Adding psychotherapy to pharmacotherapy in the treatment of depressive disorders in adults: a meta-analysis
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CRD summary
The authors concluded that psychotherapy seemed to have an additional value compared to pharmacotherapy alone in the treatment of depression. The conclusions appear to be supported by the evidence, but should be treated with caution given the quality of the evidence and potential for bias in the review.

Authors’ objectives
To assess the effects of adding psychotherapy to pharmacotherapy for the treatment of adults with depression.

Searching
A specialist database of studies on the psychological treatment of depression was searched without language restrictions. This database was developed from searches between 1966 and January 2008 in PubMed, PsycINFO, EMBASE and Cochrane Central Register of Controlled Trials (CENTRAL) plus articles from retrieved meta-analyses. Search terms were reported.

Study selection
Randomised controlled trials (RCTs) that compared the effects of a pharmacologic intervention alone versus a combined pharmacologic and psychological intervention in adults with diagnosed depressive disorder (major depression, dysthymia) were eligible for inclusion. Studies of in-patients were excluded, as were studies aimed at relapse prevention or maintenance treatments.

The included trials were of adults in general or targeted specific adult groups (older adults or adults who lost their spouse, adult women, patients with comorbid borderline personality disorder, chronic depression or coronary artery disease and women with postpartum depression). Patients were recruited through clinical referrals and/or the community. Psychological treatments varied, but included cognitive-behavioural therapy (CBT), social skills training, interpersonal psychotherapy, psychodynamic psychotherapy, dialectical behaviour therapy, rational-emotive therapy, problem-solving therapy and a treatment initiation programme. Psychological treatments were given individually and/or in groups. The number of sessions ranged from five to 56. Pharmacotherapy included selective serotonin reuptake inhibitors (SSRIs), tricyclic antidepressants and other medications or a protocol. The most commonly used outcome measures were Beck Depression Inventory (BDI) and Hamilton Rating Scale for Depression (HRSD).

The authors did not state how many reviewers selected trials for inclusion.

Assessment of study quality
Trial validity was assessed using modified criteria based on recommendations of The Cochrane Handbook: independent randomisation, outcome assessor blinding and intention-to-treat (ITT) analysis.

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

Data extraction
Standardised effect sizes (ES) using Cohen's d and 95% confidence intervals (CIs) were calculated from the difference in means and standard deviations (SDs) of treatment and control groups at post-test. If more than one depression outcome was reported in a trial, the mean of all effect sizes was calculated. Where means and standard deviations were not reported, other statistics were used to calculate effect sizes. Dropout rates were extracted separately for pharmacologic and combined intervention studies and odds ratios (ORs) and 95% CIs were calculated.

The authors did not state how many reviewers extracted data.
Methods of synthesis
Trials were pooled in meta-analyses using a random-effects model. The number of patients needed to treat (NNT) was calculated. Cochran’s Q and the $I^2$ statistic were used to assess statistical heterogeneity.

Subgroup analyses were conducted on target group, severity of depression, type of treatment and study quality.

Sensitivity analysis was conducted to remove studies that significantly differed from other studies in terms of study characteristics. Meta-regression analysis was undertaken to assess the association between effect sizes and severity of depression at baseline.

Publication bias was assessed through visual inspection of funnel plots and Duval and Tweedie’s trim-and-fill method.

Results of the review
Twenty-five studies (n=2,036, range 20 to 453, most studies had fewer than 50 patients) were included in the review. Study quality varied. Only five studies met all three criteria. Eight studies reported independent allocation. Eighteen studies reported blinding of assessors and 16 reported ITT analysis. Drop-out rates were statistically significantly lower for combined treatment compared to pharmacotherapy alone (OR 0.65, 95% CI 0.50 to 0.83, $I^2=0.62$; 19 studies).

There was a small pooled effect size in favour of the combined treatment group compared to the group that received pharmacotherapy alone (ES 0.31, 95% CI 0.20 to 0.43, NNT=5.75; 25 studies). The effect size was comparable in studies that used HDRS and BDI. Sensitivity analyses did not significantly alter the results. There was no evidence of significant statistical heterogeneity or publication bias.

Subgroup analyses indicated statistically significantly lower effect sizes between studies aimed at patients with dysthymia (ES=0.00; five studies) and studies aimed at patients with major depressive disorder (ES=0.40; 20 studies) and between studies in which SSRIs were used compared to studies in which tricyclic antidepressants and other pharmacotherapies were used ($p=0.004$). Greater effect sizes were found in studies recruiting patients from clinical samples (ES 0.44; 18 studies) compared to studies that recruited in other ways (ES 0.08; seven studies). Further subgroup analyses in patients with major depressive disorder resulted in small effect sizes, but differences between patients recruited from clinics compared to other methods and patients who took SSRIs compared to patients who took tricyclic antidepressants were no longer statistically significant. There was evidence of statistical heterogeneity among studies that analysed data on completors only ($I^2=56.11\%$).

Meta-regression analysis was reported in the review.

Authors’ conclusions
Psychotherapy seemed to have an additional value compared to pharmacotherapy alone in the treatment of depression.

CRD commentary
The review question and inclusion criteria were clearly stated. A number of electronic databases were searched without language restrictions. No attempts were made to locate unpublished data. Publication bias was assessed and was not found to be present. Study quality was assessed and appeared to be generally poor. The authors did not state whether each stage of the process was undertaken in duplicate, so reviewer error and bias could not be ruled out. Appropriate methods were used to combine studies and assess statistical heterogeneity. The authors acknowledged certain limitations with the included studies, such as small number of studies and small sample size, limited study quality and lack of long-term follow-up.

The authors’ conclusions appeared to be supported by the evidence, but should be treated with caution given the quality of the evidence and potential for bias in the review.

Implications of the review for practice and research
Practice: The authors stated that combined treatments appeared to be superior in both milder and more severe cases of depression.
Research: The authors stated that further research was needed to investigate the importance of the two different treatments (psychotherapy and pharmacotherapy) and characteristics of patients who responded better to the different treatments, and investigate ways to address clinicians' handling of the two treatments as this was often provided by different clinicians.

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