A systematic review of controlled trials of the effectiveness and cost-effectiveness of brief psychological treatments for depression

Authors' objectives
To compare brief psychological treatments with one another or with usual care in the treatment of depression; to evaluate methodological issues of identified trials; and to summarise all available cost data from controlled trials of brief psychological treatments for depression. Cost-effectiveness issues are only briefly highlighted in this abstract.

Searching
A wide range of electronic databases were searched using a comprehensive strategy, which was detailed in the report. In addition, 11 psychiatry/psychology journals and three health economics journals were handsearched. The reviewers searched the bibliographies of relevant trials and reviews, grey literature and dissertations. They also contacted leading researchers, stakeholders and experts in the field. Both published and unpublished material was acceptable for inclusion in the review.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials or controlled clinical trials were eligible for the review.

Specific interventions included in the review
All variants of brief psychological treatments compared with treatment as usual or each other were eligible for inclusion. In addition, the review set out to compare cognitive-behavioural therapy versus treatment as usual, interpersonal therapy, psychodynamic therapy and supportive therapy. Interpersonal therapy, psychodynamic therapy and supportive therapy were also compared with treatment as usual and with one another. The review also included studies comparing all variants of individual and group therapies. The interventions needed to be described within an explicit psychological orientation and be completed within a time-limited framework of, at most, 20 sessions. Marital/couples therapy and family therapy were excluded. The treatment as usual control condition included usual care or management, waiting-list and no treatment.

Participants included in the review
Males or females aged 16 to 65 years, in any country, were eligible. They had to have a primary diagnosis of depression according to the Research Diagnostic Criteria, American Psychiatric Association criteria (DSM-IIIR/IV), International Classification of Disease criteria or other validated diagnostic instruments, or to have been assessed through self-rated or clinician-rated validated instruments.

Outcomes assessed in the review
The main outcome measure was depression symptom level. This could be measured using self-rating scales, such as the Beck Depression inventory and the Minnesota Multiphasic Personality Inventory, and/or clinician-rating scales, such as the Hamilton Rating Scale for Depression. Quality of life outcomes, as measured by social and cognitive-behavioural functioning, provided additional outcomes where available. Drop-outs from psychotherapy were a secondary outcome.

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

Assessment of study quality
The reviewers used a specially developed quality rating scale (detailed in the report) which examined 23 items. The authors do not state how the papers were assessed for quality, or how many of the reviewers performed the quality assessment.
Data extraction
Psychotherapy models were categorised based on the individual study authors’ description. Data relating to the internal and external validity, study power and outcomes were extracted.

Methods of synthesis
How were the studies combined?
Odds ratios (ORs) and relative risks were calculated and pooled for dichotomous data. Three dichotomous outcomes were pooled: recovery at post-treatment (as defined by the trialists), whether the trial participants were non-symptomatic at different points of follow-up, and drop-outs at post-treatment. For continuous outcomes, the weighted mean differences (using inverse of the study variance) or standardised mean differences (SMDs) were calculated. Four outcomes were pooled: mean change from baseline to post-treatment, mean change from baseline at different follow-up points, mean differences at post-treatment and mean differences at follow-up. Where there was no evidence of statistical heterogeneity a fixed-effect model was used to combine the data. Where there was evidence of statistical heterogeneity the results were recalculated using a random-effects model. The outcomes were presented with 95% confidence intervals (CIs).

There were insufficient data for a pooled analysis of the economic data. Publication bias was investigated using funnel plots.

How were differences between studies investigated?
Statistical, methodological and clinical heterogeneity were explored. A formal test for statistical heterogeneity (chi-squared) was conducted. Clinical heterogeneity was explored according to two predefined characteristics: the severity of depression at baseline (severe, mild/moderate or unspecified) and the number of psychotherapy sessions offered (1 to 6, 7 to 12 or 13 to 20). Methodological heterogeneity (quality and recruitment methods) was explored through sensitivity analyses.

Results of the review
Sixty-three trials were included in the review. Fifty of these reported sufficient data to be included in the meta-analyses.

Patients receiving any variant of psychotherapy for depression were significantly more likely to improve to a degree where they were no longer classed as clinically depressed when compared with treatment as usual or waiting-list control. Thirteen trials (886 patients) gave a pooled OR for post-treatment recovery of 3.01 (95% CI: 2.37, 3.99), with no significant heterogeneity noted. Patients exhibited significantly fewer symptoms post-treatment: 22 trials (943 patients) gave a pooled SMD of -0.90 (95% CI: -1.21, -0.60). The trials showed significant heterogeneity, but better quality trials exhibited a more highly significant difference in favour of psychotherapy. Patients experienced greater symptom reduction from baseline than those receiving treatment as usual: 6 trials (363 patients) gave a pooled SMD of 0.27 (95% CI: 0.06, 0.48).

Patients receiving individual therapies were significantly more likely to improve to a degree where they were no longer regarded as depressed and exhibited fewer symptoms post-treatment. The weighted mean difference was -3.07 (95% CI: -4.69, -1.45). No differences in drop-outs between the groups were demonstrated.

Other comparisons were described in the report; these were largely in favour of cognitive-behavioural therapy.

The reviewers identified the following limitations of their results.

Many trials scored low marks for quality and had methodological problems, such as a lack of intention-to-treat analysis. The mean overall quality score was 19 out of 46. The majority of the trials had very small sample sizes with a median arm size for all trials of just 13 patients.

The funnel plot indicated probable bias. It is likely that small negative trials may have been omitted and that the positive treatment effects of smaller studies have been exaggerated.
Many trials may not be generalisable to the UK setting due to sociodemographic characteristics, severity of disorder, motivation of participants and type of therapy.

In 24 trials (37%) the trialists specifically requested that no patients was to take antidepressant medication. In the remaining trials prescribing was permitted or not reported.

Thirty-two distinct psychological models or psychotherapeutic techniques were distinguished in the included trials. However, almost 40% of the trials included in the review failed to monitor adherence to the psychotherapy interventions under evaluation.

Cost information
Three of the 5 trials providing evidence on cost-effectiveness were conducted in the USA, a health care setting potentially less relevant to the UK context. A further limitation was the lack of follow-up in the studies, making a long-term economic evaluation impossible. Overall, the review lacked statistical power to conduct a meaningful cost-effectiveness analysis. However, there was tentative support for the hypothesis that psychotherapy was more efficient than usual care and that there was a modest cost-effectiveness advantage in favour of cognitive-behavioural therapy.

Authors' conclusions
Some forms of brief psychological treatments, particularly those derived from cognitive-behavioural models, are beneficial in the treatment of people with depression being managed outside of hospital settings. The data suggest individual therapy rather than group therapy. The authors highlight a number of moderating factors which may affect the outcome, such as baseline severity of depression, the methods used to identify patients and the number of psychotherapy sessions on offer. They could not offer conclusions on a range of other factors that might impact on the outcome, such as patient characteristics and motivation; nor could they determine the short- and long-term outcomes of such treatments, the differential effects of alternative models (e.g. psychodynamic therapy) and any possible adverse events related to the therapy.

CRD commentary
This review had clear objectives with defined inclusion criteria for the participants, interventions, outcomes and study designs. The reviewers carried out an extremely thorough search and made rigorous attempts to locate both published and unpublished material. In addition, they tested for publication bias. The reviewers quality assessed the included trials and examined the effect of trials of lower methodological quality on the outcomes. Details of the studies were presented extensively and it is possible to verify the conclusions of the reviewers. The data appear to have been pooled appropriately in meta-analyses, taking account of statistical heterogeneity. Predefined subgroup and sensitivity analyses were used to explore clinical and methodological heterogeneity. The reviewers' conclusions appeared to be consistent with their results, and they were careful to indicate possible sources of bias in the included studies and consequent limitations in the review. They also commented on problems of generalisability of the study populations and health care settings. It was not clear whether all stages of the review process involved more than one reviewer (serving to minimise bias), but this was a well-conducted review.

Implications of the review for practice and research
Practice: The authors state that, overall, the implications of the review relate more to USA settings rather than to the UK context. It would appear that some forms of brief psychological therapy, in particular those derived from cognitive-behavioural models, would benefit people with depression who are being managed outside of hospital settings. The efficacy of psychological treatments might be influenced by baseline severity, the methods used to identify patients and possibly the number of sessions offered. Although these factors appear to be important, it is unclear how this can guide clinical practice. Finally, it is unclear how other moderating variables identified in this review might impact on clinical practice.

Research: The authors state that further trials of psychological treatments in primary care settings, involving representative patients who meet the diagnostic criteria for depressive disorder, are required. There is a need for
randomised controlled trials examining both immediate and long-term outcomes, cost implications, psychodynamic therapy or client-centred therapies, and individual versus group psychological treatments. The reviewers state that future trials should be adequately powered to detect effects, should involve longer follow-up, and should monitor adherence to therapeutic technique properly and record any use of concomitant treatments. Trials should incorporate a range of outcomes to measure the broader impact of treatment and provide high-quality cost data.

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