Mindfulness-based therapies in the treatment of somatization disorders: a systematic review and meta-analysis

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CRD summary

This review concluded that the preliminary evidence suggested that mindfulness-based therapy could successfully treat some somatization disorder symptoms. This conclusion corresponds with the evidence presented, but the limitations of the review methods and the evidence should be borne in mind.

Authors' objectives

To evaluate the effectiveness of mindfulness-based therapy for somatization disorders.

Searching

PubMed, ScienceDirect and The Cochrane Library were searched in December 2012 for peer-reviewed papers. Key words for the search were reported. Reference lists of retrieved studies, and relevant reviews and meta-analyses, were handsearched.

Study selection

Randomised controlled trials (RCTs) evaluating the effectiveness of mindfulness-based therapy (alone or with movement-based therapy) were eligible for inclusion. Trials had to be of adults (aged 18 years or older) who were diagnosed with fibromyalgia, chronic fatigue syndrome, irritable bowel syndrome, or a non-specified or mixed somatization disorder. Eligible trials had to have at least six patients undergoing treatment. Trials were excluded if there were insufficient data to calculate an effect size.

In half the included trials, the patients had a diagnosis of fibromyalgia, and in a quarter, they had a diagnosis of irritable bowel syndrome. The percentage of female participants by group, ranged from 75 to 100. Just over half of the interventions included mindfulness-based stress reduction; the remainder included mindfulness meditation with yoga or Qigong, or mindfulness-based cognitive therapy. Controls were active, on a waiting list, education, support, relaxation, exercise, or enhanced treatment as usual. The outcomes and their assessment measures varied across the trials.

The authors did not state how many reviewers selected trials for inclusion.

Assessment of study quality

The authors did not state that they performed any quality assessment.

Data extraction

The outcomes (means and standard deviations) were extracted to calculate standardised mean differences and 95% confidence intervals. The eligible outcomes were determined after the trials were assessed. The primary outcome was symptom severity; secondary outcomes included pain, quality of life, depression, and anxiety.

The authors did not state how many reviewers extracted the data.

Methods of synthesis

Standardised mean differences and 95% confidence intervals were pooled using fixed-effect models. Statistical heterogeneity was assessed using I^2, which was considered high if 75% or more, moderate around 50%, and low at 25% or less. Subgroup analyses were performed by diagnosis (fibromyalgia, irritable bowel syndrome, etc.) and by type of therapy (for the primary outcome only).

The size of the effect was interpreted using Cohen's recommendations (a size of 0.2 was considered small, 0.5 was moderate, and 0.8 was large). Publication bias was assessed using funnel plots.

Results of the review

Twelve RCTs were included in the review and meta-analysis, with 1,092 patients (range 35 to 168).

A small-to-moderate effect was found, favouring mindfulness-based therapy over control, for reduced symptom severity (SMD -0.40, 95% CI -0.54 to -0.26; 10 RCTs); heterogeneity was moderately high (I^2=71%).

A small-to-moderate effect, favouring mindfulness-based therapy, was found for quality of life (SMD 0.39, 95% CI 0.19 to 0.59; five RCTs); heterogeneity was moderately high (I^2=70%). Small favourable effects were found for pain (SMD -0.21, 95% CI -0.38 to -0.03; seven RCTs), depression (SMD -0.23, 95% CI -0.40 to -0.07; eight RCTs), and anxiety (SMD -0.20, 95% CI -0.42 to 0.02; five RCTs). Heterogeneity was absent for anxiety (I^2=0), and low-to-moderate for pain (I^2=42%) and depression (I^2=46%).

Funnel plots demonstrated some asymmetry; the authors stated that the assessment of publication bias was inconclusive due to the few trials, substantial heterogeneity, and small effect sizes. Further results were reported.

Authors' conclusions
The preliminary evidence suggested that mindfulness-based therapy could successfully treat some somatization disorder symptoms.

CRD commentary
The review question and inclusion criteria were clearly defined. Relevant databases were searched. The restriction to peer-reviewed papers, and the asymmetry in the funnel plots, suggest publication bias. The authors did not report how many reviewers were involved in trial selection and data extraction, so reviewer error and bias were possible. No quality assessment was reported, so it is unclear if any bias within each trial influenced the pooled findings. Substantial statistical variation was shown in most meta-analyses; this, along with the clinical and method variation across the trials, suggests that the statistical methods of synthesis were not appropriate. The authors acknowledged that only a few trials were included.

The authors' careful conclusion corresponds with the evidence presented, but the limitations of the review methods and the evidence should be borne in mind.

Implications of the review for practice and research
Practice: The authors did not state any implications for clinical practice.

Research: The authors stated that improved understanding of the complex causes of somatization disorders was needed, as well as clearer, more accurate diagnostic criteria. Randomised controlled trials should investigate the effectiveness of mindfulness-based therapy for particular outcomes and patients with specific diagnoses. They suggested that reviews and meta-analyses should avoid pooling across different subtypes of the disorders.

Funding
No funding received.

Bibliographic details
Lakhan SE, Schofield KL. Mindfulness-based therapies in the treatment of somatization disorders: a systematic review and meta-analysis. PLOS ONE 2013; 8(8): e71834

PubMedID
23990997

DOI
10.1371/journal.pone.0071834

Indexing Status
Subject indexing assigned by NLM

MeSH

Anxiety /therapy; Chronic Pain /therapy; Depression /therapy; Fatigue Syndrome, Chronic /psychology /therapy; Fibromyalgia /therapy; Humans; Irritable Bowel Syndrome /therapy; Mindfulness /methods; Quality of Life; Randomized Controlled Trials as Topic; Somatoform Disorders /therapy; Treatment Outcome

AccessionNumber
12013052464

Date bibliographic record published
18/09/2013

Date abstract record published
22/09/2014

Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.