provoked controversy. To try to address ongoing uncertainty in this field we present a systematic review and meta-analysis to assess the efficacy of faith-based adaptations of bona fide psychological therapies for depression or anxiety. Methods A systematic review and meta-analysis of randomised controlled trials were performed. Results The literature search yielded 2274 citations of which 16 studies were eligible for inclusion. All studies used cognitive or cognitive behavioural models as the basis for their faith-adapted treatment (F-CBT). We identified statistically significant benefits of using F-CBT. However, quality assessment using the Cochrane risk of bias tool revealed methodological limitations that reduce the apparent strength of these findings. Limitations Whilst the effect sizes identified here were statistically significant, there were relatively a few relevant RCTs available, and those included were typically small and susceptible to significant biases. Biases associated with researcher or therapist allegiance were identified as a particular concern. Conclusions Despite some suggestion that faith-adapted CBT may out-perform both standard CBT and control conditions (waiting list or "treatment as usual"), the effect sizes identified in this meta-analysis must be considered in the light of the substantial methodological limitations that affect the primary research data. Before firm recommendations about the value of faith-adapted treatments can be made, further large-scale, rigorously performed trials are required.

Bai, Y.-M., T.-P. Su, et al. (2015). **"Comparison of pro-inflammatory cytokines among patients with bipolar disorder and unipolar depression and normal controls."** *Bipolar Disorders* 17(3): 269-277. <http://dx.doi.org/10.1111/bdi.12259>

Objective Research evidence has shown that bipolar disorder (BD) and unipolar depression (UD) are both related to inflammatory dysregulation, but few studies have compared the levels of cytokines between these two disorders. Methods Study subjects were age- and gender-matched outpatients with BD or UD and normal controls (NC). Severities of depression and mania symptoms were assessed with the Montgomery-Åsberg Depression Rating Scale (MADRS) and the Young Mania Rating Scale (YMRS). Pro-inflammatory cytokines, including soluble interleukin-6 receptor (sIL-6R), soluble interleukin-2 receptor (sIL-2R), C-reactive protein (CRP), soluble tumor necrosis factor receptor type 1 (sTNF-R1), soluble p-selectin receptor (sP-selectin), and monocyte chemoattractant protein-1 (MCP-1), were assessed in all subjects by enzyme-linked immunosorbent assays. Results In all, 130 patients with BD, 149 patients with UD, and 130 NC were enrolled in the study; 67.6% were female and the average age was mean ± standard deviation (SD) 43.5 ± 11.8 years. The BD group had a significantly higher smoking rate, more medical comorbidity, higher body mass index (BMI), and higher levels of sIL-2R, sIL-6R, CRP, sTNF-R1, and MCP-1 (all p < 0.01) than the UD and NC groups. When the remitted patients with BD (YMRS scores ≤ 12) were compared with the

patients with UD, controlling for age, MADRS score, smoking, medical comorbidity, and BMI in the regression model, the results showed that the BD group had significantly higher levels of sIL-6R ( $p < 0.001$ ), CRP ( $p = 0.045$ ), sTNF-R1 ( $p = 0.036$ ), and MCP-1 ( $p = 0.001$ ) than the UD group. Conclusions Higher levels of sIL-6R, CRP, sTNF-R1, and MCP-1 were noted in BD than in UD. These results may suggest a more severe inflammatory dysregulation in BD. Further studies are required to investigate whether these cytokines could be biomarkers for affective disorders.

Bianchi, R., I. S. Schonfeld, et al. (2015). **"Is burnout separable from depression in cluster analysis? A longitudinal study."** *Soc Psychiatry Psychiatr Epidemiol* 50(6): 1005-1011. <http://link.springer.com/article/10.1007%2Fs00127-014-0996-8>

PURPOSE: Whether burnout and depression represent distinct pathologies is unclear. The aim of this study was to examine whether burnout and depressive symptoms manifest themselves separately from each other or are so closely intertwined as to reflect the same phenomenon. METHODS: A two-wave longitudinal study involving 627 French schoolteachers (73 % female) was conducted. Burnout was assessed with the Maslach Burnout Inventory and depression with the 9-item depression module of the Patient Health Questionnaire. RESULTS: Burnout and depressive symptoms clustered both at baseline and follow-up. Cluster membership at time 1 (T1) predicted cases of burnout and depression at time 2 (T2), controlling for gender, age, length of employment, lifetime history of depression, and antidepressant intake. Changes in burnout and depressive symptoms from T1 to T2 were found to overlap. Teachers with increasing burnout experienced increases in depression and teachers with decreasing burnout experienced decreases in depression. In addition, emotional exhaustion, the core of burnout, was more strongly associated with depression than with depersonalization, the second dimension of burnout, underlining an inconsistency in the conceptualization of the burnout syndrome. CONCLUSIONS: Our results are consistent with recent findings showing qualitative and quantitative symptom overlap of burnout with depression. The close interconnection of burnout and depression questions the relevance of a nosological distinction between the two entities. Emotional exhaustion and depersonalization, the two main dimensions of burnout, may be better conceptualized as depressive responses to adverse occupational environments than as components of a separate entity.

Braun, J. D., D. R. Strunk, et al. (2015). **"Therapist use of Socratic questioning predicts session-to-session symptom change in cognitive therapy for depression."** *Behaviour Research and Therapy* 70(0): 32-37.

<http://www.sciencedirect.com/science/article/pii/S0005796715000790>

Socratic questioning is a key therapeutic strategy in cognitive therapy (CT) for depression. However, little is known regarding its relation to outcome. In this study, we examine therapist use of Socratic questioning as a predictor of session-to-session symptom change. Participants were 55 depressed adults who participated in a 16-week course of CT (see Adler, Strunk, & Fazio, 2015). Socratic questioning was assessed through observer ratings of the first three sessions. Socratic ratings were disaggregated into scores reflecting within-patient and between-patient variability to facilitate an examination of the relation of within-patient Socratic questioning and session-to-session symptom change. Because we examined within-patient variability in Socratic questioning, the identification of such a relation cannot be attributed to any stable patient characteristics that might otherwise introduce a spurious relation. Within-patient Socratic questioning significantly predicted session-to-session symptom change across the early sessions, with a one standard deviation increase in Socratic-Within predicting a 1.51-point decrease in BDI-II scores in the following session. Within-patient Socratic questioning continued to predict symptom change after controlling for within-patient ratings of the therapeutic alliance (i.e., Relationship and Agreement), suggesting that the relation of Socratic questioning and symptom change was not only independent of stable characteristics, but also within-patient variation in the alliance. Our results provide the first empirical support for a relation of therapist use of Socratic questioning and symptom change in CT for depression.

Chan, Y.-Y., W.-Y. Lo, et al. (2015). **"The benefit of combined acupuncture and antidepressant medication for depression: A systematic review and meta-analysis."** *Journal of Affective Disorders* 176: 106-117.

<http://www.sciencedirect.com/science/article/pii/S016503271500052X>

Acupuncture, one of the most popular complementary therapies, is best known for its ability to provide pain relief. Accumulating evidence suggests that acupuncture may also be beneficial in depression, although its effectiveness remains uncertain in this condition. We conducted a meta-analysis of randomized trials in which the effects of acupuncture combined with antidepressant medications were compared with those of antidepressant medications alone in adults with a diagnosed depressive disorder. Thirteen randomized controlled trials involving 1046 subjects were included in the meta-analysis. Our results confirmed that the pooled standardized mean difference of the 'endpoint scores of the 17-item Hamilton rating scale for depression' was  $-3.74$  (95% CI,  $-4.77$  to  $-2.70$ ,  $p < 0.001$ ) in week 1 and  $-2.52$  (95% CI,  $-4.12$  to  $-0.92$ ;  $p < 0.01$ ) in week 6, indicating a significant difference in favor of acupuncture combined with selective serotonin reuptake inhibitors (SSRIs). Moreover, therapeutic response rates were statistically significantly different between the two groups (risk ratio [RR], 1.23; 95% CI, 1.10 to 1.39;  $p < 0.001$ ;  $I^2 = 68\%$ ) in favor of the combined treatment group. This systematic review and meta-analysis suggest that acupuncture combined with antidepressant medication is effective, has an early onset of action, safe and well-tolerated over the first 6-week treatment period. Moreover, this treatment combination appears to result in greater therapeutic efficacy than SSRI therapy alone. More high-quality randomized clinical trials are needed to evaluate the clinical benefit and long-term effectiveness of acupuncture in the treatment of depression.

Farrell, N. R. and B. J. Deacon (2015). **"The relative importance of relational and scientific characteristics of psychotherapy: Perceptions of community members vs. therapists."** *J Behav Ther Exp Psychiatry* 50: 171-177.

<http://www.ncbi.nlm.nih.gov/pubmed/26291406>

Although client preferences are an integral component of evidence-based practice in psychology (American Psychological Association, 2006), relatively little research has examined what potential mental health consumers value in the psychotherapy they may receive. The present study was conducted to examine community members' preferences for the scientific and relational aspects of psychotherapy for different types of presenting problems, and how accurately therapists perceive these preferences. Community members ( $n = 200$ ) were surveyed about the importance of scientific (e.g., demonstrated efficacy in clinical trials) and relational (e.g., therapist empathy) characteristics of psychotherapy both for anxiety disorders (e.g., obsessive-compulsive disorder) and disorder-nonspecific issues (e.g., relationship difficulties). Therapists ( $n = 199$ ) completed the same survey and responded how they expected the average mental health consumer would. Results showed that although community members valued relational characteristics significantly more than scientific characteristics, the gap between these two was large for disorder-nonspecific issues ( $d = 1.24$ ) but small for anxiety disorders ( $d = .27$ ). Community members rated scientific credibility as important across problem types. Therapists significantly underestimated the importance of scientific characteristics to community members, particularly in the treatment of disorder-nonspecific issues ( $d = .74$ ). Therapists who valued research less in their own practice were more likely to underestimate the importance of scientific credibility to community members. The implications of the present findings for understanding the nature of client preferences in evidence-based psychological practice are discussed.

Finkelstein, Y., E. M. Macdonald, et al. (2015). **"Risk of suicide following deliberate self-poisoning."** *JAMA Psychiatry* 72(6): 570-575. <http://dx.doi.org/10.1001/jamapsychiatry.2014.3188>

**Importance** Suicide is the tenth leading cause of death in the United States, and its rate has risen by 16% in the past decade. Deliberate self-poisoning is the leading method of attempted suicide. Unlike more violent methods, which are almost universally fatal, survival following self-poisoning is common, providing an opportunity for secondary prevention. However, the long-term risk of suicide following a first episode of self-poisoning is unknown. **Objective** To determine the risk of suicide and mortality from other causes following a first self-poisoning episode. **Design, Setting, and Participants** Population-based cohort study using multiple linked health care databases. We identified all individuals with a first self-poisoning episode in Ontario, Canada, from April 1, 2002, through December 31, 2010, and followed up all surviving participants until December 31, 2011, or death, whichever occurred first. For each individual with a deliberate self-poisoning episode, we randomly selected 1 control from the same population with no such history, matched for age (within 3 months), sex, and calendar year. **Main Outcomes and Measures** The primary analysis examined the risk of suicide following discharge after self-poisoning. The secondary analyses explored factors associated with suicide and examined the risk of death caused by accidents or any other cause. **Results** We identified 65 784 patients (18 482 [28.1%] younger than 20 years) who were discharged after a first self-poisoning episode. During a median follow-up of 5.3 years (interquartile range, 3.1-7.6 years), 4176 died, including 976 (23.4%) by suicide. The risk of suicide following self-poisoning was markedly increased relative to controls (hazard ratio, 41.96; 95% CI, 27.75-63.44), corresponding to a suicide rate of 278 vs 7 per 100 000 person-years, respectively. The median time from hospital discharge to completed suicide was 585 days (interquartile range, 147-1301 days). Older age, male sex, multiple intervening self-poisoning episodes, higher socioeconomic status, depression, and recent psychiatric care were strongly associated with suicide. Patients with a self-poisoning episode were also more likely to die because of accidents (hazard ratio, 10.45; 95% CI, 8.10-13.47) and all causes combined (hazard ratio, 5.55; 95% CI, 5.12-6.02). **Conclusions and Relevance** A first self-poisoning episode is a strong predictor of subsequent suicide and premature death. Most suicides occur long after the index poisoning, emphasizing the importance of longitudinal, sustained secondary prevention initiatives.

Finkelstein, Y., E. M. Macdonald, et al. (2015). **"Long-term outcomes following self-poisoning in adolescents: A population-based cohort study."** *The Lancet Psychiatry* 2(6): 532-539.

<http://www.sciencedirect.com/science/article/pii/S2215036615001704>

**Summary Background** Suicide is the third most common cause of death among adolescents worldwide, and poisoning is the leading method of attempted suicide. Unlike more violent methods, survival after self-poisoning is common, providing an opportunity for secondary prevention. We determined the risk and time course of completed suicide after adolescent self-poisoning, and explored potential risk factors. **Methods** We did a population-based cohort study using multiple linked health-care databases in Ontario, Canada, from Jan 1, 2001, to Dec 31, 2012. We identified all adolescents aged 10-19 years presenting to hospital after a first self-poisoning episode. Each was matched with 50 population-based reference individuals with no such history, matching on age, sex, and year of cohort entry. The primary outcome was the risk of suicide after a first self-poisoning episode. Secondary analyses explored factors associated with suicide and self-poisoning repetition. **Findings** We identified 20 471 adolescents discharged from hospital after a first self-poisoning episode and 1 023 487 matched reference individuals. Over a median follow-up of 7.2 years (IQR 4.2-9.7), 248 (1%) adolescents discharged after self-poisoning died, 126 (51%) of whom died by suicide. The risk of suicide at 1 year after self-poisoning was greatly increased relative to reference individuals (hazard ratio [HR] 32.1, 95% CI 23.6-43.6), corresponding to a suicide rate of 89.6 (95% CI 75.2-106.7) per 100 000 person-years over the course of follow-up. The median time from hospital discharge to suicide was 3.0 years (IQR 1.1-5.3). Factors associated with suicide included recurrent self-poisoning (adjusted HR 3.5, 95% CI 2.4-5.0), male sex (2.5, 1.8-3.6) and psychiatric care in the preceding year (1.7, 1.1-2.5). Adolescents admitted to hospital for self-poisoning were also more likely to die from accidents (5.2, 4.1-6.6) and from all causes (3.9, 2.8-5.4) during follow-up. **Interpretation** Self-poisoning in adolescence is a strong predictor of suicide and premature death in the ensuing decade, and identifies a high-risk group for targeted secondary prevention. Suicide risk is increased for many years after the index hospital admission, emphasizing the importance of sustained prevention efforts.

Firth, N., M. Barkham, et al. (2015). **"Therapist effects and moderators of effectiveness and efficiency in psychological wellbeing practitioners: A multilevel modelling analysis."** *Behaviour Research and Therapy* 69: 54-62.

<http://www.sciencedirect.com/science/article/pii/S0005796715000595>

**Objectives** The study investigated whether psychological wellbeing practitioners (PWPs) working within the UK government's Improving Access to Psychological Therapies (IAPT) initiative are differentially effective (i.e., therapist effect size) and differentially efficient (i.e., rate of clinical change), and the moderating effect of demographic and process factors on outcomes. **Design and Methods** Routine clinical outcome data (depression, anxiety, and functional impairment) were collected from a single IAPT service. A total of 6111 patients were treated by 56 PWPs. Multilevel modelling (MLM) determined the size of the therapist effect and examined significant moderators of clinical outcomes. PWPs were grouped according to below average, average, and above average patient outcomes and compared on clinical efficiency. **Results** Therapist effects accounted for 6-7% of outcome variance that was moderated by greater initial symptom severity, treatment duration, and non-completion of treatment. Clinically effective PWPs achieved almost double the change per treatment session. As treatment durations increased beyond protocol guidance, outcomes atrophied. Treatment non-completion was particularly detrimental to outcome. **Conclusions** PWPs appear to be differentially effective and efficient despite ostensibly delivering protocol driven interventions. **Implications** for services, training, and supervision are outlined.

Harvey, A. G., A. M. Soehner, et al. (2015). **"Treating insomnia improves mood state, sleep, and functioning in bipolar disorder: A pilot randomized controlled trial."** *J Consult Clin Psychol* 83(3): 564-577.

<http://www.ncbi.nlm.nih.gov/pubmed/25622197>

**OBJECTIVE:** To determine if a treatment for interepisode bipolar disorder I patients with insomnia improves mood state, sleep, and functioning. **METHOD:** Alongside psychiatric care, interepisode bipolar disorder I participants with insomnia were randomly allocated to a bipolar disorder-specific modification of cognitive behavior therapy for insomnia (CBTI-BP; n = 30) or psychoeducation (PE; n = 28) as a comparison condition. Outcomes were assessed at baseline, the end of 8 sessions of treatment, and 6 months later. This pilot was conducted to determine initial feasibility and generate effect size estimates. **RESULTS:** During the 6-month follow-up, the CBTI-BP group had fewer days in a bipolar episode relative to the PE group (3.3 days vs. 25.5 days). The CBTI-BP group also experienced a significantly lower hypomania/mania relapse rate (4.6% vs. 31.6%) and a marginally lower overall mood episode relapse rate (13.6% vs. 42.1%) compared with the PE group. Relative to PE, CBTI-BP reduced insomnia severity and led to higher rates of insomnia remission at posttreatment and marginally higher rates at 6 months. Both CBTI-BP and PE showed statistically significant improvement on selected sleep and functional impairment measures. The effects of treatment were well sustained through follow-up for most outcomes, although some decline on secondary sleep benefits was observed. **CONCLUSIONS:** CBTI-BP was associated with reduced risk of mood episode relapse and



improved sleep and functioning on certain outcomes in bipolar disorder. Hence, sleep disturbance appears to be an important pathway contributing to bipolar disorder. The need to develop bipolar disorder-specific sleep diary scoring standards is highlighted.

Hawton, K., K. G. Witt, et al. (2015). **"Pharmacological interventions for self-harm in adults."** *Cochrane Database Syst Rev* 7: CD011777. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD011777/abstract>

(Free full text available) **BACKGROUND:** Self-harm (SH; intentional self-poisoning or self-injury) is common, often repeated, and strongly associated with suicide. This is an update of a broader Cochrane review on psychosocial and pharmacological treatments for deliberate SH, first published in 1998 and previously updated in 1999. We have now divided the review into three separate reviews. This review is focused on pharmacological interventions in adults who self-harm. **OBJECTIVES:** To identify all randomised controlled trials of pharmacological agents or natural products for SH in adults, and to conduct meta-analyses (where possible) to compare the effects of specific treatments with comparison types of treatment (e.g., placebo/alternative pharmacological treatment) for SH patients. **SEARCH METHODS:** For this update the Cochrane Depression, Anxiety and Neurosis Review Group (CCDAN) Trials Search Co-ordinator searched the CCDAN Specialised Register (September 2014). Additional searches of MEDLINE, EMBASE, PsycINFO, and CENTRAL were conducted to October 2013. **SELECTION CRITERIA:** We included randomised controlled trials comparing pharmacological treatments or natural products with placebo/alternative pharmacological treatment in individuals with a recent (within six months) episode of SH resulting in presentation to clinical services. **DATA COLLECTION AND ANALYSIS:** We independently selected trials, extracted data, and appraised trial quality. For binary outcomes, we calculated odds ratios (ORs) and their 95% confidence intervals (CIs). For continuous outcomes we calculated the mean difference (MD) and 95% CI. Meta-analysis was only possible for one intervention (i.e. newer generation antidepressants) on repetition of SH at last follow-up. For this analysis, we pooled data using a random-effects model. The overall quality of evidence for the primary outcome was appraised for each intervention using the GRADE approach. **MAIN RESULTS:** We included seven trials with a total of 546 patients. The largest trial included 167 participants. We found no significant treatment effect on repetition of SH for newer generation antidepressants ( $n = 243$ ;  $k = 3$ ; OR 0.76, 95% CI 0.42 to 1.36; GRADE: low quality of evidence), low-dose fluphenazine ( $n = 53$ ;  $k = 1$ ; OR 1.51, 95% CI 0.50 to 4.58; GRADE: very low quality of evidence), mood stabilisers ( $n = 167$ ;  $k = 1$ ; OR 0.99, 95% CI 0.33 to 2.95; GRADE: low quality of evidence), or natural products ( $n = 49$ ;  $k = 1$ ; OR 1.33, 95% CI 0.38 to 4.62; GRADE: low quality of evidence). A significant reduction in SH repetition was found in a single trial of the antipsychotic flupenthixol ( $n = 30$ ;  $k = 1$ ; OR 0.09, 95% CI 0.02 to 0.50), although the quality of evidence for this trial, according to the GRADE criteria, was very low. No data on adverse effects, other than the planned outcomes relating to suicidal behaviour, were reported. **AUTHORS' CONCLUSIONS:** Given the low or very low quality of the available evidence, and the small number of trials identified, it is not possible to make firm conclusions regarding pharmacological interventions in SH patients. More and larger trials of pharmacotherapy are required. In view of an indication of positive benefit for flupenthixol in an early small trial of low quality, these might include evaluation of newer atypical antipsychotics. Further work should include evaluation of adverse effects of pharmacological agents. Other research could include evaluation of combined pharmacotherapy and psychological treatment.

Hyphantis, T., K. Kotsis, et al. (2015). **"Lower PHQ-9 cutpoint accurately diagnosed depression in people with long-term conditions attending the accident and emergency department."** *Journal of Affective Disorders* 176: 155-163. <http://www.sciencedirect.com/science/article/pii/S0165032715000750>

**Abstract** Background Major Depressive Disorder (MDD) is frequent in the Accident and Emergency Department (AED) but is often unrecognized. We aimed to assess the prevalence of MDD and determine the psychometric properties of the PHQ-9 in diagnosing MDD in patients with long-term medical conditions attending an AED. **Methods** The PHQ-9 was administered to 349 patients with diabetes, COPD and chronic inflammatory rheumatic diseases, mainly rheumatoid arthritis and spondyloarthropathies, visiting an AED. The MINI interview was used as the criterion standard for MDD. Receiver operator characteristic (ROC) curve analysis was performed to determine the optimal PHQ-9 cutpoint for MDD. Construct validators included psychological distress (SCL-90-R), illness perceptions (B-IPQ) and Health-Related Quality of Life (WHOQOL-BREF). **Results** The prevalence of MDD was 27.2%. At an optimal cutpoint of 8, PHQ-9 had a sensitivity of 90.5% and specificity of 89.4%. The area under the curve (0.96) was excellent. Convergent validity was established by the strong associations between PHQ-9 scores and functional status, SCL-90-R depression, illness perceptions and AED visits during the previous year. **Limitations** The sample consisted of multiple rather a single disease group, preventing us from accounting for illness severity using specific disease severity indices. **Conclusion** MDD is frequent in patients with long-term medical conditions attending the AED and the PHQ-9, at a cutpoint of 8, is an accurate, reliable and valid measure for MDD screening in this patient population.

Imamura, K., N. Kawakami, et al. (2015). **"Does internet-based cognitive behavioral therapy (iCBT) prevent major depressive episode for workers? A 12-month follow-up of a randomized controlled trial."** *Psychol Med* 45(9): 1907-1917. <http://www.ncbi.nlm.nih.gov/pubmed/25562115>

**BACKGROUND:** In this study we investigated whether an Internet-based computerized cognitive behavioral therapy (iCBT) program can decrease the risk of DSM-IV-TR major depressive episodes (MDE) during a 12-month follow-up of a randomized controlled trial of Japanese workers. **METHOD:** Participants were recruited from one company and three departments of another company. Those participants who did not experience MDE in the past month were randomly allocated to intervention or control groups ( $n = 381$  for each). A 6-week, six-lesson iCBT program was provided to the intervention group. While the control group only received the usual preventive mental health service for the first 6 months, the control group was given a chance to undertake the iCBT program after a 6-month follow-up. The primary outcome was a new onset of DSM-IV-TR MDE during the 12-month follow-up, as assessed by means of the web version of the WHO Composite International Diagnostic Interview (CIDI), version 3.0 depression section. **RESULTS:** The intervention group had a significantly lower incidence of MDE at the 12-month follow-up than the control group (Log-rank  $\chi^2 = 7.04$ ,  $p < 0.01$ ). The hazard ratio for the intervention group was 0.22 (95% confidence interval 0.06-0.75), when estimated by the Cox proportional hazard model. **CONCLUSIONS:** The present study demonstrates that an iCBT program is effective in preventing MDE in the working population. However, it should be noted that MDE was measured by self-report, while the CIDI can measure the episodes more strictly following DSM-IV criteria.

Lavretsky, H., M. Reinlieb, et al. (2015). **"Citalopram, methylphenidate, or their combination in geriatric depression: A randomized, double-blind, placebo-controlled trial."** *Am J Psychiatry* 172(6): 561-569. <http://www.ncbi.nlm.nih.gov/pubmed/25677354>

**OBJECTIVE:** The authors evaluated the potential of methylphenidate to improve antidepressant response to citalopram, as assessed by clinical and cognitive outcomes, in elderly depressed patients. **METHOD:** The authors conducted a 16-week randomized double-blind placebo-controlled trial for geriatric depression in 143 older outpatients diagnosed with major depression comparing treatment response in three treatment groups: methylphenidate plus placebo ( $N=48$ ), citalopram plus placebo ( $N=48$ ), and citalopram plus methylphenidate ( $N=47$ ). The primary outcome measure was change in depression

severity. Remission was defined as a score of 6 or less on the Hamilton Depression Rating Scale. Secondary outcomes included measures of anxiety, apathy, quality of life, and cognition. RESULTS: Daily doses ranged from 20 mg to 60 mg for citalopram (mean=32 mg) and from 5 mg to 40 mg for methylphenidate (mean=16 mg). All groups showed significant improvement in depression severity and in cognitive performance. However, the improvement in depression severity and the Clinical Global Impressions improvement score was more prominent in the citalopram plus methylphenidate group compared with the other two groups. Additionally, the rate of improvement in the citalopram plus methylphenidate group was significantly higher than that in the citalopram plus placebo group in the first 4 weeks of the trial. The groups did not differ in cognitive improvement or number of side effects. CONCLUSIONS: Combined treatment with citalopram and methylphenidate demonstrated an enhanced clinical response profile in mood and well-being, as well as a higher rate of remission, compared with either drug alone. All treatments led to an improvement in cognitive functioning, although augmentation with methylphenidate did not offer additional benefits.

Lee, J. Y. and A. G. Harvey (2015). **"Memory for therapy in bipolar disorder and comorbid insomnia."** *J Consult Clin Psychol* 83(1): 92-102. <http://www.ncbi.nlm.nih.gov/pubmed/25222800>

OBJECTIVE: To examine the extent to which patients recall the contents of therapy from 1 session to the next and to determine whether recall is associated with treatment outcome. METHOD: Thirty interepisode individuals with bipolar disorder and comorbid insomnia (ages 21-62 years, 56.7% women, 56.7% Caucasian) participated in a randomized controlled trial of psychotherapies. Patients received either cognitive behavior therapy for insomnia (CBTI-BP; n = 17) or psychoeducation (PE; n = 13). At the beginning of each weekly session, patients freely recalled as many therapy points (i.e., distinct ideas, principles, and experiences) as they could from their previous session. After each session, therapists recorded a list of all therapy points delivered. Treatment outcome was measured via the Insomnia Severity Index (ISI), Pittsburgh Sleep Quality Index, Patient-Reported Outcome Measurement Info System-Sleep, and Quality of Life-Sleep (QOL-Sleep), administered pre- and posttreatment, and treatment evaluation questions administered posttreatment. RESULTS: Patients recalled 19.6% to 36.9% of therapy points listed by therapists. Raw numbers of therapy points recalled were positively correlated with reductions in ISI scores and gains in QOL-Sleep and with most treatment evaluation questions. Percentages of therapy points recalled were positively correlated with gains in QOL-Sleep but with no other sleep outcome measures or any of the treatment evaluation questions. Patients in CBTI-BP recalled more therapy points than did those in PE but did not differ in the percentages of points recalled. CONCLUSIONS: Memory for therapy is poor. The amount of content recalled is positively associated with treatment outcome. Enhancing memory for therapy might play a key role in improving treatment outcome.

Liao, K. Y.-H. and M. Wei (2015). **"Insecure attachment and depressive symptoms: Forgiveness of self and others as moderators."** *Personal Relationships* 22(2): 216-229. <http://dx.doi.org/10.1111/per.12075>

Most of the research on forgiveness has examined forgiveness of others, but not forgiveness of self even though researchers have argued that the latter deserves more attention. To fill this gap in the literature, and based on attachment theory's internal working models of self and others, this study examined forgiveness of self and others as moderators in the association between insecure attachment and depressive symptoms. A total of 403 undergraduate students participated in the study. Results supported the moderator role of forgiveness of self. Specifically, at high levels of forgiveness of self, the association between insecure attachment (i.e., anxiety and avoidant attachment) and depressive symptoms was not significant. The results did not support forgiveness of others as a moderator.

Moradveisi, L., M. J. H. Huibers, et al. (2015). **"The influence of patients' attributions of the immediate effects of treatment of depression on long-term effectiveness of behavioural activation and antidepressant medication."** *Behaviour Research and Therapy* 69: 83-92. <http://www.sciencedirect.com/science/article/pii/S0005796715000650>

Patients' attributions of effects of treatment are important, as these can affect long-term outcome. Most studies so far focused on the influence of attributions to medication for anxiety and depression disorders. We investigated the effects of patients' attributions made after acute treatment on the long-term outcome of antidepressant medication (ADM) and psychological treatment (behavioural activation, BA). Data are based on a randomized trial testing the effectiveness of BA vs. ADM for major depression (MDD) in Iran. Patients with MDD (N = 100) were randomized to BA (N = 50) or ADM (N = 50). Patients' attributions were assessed at post-test (after completion of the treatments). Scores on an attribution questionnaire were factor analysed, and factor scores were retained as predictors of depressive symptoms at 1-year follow-up. Regression analysis was used to test whether attributions predicted depressive symptoms at 1-yr follow-up, controlling for symptom level, condition, and their interaction at post-test. Belief in coping efficacy was the only attribution factor significantly predicting 1-year HRSD scores, controlling for condition, post-test HRSD and their interaction. It also mediated the condition differences at follow-up. Credit to self was the single attribution factor that predicted BDI follow-up scores, controlling for condition, posttest BDI, and their interaction. It partially mediated the condition differences on the BDI at follow-up. Attribution to increased coping capacities and giving credit to self appear essential. In the long-term (at 1 year follow-up), the difference in outcome between BA and ADM (with BA being superior to ADM) is at least partially mediated by attributions.

Nelson, J. C. (2015). **"The role of stimulants in late-life depression."** *American Journal of Psychiatry* 172(6): 505-507. <http://ajp.psychiatryonline.org/doi/abs/10.1176/appi.ajp.2015.15030356>

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

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

Panayiotou, G., C. Leonidou, et al. (2015). **"Do alexithymic individuals avoid their feelings? Experiential avoidance mediates the association between alexithymia, psychosomatic, and depressive symptoms in a community and a**

**clinical sample."** *Comprehensive Psychiatry* 56: 206-216.

<http://www.sciencedirect.com/science/article/pii/S0010440X14002570>

Objective Alexithymia is defined as the trait associated with difficulty in identifying and describing feelings as well as poor fantasy and imagery. While alexithymia is related to psychopathology in general, it has been associated with increased reporting of medically unexplained symptoms and depression in particular. This study attempts to assess the extent to which alexithymia represents a learned, avoidant coping strategy against unwanted emotions. In this way the study aims to identify a potential mechanism that may elucidate the relationship between alexithymia and psychological symptoms. Method Alexithymia is examined in two different samples, students from two universities in Cyprus and intensive outpatients/residents in an American anxiety disorder treatment program. We examine whether alexithymia predicts psychosomatic and depressive symptoms respectively through the mediating role of experiential avoidance, a coping mechanism believed to be reinforced because of the immediate relief it provides. Results Experiential avoidance was found to correlate strongly with alexithymia, especially its difficulty in identifying feelings factor, while the mediation hypothesis was supported in all models tested. Furthermore, results from the clinical sample suggest that clinical improvement in depression was associated with a decrease in alexithymia, especially difficulty in identifying feelings, mediated by decreased experiential avoidance. Conclusions Alexithymia, and more specifically its difficulty in identifying feelings aspect, may be a learned behavior used to avoid unwanted emotions. This avoidant behavior may form the link between alexithymia and psychopathology. Implications for alexithymia theory and treatment are discussed.

Parker, G., S. McCraw, et al. (2015). **"Clinical features distinguishing grief from depressive episodes: A qualitative analysis."** *Journal of Affective Disorders* 176: 43-47. <http://www.sciencedirect.com/science/article/pii/S0165032715000762>

AbstractBackground The independence or interdependence of grief and major depression has been keenly argued in relation to recent DSM definitions and encouraged the current study. Methods We report a phenomenological study seeking to identify the experiential and phenomenological differences between depression and grief as judged qualitatively by those who had experienced clinical (n=125) or non-clinical depressive states (n=28). Results Analyses involving the whole sample indicated that, in contrast to grief, depression involved feelings of hopelessness and helplessness, being endless and was associated with a lack of control, having an internal self-focus impacting on self-esteem, being more severe and stressful, being marked by physical symptoms and often lacking a justifiable cause. Grief was distinguished from depression by the individual viewing their experience as natural and to be expected, a consequence of a loss, and with an external focus (i.e. the loss of the other). Some identified differences may have reflected the impact of depressive "type" (e.g. melancholia) rather than depression per se, and argue for a two-tiered model differentiating normative depressive and grief states at their base level and then "clinical" depressive and 'pathological' grief states by their associated clinical features. Limitations Comparative analyses between the clinical and non-clinical groups were limited by the latter sub-set being few in number. The provision of definitions may have shaped subjects' nominated differentiating features. Conclusion The study identified a distinct number of phenomenological and clinical differences between grief and depression and few shared features, but more importantly, argued for the development of a two-tiered model defining both base states and clinical expressions.

Rudd, M. D., C. J. Bryan, et al. (2015). **"Brief cognitive-behavioral therapy effects on post-treatment suicide attempts in a military sample: Results of a randomized clinical trial with 2-year follow-up."** *Am J Psychiatry* 172(5): 441-449.

<http://ajp.psychiatryonline.org/doi/abs/10.1176/appi.ajp.2014.14070843>

OBJECTIVE: The authors evaluated the effectiveness of brief cognitive-behavioral therapy (CBT) for the prevention of suicide attempts in military personnel. METHOD: In a randomized controlled trial, active-duty Army soldiers at Fort Carson, Colo., who either attempted suicide or experienced suicidal ideation with intent, were randomly assigned to treatment as usual (N=76) or treatment as usual plus brief CBT (N=76). Assessment of incidence of suicide attempts during the follow-up period was conducted with the Suicide Attempt Self-Injury Interview. Inclusion criteria were the presence of suicidal ideation with intent to die during the past week and/or a suicide attempt within the past month. Soldiers were excluded if they had a medical or psychiatric condition that would prevent informed consent or participation in outpatient treatment, such as active psychosis or mania. To determine treatment efficacy with regard to incidence and time to suicide attempt, survival curve analyses were conducted. Differences in psychiatric symptoms were evaluated using longitudinal random-effects models. RESULTS: From baseline to the 24-month follow-up assessment, eight participants in brief CBT (13.8%) and 18 participants in treatment as usual (40.2%) made at least one suicide attempt (hazard ratio=0.38, 95% CI=0.16-0.87, number needed to treat=3.88), suggesting that soldiers in brief CBT were approximately 60% less likely to make a suicide attempt during follow-up than soldiers in treatment as usual. There were no between-group differences in severity of psychiatric symptoms. CONCLUSIONS: Brief CBT was effective in preventing follow-up suicide attempts among active-duty military service members with current suicidal ideation and/or a recent suicide attempt. [See too editorial at <http://ajp.psychiatryonline.org/doi/abs/10.1176/appi.ajp.2014.14070843%5D>.

Saavedra Pérez, H. C., M. A. Ikram, et al. (2015). **"Cognition, structural brain changes and complicated grief. A population-based study."** *Psychological Medicine* 45(07): 1389-1399. <http://dx.doi.org/10.1017/S0033291714002499>

Background Several psychosocial risk factors for complicated grief have been described. However, the association of complicated grief with cognitive and biological risk factors is unclear. The present study examined whether complicated grief and normal grief are related to cognitive performance or structural brain volumes in a large population-based study. Method The present research comprised cross-sectional analyses embedded in the Rotterdam Study. The study included 5501 non-demented persons. Participants were classified as experiencing no grief (n = 4731), normal grief (n = 615) or complicated grief (n = 155) as assessed with the Inventory of Complicated Grief. All persons underwent cognitive testing (Mini-Mental State Examination, Letter-Digit Substitution Test, Stroop Test, Word Fluency Task, word learning test - immediate and delayed recall), and magnetic resonance imaging to measure general brain parameters (white matter, gray matter), and white matter lesions. Total brain volume was defined as the sum of gray matter plus normal white matter and white matter lesion volume. Persons with depressive disorders were excluded and analyses were adjusted for depressive symptoms. Results Compared with no-grief participants, participants with complicated grief had lower scores for the Letter-Digit Substitution Test [Z-score -0.16 v. 0.04, 95% confidence interval (CI) -0.36 to -0.04, p = 0.01] and Word Fluency Task (Z-score -0.15 v. 0.03, 95% CI -0.35 to -0.02, p = 0.02) and smaller total volumes of brain matter (933.53 ml v. 952.42 ml, 95% CI -37.6 to -0.10, p = 0.04). Conclusions Participants with complicated grief performed poorly in cognitive tests and had a smaller total brain volume. Although the effect sizes were small, these findings suggest that there may be a neurological correlate of complicated grief, but not of normal grief, in the general population.

Schoenmaker, C., F. Juffer, et al. (2015). **"From maternal sensitivity in infancy to adult attachment representations: A longitudinal adoption study with secure base scripts."** *Attachment & Human Development* 17(3): 241-256.

<http://dx.doi.org/10.1080/14616734.2015.1037315>



We examined whether differences in adult attachment representations could be predicted from early and later maternal sensitivity, controlling for early and later assessments of attachment. In this longitudinal study on 190 adoptees, attachment at 23 years was measured with the Attachment Script Assessment. Maternal sensitivity was observed in infancy and at seven and 14 years. Attachment was also measured in infancy and at 14 years. Higher maternal sensitivity in infancy predicted more secure attachment in infancy and more secure attachment representations in young adulthood. Higher maternal sensitivity in middle childhood also predicted more secure attachment representations in young adulthood. There was no continuity of attachment from infancy to young adulthood, but attachment in adolescence and young adulthood were significantly related. Even in genetically unrelated families, maternal sensitivity in early and middle childhood predicts attachment representations in young adults, confirming the importance of sensitive parenting for human development.

Tajika, A., Y. Ogawa, et al. (2015). **"Replication and contradiction of highly cited research papers in psychiatry: 10-year follow-up."** *Br J Psychiatry*. <http://www.ncbi.nlm.nih.gov/pubmed/26159600>

Background Contradictions and initial overestimates are not unusual among highly cited studies. However, this issue has not been researched in psychiatry. Aims To assess how highly cited studies in psychiatry are replicated by subsequent studies. Method We selected highly cited studies claiming effective psychiatric treatments in the years 2000 through 2002. For each of these studies we searched for subsequent studies with a better-controlled design, or with a similar design but a larger sample. Results Among 83 articles recommending effective interventions, 40 had not been subject to any attempt at replication, 16 were contradicted, 11 were found to have substantially smaller effects and only 16 were replicated. The standardised mean differences of the initial studies were overestimated by 132%. Studies with a total sample size of 100 or more tended to produce replicable results. Conclusions Caution is needed when a study with a small sample size reports a large effect.

van der Voort, T. Y. G., B. van Meijel, et al. (2015). **"Collaborative care for patients with bipolar disorder: Randomised controlled trial."** *Br J Psychiatry* 206(5): 393-400. <http://bjp.rcpsych.org/bjprcpsych/206/5/393.full.pdf>

Background A substantial number of people with bipolar disorder show a suboptimal response to treatment. Aims To study the effectiveness of a collaborative care programme on symptoms and medication adherence in patients with bipolar disorder, compared with care as usual. Method A two-armed, cluster randomised clinical trial was carried out in 16 out-patient mental health clinics in The Netherlands, in which 138 patients were randomised. Patient outcomes included duration and severity of symptoms and medication adherence, and were measured at baseline, 6 months and 12 months. Collaborative care comprised contracting, psychoeducation, problem-solving treatment, systematic relapse prevention and monitoring of outcomes. Mental health nurses functioned as care managers in this programme. The trial was registered with The Netherlands Trial Registry (NTR2600). Results Collaborative care had a significant and clinically relevant effect on number of months with depressive symptoms, both at 6 months ( $z = -2.6$ ,  $P = 0.01$ ,  $d = 0.5$ ) and at 12 months ( $z = -3.1$ ,  $P = 0.002$ ,  $d = 0.7$ ), as well as on severity of depressive symptoms at 12 months ( $z = -2.9$ ,  $P = 0.004$ ,  $d = 0.4$ ). There was no effect on symptoms of mania or on treatment adherence. Conclusions When compared with treatment as usual, collaborative care substantially reduced the time participants with bipolar disorder experienced depressive symptoms. Also, depressive symptom severity decreased significantly. As persistent depressive symptoms are difficult to treat and contribute to both disability and impaired quality of life in bipolar disorder, collaborative care may be an important form of treatment for people with this disorder.

van Sloten, T. T., S. Sigurdsson, et al. (2015). **"Cerebral small vessel disease and association with higher incidence of depressive symptoms in a general elderly population: The ages-Reykjavik study."** *Am J Psychiatry* 172(6): 570-578. <http://www.ncbi.nlm.nih.gov/pubmed/25734354>

OBJECTIVE: The vascular depression hypothesis postulates that cerebral small vessel disease (CSVD) leads to depressive symptoms by disruption of brain structures involved in mood regulation. However, longitudinal data on the association between CSVD and depressive symptoms are scarce. The authors investigated the association between CSVD and incident depressive symptoms. METHOD: Longitudinal data were taken from the Age, Gene/Environment Susceptibility-Reykjavik Study of 1,949 participants free of dementia and without baseline depressive symptoms (mean age: 74.6 years [SD=4.6]; women, 56.6%). MRI markers of CSVD, detected at baseline (2002-2006) and follow-up (2007-2011), included white matter hyperintensity volume, subcortical infarcts, cerebral microbleeds, Virchow-Robin spaces, and total brain parenchyma volume. Incident depressive symptoms were defined by a score  $\geq 6$  on the 15-item Geriatric Depression Scale and/or use of antidepressant medication. RESULTS: Depressive symptoms occurred in 10.1% of the participants. The association for a greater onset of depressive symptoms was significant for participants with 1 standard deviation increase in white matter hyperintensity volume over time, new subcortical infarcts, new Virchow-Robin spaces, 1 standard deviation lower total brain volume at baseline, and 1 standard deviation decreased total brain volume over time, after adjustments for cognitive function and sociodemographic and cardiovascular factors. Results were qualitatively similar when change in the Geriatric Depression Scale score over time was used as the outcome instead of incident depressive symptoms. CONCLUSIONS: Most markers of progression of CSVD over time and some markers of baseline CSVD are associated with concurrently developing new depressive symptoms. These findings support the vascular depression hypothesis.

Williams, C. L., E. J. Harfmann, et al. (2015). **"Specificity of parental bonding and rumination in depressive and anxious emotional distress."** *Personality and Individual Differences* 79: 157-161. <http://www.sciencedirect.com/science/article/pii/S0191886915000951>

We examined how different dimensions of rumination may mediate the impact of parental bonding (lack of care and overprotectiveness) on negative emotional symptomatology (anxiety and depression). Survey data from participants were analyzed using structural equation modeling. Results indicated that brooding rumination fully mediated the relationship between maternal care and depressive and anxious symptomatology. These findings suggest that to the extent that maternal caregivers are low in warmth and support, offspring are more likely to develop a brooding style of ruminative thinking associated with heightened emotional distress. This research supports the growing body of evidence suggesting that cognitive variables form a pathway between troublesome parent/child interactions and psychopathology.