

ONDERZOEK

Uit verschillende wetenschappelijke onderzoeken komen positieve effecten van mindfulness naar voren. Uit verschillende systematische reviews en meta-analyses (onderzoeksmethodes waarin over verschillende studies heen naar de effectiviteit wordt gekeken) is gevonden dat mindfulness effectief is in het verminderen van stress, angst, depressie. Daarnaast is gevonden dat mindfulness/meditatie veranderingen op hersen niveau lijkt te bewerkstelligen. Hieronder wordt een beperkte selectie van wetenschappelijke artikelen, systematische reviews en meta-analyses, over mindfulness weergegeven.

Artikelen: Review en meta-analyses effectiviteit mindfulness

Artikel

Chiesa, A., & Serretti, A. (2009). Mindfulness-Based Stress Reduction for Stress Management in Healthy People: A Review and Meta-Analysis. *Journal of Alternative and Complementary Medicine*, 15(5), 593- 600.

Abstract

Background: Mindfulness-based stress reduction (MBSR) is a clinically standardized meditation that has shown consistent efficacy for many mental and physical disorders. Less attention has been given to the possible benefits that it may have in healthy subjects. The aim of the present review and meta-analysis is to better investigate current evidence about the efficacy of MBSR in healthy subjects, with a particular focus on its benefits for stress reduction.

Materials and methods: A literature search was conducted using MEDLINE (PubMed), the ISI Web of Knowledge, the Cochrane database, and the references of retrieved articles. The search included articles written in English published prior to September 2008, and identified ten, mainly low-quality, studies. Cohen's d effect size between meditators and controls on stress reduction and spirituality enhancement values were calculated.

Results: MBSR showed a nonspecific effect on stress reduction in comparison to an inactive control, both in reducing stress and in enhancing spirituality values, and a possible specific effect compared to an intervention designed to be structurally equivalent to the meditation program. A direct comparison study between MBSR and standard relaxation training found that both treatments were equally able to reduce stress. Furthermore, MBSR was able to reduce ruminative thinking and trait anxiety, as well as to increase empathy and self-compassion.

Conclusions: MBSR is able to reduce stress levels in healthy people. However, important limitations of the included studies as well as the paucity of evidence about possible specific effects of MBSR in comparison to other nonspecific treatments underline the necessity of further research.

Artikel

Eberth, J., & Sedlmeier, P. (2012). The effects of mindfulness meditation: a meta-analysis. *Mindfulness*, 3(3), 174-189.

Abstract

Previous meta-analyses on the effects of mindfulness meditation were predominantly concerned with clinical research. In contrast, the present study aims at giving a comprehensive overview of the effects of mindfulness meditation on various psychological variables, for meditators in nonclinical settings. Included are 39 studies that fulfilled our six selection criteria: (1) a mindfulness meditation treatment, (2) the existence of an inactive control group, (3) a population of nonclinical adults, (4) the investigation of psychological measures that were (5) assessed at temporal distance from a meditation session, and (6) the availability of sufficient data to calculate effect sizes. The dependent variables examined included, among others, attention, intelligence, self-attributed mindfulness, positive and negative emotions, emotion regulation, personality traits, self-concept, self-realization, stress, and well-being. We found an effect size of $r^2=0.27$ averaged across all studies and dependent variables. The effects differed widely across dependent variables. Moreover, we found large differences between the effect sizes reported for complete Mindfulness-based Stress Reduction (MBSR) programs vs. “pure” meditation. MBSR seems to have its most powerful effect on attaining higher psychological well-being, whereas pure mindfulness meditation studies reported the largest effects on variables associated with the concept of mindfulness. This raises the question if some effect sizes found for MBSR might be partly inflated by effects that are not attributable to its mindfulness meditation component. Future theorizing should address meditation-specific concepts more extensively to account for the changes in healthy practitioners.

Artikel

Fjorback, L. O., Arendt, M., Ornbol, E., Fink, P., & Walach, H. (2011). Mindfulness-Based Stress Reduction and Mindfulness-Based Cognitive Therapy - a systematic review of randomized controlled trials. *Acta Psychiatrica Scandinavica*, 124(2), 102-119.

Abstract

Objective: To systematically review the evidence for MBSR and MBCT.

Method: Systematic searches of Medline, PsycInfo and Embase were performed in October 2010. MBSR, MBCT and Mindfulness Meditation were key words. Only randomized controlled trials (RCT) using the standard MBSR/MBCT programme with a minimum of 33 participants were included.

Results: The search produced 72 articles, of which 21 were included. MBSR improved mental health in 11 studies compared to wait list control or treatment as usual (TAU) and was as efficacious as active control group in three studies. MBCT reduced the risk of depressive relapse in two studies compared to TAU and was equally efficacious to TAU or an active control group in two studies. Overall, studies showed medium effect sizes. Among other limitations are lack of active control group and long-term follow-up in several studies.

Conclusion: Evidence supports that MBSR improves mental health and MBCT prevents depressive relapse. Future RCTs should apply optimal design including active treatment for comparison, properly trained instructors and at least one-year follow-up. Future research should primarily tackle the question of whether mindfulness itself is a decisive ingredient by controlling against other active control conditions or true treatments.

Artikelen: [Werkzame mechanismes mindfulness training](#)

Artikel

Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of consulting and clinical psychology, 78*(2), 169.

Abstract

Objective: Although mindfulness-based therapy has become a popular treatment, little is known about its efficacy. Therefore, our objective was to conduct an effect size analysis of this popular intervention for anxiety and mood symptoms in clinical samples. **Method:** We conducted a literature search using PubMed, PsycINFO, the Cochrane Library, and manual searches. Our meta-analysis was based on 39 studies totaling 1,140 participants receiving mindfulness-based therapy for a range of conditions, including cancer, generalized anxiety disorder, depression, and other psychiatric or medical conditions. **Results:** Effect size estimates suggest that mindfulness-based therapy was moderately effective for improving anxiety (Hedges's $g = 0.63$) and mood symptoms (Hedges's $g = 0.59$) from pre- to posttreatment in the overall sample. In patients with anxiety and mood disorders, this intervention was associated with effect sizes (Hedges's g) of 0.97 and 0.95 for improving anxiety and mood symptoms, respectively. These effect sizes were robust, were unrelated to publication year or number of treatment sessions, and were maintained over follow-up. **Conclusions:** These results suggest that mindfulness-based therapy is a promising intervention for treating anxiety and mood problems in clinical populations

Artikel

Gu, J., Strauss, C., Bond, R., & Cavanagh, K. (2015). How do mindfulness-based cognitive Therapy and mindfulness-based stress reduction improve mental health and wellbeing? A systematic review and meta-analysis of mediation studies. *Clinical psychology review, 37*, 1-12.

Abstract

Given the extensive evidence base for the efficacy of mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT), researchers have started to explore the mechanisms underlying their therapeutic effects on psychological outcomes, using methods of mediation analysis. No known studies have systematically reviewed and statistically integrated mediation studies in this field. The present study aimed to systematically review mediation studies in the literature on mindfulness-based interventions (MBIs), to identify potential psychological mechanisms underlying MBCT and MBSR's effects on psychological functioning and wellbeing, and evaluate the strength and consistency of evidence for each mechanism. For the identified mechanisms with sufficient evidence, quantitative synthesis using two-stage meta-analytic structural equation modelling (TSSEM) was used to examine whether these mechanisms mediate the impact of MBIs on clinical outcomes. This review identified strong, consistent evidence for cognitive and emotional reactivity, moderate and consistent evidence for mindfulness, rumination, and worry, and preliminary but insufficient evidence for self-compassion and psychological flexibility as mechanisms underlying MBIs. TSSEM demonstrated evidence for mindfulness, rumination and worry as significant mediators of the effects of MBIs on mental health outcomes. Most reviewed mediation studies have several key methodological shortcomings which preclude robust conclusions regarding mediation. However, they provide important groundwork on which future studies could build.

Artikelen: Meditatie en veranderingen in het brein

Artikel

Fox, K. C., Nijeboer, S., Dixon, M. L., Floman, J. L., Ellamil, M., Rumak, S. P., ... & Christoff, K. (2014). Is meditation associated with altered brain structure? A systematic review and meta-analysis of morphometric neuroimaging in meditation practitioners. *Neuroscience & Biobehavioral Reviews*, 43, 48-73.

Abstract

Numerous studies have begun to address how the brain's gray and white matter may be shaped by meditation. This research is yet to be integrated, however, and two fundamental questions remain: Is meditation associated with altered brain structure? If so, what is the magnitude of these differences? To address these questions, we reviewed and meta-analyzed 123 brain morphology differences from 21 neuroimaging studies examining ~300 meditation practitioners. Anatomical likelihood estimation (ALE) meta-analysis found eight brain regions consistently altered in meditators, including areas key to meta-awareness (frontopolar cortex/BA 10), exteroceptive and interoceptive body awareness (sensory cortices and insula), memory consolidation and reconsolidation (hippocampus), self and emotion regulation (anterior and mid cingulate; orbitofrontal cortex), and intra- and interhemispheric communication (superior longitudinal fasciculus; corpus callosum). Effect size meta-analysis (calculating 132 effect sizes from 16 studies) suggests a global 'medium' effect size (Cohen's $\bar{d} = 0.46$; $\bar{r} = .19$). Publication bias and methodological limitations are strong concerns, however. Further research using rigorous methods is required to definitively link meditation practice to altered brain morphology.