Acupuncture for anxiety and anxiety disorders: a systematic literature review
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CRD summary
The authors concluded that there was insufficient evidence to draw firm conclusions about the effectiveness of acupuncture in patients with anxiety, and further research was required. This was a well-conducted and clearly presented review, and the authors' conclusions are likely to be reliable.

Authors' objectives
To evaluate the efficacy of acupuncture for the treatment of anxiety and anxiety disorders.

Searching
MEDLINE, PubMed, EMBASE, CINAHL, PsycINFO, The Cochrane Library (Cochrane CENTRAL Register and Database of Systematic Reviews), DARE, Acubriefs, AMED and CISCOM were searched from inception to between February and July 2004; the search terms were reported. In addition, relevant databases (UK National Research Register and the U.S. ClinicalTrials.gov) were screened and experts contacted for details of unpublished and ongoing trials. No language restrictions were applied.

Study selection
Study designs of evaluations included in the review
Non-randomised and randomised controlled trials (RCTs) were eligible for inclusion.

Specific interventions included in the review
Studies that evaluated traditional or Western acupuncture were eligible for inclusion; ear acupuncture, electroacupuncture and acupressure treatments were included. The included studies evaluated acupuncture alone or in combination with other treatments such as electromyographic biofeedback (EMG BFB) and medication; control treatments included sham acupuncture, behavioural desensitisation, drug treatments, EMG BFB alone and relaxation.

Participants included in the review
Studies that included adults or children with anxiety or an anxiety disorder were eligible for inclusion. Studies of patients with anxiety related to co-morbid medical or physical conditions were excluded. The included studies were in patients with generalised anxiety and 'anxiety neurosis' (including, where reported, patients attending psychiatric clinics and in- and out-patient facilities) and situational anxiety (including patients with anxiety related to hospital transfer and elective surgery, mothers of children undergoing surgery and operating room staff).

Outcomes assessed in the review
Inclusion criteria were not specified in terms of the outcomes. The included studies assessed a range of outcomes including various measures of anxiety, physiological measures and variously defined cure rates (details were reported).

How were decisions on the relevance of primary studies made?
Two reviewers independently selected the studies.

Assessment of study quality
Two reviewers independently assessed validity using the following criteria: randomisation; blinding; reporting of drop-outs; allocation concealment; check on blinding; baseline comparability of the treatment groups; power calculation; intention-to-treat analysis; and the reporting of compliance and cointerventions. Any disagreements were resolved by discussion. The appropriateness of the acupuncture and control interventions and outcome measures was also assessed.

Data extraction
Two reviewers independently extracted the data and resolved any disagreements through discussion.

Methods of synthesis
How were the studies combined?
The studies were grouped by type of anxiety and study design, and combined in a narrative.

How were differences between studies investigated?
Differences between the studies were discussed in the text.

Results of the review
Twelve studies (1,134 participants) were included: 10 RCTs (1,010 participants) and two non-randomised controlled trials (124 participants).

Two studies reported the randomisation method, five each reported blinding of the assessors and patients, three reported drop-outs, nine reported baseline comparisons of the treatment groups, one reported a check on the success of blinding, three reported power calculations and three reported intention-to-treat analysis. Patients with generalised anxiety (four RCTs plus 2 non-randomised controlled trials).

The only RCT (56 participants) that used a sham acupuncture control treatment reported a significantly improved Clinical Global Impression score, clinical improvement at 10 weeks and an increased percentage of responders in the acupuncture group compared with the control group, but the majority of patients had minor depression rather than anxiety. Two RCTs (39 and 296 participants) that compared acupuncture with drug treatments reported no significant difference between treatments. One RCT (240 participants) reported a significantly greater ‘cure rate’ in patients allocated to acupuncture plus EMG BFB than in those allocated to EMG BFB alone. One non-randomised trial (100 participants) reported a significantly greater cure rate in patients allocated to acupuncture plus drug treatment than in those allocated to drug treatment alone, but the outcome measurement was subjective. There was insufficient information reported for the other non-randomised trial to draw any conclusions.

Patients with situational anxiety (six RCTs).

All four RCTs that compared acupuncture with sham acupuncture (36, 55, 91 and 67 participants) reported some positive outcomes with acupuncture interventions compared with controls; three of these studies evaluated auricular acupuncture and the fourth evaluated auricular acupuncture and acupuncture at relaxation points. One RCT (90 participants) reported no significant difference in anxiety between patients treated with acupuncture, diazepam and progressive relaxation. One RCT (40 participants) reported that, based on State-Trait Anxiety Inventory scores, acupuncture was significantly more effective than diazepam.

Authors’ conclusions
Although positive outcomes were reported when using acupuncture in patients with anxiety, there was insufficient evidence to draw firm conclusions and further research was required.

CRD commentary
The review addressed a clear question that was defined for participants, intervention and study design. Inclusion criteria were not specified for the outcomes, and a wide variety of outcomes were evaluated in the included studies. Several relevant sources were searched and attempts were made to minimise publication and language bias. Methods were used to minimise reviewer error and bias in the study selection, validity assessment and data extraction processes.

There was adequate information about the included studies, and validity was assessed using specified criteria and the results of this assessment reported. In view of the differences between the studies, a narrative synthesis that took account of study design and other aspects of quality was appropriate.

This was a well-conducted and clearly presented review. The authors’ conclusions reflect the limitations of the evidence and are likely to be reliable.

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

Research: The authors stated the need for adequately-powered well-designed studies to evaluate the efficacy of
acupuncture (used alone or as an adjunctive treatment) for the treatment of patients with anxiety and anxiety disorders.

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