Group cognitive behavioural therapy for obsessive-compulsive disorder: a systematic review and meta-analysis

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CRD summary
This review found that group cognitive behavioural therapy or exposure and response prevention therapy were effective treatments for obsessive compulsive disorder. Further studies were needed to compare the effectiveness of group and individual treatment formats. Given limitations in the review process and limitations of the included (mostly non-randomised) studies, the conclusions should be interpreted with some caution.

Authors' objectives
To assess the effectiveness of group cognitive-behavioural therapy (CBT) and exposure and response prevention (ERP) for obsessive-compulsive disorder (OCD)

Searching
PsycINFO, EBSCO host, PubMed, Web of Science and NRR were searched from the first available year to 1 February 2007. Search terms were reported. Reference lists of other reviews and selected articles were consulted for further studies.

Study selection
Eligible studies needed to include participants aged 18 years or above with a primary diagnosis of OCD according to a standardised diagnostic classification system. Interventions needed to be group ERP or group CBT with outcomes reported as means and standard deviations on Yale-Brown Obsessive Compulsive Scale (Y-BOCS). Studies had to include 10 or more participants and be published in peer-reviewed journals in English or German. Studies were excluded if they were limited to patients with only hoarding symptoms or patients with obsessions only. Studies where patients received combined individual and group therapy were excluded, as were those with a treatment duration of more than 20 weeks.

The mean age of the group treatment sample was 36.4 years. Approximately 63% of participants were female. Approximately 54% of participants were receiving pharmacological treatment at treatment onset. Treatment duration ranged from seven to 16 weekly sessions with an average of 11 sessions and each session lasting a mean of 120 minutes. Group size ranged from four to 10 participants with one or two therapists. Comparators included waiting-list controls, pharmacological treatment, individual CBT, group relaxation training and other (including mixed) active treatments. Follow-up ranged from one month to four years (average 12.3 months).

The authors did not state how studies were selected for the review.

Assessment of study quality
Quality was assessed using the Cochrane Collaboration Depression, Anxiety and Neurosis Group (CCDAN) 23-item rating scale to score studies from zero to 46.

Two reviewers were involved in the assessment of studies for the review. Differences were resolved through discussion.

Data extraction
The authors did not state how data were extracted for the review.

Methods of synthesis
Data from the Y-BOCS were considered as primary outcome measures. Standardised weighted mean differences based on Cohen's d were calculated along with 95% confidence intervals (CIs). A random-effects model of meta-analysis was used. Heterogeneity was investigated through Q and I^2 statistics. Fail safe N was calculated to assess how robust the
pooled results were to contrary findings from unpublished studies. Pooled effect sizes (ES) were calculated for all of the studies and for studies in each methodological category: randomised controlled trials (RCTs), controlled studies and before and after open clinical trials. Between-group effect sizes were calculated for comparative studies of either CBT or ERP. All comparisons were based on completer analyses, except for two studies where only intention-to-treat data were available. Where there was noticeable heterogeneity ($I^2$>50%) studies with markedly higher/lower effect sizes were treated as outliers and excluded from sensitivity analyses. Overall pooled mean pre-post effect sizes were calculated for other outcome measures of symptoms of depression and anxiety.

**Results of the review**

Thirteen studies were included in the review (n=828 participants): four RCTs, four controlled studies and five open studies. Sample size varied between 20 and 155 participants. General quality of the studies was low to moderate (mean 22.8 out of a possible 46). The mean quality scores of the RCTs were significantly higher than mean scores of uncontrolled and open trials. The quality rating scores did not correlate significantly with the effect sizes of individual studies.

**Within-group analyses:** Pre-post effect sizes ranged from 0.78 to 1.89 with a weighted statistically non-significant mean of 1.18 (95% CI 0.98 to 1.37) and similar results when grouped by different study methodologies. There was considerable heterogeneity for the whole sample of studies ($I^2$=47.2%, $p=0.02$), mostly because of marked heterogeneity in the open studies ($I^2$=78.9%, $p=0.0008$). Sensitivity analysis that excluded two studies with the highest effect sizes reduced heterogeneity to 0% and overall effect size to 1.04 (95% CI 0.89 to 1.18). Further outcome measures were presented.

**Between-group analyses:** Based on three RCTs, a statistically non-significant mean effect size of 1.12 (95% CI: 0.78 to 1.46) was found with no evidence of heterogeneity. One non-randomised controlled study compared group CBT to group-based relaxation training and found no significant difference between groups. However, differential drop-out was noted with a larger number of relaxation training participants withdrawing from the study. One RCT that compared group CBT to individual CBT showing no statistically significant differences between treatments. Two studies compared group therapy to pharmacological treatment, one of which was randomised and the other had treatment allocated by preference. The pooled non-significant ES was 0.80 (95% CI 0.45 to 1.15) with no significant heterogeneity. Comparison of pooled effect sizes of ERP and CBT showed no statistically significant difference.

**Authors’ conclusions**

Group CBT was an effective treatment for OCD, but further studies were needed to compare the effectiveness of group and individual treatment formats.

**CRD commentary**

This review had defined inclusion criteria for participants, interventions, outcomes and study designs. Searching was based on a range of databases, but was subject to language and publication restrictions that opened up the possibility of language and publication biases. It was unclear whether more than one reviewer was involved in study selection and data extraction to help minimise the introduction of bias and error. Study quality was assessed and the impact of study quality on results investigated. Pooling the whole sample of studies may not have been appropriate given clinical and statistical heterogeneity; however, results were provided for each methodological category. Results were based on completer rates rather than all those who entered the trial. Statistically non-significant mean effect sizes were interpreted as clinically effective.

Given limitations in the review process and limitations of the included (mostly non-randomised) studies, the conclusions should be interpreted with some caution.

**Implications of the review for practice and research**

**Practice:** The authors did not state any implications for practice.

**Research:** The authors stated that further studies were needed to compare the effectiveness of group and individual treatment formats.
Funding
Funded in part by a PhD fellowship.

Bibliographic details

PubMedID
18822090

DOI
10.1111/j.1600-0447.2008.01270.x

Original Paper URL

Indexing Status
Subject indexing assigned by NLM

MeSH
Adult; Cognitive Therapy /methods; Female; Humans; Male; Obsessive-Compulsive Disorder /therapy; Psychotherapy, Group /methods; Randomized Controlled Trials as Topic

AccessionNumber
12009102710

Date bibliographic record published
18/11/2009

Date abstract record published
12/01/2011

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.