Effects of mindful and non-mindful exercises on people with depression: a systematic review

Tsang HW, Chan EP, Cheung WM

CRD summary
This review assessed the management of depression or depressive symptoms through the effectiveness mindful or non-mindful physical exercises and concluded that for a variety of clinical populations, physical exercise in general was efficacious. Given the shortcomings in the review process and small sample sizes, the authors’ conclusions should be interpreted with caution.

Authors' objectives
To assess the management of depression or depressive symptoms through the use of mindful or non-mindful physical exercise.

Searching
MEDLINE, Social Sciences Citation Index, PsycINFO, PsycARTICLES and Academic Search Premiere were searched from 2000 to 2007 for English-language studies; search terms were reported.

Study selection
Randomised controlled trials (RCTs) that assessed the condition of depression through mindful or non-mindful physical exercises and had at least 10 participants aged at least 18 years of age were eligible for inclusion. Studies that did not use a comparison group or included participants with a mixed diagnosis of psychiatric syndromes were excluded. Included interventions lasted between one and four months and comprised physical exercise treatment with mindful elements (qigong, yoga and tai chi) and physical exercise treatment without mindful elements (aerobic exercise, walking, pram walking, jogging and other forms of physical exercise). Interventions were most frequently compared with no treatment, but comparisons with medication and different types of physical exercise were undertaken. Outcomes were assessed using a variety of depression outcome measures. The mean age of participants in the included studies, where stated, ranged from 28.2 to 82.4 years; 62% were female. Depression severity varied from minor to moderate.

Two authors independently selected studies for inclusion in the review. It was not stated how disagreements were resolved.

Assessment of study quality
The quality of studies was assessed using previously published criteria, including items on: allocation concealment; intention to treat analysis; blinding; and follow-up after the intervention. The authors did not state how many reviewers undertook the validity assessment.

Data extraction
The authors stated neither how the data were extracted for the review nor how many reviewers performed the data extraction.

Methods of synthesis
A narrative synthesis was provided, supported by a table. Differences between studies were discussed in the text. Findings were classified according to the number of positive, negative or null effects.

Results of the review
A total of 12 RCTs were included in the review (n=591, range 14 to 100). Six studies included mindful elements and six included non-mindful elements. Nine studies reported being at least single-blind, nine undertook intention to treat analysis and three reported allocation concealment and follow-up after the intervention.

Positive results for treating depression were reported (11 studies), with statistically significant reduction of
measurement scores in both mindful (five studies) and non-mindful (six studies) interventions. Reductions of at least 50% of baseline score were reported for mindful (four studies) and non-mindful (two studies) interventions. Sustained treatment effects during follow-up (from one to 54 months) were reported for two non-mindful studies. One mindful study reported longer-term follow up and found that the initially observed effects of qigong diminished over two months.

Authors' conclusions
For a variety of clinical populations, physical exercise was efficacious for reducing depression or depressive symptoms.

CRD commentary
The review question and inclusion criteria were clear. The search strategy was thorough, but was restricted to publications in English and was unclear about whether unpublished studies were sought; therefore, both language and publication bias could have been present and some studies may have been missed. Study selection was undertaken in duplicate, but it was unclear whether this extended to other parts of the review process, which made it unclear whether appropriate methods were employed to reduce error and bias. Appropriate criteria were used to assess the quality of the included studies, which were generally of reasonable quality. Most included studies were small and contained less than 50 participants. Given the heterogeneity between studies, the decision to employ a narrative synthesis was appropriate. Although the authors acknowledged the limitations of both the review and primary evidence, the small sample sizes and poor reporting of the review process suggested that the findings regarding efficacy should be interpreted with caution.

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

Research: The authors recommend that more well-conducted studies should be conducted that addressed the short-term and long-term effects of physical exercise on alleviating depression. Studies should focus on the differential effects of mindful and non-mindful exercises on depression and the underlying mechanisms of their therapeutic action.

Funding
Not stated.

Bibliographic details

PubMedID
18237457

DOI
10.1348/014466508X279260

Original Paper URL

Indexing Status
Subject indexing assigned by NLM

MeSH
Adult; Aged; Breathing Exercises; Control Groups; Dance Therapy/methods; Depressive Disorder/psychology/therapy; Exercise/psychology; Female; Follow-Up Studies; Humans; Male; Meditation/methods/psychology; Middle Aged; Placebos; Randomized Controlled Trials as Topic/statistics & numerical data; Research/trends; Research Design; Sample Size; Tai Ji/methods/psychology; Treatment Outcome; Yoga/psychology

AccessionNumber
Date bibliographic record published
31/03/2009

Date abstract record published
04/11/2009

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.