Efficacy, cost-effectiveness and acceptability of self-help interventions for anxiety disorders: systematic review

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CRD summary
The review concluded that self-help interventions appeared to be an effective way of treating individuals diagnosed with social phobia and panic disorder. The review had some methodological and data limitations that limit the reliability of the authors’ conclusions.

Authors’ objectives
To determine the efficacy, cost-effectiveness and acceptability of self-help interventions for anxiety disorders.

Searching
MEDLINE, CINAHL, EMBASE, ASSIA, AMED, IBSS, PsycINFO, EBM Reviews and PILOTS were searched to 31 October 2010 for articles in English. Search terms were reported. Reference lists of selected articles were searched.

Study selection
Randomised controlled trials (RCTs) of self-help interventions versus waiting list or therapist-administered treatment aimed at adults diagnosed with an anxiety disorder (Diagnostic and Statistical Manual of Mental Disorders or the International Statistical Classification of Diseases criteria) were eligible for inclusion. Self-help interventions were defined as interventions that had no therapist input or guided self-help interventions that involved minimal contact with a therapist or trained professional through face-to-face appointments, telephone or email. The primary outcome measure was change in anxiety symptoms. Secondary outcome measures were rate of drop-out, cost-effectiveness and acceptability (measured in terms of patient satisfaction). Trials of self-help groups, self-help materials adjunctive to therapist-administered psychological therapy, virtual reality exposure unaccompanied by any other self-help material and one-off presentations of videos or audio tapes aimed only at exposure or relaxation were excluded.

The included studies considered self-help interventions for panic disorder, generalised anxiety disorder, social phobia, mixed anxiety disorder, obsessive compulsive disorder and post-traumatic stress disorder. Interventions were face-to-face or written, email or telephone guidance and lasted between zero and 7 hours. Treatment lasted between three and 15 weeks. Controls were wait list or therapist cognitive-behavioural therapy. Clinical hours, where reported, ranged from zero to 20 hours. Studies were published between 1987 and 2010.

The authors did not state how many reviewers performed study selection.

Assessment of study quality
Study validity was assessed using the Cochrane Collaboration criteria of randomisation, allocation concealment, blinding, incomplete outcome data, selective outcome reporting and any other biases.

Two reviewers independently undertook validity assessment. Disagreements were resolved by discussion with a third reviewer.

Data extraction
Data were extracted on change in anxiety symptoms and drop-out rate and used to calculate mean differences and odds ratios (ORs) with 95% confidence intervals (CIs).

The authors did not state how many reviewers were involved in data extraction.

Methods of synthesis
Where there was evidence of statistical heterogeneity, random-effects meta-analysis was used to calculate pooled weighted mean differences (WMDs), standardised mean differences (SMDs) and odds ratios, each with 95% CIs. Studies were analysed according to pure versus guided self help. Control sizes were modified where there were two self-
help interventions in the same study. Statistical heterogeneity was assessed with $I^2$. Weighted mean differences were calculated where the same measurement scales were used and standard mean differences where different scales were used.

Subgroup analysis was presented on the basis of the anxiety disorder. Publication bias was assessed using funnel plots.

**Results of the review**

Thirty-one RCTs (2,442 participants) were included in the review. Quality of the RCTs was variable: 12 did not report randomisation method, 14 did not report allocation concealment and none provided sufficient detail to be free of selective reporting.

*Waiting list versus self-help:* Compared with waiting list, there was a statistically significantly greater reduction in anxiety symptoms with self-help interventions (SMD -0.88, 95% CI -1.05 to -0.71; 20 studies, $I^2=44\%$). There was a slight discrepancy in the figures reported in the text and forest plot and we used the forest plot figure. Analyses restricted to studies of guided self-help interventions showed greater efficacy (SMD -0.97, 95% CI -1.17 to -0.76; 12 studies), as did analyses considering only web-based and multimedia self-help interventions (SMD -0.90, 95% CI -1.13 to -0.68; 13 studies). In terms of drop-out, there was a significant difference in favour of the waiting-list condition (OR 1.98, 95% CI 1.26 to 3.11; 20 studies).

*Therapist administered treatment versus self-help:* There was a significant difference between self-help and therapist-administered psychological therapy in favour of therapist-administered treatment (SMD 0.34, 95% CI 0.03 to 0.65; 12 studies, $I^2=72\%$). Removing pure self-help interventions from the analysis resulted in there being no significant difference between guided self-help and therapist-administered treatment. An analysis of only web-based and multimedia interventions showed no significant difference between self-help and therapist-administered psychological therapy in terms of anxiety symptoms or drop-out rates.

Subgroup analyses indicated that self-help interventions were effective in the treatment of panic disorder and social phobia, although three RCTs showed outcomes in favour of control for mixed anxiety disorders. Other results were presented in the review. None of the RCTs assessed acceptability. Publication bias was not detected.

**Authors' conclusions**

Self-help interventions appeared to be an effective way of treating individuals diagnosed with social phobia and panic disorder.

**CRD commentary**

Inclusion criteria for the review were clearly defined. Several relevant data sources were searched. There was potential for language bias as only articles in English were included. There was potential for publication bias as unpublished studies were not sought. However, formal assessment of publication bias did not detected bias. Attempts were made to reduce reviewer error and bias during quality assessment, but whether the same methods were used for data extraction and study selection was unclear. Quality assessment indicated that the quality of the included studies was variable.

Several trials had small sample sizes (acknowledged by the authors). Few trials provided evidence for certain subgroups (such as obsessive compulsive disorder and generalised anxiety disorder). The authors presented odds ratios although they originally said they calculated relative risks. Standard statistical techniques were used to combine data but the level of statistical heterogeneity was not reported for all analyses. The authors highlighted the clinical heterogeneity between studies and it was, therefore, unclear whether statistical pooling was appropriate.

The review had some methodological and data limitations that limit the reliability of the authors' conclusions.

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

**Practice:** The authors stated that the inclusion of self-help interventions in stepped care treatment models for social phobia and panic disorder may be useful.

**Research:** The authors stated that further research was required to evaluate the cost-effectiveness and acceptability of self-help interventions. Further high-quality RCTs of self-help interventions were needed, particularly for obsessive compulsive disorder, generalised anxiety disorder and post-traumatic disorder. There was a need for evaluation of self-
help interventions in the context of a stepped-care model.

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