Effectiveness of psychotherapy for personality disorders

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Authors' objectives
To assess the effectiveness of psychotherapy for personality disorders.

Searching
MEDLINE and PsycINFO were searched from 1974 to 1998, and a supplementary manual search was conducted.

Study selection

Study designs of evaluations included in the review
Studies that reported sufficient data to allow either an estimation of the within-condition effect size, or the determination of the recovery from personality disorder, were eligible. The included studies were randomised controlled trials (RCTs) with a waiting-list or non-specific treatment control, randomised comparisons of active treatments, before-and-after studies, and observational studies. The duration of follow-up ranged from 1 to 62 months (14 studies).

Specific interventions included in the review
Psychotherapy interventions were eligible. The treatment modalities used were dynamic psychotherapy, cognitive-behaviour therapy, supportive psychotherapy, and interpersonal group therapy. The length of treatment ranged from 10 days to 25.4 months. The number of sessions ranged from 12 to 122 (7 studies), while the frequency of sessions ranged from daily for in-patients and day hospital patients, to once or twice weekly for out-patients. Nine studies used treatment explicit manuals, while one study used weekly seminars and therapist supervision to ensure adherence to treatment. Concurrent medication was rarely reported. One study used methadone maintenance and one study used psychotropic medication.

Participants included in the review
Patients who were diagnosed as having personality disorders using systematic methods were eligible. The participants included patients with the following diagnoses: borderline personality disorder (4 studies); largely borderline personality disorder and schizotypal personality disorder (1 study); avoidant (1 study); antisocial (1 study); and mixed types from one to all three clusters of the American Psychiatric Association's DSM personality disorders (8 studies). The participants included patients with axis I disorders (opiate dependence, bulimia nervosa, or major depression), parasuicidal women with borderline personality disorder, and patients with cluster C personality disorders. The severity of illness on the Global Assessment of Functioning Scale, as reported in 4 studies, ranged from 35 to 57. The studies involved out-patients (13 studies), hospitalised patients (1 study) and day hospital patients (1 study).

Outcomes assessed in the review
Studies that used validated outcome assessments were eligible. Self-reports and observer-rated outcomes were examined separately. The most frequently reported self-rated outcome measures were the Symptom Checklist-90-R, target complaints, the Inventory of Interpersonal Problems, and the Beck Depression Inventory. The most frequently reported observer-rated outcomes measures were the Health-Sickness Rating Scale, or the Global Assessment Scale and the Social Adjustment Scale. Two studies measured dynamic change. The proportion of patients no longer meeting the criteria for a personality disorder at follow-up was assessed where the data were reported. Attrition rates were also assessed.

How were decisions on the relevance of primary studies made?
The authors do not state how the papers were selected for the review, or how many of the reviewers performed the selection.

Assessment of study quality
No formal assessment of validity was undertaken.

**Data extraction**
The authors do not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.

The tabulated data included the author, year of publication, and effect size for specified outcomes from 10 studies. For each included study, the study design, patients, treatment duration and outcome measures were described in the text. Within-condition effect sizes were calculated with reversal of signs so that a positive effect size indicated improvement. Where there was more than one patient group, a pooled baseline standard deviation was used (see Other Publications of Related Interest). Data from the longest post-treatment follow-up was selected for the analyses. When studies used multiple outcome measures, the effect size was calculated for each measure separately. The median values for the effect sizes of the self-report and observer-rated measures were then estimated to summarise the individual study's overall effect.

**Methods of synthesis**

*How were the studies combined?*
A pooled unweighted mean effect size and 95% confidence interval (CI) were calculated for self-rated and observer-rated measures of the active psychotherapies and the control conditions separately. The mean percentage and 95% CI of patients recovered were estimated from studies reporting this outcome. Publication bias was assessed by considering the effect of adding one study with a zero difference in effect size between the active treatment and control on the findings for self-rated outcome measures.

*How were differences between studies investigated?*
The mean differences between the treatment groups in observer-rated and self-rated effect size (unweighted and weighted by sample size) were calculated using data from the RCTs. Non-parametric Spearman correlations were used to examine the relationship between the effect size and duration of treatment. Data on recovery from personality disorder were plotted in a simple linear regression against the treatment duration, and the number of treatment sessions, to estimate the percentage of patients in each study group that had recovered.

**Results of the review**
Fifteen studies were included (the number of patients was not reported). There were 3 RCTs, 3 randomised comparisons of active treatments, and 9 uncontrolled observational studies.

The included studies differed with respect to the patient characteristics, severity of illness, treatment modality and duration, study design, attrition rates (range: 0 to 51%) and assessment methods. The drop-out rates were higher for treatments of longer duration (greater than 16 weeks) than for those of shorter duration (16 weeks or less): 29.3% (9 studies) for longer duration versus 8.2% (5 studies) for shorter duration (p=0.004). Concurrent use of medication was rarely reported.

All the studies reported an improvement in personality disorder with psychotherapy.

The mean pre-treatment post-treatment effect sizes were significantly greater than 0. For active psychotherapies, the pooled self-rated effect size (12 studies) was 1.11 (95% CI: 0.88, 1.34; range: 0.54 to 1.74), and the pooled observer-rated effect size (12 studies) was 1.29 (95% CI: 0.78, 1.81; range: 0.34 to 2.51).

For control therapies, the pooled self-rated effect size (3 studies) was 0.25 (95% CI: -0.35, +0.86; range: 0.13, 0.45), and the pooled observer-rated effect size (2 studies) was 0.50 (95% CI: -2.29, +3.29; range: 0.19, 0.81).

Psychotherapy was more effective than no treatment in the RCTs. The mean difference in self-rated effect size weighted by sample size (3 RCTs) was 0.78 (p=0.002). The mean difference in observer-rated effect size weighted by sample size (2 RCTs) was 0.57 (p=0.085).
The correlation (r) between the treatment duration and effect size was negative for self-reported outcomes (N=12; r = -0.46, p=0.13) but positive for observer-related outcomes (N=12, r=0.14, p=0.66). The mean self-reported effect size was greater for shorter-term than for longer-term studies; the mean effect sizes were 1.38 and 0.92, respectively (p=0.02).

Publication bias: the investigation showed that the addition of one study with a zero difference in effect size between the active treatment and the control would diminish the self-rated findings to a trend (p=0.06).

The proportion of patients no longer meeting the criteria for a personality disorder ranged from 30 to 69% in 4 studies using medium- to long-term dynamic or interpersonal therapies. The mean proportion of patients was 51.8% (95% CI: 13.1, 90.4) after a mean of 78 sessions over a mean of 67 weeks. There was no statistically-significant difference between the percentage recovered and the treatment length or the number of therapy sessions.

**Authors' conclusions**

Psychotherapy is an effective treatment for personality disorders, and may be associated with up to a seven-fold faster rate of recovery in comparison with the natural history of disorders.

**CRD commentary**

The aims of the review were stated and the inclusion criteria were defined in terms of the participants, intervention and outcomes. However, information on the methods used to conduct the review was inadequate. The inclusion criteria were not defined a priori in terms of the study design. Two relevant databases were searched but the keywords used were not reported, and no details were given of the manual search. Publication bias was assessed. The methods used to select the studies were not described and validity was not formally assessed.

Some relevant information on the individual studies was presented in the text of the review, but no details were given of the methods used to extract the data. The data were pooled from all studies using within-condition effect sizes; data from the RCTs were pooled separately. Statistical heterogeneity was not assessed although some potential causes of heterogeneity were explored. The data were not analysed on an intention-to-treat basis, and the high attrition rates have affected the results. Some limitations of the review were considered in the discussion. In view of the clinical heterogeneity among the studies, it is not possible to determine which specific therapy is effective in which group of patients. The interpretation of effect sizes based on different outcomes is problematic. The lack of a validity assessment makes it impossible to assess the strength of the evidence presented.

The authors correctly state in the text of the review that their conclusions warrant caution.

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

Practice: The authors state that this review suggests that both psychodynamic and cognitive-behaviour therapies are effective in improving the distress and functioning of individuals with personality disorders. They state that treatments lasting less than one year may be effective for select types, such as some cluster C personality disorders, while the majority of personality disorders are likely to require longer treatments. However, they also state that more research is required to confirm and extend these findings.

Research: The authors state that future studies should examine specific therapies for specific personality disorders, using more uniform assessment of core pathology and outcomes. Recommendations for future studies are listed in the report.

**Bibliographic details**


**PubMedID**
DOI
10.1176/ajp.156.9.1312

Original Paper URL

Other publications of related interest

Indexing Status
Subject indexing assigned by NLM

MeSH
Clinical Trials as Topic; Cognitive Therapy; Follow-Up Studies; Health Status; Humans; Outcome Assessment (Health Care); Personality Disorders /diagnosis /psychology /therapy; Personality Inventory; Psychiatric Status Rating Scales; Psychotherapy; Research Design; Treatment Outcome

AccessionNumber
12002008184

Date bibliographic record published
28/02/2003

Date abstract record published
28/02/2003

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.