**Interventions**

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


generalized anxiety disorder. *Psychiatry Research.* [link]


**ASSOCIATIONS**

*Articles examining the correlates and mechanisms of mindfulness*


attention during mindfulness meditation: Assessment in relation to meditation breath attention scores in mental health help-seeking participants. *Mindfulness.* [link]


**METHODS**

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

Huijbers, M. J., Crane, R. S., Kuyken, W.,...Speckens, A. E. (2017). Teacher competence in mindfulness-based cognitive therapy for...
depression and its relation to treatment outcome. *Mindfulness.* [link]


**Reviews**

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


**Trials**

Research studies newly funded by the National Institutes of Health (FEB 2017)

H. Lee Moffitt Cancer Center (C. Vinci, PI). Applying mHealth to tobacco-related health disparities: Enhancing aspects of resiliency to aid cessation efforts. NIH/NIMHD project #4R00MD010468-03. [link]

University of California, San Francisco (F. Hecht, PI). Training researchers in clinical integrative medicine. NIH/NCCIH project #3T32AT003997-10S1. [link]
People with generalized anxiety disorder (GAD) suffer from excessive and uncontrollable worry concerning a broad array of everyday matters (work, money, health, relationships, etc.) along with a range of physical symptoms (headache, fatigue, muscle tension, etc.) associated with stress. As a result, people with GAD often miss days at work and tend to use medical and mental health services at a higher rate than the average person. GAD is often treated with medication and psychotherapy, and in recent years, mindfulness-based interventions have been added as an additional treatment alongside more traditional approaches.

In a secondary analysis of a previously published randomized, controlled clinical trial, Hoge et al. [Journal of Psychosomatic Medicine] investigated whether Mindfulness-Based Stress Reduction (MBSR) reduced the number of GAD sufferers’ missed days at work and the number of their visits to primary care and mental health care professionals to a greater degree than a stress management education (SME) control.

The 57 individuals with GAD (mean age = 39; 56% female; 83% Caucasian) whose data were analyzed in this study were a subset of a larger cohort of individuals with GAD who were randomly assigned to either a standard 8-week MBSR program or an 8-week SME program. The SME program covered topics relevant to stress including time management, nutrition, exercise, and sleep. The subgroup of patients whose data was included in this analysis completed the World Health Organization Health Performance and Work Questionnaire (HPQ) at baseline, after intervention, and at 24-week follow-up. The HPQ is a self-report measure of illness-related absences from work and visits to primary care and mental health professionals.

At immediate post-intervention, the MBSR group had significantly decreased the number of partial days (from 1.4 days to 0.5 days a month) they had missed employment due to physical or mental health problems, whereas the control group increased (from 0.7 to 1.2 days a month) their partial days of work missed. This between groups difference in partial days missed was no longer significant at 24-week follow-up. There were no significant changes over time, however, in full days of work missed or in health care utilization. The amount of home mindfulness practice MBSR participants engaged in during the follow-up period had associations that trended towards significance with both mental health utilization and partial days of work missed. The more participants practiced, the less they missed partial workdays (r = -.45) or visited mental health professionals (r = -.43).

The study shows a decrease in partial workdays missed for MBSR participants with GAD, and a tendency for mental health care utilization and partial days missed to decrease with increased mindfulness practice. It lends support to previous research demonstrating the benefits of MBSR for persons with anxiety disorders. Previous studies failed to measure partial workdays missed, but this may be the most sensitive measure of how anxiety disorders impact work performance, as employees with GAD may come late to work, or leave early depending on their mental state. A relatively high dropout rate (19%) for MBSR participants limited power to detect differences at 24-week follow-up.
Migraines are disabling headaches lasting from several hours to several days that are characterized by severe, pulsating pain usually localized to one side of the head. Migraine sufferers may also experience nausea and sensitivity to light, sound or smell. Their headaches may also be preceded by visual disturbances (e.g., blind spots and zigzag patterns) that signal their impending onset. Migraines are considered “chronic” when they occur more than 15 days a month over a period of three months. Chronic migraines are often complicated by medication overuse, which tends to make migraines worse and harder to manage. The treatment of chronic migraine complicated by medication overuse is complex, and physicians are interested in behavioral approaches that can either supplement or be used instead of medications.

Grazzi et al. [Journal of Headache and Pain] conducted a non-randomized exploratory clinical trial of a mindfulness-based intervention compared to prescribed medications intended to prevent headache onset for patients with combined chronic migraine and medication overuse.

Patients with chronic migraine and medication overuse who were being treated at a neurology clinic were withdrawn from their medication in a structured day treatment program. At the end of the program, they were invited to participate in a clinical trial of either mindfulness training (MT) or prophylactic medication (MED). A total of 44 patients (average age = 45) were enrolled in the study, and assignment to treatment was self-selected. The MT intervention, based on Mindfulness-Based Stress Reduction, involved six weekly 45-minute small group sessions. MT participants practiced maintaining a non-judgmental, present-moment focus during sitting meditation.

Patients in the MED condition were prescribed medications to take before their headaches began including valproate, botulinum toxin, pizotifen, amitriptyline, and beta blockers. Patients in both groups could take medication for acute headaches (primarily triptans and NSAIDs) once headaches had begun. Participants in both groups completed daily diaries documenting their headaches and medication use. They also completed self-report measures of headache impact, migraine disability, depression, and anxiety at baseline, and at 3, 6, and 12 months. The researchers also evaluated participants at 3, 6, and 12 months to see whether they had achieved a 50% reduction in headache frequency and whether they still met the diagnostic criteria for chronic migraine.

Headache frequency, medication use, and depression severity significantly decreased for both treatments over time, without significant differences between treatments. Headache-related disability significantly decreased for both groups at 3- and 6-month follow-up, but not at 12 months. Only one measure called the Headache Impact Test, a self-report measure of pain severity, fatigue and mood, showed different treatment outcomes over time. While the MT group's scores on that test didn’t change significantly, the MED group's scores significantly improved at 3 months and 12 months, but not at 6 months. There was no difference between treatments at 12 months in terms of those meeting the criteria of a 50% reduction in headache frequency (50% of MT patients and 53% of MED patients) or those no longer meeting chronic migraine diagnostic criteria (65% of MT patients and 74% of MED patients).

The results support a role for mindfulness in the treatment of chronic migraine with medication overuse. The results suggest that mindfulness training may be as effective in reducing headache frequency, depression, headache-related disability, and acute medication use as prescribed medication to prevent headache onset. The study is limited by its lack of random assignment, a placebo control, and measures of adherence to treatment and home practice.