Differential effects of manual assisted cognitive behavior therapy in the treatment of recurrent deliberate self-harm and personality disturbance: the POPMACT study

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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
The study compared manual-assisted cognitive-behaviour therapy (MACT) with treatment as usual (TAU) for patients with a history of recurrent deliberate self-harm. MACT took the form of cognitive therapy combined with some aspects of dialectical behaviour therapy. The patients were sent a 70-page manual based on cognitive-behaviour therapy and were then offered 7 treatment sessions with a therapist trained in MACT methods. Patients allocated to TAU were seen by a designated therapist and offered the standard treatment. Standard treatment varied according to area and included problem-solving approaches, dynamic psychotherapy, general practitioner (GP) or voluntary group referral, or short-term counselling. The authors referred to their other papers for further details (Tyrer et al. 2003a, 2003b, see 'Other Publications of Related Interest' below for bibliographic details).

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Patients were recruited to the study if they had repeated self-harm episodes. Other inclusion criteria were that they gave informed written consent, did not require inpatient psychiatric treatment, did not have a psychotic disorder or bipolar disorder, and did not have a primary diagnosis of substance dependence. For further details see Tyrer et al. (2003a, 2003b).

Setting
The setting was primary and secondary care. The economic study was carried out in the UK.

Dates to which data relate
The effectiveness data were collected between May 1998 and April 2000. The resource use data were collected between 1999 and 2000. The price year was unclear, although the reader was referred to Byford et al. 2003 (see 'Other Publications of Related Interest' below for bibliographic details).

Source of effectiveness data
The effectiveness data were derived from a single study.

Link between effectiveness and cost data
The costing was undertaken prospectively on the same patient sample as that used in the effectiveness study.
Study sample
The sample size was determined in the planning phase of the study to ensure a 90% power of detecting a true reduction (from 45 to 30%) in the proportion of patients with a parasuicide event in the 12-month follow-up period. To achieve this 420 patients were required. The patients were selected after presenting at an accident and emergency centre following a self-harm episode. A total of 480 patients were randomised, 239 to MACT and 241 to TAU. Of the 239 patients randomised to MACT, 5 (2%) did not receive the booklet and a further 90 (38%) received the booklet but did not attend any therapy sessions. Their treatment comprised only of the booklet.

Study design
This was a randomised controlled trial that was conducted in five major centres. Randomisation was stratified by centre and baseline parasuicide risk score. The follow-up was at 6 and 12 months. From the 239 patients randomised to receive MACT, there were follow-up data on 211 at 6 months and 199 at 12 months. From the 241 patients randomised to TAU, there were follow-up data on 212 at 6 months and 203 at 12 months.

Analysis of effectiveness
The analysis of the clinical data was not based on all of those entered into the study, but was based instead on those for whom there were complete data on parasuicide events over the 12-month follow-up period. The primary health outcome used was the proportion of patients who had a repeated self-harm episode during the 12-month follow-up. Other outcomes included the number of suicides, the number of deliberate self-harm episodes and time to first episode. No information was given on the baseline characteristics of the two groups, the reader being referred to the studies by Tyrer et al. (2003a and 2003b).

Effectiveness results
There was no significant difference between those repeating self-harm in the MACT (39%) and TAU (46%) groups, (p=0.2). The frequency of self-harm episodes was less in the MACT group (1.94) than in the TAU group (4.14).

There were 2 suicides in the MACT group and 5 in the TAU group.

Based on information from 400 patients, those allocated to MACT were slower to repeat than those allocated to TAU. The mean period for 25% of the population to repeat was 222 days in the MACT group versus 169 days in the TAU group. These differences were not statistically significant, (adjusted p=0.214).

Severity and type of personality disorder influenced the repetition of self-harm. The difference in time between the two groups for 25% of the population to repeat was 30 days in those with no personality disorder. This increased to 103 days in those with personality disorder. The rate of repetition was approximately twice as high among those with personality disorders at the 6-month follow-up.

Clinical conclusions
The results showed no significant difference in the proportion of those repeating self-harm 12 months after randomisation. There were, however, fewer episodes of self-harm and fewer suicides among those receiving MACT.

Measure of benefits used in the economic analysis
As there was no summary health benefit measure, a cost-consequences analysis was performed.

Direct costs
Discounting was not relevant as the costs were incurred during less than 2 years. A broad perspective was adopted, which included hospital service costs, community health services and other public-sector providers. Information was collected in interviews using a modified version of the Client Service Receipt Inventory (Beecham & Knapp, 1992). Very limited information on costing methodology was provided in this paper, and the reader was referred instead to
Byford et al. 2003. The costs and the quantities were not reported separately. The price year was unclear.

**Statistical analysis of costs**
Statistical analyses using the test of interaction and analysis of variance were reported. However, limited information on the costing methodology was provided in this paper and the reader was referred instead to Byford et al. 2003.

**Indirect Costs**
Discounting was not relevant as the costs were incurred during less than 2 years. The authors stated that productivity losses resulting from time off work due to illness were calculated, but very limited information on costing methodology was presented in this paper. The reader was referred instead to Byford et al. 2003.

**Currency**
UK pounds sterling (£).

**Sensitivity analysis**
It was not stated whether any sensitivity analysis was conducted, but the reader was referred to Byford et al. 2003.

**Estimated benefits used in the economic analysis**
See the 'Effectiveness Results' section.

**Cost results**
The authors stated that the total costs of MACT were 10% cheaper than TAU.

The total costs were significantly greater in those with personality disorder in the year of follow-up than in those without personality disorder, 15,081 (standard deviation, SD=8,201) versus 12,985 (SD=4,508), (p=0.004)).

These costs were reduced in those allocated to MACT among patients with personality disorders other than borderline personality disorder and were significantly cheaper than TAU, (p=0.06). However, patients with borderline personality disorder who received MACT had higher total costs than those receiving TAU, 16,144 (SD=7,140) versus 14,185 (SD=4,932)).

**Synthesis of costs and benefits**
Not relevant since a cost-consequences analysis was conducted.

**Authors' conclusions**
Although manual-assisted cognitive-behavioural therapy (MACT) did not result in a significantly lower proportion of patients repeating self-harm in comparison with treatment as usual (TAU), it may be of some public health value. It was found to be cheaper than TAU, and it also led to fewer episodes of self-harm and was associated with fewer suicides. Preventing self-harm cost-effectively through MACT appears, however, to be limited to those that do not have borderline personality disorder.

**CRD COMMENTARY - Selection of comparators**
The authors justified the choice of the comparator (TAU) on the basis that it was the standard treatment in the UK. It is clear, however, that the standard treatment varies according to geographical area. The reader must decide if the comparator is relevant to their own setting.
Validity of estimate of measure of effectiveness
The effectiveness data was derived from a randomised trial. Very few details on the study design were given as the authors referred to another paper detailing the methodology (Tyrer et al. 2003a). Although the sample size was based on power calculations, it was unclear whether all of those entered into the study were included in the analysis.

Validity of estimate of measure of benefit
The authors did not derive a measure of health benefit. The analysis was therefore categorised as a cost-consequences study.

Validity of estimate of costs
Very limited information on the costing methodology was provided in this paper. Also, the internal validity of the analysis would have benefited had more information been provided on what resources were included in the costs. It is likely that details were given in the Byford study. Discounting was not necessary, as the costs were incurred during less than 2 years, and was not applied. The costs and the quantities were not reported separately, which may limit the reproducibility of the results. The price year was unclear and this limits the generalizability of the results.

Other issues
The authors made appropriate comparisons of their results with the findings from other studies. The issue of generalisability to other settings was not addressed in this paper. Although the standard treatment varied according to area, it was unclear whether the results differed according to the nature of the standard treatment, or whether the impact of MACT varied across different areas. Without baseline information, it is unclear whether the findings are generalisable across different populations. The authors’ conclusions reflected the scope of the analysis. The authors reported as a main limitation of the analysis the fact that the study did not give clear information on the place of cognitive-behaviour therapy in the condition.

Implications of the study
The authors concluded that MACT may be of some public health value in treating those who recurrently deliberate self-harm, but mainly to those who do not have borderline personality disorder. The authors suggested that improving the take-up of the treatment and its intensity are possible strategies to enhance the results.

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Other publications of related interest


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