Ethnic differences in the treatment of dual mental and substance disorders: a preliminary analysis

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Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

Health technology
Treatment for dual mental and substance disorders.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Patients, aged 18-59, diagnosed as having severe mental illness and severe substance abuse or dependence.

Setting
Community health centre. The study was carried out in the USA.

Dates to which data relate
The dates for the effectiveness data, resources use data and prices were not stated.

Source of effectiveness data
The estimate for final outcomes was derived from a single study.

Link between effectiveness and cost data
The costing was undertaken retrospectively on the same patient sample as that used in the effectiveness analysis.

Study sample
Power calculations did not determine the sample size. The sample consisted of 132 patients who were allocated to the three treatment approaches as follows:

AA/12 step: 39 (white=27, ethnic=12),
Behavioral skills: 48 (white=34, ethnic=14), and
Case management: 45 (white=31, ethnic=14).
Study design
This was a non-randomised controlled trial with concurrent controls carried out in four Health Centers. The period of follow-up was 18 months. The loss to follow-up was not stated.

Analysis of effectiveness
The analysis of the clinical study was based on intention to treat. The primary outcomes were psychological functioning, psychiatric and substance abuse symptomatology. The instruments used to measure these data were a modified version of the Social Adjustment Scale-II (SAS-SMI), and the Role Functioning Scale (RFS) to rate the level of psychological functioning of each subject. The Diagnosis Interview Schedule was used by the C-DIS_R programme, which scored for depression, mania, schizophrenia, alcohol, and drug abuse symptoms. Groups were shown to be comparable in terms of age, gender, diagnosis, 24-hour care days, total role functioning, drug severity score and treatment group.

Effectiveness results
For psychological functioning there were no significant differences across the three treatments for SAS change score (T1-T10) (p=NS) or RFS change score (T1-T10) (p=NS). Social adjustment score and total role functioning score showed ethnic group differences. For the psychiatric and substance abuse symptomatology, psychiatric symptoms were significantly higher in the 12-step group (total psychiatric symptoms: white = 15.17, ethnic = 16.12). For the drug and alcohol symptoms, the rates were lower in the behavioural skills group, especially for the ethnic clients (total drug and alcohol symptoms: white = 4.57, ethnic = 2.62). 95%, 99% and 99.9% confidence intervals and P<0.05, p<0.01 and p<0.001 were used in the analysis.

Clinical conclusions
There were no functioning or symptom outcome differences across the three treatment groups.

Measure of benefits used in the economic analysis
No single measure of benefit was produced by the authors, as the three treatment approaches showed similar effectiveness results. The analysis was, therefore, based on the difference in costs only.

Direct costs
Costs were incurred over a period of 18 months and do not appear to have been discounted. Quantities and costs were not reported separately. Health service costs included costs of supporting interventions (case management hours, outpatients visits, supporting housing days, and service days) and intensive mental health services (inpatient days, skilled nursing days, residential treatment days, and emergency days). Cost of care data was obtained from the local mental health authority's management information and billing system (Public mental health services and private mental health institutions). The price date was not given.

Currency
US dollars ($).

Sensitivity analysis
No sensitivity analysis was performed.

Cost results
For intensive mental health costs, the total cost in the 12-step group was $10,275 (white, $4,452; ethnic, $5,823), in the behavioural skills group was $4,276 (white, $2,195; ethnic, $2,081) and in the case management group was $7,643 (white, $3,325; ethnic, $4,318). For supportive mental health costs, the total cost in the 12-step group was $7,798 (white, $4,702; ethnic, $3,096), in the behavioural skills group was $6,112 (white, $3,533; ethnic, $2,579) and in the...
case management group was $5,970 (white, $3,939; ethnic, $2,031).

**Authors' conclusions**

There were no functioning or symptom outcome differences across the three treatment groups, but the 12-step group had the highest intensive and supportive service costs over time, and also the greatest reductions in intensive service costs after 6 months.

**CRD COMMENTARY - Selection of comparators**

The cost-effectiveness of the three treatment approaches was assessed with no single treatment approach being regarded as the comparator. You, as a database user, should consider whether these treatment approaches represent commonly used health technologies in your own setting.

**Validity of estimate of measure of benefit**

Treatment groups were shown to be comparable in terms of ethnicity, but it is not clear whether they were comparable in the remaining baseline characteristics. Given the non-randomised design of the study and the lack of information concerning the power of the study and the comparability of the treatment groups, the validity of the effectiveness results cannot be guaranteed. More details about the relative effectiveness of the three alternative treatment strategies would have been useful.

**Validity of estimate of costs**

The description of individual cost components could have been more comprehensive. It is not possible to tell whether the cost analysis included actual costs or merely charges. Given the similar effectiveness results of the three treatment strategies, the authors carried out a cost-minimization analysis.

**Other issues**

The authors made appropriate comparisons with other studies. However, cost results may not be generalisable to other settings or countries.

**Implications of the study**

Issues of ethnicity should also be considered in the delivery of health services. "Whenever possible, staff and clients should be ethnically matched", in order to improve clinical outcomes.

**Source of funding**

Supported by a grant from the National Institute of Mental Health (R01-MH46331).

**Bibliographic details**


**PubMedID**

9258857

**Indexing Status**

Subject indexing assigned by NLM

**MeSH**

Adolescent; Adult; Behavior Therapy /economics; Case Management /economics; Cost-Benefit Analysis; Diagnosis,
Dual (Psychiatry); Ethnic Groups /psychology; European Continental Ancestry Group /psychology; Female; Follow-Up Studies; Humans; Length of Stay /economics; Longitudinal Studies; Male; Middle Aged; Outcome Assessment (Health Care); Patient Discharge /economics; Psychotic Disorders /ethnology /rehabilitation; Schizophrenia /ethnology /rehabilitation; Self-Help Groups /economics; Substance-Related Disorders /ethnology /rehabilitation

**Accession Number**
21997007064

**Date bibliographic record published**
30/04/2000

**Date abstract record published**
30/04/2000