A systematic review of randomized controlled trials of acupuncture in the treatment of depression
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CRD summary
This review concluded that evidence about the role of acupuncture in the treatment of depression is inconclusive. Given the inclusion of only a limited number of quite variable, poor-quality studies and the poor reporting of the review methods, the authors' cautious conclusions would appear to be supported by the data presented.

Authors' objectives
To determine the effects of acupuncture on depression.

Searching
MEDLINE, AMED and the Cochrane CENTRAL Register were searched up to 2004; the search terms were reported. Abstracts without full methodological detail were excluded from the review.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were eligible for inclusion in the review.

Specific interventions included in the review
Studies comparing any acupuncture or electroacupuncture technique with a control were eligible for inclusion. The quality of the acupuncture interventions were assessed according to the standards for reporting interventions in controlled trials of acupuncture (STRICTA). Acupressure studies were excluded. The included interventions mainly followed standardised protocols, but some studies used techniques that were tailored to the patients' individual needs. The number (mean 5.7 points; range: 2 to 13) and type of acupuncture points used varied in the included studies, as did the frequency and modality of the treatment used. Most studies used corporeal acupuncture, but two used both corporeal and auricular. Electrical stimulation was used in three studies, manual stimulation in three studies, and two studies failed to report the type of stimulation used. Control groups included waiting-list, antidepressant medication, sham acupuncture, inert placebo acupuncture, inert acupuncture points and massage. The number of treatments ranged from 10 to 36 over between 2 and 8 weeks.

Participants included in the review
Studies of patients with depression were eligible for inclusion. The included study populations were diverse, including: hospitalised stroke patients, depressed pregnant patients, depressed in-patients, depressed out-patients and community samples recruited through advertisements. Some studies included broad definitions of depression, while others had very specific diagnostic criteria for inclusion. Where specified, the diagnosis of depression was based on clinical interview and/or the Hamilton Depression Scale.

Outcomes assessed in the review
Eligible studies had to report depression as an outcome. Scales used to report the level of depression included the Hamilton Depression Scale for Depression, Hamilton Depression Scale for Anxiety, Clinical Global Impressions Scale, Beck Depression Inventory, Center for Epidemiological Study of Depression and the Structured Clinical Interview for Depression.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for review, or how many reviewers performed the selection.

Assessment of study quality
Study quality was assessed using a modified Jadad scale (randomisation, blinding and loss to follow-up), with studies awarded a total score of between 0 and 5 points. Studies were described as 'low quality' if they only scored between 0
and 2 points; 3 points was 'acceptable quality'; 4 points was 'good quality'; and 5 points was 'very good quality'. The authors did not state how the validity assessment was performed.

**Data extraction**
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. For each study, the proportion of patients whose depression improved in the treatment and control group was extracted and used to calculate odds ratios (ORs) with 95% confidence intervals (CIs). The authors also reported whether the acupuncture intervention was standardised across all patients or individualised according to the principles of Traditional Chinese Medicine.

**Methods of synthesis**

*How were the studies combined?*
The studies were combined in a narrative because of the presence of significant levels of heterogeneity.

*How were differences between studies investigated?*
Some differences between the studies were evident from the data tables and were discussed within the text of the review.

**Results of the review**

Nine RCTs (666 participants) were included in the review.

Two studies scored 4 out of 5 points ('good quality'), two scored 3 points ('acceptable quality'), and the remaining five scored only 1 point ('low quality'). None of the studies provided details on method of randomisation. Three studies reported that the studies were double-blind, and five reported that the outcome assessors were blinded. Only 3 studies reported on the numbers of withdrawals.

Improvement in depression (8 studies).

All but one of the studies suggested a benefit of acupuncture compared with control, but these differences were only significant in 2 studies. No significant differences in the numbers of patients showing an improvement in depression were reported when acupuncture interventions were compared with a waiting-list control (1 'good quality' study), placebo control (1 study), non-specific acupuncture control (2 studies, one of which was 'good quality') and antidepressant treatment (3 studies). One 'good quality' study showed a significantly greater number of patients reporting an improvement with acupuncture in comparison with massage (OR 4.77, 95% CI: 1.15, 19.8); another study of 'acceptable quality' showed a significant increase in comparison with a sham acupuncture control (OR 5.67, 95% CI: 1.8, 18.2). Overall, the studies varied widely in terms of their interventions, controls, populations and outcome measures.

**Authors’ conclusions**
Evidence regarding the role of acupuncture in treating depression is inconclusive.

**CRD commentary**
This review answered a clear but broad question with only poorly defined inclusion criteria. The literature search was adequate for published material, but publication bias may be a problem as no specific attempts appear to have been made to locate unpublished material and abstracts without adequate methodological reporting were excluded from the review. Poor reporting of the review methodology also makes it difficult to assess the risk of reviewer error and bias.

The authors did assess study quality, which provided some indication of the reliability of the included data. Despite the issues mentioned and the inclusion of such a small number of quite heterogeneous, poor-quality studies, the authors’ cautious conclusions appear justified.

**Implications of the review for practice and research**

*Practice:* The authors did not state any implications for practice.

*Research:* The authors stated that further research into the role of acupuncture in treating depression is required. Future studies should include comparisons with newer antidepressants and should be carried out using rigorous methods.
(adequate sample size; randomisation; reporting of methods using a treatment manual; reporting of loss to follow-up; assessment of treatment confounders; and use of adequate blinding of patients and assessors). The authors also stated that studies need to assess adverse effects and the duration of effects.

**Bibliographic details**

**PubMedID**
16899301

**DOI**
10.1016/j.jad.2006.06.012

**Indexing Status**
Subject indexing assigned by NLM

**MeSH**
Acupuncture; Antidepressive Agents /therapeutic use; Depressive Disorder /therapy; Humans; Randomized Controlled Trials as Topic; Treatment Outcome

**AccessionNumber**
12007007011

**Date bibliographic record published**
03/08/2007

**Date abstract record published**
09/08/2008

**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.