Brief psychological therapies for anxiety and depression in primary care: meta-analysis and meta-regression

*Cape J, Whittington C, Buszewicz M, Wallace P, Underwood L*

**CRD summary**
This review assessed whether brief psychological therapies delivered in primary care were effective for patients with anxiety and depression. It concluded that cognitive-behavioural therapy, counselling and problem-solving therapy were effective. The review was of a reasonable standard and the authors' main conclusions are likely to be reliable.

**Authors' objectives**
To compare the effectiveness of different brief psychological therapies versus usual care for adults with anxiety, depression and mixed common mental health problems.

**Searching**
MEDLINE, EMBASE and PsycINFO were searched from inception to July 2008. Search terms were provided. Reference lists and unspecified key journals were handsearched. Primary care mental health researchers were contacted to identify additional relevant studies. Searches were restricted to studies in English.

**Study selection**
Randomised controlled trials (RCTs) that compared brief psychological therapies to usual care for treatment of anxiety, depression, unspecified common mental health problems and emotional distress in adults were included. Interventions had to be provided in primary care or at home organised by primary care, but not delivered by the patient's general practitioner. Brief was defined as more than two but fewer than 10 appointments. Studies of computerised and facilitated self-help, psycho-educational groups and of psychological therapy associated with case management within collaborative care were excluded. Primary outcomes were not described.

Types of therapy provided included cognitive-behavioural therapy (CBT), counselling, psychotherapy and problem-solving therapy (PST). Interventions were provided in a primary care setting, by telephone and in the patient's own home. Median treatment intensity was 6 to 7 contacts for CBT, counselling and problem-solving therapy and a single contact for the psychotherapy studies. Study follow-up periods ranged from 4 weeks to 26 weeks. Studies focused on patients with depression (including major depressive disorder and minor depression), anxiety disorders (including generalised anxiety disorders, panic disorder and mixed phobic disorders) and mixed anxiety and depression. Outcomes were assessed using a range of rating scales including the Hamilton Depression Rating Scale, Hamilton Anxiety Rating Scale, General Health Questionnaire and Beck Depression Inventory, amongst others.

The authors do not state how papers were selected for the review, or how many reviewers performed the selection.

**Assessment of study quality**
A modified version of the SIGN checklist for RCTs was used to assess study quality. The adequacy of randomisation and allocation concealment, and attrition were examined.

Validity was assessed by one reviewer. A sample of papers were checked by a second reviewer, blinded to the findings of the first reviewer.

**Data extraction**
Where outcome data were reported at more than one follow-up period, those closest to four months from baseline were extracted. The standardised mean difference (d) and associated standard error were extracted for each study (or where possible computed from the data provided). Intention-to-treat data, with last observation carried forward, were used where available. Where studies reported only dichotomous outcomes it was assumed that participants lost to follow-up had an unfavourable outcome and the log odds ratio was converted into d.
Data were extracted by one reviewer and checked by a second; outcome data were extracted independently by the second reviewer. Disagreements were resolved by discussion.

Methods of synthesis

A random effects model was used for meta-analysis. Heterogeneity was examined using $I^2$ and the Q test of heterogeneity, and through visual inspection of forest plots. The presence of publication bias was assessed through inspection of funnel plots and using Egger's regression asymmetry test. If asymmetry was detected, Duval and Tweedie's trim-and-fill method was used to recalculate effect sizes.

Planned subgroup analyses included: type of psychological therapy and diagnosis. Meta-regression with restricted maximum likelihood estimation and improved variance estimator of Knapp and Hartung was used to examine whether there were differences in the magnitude of treatment effect between psychological therapies and between diagnostic categories. Multivariate models were used to control for study characteristics found to be potential moderators in univariate analyses, including country, publication year, number of sessions, number randomised, continuous versus dichotomous data, and validity features.

Sensitivity analyses were used to examine how robust the findings were to assumptions made when calculating effect size.

Results of the review

Thirty-four RCTs were included. There was a discrepancy between Table 1, which reported 4,024 participants, and the abstract, which reported 3,962. The results of the validity assessment showed that the method of randomisation was at least adequately addressed in all studies, allocation concealment was not well reported and less than half of the studies reported using intention-to-treat analysis. Attrition rates were less than 20% in most studies. Funnel plots showed evidence of asymmetry, which suggested publication bias in the studies of CBT for anxiety (Egger's test $p=0.04$), studies of counselling (Egger's test $p=0.04$) and studies of problem-solving therapy (Egger's test $p=0.04$).

In general, small but statistically significant effects that favoured brief therapy over usual care were found regardless of diagnostic category (depression, anxiety and mixed anxiety and depression). A large effect was seen for brief CBT for anxiety disorders ($d = 1.06$, 95% CI -1.31 to -0.80; seven RCTs) and a non-significant effect for brief counselling for depression and brief problem-solving therapy for mixed anxiety and depression. Heterogeneity assessed by $I^2$ was low in studies of CBT and moderate for studies that evaluated counselling and problem-solving therapy. Only one small trial that evaluated interpersonal psychotherapy and one of psychodynamic psychotherapy were found; both showed small non-significant effects.

The meta-regression found no significant effects between types of psychological therapy. For studies of CBT ($n=13$), statistically significant differences were found that suggested a larger effect in studies of anxiety compared with depression and mixed anxiety and depression. Use of the trim-and-fill method to correct for publication bias slightly reduced the observed effect sizes.

Authors' conclusions

Brief CBT, counselling and problem-solving therapy were effective for routine delivery in primary care although (apart from brief CBT for anxiety disorders) they had smaller effects than the same interventions given over a longer time period. It was not possible to determine whether brief CBT was more effective than other brief psychological therapies.

CRD commentary

The aim and inclusion criteria for this review were clear and appropriate. Reasonable study details were provided. The literature search included electronic and manual elements. There was no attempt to identify grey literature and the search was restricted to English-language studies, which left the review open to publication and language biases. Some evidence of publication bias was detected in the analysis. The review did not describe how studies were selected for inclusion and the validity assessment double checked only a sample of studies, which left potential for reviewer bias.
Data extraction was double checked by a second reviewer and outcome data were extracted independently. The validity assessment considered the main factors that could affect the outcome of an RCT; the results were clearly reported and impacts on outcomes were assessed using univariate analyses. The statistical synthesis of included studies was appropriate, as were the methods used.

Overall the review was carried out to a reasonable standard and the authors’ primary conclusions were based on the data presented. However, only limited evidence was provided to support the authors’ stated objective of comparing different types of brief therapies as these comparisons were indirect (based on meta-regression rather than head-to-head trials). The comparison to interventions given over a longer duration was inappropriate as these were not included in the review.

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

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

**Research:** The authors stated that better reporting of location of treatment and the nature of liaison with patients’ general practitioners should be encouraged in studies of treatment in primary care.

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