Interventions

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

Ahmad, M. M., Al-Daken, L. I. (2020). Clinical Trial on Mindfulness with Family Caregivers for Patients with Cancer. Journal of Cancer Education. [link]


Schanche, E., Vøllestad, J., Visted, E.,...Sørensen, L. (2020). The effects of MBCT on risk and protective factors of depressive relapse – a randomized wait-list controlled trial. BMC Psychology. [link]


Zarifsanaiey, N., Jamalian, K., Bazrafcan, L., ... Shahraki, H. R. (2020). The effects of mindfulness training on the level of happiness and blood sugar in diabetes patients. *Journal of Diabetes and Metabolic Disorders.* [link]

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**Associations**

Articles examining the correlates and mechanisms of mindfulness


Fredrickson, B. L., Arizmendi, C., Cappellen, P. V. (2020). Same-day, cross-day, and upward spiral relations between positive affect and positive health behaviours. *Psychology & Health.* [link]


Thompson, C., Quigley, E., Taylor, A. (2020). The Influence of a Short-Term Mindfulness Meditation Intervention on Emotion and

**Methods**

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


**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 (JUN 2020)*

Georgia State University (C. Spears, PI). *Mindfulness-based addiction treatment delivered through mobile technology for low-income smokers*. NIH/NIDA project #1R34DA049208-01A1. [link]

Icahn School of Medicine at Mount Sinai (R. Goldstein, PI). *Neuroimaging response inhibition and salience attribution changes during mindfulness-based treatment of human heroin addiction*. NIH/HCCIH project #5R01AT010627-02. [link]
Highlights

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

Natural environments such as woodlands, seashores, and meadows often have a restorative effect on human well-being. These settings allow for distancing from everyday causes of stress and worry, and allow for unique emotional experiences such as beauty, awe, and connection to something profound. Research shows that people who live adjacent to green spaces show lower levels of stress, and people who report a greater connection to nature describe their lives as happier and more meaningful.

Studies rarely investigate whether natural settings can bolster the effects of behavioral interventions. Choe et al. [Landscapes and Urban Planning] investigated whether offering Mindfulness-Based Stress Reduction (MBSR) in nature, as compared to built environments, enhances human well-being.

The researchers randomly assigned 99 British participants (62% female; average age = 36 years) to MBSR offered in three different environments: a public park with trees, shrubs, flower beds, a lawn, and a lake (i.e., nature), a concrete-and-brick courtyard (i.e., the built outdoors), and a windowless seminar room (i.e., the built indoors). All participants attended 6-week versions of MBSR offered in weekly 1-hour group sessions. Participants completed self-report measures of mindfulness (Five Facet Mindfulness Questionnaire), relatedness to nature, mood, depression, anxiety, stress, reflection (curiosity-motivated cognition) and rumination (anxiety-motivated cognition) at baseline, midway through MBSR, and at one week and one month following MBSR completion.

The results showed that all three groups had significant improvements in mindfulness (η²=.09), positive affect (η²=.08), depression (η²=.20), anxiety (η²=.19), and negative affect (η²=.25). There were no significant between-group differences on these measures. The natural environment group showed a relative significant increase in connectedness to nature (η²=.27) and reflection (η²=.19), and decrease in stress (η²=.94). All three groups showed significant decreases in rumination, but this improvement was larger (η²=.54) for the natural environment group than for the built outdoor (η²=.16) or indoor (η²=.25) groups. There was also a greater tendency for natural environment participants to continue to report reductions in stress during the one-month follow-up period.

The study reveals the additional benefits gained from holding MBSR classes in nature versus built environments. Its largest effect was on the reduction of stress levels, which is a primary target of MBSR. Nature appears to have had a greater effect on the eudaimonic components of happiness (meaning, connectedness) than on the hedonic (positive and negative affect) components of happiness. While offering MBSR in nature holds promise, it also has potential drawbacks in terms of the disruptive possibility of inclement weather or some participants feeling vulnerable to the observation of nearby strangers. The study doesn’t address whether adding natural features to built environments (e.g., houseplants, nature images) can have a similar effect.

Cigarette smoking remains the leading cause of preventable mortality in the world. While smoking cessation programs are often initially effective, they tend to lose efficacy over time with 40%-70% of former smokers eventually relapsing. Smoking cessation maintenance programs aim to address
the problems of urges to smoke and a decreased capacity for experiencing pleasure after quitting. Mindfulness-based approaches focused on relapse prevention use meditation practices to help users experience urges without reaction and increase attentiveness to pleasurable experiences. Souza et al. [Nicotine and Tobacco Research] tested whether an add-on Mindfulness-Based Relapse Prevention (MBRP) program increases the efficacy of a standard relapse prevention program in preventing smoking relapse.

The researchers randomized 86 Brazilian smokers (80% female; average age = 50 years) to standard relapse prevention treatment plus MBRP, or to the standard treatment alone. Both groups received four weeks of standard treatment, then half the group went on to receive an additional 8 weeks of MBRP. Standard treatment consisted of four 90-minute weekly group sessions and six maintenance sessions in weeks 6, 8, 10, 12, and 24. MBRP groups were conducted concurrently with the standard treatment maintenance groups.

Standard treatment focused on cognitive-behavioral strategies for coping with thoughts and situations that trigger relapse. Medication to reduce cravings (nicotine patches or gum, bupropion) was also provided. The 8-week MBRP program met for 2-hour weekly group sessions that included guided meditations, discussion, homework review, and encouragement for daily home practice. Participants were assessed at baseline and at 1-month (after standard treatment), 3-month (after MBSR), and 6-month follow-ups for smoking abstinence assessed by exhaled carbon monoxide as well as self-report of cravings, mood, anxiety, depression, and mindfulness (Five Facet Mindfulness Questionnaire).

Both groups experienced high attrition rates as is often common in smoking cessation studies. Thirty-six percent of the standard treatment group did not complete the 1-month standard treatment program, and a total of 79% of the starting standard treatment cohort did not make it through to 6-month follow-up. Forty-five percent of MBRP participants did not complete the standard treatment program, another 23% did not complete the MBRP program, and an additional 7% did not show for 6-month follow-up. As a result, the researchers provided results for the both the intention-to-treat cohort (all 86 participants initially enrolled in the study) and the completers (the 9 standard treatment and 11 MBRP participants who completed the study).

Among standard treatment completers, 84% of the standard group and 67% of the MBRP group were abstinent from smoking immediately following the 4-week standard program. After the MBRP program at 3-month follow-up, 90% of the standard group and 86% of the MBRP group were abstinent. At 6-month follow-up, 67% of the standard group and 82% of the MBRP group were abstinent. In the intention-to-treat cohort, 14% of standard and 20% of MBRP participants were abstinent at 6-month follow-up.

MBRP members reported a significant increase in mindfulness and a significant decrease in cravings by 6-month follow-up. There were no significant improvements on these measures for the standard group. There were no other significant within or between-group differences on self-report measures. All 14 of the participants who completed the MBRP program rated it a “10” on a 10-point scale of importance.

The study suggests that appending mindfulness-based relapse prevention to the end of standard relapse prevention program can slightly improve smoking cessation. Trends toward significant differences in long-term abstinence rates were observed for both completers and the intent-to-treat cohort. The study has major limitations due to high attrition rates, unequal time and attention given to each treatment group, and differing lengths of follow-up time after intensive interventions for each group.