Problem-solving therapy for depression in adults: a systematic review
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CRD summary
This review concludes that problem-solving therapy (PST) combined with antidepressant treatment is associated with more favourable outcomes than PST alone for the treatment of non-institutionalised adults with depression. Overall, given the differences between studies, the methodological flaws in some studies and the potential for publication bias, the authors' findings should be interpreted with caution.

Authors' objectives
To determine whether problem-solving therapy (PST) reduces depression in non-institutionalised adults.

Searching
PubMed, PsycINFO, and PsycLit were searched from 1967 to March 2006. AgeLine (up to February 2006), Social Work Abstracts (up to December 2005) and Social Science Abstracts (up to January 2006) were also searched. Search terms were reported. Relevant journals were handsearched to identify further trials. Only published studies written in English were eligible for inclusion in the review.

Study selection
Randomised controlled trials (RCTs) assessing the effects of PST on symptoms of depression in depressed non-institutionalised adults (at least 18 years) were eligible for inclusion in the review. Eligible control groups included placebo and other treatments including both pharmacological and psychosocial treatments.

The majority of included studies assessed individual PST therapy. The remainder assessed the effects of group or telephone-based PST. Most interventions lasted at least 12 weeks (range 4 to 52 weeks), with an average of eight sessions delivered over 10 weeks (median 6; standard deviation (SD) 10.24). The majority of interventions were compared with usual care/treatment or placebo; others were compared with waiting-list control, medication (paroxetine, fluvoxamine, amitriptyline), a psychosocial intervention (supportive or reminiscence therapy or psychoeducation) or other interventions such as home-based hospice care. Included participants were mainly Caucasian females. Participant age ranged between 18 and 90 years. The most frequently reported outcome measure was depression severity, usually reported using the Beck Depression Inventory (BDI) or the Hamilton Rating Scale for Depression (HAM-D). Outcomes were most commonly assessed over a period of 52 weeks (range 8 to 52 weeks).

Two reviewers independently assessed studies for inclusion.

Assessment of study quality
Study validity was assessed by two independent reviewers using criteria recommended by the Cochrane Collaboration: use of random allocation; use of a power calculation; adequate description of intervention methods; use of an intention-to-treat (ITT) analysis; description of interventionist training; and description of outcome measures. Each study was awarded either 0 or 1 point per criterion, with the exception of the assessment of study power, where studies were awarded 1 to 3 points. Overall scores ranged from 0 to 10; with studies scoring 6 or more points judged to be of above average quality.

Data extraction
Two reviewers independently extracted the study data. Data were extracted for the main outcome measures along with the time of follow-up assessment and the statistical significance of any differences between intervention and control groups, where reported. Data relating to the inclusion of any minority groups of participants were also extracted.

Methods of synthesis
Due to the variation in interventions and outcome measures, the studies were discussed using a narrative synthesis.
Results of the review
Twenty-two RCTs (n=5,550) were included in the review. Sample sizes ranged from 20 to 1,801 (mean 238.68; SD 371.06). Fifteen out of 22 studies were rated as having above average quality. The most common reason for failing to meet the quality criteria was a lack of ITT data.

Seven studies demonstrated that PST was significantly superior to control (waiting list, usual care or treatment) in reducing depressive symptoms, with effects persisting up to 52 weeks in some cases. Two of the six studies comparing PST with antidepressant therapy (amitriptyline or paroxetine) and placebo found a combination of PST and paroxetine to significantly reduce depressive symptoms at two and 11 weeks. No significant differences were reported between multifaceted PST interventions, paroxetine and placebo therapy. Three of the five studies comparing PST with alternative interventions reported that PST was significantly superior, but one study comparing PST provided to a significant other such as a spouse (PST-SO) and another comparing it with hospice care did not. All five studies assessing multifaceted PST reported significant reductions in depressive symptoms in favour of the intervention group. Significant effects were found in most cases to be maintained for up to 12 months.

Authors’ conclusions
PST combined with antidepressant treatment for non-institutionalised adults with depression is associated with more favourable outcomes in comparison with PST alone.

CRD commentary
This review answers a clear research question supported by appropriate, but sometimes wide inclusion criteria, particularly for participants and outcomes. A number of databases and additional sources were searched, but publication and language bias may be present as only published studies written in English were eligible for inclusion. Attempts were made to reduce the risk of reviewer error and bias when selecting studies, assessing their quality and extracting the data. Criteria used to assess the quality of the studies were reported along with details of the scores for individual studies. The quality of the studies was graded as above average for more than half of the studies and the authors described the evidence as rigorous. However, at least a third of studies had methodological flaws that may have affected the reliability of their findings. The sometimes wide inclusion criteria led to wide variations between the studies, most notably in terms of outcomes and the way in which interventions were performed. This justifiably led the authors to restrict their findings to a narrative synthesis based on overall effects and their statistical significance, although actual effect sizes were rarely reported and the data reported in the text and tables did not always agree. The study data were also mainly restricted to female Caucasians, which the authors rightly suggest may limit the overall generalisability of their findings to other populations. Overall, given the differences between studies, the methodological flaws in some studies and the potential for publication bias, the authors' findings should be interpreted with caution.

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

Practice: the authors stated that future studies should evaluate the effects of PST in other health disorders and in older depressed adults and different ethnic and cultural groups, and compare effects with newer alternative treatments and in settings where social workers are employed.

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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.