**INTERVENTIONS**

Articles testing the applied science and implementation of mindfulness-based interventions


ASSOCIATIONS
Articles examining the correlates and mechanisms of mindfulness


program among breast cancer survivors. Translational Behavioral Medicine. [link]


METHODS

Articles developing empirical procedures to advance the measurement and methodology of mindfulness


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Reviews
Articles reviewing content areas of mindfulness or conducting meta-analyses of published research


Forner, C. (2018). What mindfulness can learn about dissociation and what dissociation can learn from mindfulness. Journal of Trauma & Dissociation. [link]


Trials
Research studies newly funded by the National Institutes of Health (AUG 2018)

Boston University (M. Otto, PI). Engaging working memory and distress tolerance to aid smoking cessation. NIH/NIDA project #1R21DA046963-01. [link]

Duke University (C. Cox, PI). Optimizing a self-directed mobile mindfulness intervention. NIH/NCCIH project #1U01AT009974-01. [link]

Johns Hopkins University (T. Mendelson, PI). Promoting maternal mental health in neonatal intensive care through mindfulness. NIH/NCCIH project #5R34AT009615-02. [link]


Penn State University (D. Fishbein, PI). Optimizing a mindful intervention for urban youth via stress physiology. NIH/NCCIH project #1R61AT009856-01. [link]

Washington University (E. Lenze, PI). Remediating age related cognitive decline: MBSR and exercise. NIH/NIA project #5R01AG049369-05. [link]
Highlights

A summary of select studies from the issue, providing a snapshot of some of the latest research

A study by Cladder-Micus et al. (2018, Depression and Anxiety) compared the effectiveness of MBCT as an adjunctive treatment to treatment-as-usual in patients with treatment-resistant chronic depression. The researchers randomly assigned 106 patients with treatment-resistant chronic depression (female = 62%; mean age = 47 years; mean length of depressive episode = 70 months; mean number of previous episodes = 2.7) to either treatment-as-usual (TAU) or TAU combined with adjunctive MBCT. MBCT was offered in the standard 8-week group format. TAU consisted of medication, psychological treatment, psychiatric nursing support, and day hospitalization as needed. There was no difference between conditions as to the type and amount of TAU received.

Participants were assessed at baseline and post-treatment on symptom severity, remission of illness (no symptoms for two weeks), quality of life, rumination, self-compassion, and mindfulness (using the Five Facet Mindfulness Questionnaire). The MBCT attrition rate was 24.5%, with participants dropping out due to physical complaints, trouble awakening in the morning, and practical considerations (e.g., moving away from the area). Completers did not differ from non-completers in terms of baseline depressive symptoms. The main analyses were performed using an intention-to-treat (ITT) protocol using data from all participants available for post-testing, whether or not they successfully completed the MBCT program. Secondary analyses were conducted using only those MBCT participants who completed 4 or more group sessions.

Results showed that there were no significant immediate post-treatment between-group differences in severity of depressive symptoms when the entire ITT sample was analyzed. When data from completers was analyzed, MBCT completers had significantly fewer depressive symptoms than TAU participants (d = 0.45). Using the entire ITT sample, significantly more MBCT participants (42%) achieved partial or complete symptom remission than TAU participants (22%). MBCT participants also reported significantly less rumination (d = 0.39), significantly better quality of life (d = 0.42), significantly more self-compassion (d = 0.64), and significantly greater degrees of mindfulness (d = 0.73) than TAU participants. MBCT participants with higher baseline levels of rumination benefited more from MBCT than those with lower baseline levels (d = 1.64).

This study shows that adjunctive MBCT increases mindfulness, self-compassion, and quality of life while reducing rumination in patients with treatment-resistant chronic depression when compared to patients in treatment-as-usual alone.

MBCT reduces symptom severity for those patients who complete the MBCT protocol, and increases the odds of achieving a partial remission of symptoms. MBCT is more effective for depressed patients who experience high levels of rumination. The study is limited by the absence of an active control adjunctive intervention and by its relatively high attrition rate.
Meditation practice reliably demonstrates beneficial effects for memory, attention, mood, and emotional regulation. It is unclear, however, whether there is a minimum dosage necessary to attain these benefits. **Basso et al.** ([Behavioural Brain Research](https://linkinghub.elsevier.com/retrieve/pii/S0166432817315625)) measured the benefits of meditation in a group of meditation-naïve participants by assigning them to either daily brief guided meditations or to a control group, and measuring their changes in mood and cognition over time.

The researchers randomly assigned 72 meditation-naïve participants to either a meditation audio or a podcast audio. The meditation group listened to 13-minute guided meditations daily for 8 weeks. The meditations included breath-focused exercises and a body scan practice. The podcast group listened to 13-minute excerpts from NPR’s Radiolab podcast daily for 8 weeks.

Participants underwent neuropsychological and psychological evaluations and salivary cortisol (a stress hormone) assessments at baseline, 4 weeks, and 8 weeks. Computer-administered neuropsychological tests included measures of attention, working and recognition memory, and response inhibition.

The psychological tests measured mindfulness (Mindful Attention Awareness Scale or MAAS), mood, stress, depression, anxiety, rumination, sleep quality, fatigue, quality of life, self-esteem, and life satisfaction.

Following the final assessments, participants were subjected to a stress-inducing task. They were told to prepare for a job interview and deliver a five-minute presentation on why they should be hired in front of two stone-faced judges. They were then told to perform a difficult serial subtraction problem. Whenever they made an arithmetic mistake, they were instructed to start the problem over from the beginning. Subjective measures of anxiety were taken at baseline, immediately after, and at 10, 20, and 30-minute intervals after the stress-inducing tasks. Salivary cortisol levels were also assessed at each of these time points.

The study had a significant attrition rate: 45% of the participants either dropped out or were excluded due to insufficient participation. The final sample included 42 participants (15 male, 27 female).

There were no differences between the groups at baseline or 4 weeks. At 8 weeks, meditators showed better mood (partial $\eta^2 = 0.11$) (especially reduced anger, hostility, bewilderment, and confusion), less anxiety (partial $\eta^2 = 0.10$), and less fatigue ($\eta^2 = 0.15$) than controls. Meditators also displayed better working memory ($\eta^2 = 0.11$) and recognition memory ($\eta^2 = 0.10$), and made more correct responses on congruent Stroop task trials ($\eta^2 = 0.12$) than controls.

On the other hand, controls showed improved sleep quality over time, while meditators did not ($\eta^2 = 0.18$). Meditators reported experiencing less anxiety during the stress-inducing tasks ($\eta^2 = 0.10$). Meditation participants who showed the largest improvement in mood also showed the least anxiety in response to the stress-inducing task ($r = -0.41$). There were no measurable effects on cortisol levels.

The study showed that 8 weeks of daily brief meditation measurably improves mood, anxiety in response to stress, and aspects of attention and memory. The study also showed that 4 weeks of practice were not sufficient to yield results. This suggests that meditative effects are cumulative and only emerge with repeated practice over time.

The study was limited by its high attrition rate. Additionally, the fact that the interventions did not differentially affect mindfulness scores makes it unclear whether the mood and cognitive benefits were actually attributable to changes in mindfulness.