A meta-analytic study of self-help interventions for anxiety problems

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CRD summary
The authors concluded that self-help materials were moderately effective in comparison with control groups, while therapist-directed interventions were more effective than self-help interventions in the treatment of both diagnosed and non-diagnosed anxiety problems. The poor reporting of review methods and uncertainty about between-study differences mean that the reliability of the authors’ conclusions is uncertain.

Authors’ objectives
To evaluate the effectiveness of self-help (SH) treatments for individuals with anxiety problems and disorders.

Searching
MEDLINE and PsycINFO were searched from 1960 to 2003 for studies written in the English language; the search terms were not reported. References from relevant papers were also checked.

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

Specific interventions included in the review
Studies that included media-based interventions (including books, manuals, audiotapes, videotapes, computer-assisted programs, the Internet, or some combination) with minimal therapist contact (defined as therapist-initiated, non-therapeutic contact by phone, letter, email, face-to-face, or some combination) were eligible for inclusion. Comparison groups included therapist-directed interventions (TDIs) and control groups such as no treatment, waiting list, placebo or symptom monitoring alone. Studies were excluded if they employed media-based materials but participants had no opportunity to practise using the materials; targeted specific anxiety, e.g. fear of undergoing surgery; targeted a broadly defined sample of neurotic disorders unless specifically targeted anxiety symptoms within the study sample; targeted various disorders of which anxiety disorder was only one; provided TDI prior to SH treatment phase; used SH materials as supplements to conventional therapy; or employed questionable psychometric measures, e.g. not using validated materials. The average duration of SH treatment was 6.2 weeks (range: 1 day to 25.8 weeks).

Participants included in the review
Studies of adults undergoing media-based interventions for the treatment of anxiety problems were eligible for inclusion. The participants in the included reviews were treated for social anxiety, agoraphobia, test anxiety, panic disorder, social anxiety and mixed anxiety disorders. The average age 30.8 years and women comprised 72.2% of the sample. The average duration of the disorder was 14.0 years. Further participant characteristics were not reported.

Outcomes assessed in the review
Outcomes that assessed target symptoms (unspecified) were eligible for inclusion.

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

Assessment of study quality
The authors did not state that they assessed validity.

Data extraction
One author was reported as completing all coding of data. Effect sizes (Cohen’s d) were calculated for each dependent measure in a study at post-treatment and at follow-up. Effect sizes were averaged across dependent measures for each study. If a study reported non-significant results and provided no numerical data, d was estimated at 0. Where follow-up data were provided, only data from the last evaluation point was considered.
Methods of synthesis

How were the studies combined?
The studies were combined statistically to generate mean overall effect sizes: $d = 0.12$ to $0.49$ was classified as a small effect size, $d = 0.50$ to $0.79$ as a medium effect, and $d = 0.80$ as a large effect.

How were differences between studies investigated?
The homogeneity of Cohen's $d$ statistic was assessed using formulae derived from Wolf (1986).

A one-way analysis of variance was used to assess whether studies using different samples could be aggregated. Post hoc analyses were used to compare effect sizes for these groups. Analyses on format of SH materials and type of disorder were also conducted. Effect sizes were compared between interventions with different control groups, e.g. self-help versus waiting list and self-help versus placebo control. There were no significant differences, therefore the studies were combined.

None of the drop-out rates were significantly different between the intervention and control or comparison groups. Analyses revealed no differences between out-patient and community samples, but out-patient and college student samples were significantly different ($p<0.01$) and mixed samples produced significantly higher effect sizes than any other group ($p<0.01$). Samples were therefore aggregated into out-patient and community, college student, and mixed.

Results of the review

Thirty-three RCTs ($n=1,582$) were included.

Effectiveness of SH.

SH treatments were less effective than TDIIs for anxiety problems at post-treatment ($n=28$) and follow-up ($n=20$): $d = -0.42$ (standard deviation, SD=$0.52$) (95% confidence interval, CI: $-0.62$, $-0.22$) and $d = -0.36$ (SD=$0.13$) (95% CI: $-0.53$, $-0.19$), respectively. However, SH treatments were more effective than control or comparison groups (waiting list, placebo, symptom monitoring): $d = 0.62$ (SD=$0.33$) (95% CI: $0.52$, $0.72$) for post-treatment and $d = 0.51$ (SD=$0.26$) (95% CI: $0.36$, $0.66$) for follow-up, where reported.

Effects of study and treatment parameters.

For SH versus control conditions, post hoc analyses showed that self-report measures produced significantly higher effect sizes than observer ratings and behaviour measures ($p<0.01$).

For SH versus TDI comparisons, self-report measures produced significantly higher effect sizes than behaviour measures ($p<0.01$). No other study parameters were related to outcome. Studies providing minimal therapist contact had larger effect sizes than those without contact ($p<0.01$).

Authors’ conclusions

The authors’ conclusions appeared to state that SH materials were moderately effective compared with control groups for both diagnosed and non-diagnosed anxiety problems in relation to target symptoms. TDIIs were more effective than SH interventions for the treatment of both diagnosed and non-diagnosed anxiety problems.

CRD commentary

The inclusion criteria were broadly defined in terms of interventions, participants, outcomes and study designs. Only two databases were searched for studies published in English and this might have resulted in the omission of other relevant studies. In addition, the search strategy was not reported in full and can neither be evaluated nor replicated. However, some attempts were made to locate unpublished data. Study validity was not assessed, thus the results from these studies and any synthesis may not be reliable. Since review methods were not described for the study selection process and only partially described for the data extraction, it is not known whether any efforts were made to reduce reviewer error and bias.

Details of the demographics of participants in the included studies were very limited, thus it may be difficult to
generalise the review findings. The pooling of studies in meta-analyses appears appropriate. In summary, a lack of complete reporting of review methods and uncertainty about between-study differences mean that the reliability of the authors’ conclusions is uncertain.

**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 further research using multiple measurement approaches, instead of relying on self-report, for the evaluation of outcomes. Additional controlled studies are needed to test the effectiveness of SH interventions for the whole spectrum of anxiety disorders. Controlled trials evaluating the effectiveness of SH materials delivered via the Internet are essential.

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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.