Non-pharmacological prevention of major depression among community-dwelling older adults: a systematic review of the efficacy of psychotherapy interventions
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CRD summary
The review concluded that the results suggested that psychotherapy was a safe and cost-effective method to reduce the public health burden of depression among community-dwelling older adults with subthreshold depression. Given the limited evidence available with a high level of variation, the reliability of the authors’ conclusion is unclear.

Authors’ objectives
To assess the efficacy of psychotherapy interventions in preventing major depression in community-dwelling older adults with subthreshold depression.

Searching
PubMed, PsycINFO, and SCOPUS were searched up to September 2011 for studies published in English; search terms were reported.

Study selection
Randomised controlled trials (RCTs) of interventions to prevent depression, where psychotherapy formed the major arm, in community-dwelling older adults (50 years or older at entry) with subthreshold depression were eligible for inclusion. Depressive symptoms had to be measured with reliable and valid tools to identify participants with subthreshold depression. Major depression was defined according to the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition (DSM-IV, APA 1994) criteria of geriatric psychiatry, including subsyndromal and minor depression.

Included trials were conducted in the USA (including substantial numbers of racial/ethnic minorities) and the Netherlands. Interventions varied between trials. Included trials used cognitive behavioural therapy with different modes of delivery, problem solving therapy, or life review course. One trial included a second intervention group taking medication. Control groups included usual care (two RCTs), waiting list, placebo, and a 20 minute video. The tools used to measure depression symptoms varied (full details were reported, including the validity and reliability of each method). The level of training and qualifications of those administering the interventions also varied. Community settings included senior care service and settings, public housing, primary care, and mental health care. Participant age ranged from over 50 to 75 years and older. Some trials excluded certain patients, such as those with suicide risk, those taking antidepressants, or those with serious cognitive decline. Two trials included patients with dysthemia (mild depressive symptoms for two years) as well as to patients with subthreshold depression.

The authors did not report the numbers of reviewers performing the study selection.

Assessment of study quality
Three reviewers assessed relevant quality data including sampling, power, compliance, missing data, and outcome assessment. Three reviewers independently assigned quality grades using the recommendations grid of the US Preventive Task Force (2010), with discrepancies resolved through discussion. The grid assigned grade 1 to properly designed RCTs. The net benefit of each study was rated as substantive (A), moderate (B), small (C), or zero/negative. The quality of the evidence was rated as good, fair or poor.

Data extraction
The data extracted depended on the type of data reported for each trial, so it varied across trials but included both odds ratios and relative risks with 95% confidence intervals.

Methods of synthesis
A narrative review was provided.
Results of the review

Five RCTs were identified (1,083 participants, range 138 to 415). All trials were quality grade 1 RCTs; one was Good-A; one was Fair-A; two were Fair-B; and one Good-C. Compliance ranged from 57% in an Internet group to 92%. Three trials had low rates of attrition. Most trials handled missing data using some form of multiple imputation. Follow-up was during the interventions and longer, usually at three, six and 12 months from baseline.

Four RCTs reported a significant effect for each RCT with a reduction of depression symptoms of about 50% for intervention versus control groups including: one RCT using problem-solving therapy with social and physical interaction (OR 5.21, 95% CI 2.01 to 13.49); one RCT of stepped care for depressive and anxiety disorders (RR 0.49, 95% CI 0.24 to 0.98); one RCTs of life review versus control (between group effect size d=0.58); and one RCT with a significant difference between Internet cognitive behavioural therapy versus control (p=0.08) but not for group cognitive behavioural therapy versus control. The trial with the smallest effect was the lowest quality trial with the shortest follow-up; the effect size on depression symptoms and mental health function was moderate for the drug intervention group versus placebo, but smaller and slower in onset for the problem-solving therapy group versus placebo.

Results for complete remission and quality of life improvements were reported in one RCT. The authors considered that the varying levels of training and educational attainment of the mental health professionals may have affected the quality of the interventions.

Authors' conclusions

The evidence suggested that psychotherapy was a safe and cost-effective method to reduce the public health burden of depression among older adults with subthreshold depression.

CRD commentary

The review addressed a well-defined question for study design, participants, interventions and the relevant outcome. Relevant databases were searched, but no efforts were made to identify unpublished studies. Only studies published in English were included, so some relevant studies may have been missed. Quality assessment processes were carried out with efforts to reduce error and bias, but it was not reported whether this process applied to study selection or data extraction.

Trial quality was assessed with suitable criteria; it appeared that overall trial quality was adequate to good. The results for individual trials were not clearly reported. One error in the result for stepped care relative risks was made in the text. Relevant trial details were reported, but more details of the trial results were needed since a meta-analysis was not performed, presumably due to trial heterogeneity. There was heterogeneity in trial location, interventions, therapy administrators, outcome measurement, and severity of depressive symptoms. Relatively few trials were identified. Conclusions were made related to safety and cost when the main outcome was depressive symptoms and these two outcomes were not investigated.

The reliability of the authors' conclusions is unclear due to the limited evidence with a high level of heterogeneity.

Implications of the review for practice and research

Practice: The authors stated that the varying training and educational attainment levels of mental health professionals could affect the success of interventions.

Research: The authors stated that future studies should have adequate length and frequency of the interventions and length of follow-up, and ascertain whether booster sessions were needed to extend effects over a longer period. They also stated that cost effectiveness should be investigated.

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