Psychological treatment of depression in primary care: a meta-analysis
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CRD summary
The authors concluded that, despite the relatively small number of trials and the varied quality, psychological treatment for adult depression was effective in primary care, especially when GPs referred patients with depression for treatment. This review was generally well conducted and the authors’ conclusions are likely to be reliable.

Authors’ objectives
To assess the effects of psychological treatment for adult depression in primary care.

Searching
The following databases were searched from 1966 to December 2007 without language restriction: PubMed, PsycINFO, EMBASE and the Cochrane Central Register of Controlled Trials (CENTRAL). Dissertation Abstracts International was searched for unpublished studies. Search terms were reported. Reference lists of relevant publications were screened.

Study selection
Randomised controlled trials (RCTs) that compared a psychological treatment to a control condition, in patients of at least 18 years old in primary care with a depressive disorder or an elevated level of depressive symptomatology, were eligible for inclusion. Patients recruited through direct referrals from general practitioners (GPs) or through systematic screening were eligible. Eligible interventions were those where verbal communication between a therapist and a patient was the core element, or a psychological treatment was written down in book format or a computer program (with additional personal support from a therapist). Trials in which the psychological intervention could not be differentiated from other elements of the intervention were excluded, as were trials focusing on maintenance treatments and relapse prevention. Trials that included participants who were either anxious or depressed were excluded, as were trials in which a standardised effect size could not be calculated. The review outcome was improvement in depression symptoms.

The majority of included trials evaluated either cognitive-behavioural therapy or problem-solving therapy. The majority of treatment providers were psychologists alone, or psychologists with additional support from psychiatrists, social workers, psychiatric nurses and counsellors. The control arm in the majority of included trials was usual care. The Beck Depression Inventory and Hamilton Rating Scale for Depression were the most frequently used instruments to measure depression in included trials. Included patients were permitted to have comorbid general medical or psychiatric disorders. Almost half of the trials assessed patients who were referred to the treatment by GPs, whilst a similar number of trials assessed those who were screened for depression.

Two reviewers independently assessed the studies for inclusion, with any disagreements resolved by a third reviewer.

Assessment of study quality
The quality of trials was assessed using the following criteria: allocation concealment, blinding, intention-to-treat analyses, and completeness of follow-up.

The authors did not state how many reviewers performed the validity assessment.

Data extraction
Data were extracted on the mean values of the outcomes of interest. Mean differences and 95% confidence intervals (CIs) were calculated.

The authors did not state how many reviewers performed the data extraction.
Methods of synthesis
The trials were combined in meta-analyses using a random-effects model. Standardised mean differences (SMDs), with 95% confidence intervals, were calculated. The number-needed-to-treat (NNT) was also calculated. The magnitude of effect sizes was assessed using the Cohen categories. Statistical heterogeneity was assessed using Q and $I^2$ statistics. Publication bias was visualised using funnel plots, and Duval and Tweedie's trim and fill procedure. Subgroup analyses were performed using mixed-effects analyses. Multivariate meta-regression analyses were also conducted.

Results of the review
Fifteen RCTs (n=1,505 patients) were included in meta-analyses. Methodological quality varied between included trials. Blinding was adequate in thirteen RCTs. Allocation concealment was reported in eight RCTs. Intention-to-treat analyses were performed in ten RCTs.

Compared with controls, psychological treatment was significantly associated with an improvement of depression (SMD 0.31, 95% CI 0.17 to 0.45; NNT 5.75; 20 treatment arms), which was considered to be a small effect according to the evaluation of the effect size. Statistical heterogeneity was observed in this outcome ($I^2$=45.58%, $p<0.05$).

Psychological treatment was significantly associated with an improvement of depression for those patients referred directly by GPs (SMD 0.43, 95% CI 0.28 to 0.58; seven RCTs), but not for those patients recruited through systematic screening (SMD 0.13, 95% CI –0.08 to 0.34: six RCTs).

Results of meta-regression showed that recruitment in primary care was a significant predictor of the effect size when controlling other characteristics of the studies ($p=0.03$). Subgroup analyses assessing the influence of a range of characteristics of studies were also reported. No significant evidence of publication bias was found.

Authors' conclusions
Despite the relatively small number of trials and the varied quality, psychological treatment for adult depression was effective in primary care, especially when GPs referred patients with depression for treatment.

CRD commentary
This review's inclusion criteria were clear. Several relevant databases were searched. Efforts were made to find published and unpublished studies without language restriction, which minimised the potential for publication and language biases. Publication bias was assessed and little evidence of it was found, but funnel plots were not presented in the report. Steps were taken to minimise bias by having more than one reviewer independently undertake the study selection, but it was unclear whether the processes of validity assessment and data extraction were also performed in duplicate. Relevant criteria were used to examine the study quality. Statistical heterogeneity was assessed and appropriate statistical methods were used to pool the results. This review was generally well conducted and the authors' conclusions are likely to be reliable.

Implications of the review for practice and research
Practice: The authors stated that GPs who refer patients to treatments and the treatment providers need to collaborate closely. Systematic screening for patients with depression in primary care seems not to lead to beneficial outcomes for psychological treatments.

Research: The authors stated that further research is required to develop suitable screening tools for psychological treatments.

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Bibliographic details
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.