Effectiveness of psychological and pharmacological treatments for obsessive-compulsive disorder: a quantitative review

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Authors' objectives
To determine the overall efficacy of treatments for obsessive-compulsive disorders (OCDs), and to determine if certain treatments are more effective than others.

Searching
PsycLIT, MEDLINE, and the reference lists from published material concerning OCD were searched. An issue by issue examination of listed relevant journals was also conducted.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were included if they fulfilled the following criteria: explicit, standardised diagnostic criteria were used to select the participants for inclusion; and reports had to provide outcome measures of OCD symptoms at post-treatment or follow-up. Studies using a crossover design were only included if the outcomes were reported for each group separately before the crossover point. Twenty studies containing comparisons between treatments that only appeared once in the literature were excluded.

Specific interventions included in the review
The interventions were:

- exposure and response prevention procedures (ERP) that involved both daily sessions of deliberate exposure to anxiety-provoking situations, lasting until significant habituation occurs, and strict abstinence from performing rituals;

- therapies with the patient or the therapist determining the course of treatment;

- procedures involving flooding and more gradual exposure, exposures performed in vivo or in imagination;

- other psychological interventions such as relaxation and cognitive therapies (e.g. thought stopping); and

- pharmacological treatment with serotonin re-uptake inhibitors (SRIs; clomipramine, fluvoxamine, sertraline and fluoxetine) or non-serotonergic medications (alprazolam, haloperidol, imipramine, nortriptyline, amitriptyline, clorgyline, desipramine and phenelzine).

Participants included in the review
Adults with a primary diagnosis of OCD, or the former label obsessive compulsive neurosis, were included. Patients who had a concurrent diagnosis of OCD along with the active phase of other disorders were excluded.

Outcomes assessed in the review
The following outcome measures were used to calculate the effect size: Clinical Global Impression of OCD symptoms; Comprehensive Psychopathological Rating Scale OCD subscale; Compulsive Activity Checklist; Dutch Obsessional Compulsive Questionnaire; Leyton Obsessional Inventory; Lynfield Obsessional-Compulsive Inventory; Maudsley Obsessional Compulsive Inventory; NIMH General Obsessive Compulsive Rating Scale; severity of obsessive compulsive symptoms; time spent ritualising. Yale-Brown Obsessive Compulsive Scale total score. The outcomes assessed clinician- and self-rated scales separately. A secondary outcome assessed was the side-effects profile.

How were decisions on the relevance of primary studies made?
The author does not state how the papers were selected for the review, or how many of the reviewers performed the selection.
Assessment of study quality
The author does not state that they assessed validity.

Data extraction
The author does not state how the data were extracted for the review, or how many of the reviewers performed the data extraction. The following data were extracted: the total number of sessions; the number of sessions per week; the total number of hours spent in therapist-guided exposure per week; whether complete or partial response prevention was used; and the drop-out rate. Cohens d-statistic was used to estimate the effect size. When group means, standard deviations and sample size were unavailable, the statistical procedures described by Glass et al. were used (see Other Publications of Related Interest). Where authors described results as 'non-significant' the effect size was estimated to be zero. Hedges’ correction for small sample sizes was applied to all the effect sizes reported. The side-effects profile contrast within a comparison was defined as the difference in the proportion of patients in each group that reported side-effects.

Methods of synthesis
How were the studies combined?
The effect sizes for each mode of assessment were averaged separately for the self-rated and clinician-rated measures.

How were differences between studies investigated?
Correlations were computed to examine the relationship between the effect sizes for the psychological treatment comparisons and the following study characteristics: year of publication; number of participants; pre-treatment duration of OCD symptoms; number of weeks of treatment; total number of hours in therapist-guided exposure; number of hours in therapist-guided exposure per week; total number of sessions; number of sessions per week; degree of response prevention; and drop-out rate.

Correlations were computed to examine the relationship between the effect sizes for the pharmacological treatment comparisons and the following study characteristics: year of publication; average age of the participants; severity of depression in the participants; length of trial; number of professional contacts during the trial; dosage of medication; and the contrast in side-effect profiles.

Results of the review
Thirty-two RCTs studying 37 treatment comparisons were included.

Eight RCTs assessed psychological treatments. The mean number of patients per trial was 34.3 (range: 10 to 63).

Twenty-nine RCTs assessed pharmacological treatment. The mean number of patients per trial was 70.5 (range: 10 to 519).

Psychological treatments.
ERP versus relaxation (2 comparisons): the effect size was 1.18 (standard deviation, SD=0.05, P<0.01).

ERP versus cognitive therapy (4 comparisons): the effect size was - 0.19 (SD=0.13).

ERP versus single components (2 comparisons): the effect size was 0.59 (SD=0.57). The correlation (r) between the effect size and total number of hours spent in therapist-guided exposure, r(8 studies), was 0.87 (P=0.005).

Pharmacological treatments.
All SRIs versus placebo: the patient-rated effect size was 0.71 (SD=0.38, P<0.05); the clinician-rated effect size was 1.09 (SD=0.60, P<0.01). The contrast in the side-effects profile was 0.38.
Clomipramine versus placebo: the patient-rated effect size was 0.66; the clinician-rated effect size was 1.31 (SD=0.47, P<0.01). The contrast in the side-effects profile was 0.54.

Fluvoxamine versus placebo: the patient-rated effect size was 0.37 (SD=0.09); the clinician-rated effect size was 1.28 (SD=0.75). The contrast in the side-effects profile was 0.19.

Sertraline versus placebo: the patient-rated effect size was 1.09 (SD=0.19); the clinician-rated effect size was 0.37 (SD=0.15). The contrast in the side-effects profile was 0.27.

Fluoxetine versus placebo: the clinician-rated effect size was 0.68 (SD=0.66). The contrast in the side-effects profile was 0.11.

Non-SRIs versus placebo: the patient-rated effect size was 0.14 (SD=0.19); the clinician-rated effect size was 0.20 (SD=0.27). The contrast in the side-effects profile was 0.21.

Clomipramine versus non-SRIs: the patient-rated effect size was 0.70 (SD=0.41, P<0.05); the clinician-rated effect size was 0.37 (SD=0.26, P<0.05). The contrast in the side-effects profile was 0.12.

Clomipramine versus other SRIs: the clinician-rated effect size was 0.15 (SD=0.21). The contrast in the side-effects profile was 0.00. The correlation between the side-effects contrast profile and the effect size, r(21 studies), was 0.62 (P<0.01).

**Authors' conclusions**

Exposure with response prevention was highly effective in reducing OCD symptoms. Cognitive approaches were also found to be at least as effective as exposure procedures. Serotonergic medication, particularly clomipramine, also substantially reduced OCD symptoms. However, clomipramine may not be superior to other serotonergic medication.

**CRD commentary**

This was a clearly written and presented review, which included a critical appraisal of recent reviews of obsessive compulsive literature and a discussion of the potential sources of bias in the primary studies. Limited details were given of the literature search. Further information about the primary studies would have been helpful, including the number of patients allocated to each intervention and the results from the individual studies. No comment was made on the comparability or validity of the outcome measures used. No details were given of the methods used to select the studies for inclusion or to extract the data. The review did not include an assessment of either study validity or heterogeneity amongst the studies.

Further information on the primary studies, in addition to an examination of heterogeneity among studies, is required to provide evidence of treatment efficacy.

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

The author suggests that future research should address the following issues: clarification of which SRI is likely to be of benefit in severe cases of OCD; the use of computer-administered interview methods to reduce potential bias of clinicians ratings; the isolation of predictors of response to psychological treatments; and the comparison of medication and exposure with response prevention.

**Bibliographic details**


**PubMedID**

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Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

MeSH
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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.