Effects of cognitive therapy versus interpersonal psychotherapy in patients with major depressive disorder: a systematic review of randomized clinical trials with meta-analyses and trial sequential analyses

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CRD summary
This review concluded that cognitive therapy and interpersonal psychotherapy did not appear to differ in their reduction of depressive symptoms in people with major depressive disorder. Further trials with low risks of bias and error were needed and should report adverse events. This was a well-conducted review with appropriate conclusions and recommendations.

Authors' objectives
To compare the effects of cognitive therapy and interpersonal psychotherapy in the treatment of major depressive disorder.

Searching
The authors searched Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, PsycLIT, PsycINFO and Science Citation Index Expanded, up to August 2010, with no language or publication restrictions.

Study selection
Randomised controlled trials (RCTs) comparing cognitive therapy against interpersonal psychotherapy were included. Participants had to be aged over 17 years with a primary diagnosis of major depressive disorder. Diagnosis had to be by standardised criteria, such as those used by the International Classification of Diseases (ICD) or the Diagnostic and Statistical Manual of mental disorders (DSM). Trials of participants with comorbid psychiatric diagnoses were included, but those of participants with comorbid serious somatic illness, or suffering late-life depression, pregnancy-related depression or depression related to alcohol or drug abuse, were excluded. Cognitive therapy and interpersonal therapy were defined by the authors and could be conducted face-to-face, either individually or in a group, for any duration. Psychodynamic-interpersonal therapy was included in the definition of interpersonal psychotherapy. The primary outcome was the mean value on the Hamilton Rating Scale for Depression (HRSD) and the Beck Depression Inventory (BDI). Adverse events (classified by the authors as serious or non-serious) and quality-of-life measures were recorded. Secondary outcomes were participants without remission (defined as less than eight on the HRSD or less than 10 on the BDI) and participants with suicidal inclination.

The participant mean age ranged from 30.55 to 42, across the trials. The percentage of women ranged from 53 to approximately 72, where reported. The interventions varied from eight to 24 weekly sessions. The therapists' level of experience varied. One trial, with patients with comorbid borderline personality disorder, used psychotherapy as an addition to antidepressants.

Three review authors independently selected relevant trials and any trials that were not selected by all three were discussed.

Assessment of study quality
Risk of bias was assessed for the generation of the allocation sequence, allocation concealment, blinding, intention-to-treat analysis, drop-outs, reporting of outcome measures, economic bias and academic bias. Trials were classified as being at high risk of bias if one or more of the components was categorised as unclear or inadequate.

Data were extracted independently by two authors with disagreements resolved through discussion or consultation with another member of the team.

Data extraction
Mean differences between treatment groups for continuous outcomes, such as depression scales, were extracted along with 95% confidence intervals. Odds ratios and confidence intervals were extracted or calculated for dichotomous
outcomes, such as the numbers in remission.

These data were extracted independently by two authors with disagreements resolved through discussion or consultation with another member of the team.

**Methods of synthesis**
Trial data were pooled in meta-analyses using both fixed-effect and random-effects models. Continuous outcomes were evaluated using mean differences with no adjustment for baseline values. Dichotomous outcomes were evaluated using odds ratios. Accompanying confidence intervals were presented. Tests of interaction were conducted for all subgroup analyses. For the primary outcome measures trial sequential analyses were performed.

**Results of the review**
Seven RCTs were included, with 741 participants. Both interventions were adequately defined in three trials and not adequately defined in four. All trials were assessed as having a high risk of bias due to unclear or inadequate components of quality. Most trials did not report adequate procedures for randomisation and allocation concealment and did not conduct intention-to-treat analyses.

Four trials reporting data at the end of treatment showed no significant differences between groups on the HRSD; the mean difference was -1.02 (95% CI -2.35 to 0.32). Five trials showed no significant differences between groups on the BDI; mean difference -1.29 (95% CI -2.73 to 0.14). There was no significant heterogeneity for either of these outcomes ($I^2=0$). Trial sequential analysis indicated that more data were needed to assess any potential differential effect of treatment. One trial reported results 36 weeks after the end of treatment and found no significant differences between intervention groups. None of the other trials reported data after end of treatment and none reported adverse events.

One trial reported quality of life and found a significant change on two of five factors of the Satisfaction Profile (psychological functioning and social functioning). No significant differences were found on the secondary outcome of participants without remission (seven trials); significant heterogeneity was noted. One trial reported on suicidal inclination and found that two participants in the interpersonal psychotherapy group dropped out due to risk of suicide.

Subgroup and sensitivity analyses did not alter the direction of the main outcome. Two trials could not be included in the meta-analysis as they did not report means and standard deviations. One found significantly better results with cognitive therapy and the other found no significant differences between treatment groups.

**Authors’ conclusions**
Cognitive therapy and interpersonal psychotherapy did not appear to differ in their effects on depressive symptoms, but further trials with low risks of bias and error were needed and they should report adverse events.

**CRD commentary**
This review had defined inclusion criteria for the clinical question. Searching encompassed a range of sources and there were no language or publication restrictions. Study quality was assessed and used in analysing the results. All processes of the review were conducted in duplicate, minimising the potential for bias and error. A meta-analysis was appropriate and the authors conducted both subgroup and sensitivity analysis to assess if their results were robust.

This was a well-conducted review and the recommendations for further research appear to be appropriate, given the limitations of the primary trials.

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

**Research:** Trials with longer follow-up, comparing cognitive therapy to interpersonal psychotherapy, for major depressive disorder, were needed. They should assess quality of life and report outcomes relevant to patients including adverse events and suicide inclination. A better tool than the HRSD might be needed to assess depressive symptoms and the interventions should be adequately defined and described.

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