Psychoeducation for depression, anxiety and psychological distress: a meta-analysis

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CRD summary
The review found that brief passive psychological interventions for depression and psychological distress could reduce symptoms, although the effect was typically small. The review was well conducted in most respects, but the authors’ conclusions may require cautious interpretation, due to the small number of included trials, with varying populations and interventions.

Authors' objectives
To evaluate the use of passive psycho-educational interventions for depression, anxiety and psychological distress.

Searching
The Cochrane Library, PsycINFO and PubMed were searched to September 2008. Search terms were reported. Reference lists of systematic reviews and meta-analyses were checked. The search was restricted to published articles in English.

Study selection
Randomised controlled trials (RCTs) that compared passive psycho-educational interventions with no intervention, attention placebo or waiting list control were eligible for inclusion. Participants of any age were eligible, provided they were described as having mood or anxiety disorders, or scored high on symptom rating scales for depression, anxiety or psychological distress. Interventions had to provide information, education or feedback/advice which did not require the recipient to undertake explicit homework or exercises, and which did not deliver any active treatment (e.g. components of psychotherapy). Trials targeting caregivers, or groups with concurrent physical or mental disorders were excluded, as were trials where the sole control was an active or potentially active intervention.

The primary review outcome was change in depression, anxiety or psychological distress score.

Participants in the included trials were adults in community, primary care, college and work settings in Australia, USA, UK and Japan. The included interventions targeted depressive symptoms and disorders, or psychological distress. Interventions included individualised evidence-based information, feedback of test results and/or advice and encouragement. The delivery method included a web-site, emails, letters and leaflets (mostly via a single session). Control groups received an attention-placebo (e.g. a phone call or letter) or no intervention. Some participants in one trial also received medication. Outcomes were measured using various depression rating scales or the General Health Questionnaire, with differing cut-off points (where reported).

Two reviewers independently selected the studies.

Assessment of study quality
Trial quality was evaluated using the Jadad scale, which assessed reported randomisation, double-blinding, and withdrawals or drop-outs. Each trial was awarded a score out of a maximum of 5 points.

The authors did not state how many reviewers conducted the assessment.

Data extraction
Data were extracted in order to calculate standardised mean differences and 95% confidence intervals (CIs). If a trial reported more than one mental health score, the mean effect size for that trial was calculated. Odds ratios (ORs) were calculated for dichotomous measures and converted into effect sizes, using the method of Hasselblad and Hedges (1995). Effect sizes were calculated for both intention-to-treat and completer data. Only immediate post-test outcomes were pooled, as few longer-term data were available.
Two reviewers independently extracted the data, with disagreements resolved by discussion or with a third or fourth reviewer.

**Methods of synthesis**
Trials were combined to calculate pooled effect sizes with 95% confidence intervals, using a random effects model. The pooled analysis was based largely on completer data. Numbers needed to treat (NNTs) were also calculated. Heterogeneity was assessed using the $\chi^2$ and $I^2$ tests.

Subgroup analysis was conducted by type of disorder. Meta-regression was used to explore the effect of variables, such as setting, delivery method and evidence base for the intervention.

Publication bias was assessed using funnel plots and the trim-and-fill procedure (Duval 2000).

**Results of the review**
Four RCTs (five papers) were included in the review (n=694 participants, range 66 to 293). Overall trial quality was deemed adequate; Jadad scores ranged from 2 to 4 out of 5 points. One trial blinded both participants and outcomes assessors. Two trials included intention-to-treat data. Drop-out rates ranged from 4 to 17%. Duration of follow up ranged from one to 12 months.

When RCTs were pooled, intervention groups had a significantly greater post-intervention reduction in depression and psychological distress than control groups, with a small effect size ($0.20$, 95% CI $0.01$ to $0.40$; NNT $9$; four RCTs). There was no significant statistical heterogeneity and no evidence of significant publication bias.

When disorders were considered separately, effects remained significant for depression (effect size $0.26$, 95% CI $0.03$ to $0.50$; NNT $7$; three RCTs), but there was no statistically significant difference between the groups for psychological distress (one RCT).

Findings at longer-term follow-up were inconsistent.

**Authors' conclusions**
Brief passive psychological interventions for depression and psychological distress could reduce symptoms, although the effect was typically small.

**CRD commentary**
The objectives and inclusion criteria of the review were clear. Relevant sources were searched for trials, but the restriction by publication status and language meant that the review was at risk of language and publication biases. Formal testing showed no evidence of publication bias, although the power of the tests was low with so few trials. Steps were taken to minimise the risk of reviewer bias and error by having more than one reviewer independently select the trials and extract the data. It was unclear whether this also applied to validity assessment.

The statistical techniques used to combine the trials and assess for heterogeneity appeared appropriate. Although there was clear potential for bias in the use of completer rather than intention-to-treat data, the authors noted that intention-to-treat data in the included trials appeared similar or more favourable to the intervention than completer data. As the authors acknowledged, there were few trials, most relatively small, with a wide variety of populations and interventions. These factors made it hard to determine the applicability and clinical significance of the review findings. The largest trial was conducted by two of the review authors.

The review was well conducted in most respects, but the authors’ conclusions may require cautious interpretation, due to the small number of trials and their clinical heterogeneity.

**Implications of the review for practice and research**
**Practice:** The authors stated that brief passive psychological interventions for depression and psychological distress...
could serve as an initial intervention in primary care, in the community or in stepped care models, as they can reduce symptoms, are easy to implement, can be applied immediately and by non-professionals, and are not expensive.

**Research**: The authors stated that future RCTs should investigate the effects of passive psycho-education on anxiety. Studies should also investigate which factors influence the overall effectiveness of psycho-education, and explore its potential to reduce suicide rates. Psycho-education may be unsuitable for use as an attention-placebo in RCTs, as its positive effects may reduce the chance of detecting a true effect in the intervention arm of such a trial.

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