Combined psychotherapy and pharmacotherapy for the treatment of major depressive disorder

Friedman MA, Detweiler-Bedell JB, Leventhal HE, Horne R, Keitner GI, Miller IW

CRD summary
This review compared psychotherapy plus pharmacotherapy with either treatment alone for major depression. The authors concluded that the combined treatment had a small benefit for symptoms and attrition and a moderate benefit for recovery. The lack of reporting of review methods, the potential for publication bias, and no quality assessment of the included studies mean that the conclusions may not be reliable.

Authors' objectives
To compare psychotherapy plus pharmacotherapy with either treatment alone for major depression.

Searching
PsycINFO and MEDLINE were searched from 1967 to 2002 for studies in English; the search terms were reported. The reference lists of identified studies were also checked. Dissertation abstracts were not searched and no attempts to locate unpublished studies were made.

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 compared combined psychotherapy and pharmacology with at least one active single treatment (either pharmacotherapy or psychotherapy) were eligible for inclusion. The single treatment had to be one of the combined treatments. The included studies used a variety of psychotherapy (cognitive therapy, interpersonal therapy, self-control Therapy, cognitive-behavioural therapy, problem-solving, short psychodynamic supportive therapy and social skills training) and drugs (imipramine, fluoxetine, amitriptyline, clomipramine, nortriptyline, moclobemide, nefazodone, desipramine, fluvoxamine and paroxetine). Psychotherapy treatments were generally delivered at least once per week for 50 minutes or more. Treatments were given during acute and maintenance phases of the illness.

Participants included in the review
Studies of patients with major depression were eligible for inclusion. Studies were excluded if they used a cut-off on a measure of depression severity. No details of the participants in the included studies were given.

Outcomes assessed in the review
Studies that reported outcome data in a form that could be used to calculate at least one relevant effect size were eligible for inclusion. Only data from studies reporting the Hamilton Rating Scale for Depression (HRSD), the Modified Hamilton Rating Scale, or the Beck Depression Inventory (BDI) were included in the analyses. The review also assessed relapse and recovery (as defined by the authors) and attrition.

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. However, they discussed some of the methodological limitations of the studies.
Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction. Cohen's $d$ effect sizes were calculated for each comparison within each study (with positive signs indicating improved depression in the combined treatment group). For studies reporting categorical outcomes, chi-squared values were converted into $d$ scores using Rosenthal's method. Effect sizes were classified using Cohen's standards: 0.0 to 0.49 indicating small effects; 0.5 to 0.79 indicating medium effects; and 0.8 and over indicating large effects.

Methods of synthesis
How were the studies combined?
The studies were combined using meta-analysis. Pooled effect sizes were calculated, weighted by the sample size. The mean effect size of a group of studies was calculated based on the sum of the weight, multiplied by the effect size of each study, divided by the sum of the weights of each study. Separate meta-analyses were conducted for HRSD and BDI outcome data.

How were differences between studies investigated?
Statistical heterogeneity was assessed using the chi-squared statistic. Separate meta-analyses were conducted for completer and intention-to-treat (ITT) populations. Individual studies that reported no significant difference between treatments were discussed.

Results of the review
Seventeen RCTs ($n=2,079$; reported in 20 papers) were included.

Methodological problems included small sample sizes and a lack of evidence that the treatments were delivered in a consistent standardised manner. Most of the studies were conducted 10 to 20 years ago.

Combined treatment versus pharmacotherapy alone. Combined treatment had a small and consistent positive effect in reducing acute symptoms when compared with drugs alone (BDI for treatment completers: $d=0.34$, chi-squared 6.42, based on 5 RCTs; HRSD: $d=0.18$, chi-squared 4.26, based on 5 RCTs). The results were similar for the ITT analysis.

Combined treatment had a moderate and consistent positive effect on recovery rates among treatment completers measured using the HRSD ($d=0.65$, chi-squared 5.35; 5 RCTs). The results were inconsistent when using the BDI ($d=0.61$, chi-squared 19.24, $P<0.001$; 3 RCTs). The effect sizes were smaller when using ITT analyses (HRSD: $d=0.32$, chi-squared 5.76; 3 RCTs). Only one RCT used the BDI for ITT analysis ($d=0.14$).

The combined treatment had a small effect on attrition ($d=0.26$, chi-squared 15.53; 10 RCTs).

Combined treatment versus psychotherapy alone.

The studies showed almost no benefit for combined treatment compared with psychotherapy alone among treatment completers (BDI: $d=0.10$, chi-squared 0.01, based on 2 RCTs). Only one study used the HRSD ($d=-0.05$). Only one study used ITT analysis (BDI: $d=0.08$; HRSD: $d=-0.07$)

Combined treatment had a moderate effect on recovery among treatment completers measured using the HRSD ($d=0.69$, chi-squared 6.88; 3 RCTs), but the effect was smaller when using ITT analysis ($d=0.24$, chi-squared 0.61; 2 RCTs). Studies using the BDI found a small benefit ($d=0.31$, chi-squared 0.89 for completer analysis of 4 RCTs and $d=0.08$ for ITT analysis).

There was little effect of combined treatment on attrition ($d=0.04$, chi-squared 4.85; 8 RCTs).

Authors’ conclusions
Combined treatment was associated with a small benefit on overall symptom reduction and attrition, and a moderate benefit on recovery, compared with single treatment.
CRD commentary
The review question was clear in terms of the study design, intervention and participants. The outcomes assessed included defined measures and undefined outcomes (relapse and recovery rates). By limiting the included studies to those reported in English and only searching two electronic databases, the authors might have missed some relevant studies. No attempts to search for unpublished studies were made. The methods used to select the studies and extract the data were not described, so it is not known whether any efforts were made to reduce errors and bias. While only RCTs were included, the quality of the included studies was not formally assessed although some methodological problems were discussed.

There was insufficient information on the primary studies to judge whether the studies were sufficiently clinically homogeneous to pool: no information was given on the duration of treatment, characteristics of the participants, or the definition of relapse or recovery. The studies were combined in meta-analyses according to outcome measure. Statistical heterogeneity was assessed. However, where found it was not explored. Only point estimates of the results were reported, so the likely range of pooled effect sizes could not be viewed. Owing to the potential for publication and language bias, the lack of a quality assessment and reporting of study characteristics, and the lack of reporting of methodological aspects of the review, the authors' conclusions may not be reliable.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that further research using studies with larger samples, longer follow-up, and a more comprehensive assessment of outcomes is required. They also suggested that research is needed to explore the potential role of the illness cognition model in patients’ experiences with combined treatment.

Bibliographic details

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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.