Can cognitive-behavioral therapy increase self-esteem among depressed adolescents: a systematic review
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CRD summary
This review assessed the efficacy of cognitive-behavioural therapy (CBT) in improving self-esteem among depressed adolescents aged from 13 to 18 years. This was a generally well conducted review and the authors' cautious conclusion that cognitive-behavioural therapy appeared to be a potentially effective treatment in improving self-esteem reflected the limited evidence presented.

Authors' objectives
To evaluate the efficacy of cognitive-behavioural therapy in improving self-esteem in depressed adolescents (13 to 18 years).

Searching
PsychINFO (1872 to June 2005), CINAHL (1982 to May 2005), EMBASE (1980 to April 2005), MEDLINE (1966 to July 2005), ERIC, ArticleFirst and PapersFirst were searched; broad search terms were reported. References of relevant papers were also checked.

Study selection
Randomised controlled trials (RCTs) or quasi-randomised controlled trials of cognitive-behavioural therapy among participants with a mean age ranged from 13 to 18 that measured self-esteem and depression using standardised scales. The included studies compared cognitive-behavioural therapy with relaxation training, interpersonal therapy or wait-list. A variety of questionnaires were used to assess symptoms of depression and self-esteem; full descriptions of the outcome measures used were reported in the review. Where possible, outcomes were divided into immediate post treatment, short-term follow up (three months or less post treatment), medium-term follow up (three to six months post treatment) and long-term follow up (more than six months post treatment). Included participants were recruited from schools and clinics; individuals were screened and found to be depressed using a variety of measures. Individuals with known learning disabilities, emotional disturbances other than affective disorders or mental retardation and serious suicidal risk, psychotic features, bipolar disorder, organic brain syndrome, marked hyper aggression, need for immediate hospitalisation, currently receiving psychotropic medication or psychotherapy, or legal involvement were excluded.

Two reviewers independently selected papers for inclusion in the review.

Assessment of study quality
Two reviewers independently assessed the methodological quality of the included studies using the following criteria: random allocation, allocation concealment, follow-up and withdrawals, intention-to-treat analysis and blinding of assessors.

Data extraction
It appeared that two reviewers independently extracted data from the included studies. Standardised mean differences (SMD) were extracted for self-esteem and depression (immediate post-treatment). Weighted mean differences (WMD) and 95% confidence intervals (CIs) were calculated for depression and global self-esteem at short-term follow up and academic self-concept post treatment and at short-term follow-up. Authors were contacted where additional information was required.

Methods of synthesis
Where possible, studies were combined in a meta-analysis. Summary estimates were reported as standardised mean differences (using a random-effects model) and weighted mean differences (using a fixed-effect model) with their 95% CIs. Statistical heterogeneity was assessed using the Chi² test and the I² statistic.
Results of the review
Two RCTs were included in the review (n=82). Allocation concealment was unclear in both trials. Drop-out rates were 18.31% to 30%. Neither study performed a power analysis. Intention-to-treat analysis was not used.

No statistically significant between-group difference was found in depressive symptoms at immediate post treatment when cognitive-behavioural therapy was compared to wait list (standardised mean difference 0.75, 95% CI: -0.25 to 1.76, p=0.14; two RCTs, n=55). No evidence of statistical heterogeneity was found. A significant improvement in depressive symptoms was found in one study at short-term follow-up (five weeks) in favour of cognitive-behavioural therapy (weighted mean difference 14.20, 95% CI: 6.20 to 22.20, \(p=0.0005\)).

No statistically significant between-group difference was found in global self esteem at immediate post treatment (standardised mean difference was 0.13, 95% CI: -0.55 to 0.81, \(p=0.71\); two RCTs, n=55) or at short-term follow up (weighted mean difference 2.86, 95% CI: -1.73 to 7.45, \(p=0.22\); one RCT, n=15) when cognitive-behavioural therapy was compared to wait list. No evidence of statistical heterogeneity was found. No significant difference between cognitive-behavioural therapy and wait list was found for academic self concept at immediate post treatment (weighted mean difference 6.01, 95% CI: -4.06 to 16.08, \(p=0.24\); one RCT, n=16). No evidence of statistical heterogeneity was found, but there was a statistically significant effect in favour of cognitive-behavioural therapy at short-term follow up (weighted mean difference 12.41, 95% CI: 3.75 to 21.07, \(p=0.005\)).

Authors’ conclusions
Cognitive-behavioural therapy appeared to be a potentially effective treatment in improving self esteem among adolescents aged 13 to 18 years who were suffering from unhealthy low levels of self esteem. But, due to the limited number of studies further research was required.

CRD commentary
The review addressed a focused question and was supported by clear inclusion criteria. Several databases were searched. It was unclear whether the search was restricted by language and the authors did not attempt to locate unpublished data, so it was possible that the review suffered from language and publication biases. Appropriate steps were taken to minimise error and bias in the selection of studies, data extraction and validity assessment. Appropriate criteria were used to assess the study quality and results were reported. Methods used to pool studies were acceptable and statistical heterogeneity was assessed where appropriate. The authors conclusion is cautious and reflects the limited evidence presented.

Implications of the review for practice and research
Practice: The authors stated that cognitive-behavioural therapy may be a viable alternative to medication if self esteem was at the root of depression.

Research: The authors stated that further research creating and assessing interventions focused on increasing adolescent self-esteem was needed. Future research should include at least a 12-month follow-up period in order to assess the long-term effect on self esteem.

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Record Status
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.