Therapeutic community effectiveness: a systematic international review of therapeutic community treatment for people with personality disorders and mentally disordered offenders

NHS Centre for Reviews and Dissemination

Authors' objectives
To review the existing international literature on the nature and effectiveness of therapeutic communities in secure and some non-secure settings.

Searching
Twenty six electronic databases were searched covering journals, books and similar materials, grey literature, conference proceedings, pamphlets and similar materials and research (listed in report). Lists of keywords used and search strategies are also given. Sixty four journals were handsearched for all issues in 1996 and 1997. Reference volumes of current research were searched and key library sites were visited (BMA, Tavistock Centre, Institute of Psychiatry, Institute of Criminology, Prison Staff Service College). The World Wide Web was searched (strategy given in report). Requests were sent to current researchers, authors of relevant articles, interested individuals, government and professional organisations, research institutes and other relevant institutions asking for unpublished research, and a small sample of therapeutic communities were also surveyed for similar information. The reference lists of relevant reviews were also scanned.

Study selection

Study designs of evaluations included in the review
Post-treatment outcome studies. Any short research report or briefing paper was included. Any other articles of less than two pages, short idiosyncratic descriptions and short debates on practice and philosophy were excluded. Included were: process studies, individual client care studies, outcome studies of individual clients or of populations, review articles of outcome studies, cross-institutional studies, cost-offset studies.

Specific interventions included in the review
Secure and non-secure democratic and secure concept-based therapeutic community approaches. Democratic therapeutic communities tend to be aimed at a range of mental illnesses in which substance abuse, if it is present, is considered a symptom rather than the core issue. Concept-based therapeutic communities tend to be aimed exclusively at substance abusers and have structured treatment programmes whereby clients work their way through a succession of phases, ending with re-entry into the wider community and 'graduation' from the programme.

Comparisons were made either with other therapeutic community approaches or with the general prison population; waiting list controls.

Participants included in the review
'Subnormal' male psychopaths (mainly adolescent offenders); mentally ill offenders; boys at a secure reform therapeutic community; people with severe personality disorders; decompensated patients with severely disturbed personality disorders; patients who are described as psychopathic, violent or disruptive; prison inmates who had been released for between seven weeks and four years; male (adolescent) delinquent inpatients aged 13-25 with relatively low IQs; male and female patients with long-standing personality problems (affective and personality disorders); people with borderline personality or personality problems; patients with personality disorders and substance abuse; antisocial adolescents; forensic patients (psychotic offenders, some prisoners and people with socially accentuated psychiatric disorders) in Slovenia; persistent male offenders.

Outcomes assessed in the review
Ability to form satisfactory personal relationships; psychology (basic personal traits and attitudes); levels of aggression; level of disturbance; self esteem; "success"; "improvement"; symptom reduction; being on medication at
discharge; suicide attempts; being transferred to an acute ward; finishing treatment; alienation; purpose in life; hostility; criminality; number of assaults and serious incidents; amount of prison violence (riots, serious assaults, suicides, escape attempts); reconviction; recidivism; employment record post discharge; clinical wellbeing post-discharge; hospital readmission; interaction (COPES scale); changes in core personality disorder symptoms; global functioning; social adjustment; independence; coping with everyday life; satisfaction with employment and social-leisure activities; drug and alcohol problems.

How were decisions on the relevance of primary studies made?
Lists of titles and abstracts were examined by two researchers working independently.

Assessment of study quality
In-treatment and post-treatment outcome studies were categorised according to their position on a research methodology hierarchy. Levels of evidence were assigned using NHSCRD's guidelines (see Other Publications of Related Interest no.1). The authors do not state how the papers were assessed for validity, or how many of the reviewers performed the validity assessment.

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. Data extraction included: institution, diagnostic criteria used, sample characteristics (age, gender and sample size) and additional information, outcome criteria, post-treatment follow-up, treatments compared, instruments used, and results.

Methods of synthesis
How were the studies combined?
A narrative synthesis was given of all 85 studies. Those which included a control group and in which outcome criteria were clear and raw numbers were reported were combined in a meta-analysis (n=29). Odds ratios (OR) for individual studies were calculated with 95% and 99% confidence intervals (CIs) and combined using the Peto method, giving 95% and 99% CIs.

Publication bias was investigated by plotting the OR against sample size in a funnel plot.

How were differences between studies investigated?
Subgroup analyses were undertaken of: RCTs, democratic type therapeutic communities, concept type therapeutic communities, and secure therapeutic communities of either type. No statistical investigation of heterogeneity was reported to have been undertaken.

Results of the review
Ten RCTs, 10 comparative cross-institutional and cross-treatment design, 32 single community studies with control/comparison groups, 29 single community studies with no control/comparison group, 4 cost-offset studies. Numbers of participants in each study is not clear.

Meta-analysis:
All 29 studies OR 0.567 (95% CI: 0.524, 0.614).
RCTs only (n=8) OR 0.464 (95% CI: 0.392, 0.548).
Democratic only (n=21) OR 0.695 (95% CI: 0.631, 0.769).
Secure only (n=22) OR 0.544 (95% CI: 0.498, 0.596).
Concept only (n=8) OR 0.318 (95% CI: 0.271, 0.374).
The authors state that with a summary odds ratio of 0.57 and an upper 95% CI of 0.61, this set of studies gives very strong support to the effectiveness of therapeutic community treatment. A check can be made on this by grouping the studies. Odds ratios calculated separately for the RCTs, and for the democratic, concept and secure types of communities, all show strong results, with upper CIs well below one. It is important to note that the RCTs were scattered across the different types of community. This suggests that there was no one subset of studies that was strongly affecting the overall summary result.

The funnel plot for the meta-analysis did not suggest significant publication bias.

**Cost information**
Three post-treatment cost-offset studies found cost-offsets ranging from £2,579 to £12,659 per patient, however the three did not all measure exactly the same service usages so are not directly comparable.

**Authors' conclusions**
This set of studies gives very strong support to the effectiveness of therapeutic community treatment. ORs calculated separately for the RCTs and for the democratic, secure and concept types of communities all show strong results. It is important to note that the RCTs were scattered across the different types of community. This suggests that there was no one subset of studies that was strongly affecting the overall summary result. On the basis of the positive meta-analysis results, it is suggested that in addition to further RCTs a more complex cross-institutional study is undertaken, together with further cost-offset studies to complement those few already developed.

**CRD commentary**
This review is part of a review of therapeutic community interventions which aims to scope the field at the same time as answering questions on effectiveness, therefore the inclusion criteria for the review are very broad. The approach to scoping the field and subsequently selecting studies is systematic and well described. The literature search was very comprehensive and it is unlikely that any research would have been missed, as seen in the funnel plot. Some details of the review process are given and there is some assessment of validity using levels of evidence, which are then applied appropriately in the meta-analysis. The meta-analysis seems to be appropriate for the studies selected, although the relative risk may have been a better summary estimate than the odds ratio, and the subgroup analyses also seem appropriate. Study details are presented in the report. The authors' conclusions follow from the results.

**Implications of the review for practice and research**
Research: The authors state that evidence on changes produced in peoples' mental health and functioning by therapeutic communities needs to be further complemented by good-quality qualitative and quantitative research studies. Further research on the effectiveness of therapeutic communities for personality disorders is warranted. The efficacy of modified therapeutic communities in prisons in the USA and Germany should be considered for a research-based demonstration programme in the UK. Small research projects should be mounted to identify ways of reducing drop-out rates. A cross-institutional design for a study of therapeutic communities 'in the field' should be undertaken. A review of concept-based therapeutic community literature should be commissioned to complement the current review with a meta-analysis based on the studies found.

**Bibliographic details**

**Original Paper URL**
http://www.york.ac.uk/inst/crd/CRD_Reports/crdreport17.pdf

**Other publications of related interest**
1. NHS Centre for Reviews and Dissemination. Undertaking systematic reviews of research on effectiveness. CRD's

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**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.