Promoting self-change with alcohol abusers: a community-level mail intervention based on natural recovery studies

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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
Patients with alcohol problems were given personalised feedback by post to help them reduce their alcohol consumption. This motivational enhancement/personalised feedback (MEPF) consisted of advice describing their drinking levels, high-risk situations and motivation for change. Another comparator group of alcohol abusers were given two pamphlets with information on alcohol and guidelines for low-risk drinking, also by post. This was described as bibliotherapy/drinking guidelines (BDG). The problem drinkers were recruited by an advertising campaign using the media, which ran for one year. Screening was conducted by telephone and there was no face-to-face contact between the alcohol abuser and staff working for the "Promoting Self Change Project" that ran the programme.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
The study population comprised people with a drinking problem who had never had formal treatment or help for this problem. To qualify for inclusion in the study, the drinkers had to consume on average more than 12 drinks (1 drink = 13.6 g of absolute alcohol) per week, or 5 or more drinks on 5 or more days in the past year. The drinkers had to be at least 19 years old, the legal drinking age in Ontario, Canada.

Setting
The setting was community care. The economic study was carried out in the metropolitan area of Toronto (ON), Canada.

Dates to which data relate
The dates to which the effectiveness evidence and resource use data related were not reported. The price year was not reported. Note: the authors have informed us that the study was conducted during the period Sep 95 to Aug 98 and that the cost data were derived from the same period.

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

Link between effectiveness and cost data
The same patients provided both the cost data and the effectiveness data.
Study sample
No power calculations were reported. There was no sample selection, as all drinkers who participated in the study and satisfied the inclusion criteria were included. Originally, 2,434 people volunteered to participate in the programme, but 678 (27.9%) were found to be ineligible after the initial screening. Of the 1,756 drinkers subsequently sent assessment questionnaires, 743 (42.3%) did not return them and, of the 1,013 who did return them, 188 (18.6%) did not participate in the programme. Therefore, a total of 825 alcohol abusers were included in the analysis. Four hundred and fourteen participants were randomly assigned to the MEF group and 411 to the BDG group. The mean age in the study sample was 47.5 (+/- 11.8) years and 33.1% were females.

Study design
This was a randomised controlled trial. The follow-up took place 12 months after the information on drinking was sent to the participants. Of the 825 participants, 657 (79.6%) were available for follow-up (321 in the MEPF group and 336 in the BDG group). Of those not located for follow-up, 59 were lost to follow-up, while 102 refused or withdrew from the follow-up.

Analysis of effectiveness
The basis of the analysis was treatment completers only. There was no significant difference between the MEPF and BDG groups in terms of demographic and alcoholic-related variables. The following variables were used to measure the success of the programmes:

- the mean number of days drinking per week;
- the percentage of days drinking per week in the past year;
- the mean number of drinks per drinking day;
- the mean number of drinks per week;
- the mean number of days drinking 5 or more drinks during the past year;
- the mean alcohol consequences in the past year; and
- the percentage of patients who underwent alcohol treatment in the past year.

Changes in the above variables before and after the intervention started were also calculated.

Effectiveness results
There was no significant difference between the BDG and MEPF groups in any of the variables that were measured, (p<0.05).

Both groups showed significant reductions in alcohol consumption during the year following the intervention. For example:

- the mean number of drinks per week in the past year went from 31.7 (standard deviation, SD=19.6) to 22.0 (SD=17.1) in the MEPF group, and from 30.8 (SD=16.3) to 22.2 (SD=16.4) in the BDG group; and
- the mean number of days drinking 5 or more drinks during the past year went from 159.8 (SD=115.5) to 102.8 (SD=115.4) in the MEPF group, and from 161.1 (SD=112.9) to 111.5 (SD=115.3) in the BDG group.

The multivariate analysis showed that time had a significant effect on all measures of drinking, (p<0.05).

Clinical conclusions
Both kinds of intervention were shown to be equally effective in reducing alcohol consumption for problem drinkers.

**Measure of benefits used in the economic analysis**
No summary measure of benefits was produced. The authors, in effect, carried out a cost-consequences analysis.

**Direct costs**
No discounting was carried out as the costs were incurred during less than 2 years. The authors outlined the main costs that were used to derive the cost estimate. These were the wage and fringe benefit costs of a research assistant, the costs of preparing and posting the materials, telephone costs, and advertising costs. However, they did not itemise these costs, or break them down into prices and quantities. No price year was reported. The costs were derived from actual data.

**Statistical analysis of costs**
No statistical analysis of the costs was carried out.

**Indirect Costs**
No indirect costs were included.

**Currency**
US dollars ($).

**Sensitivity analysis**
No sensitivity analysis was carried out.

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

**Cost results**
The authors gave the costs per participant without distinguishing between the interventions received. Thus, the cost of the intervention was implicitly compared with the cost of no intervention. The authors gave a range of cost estimates depending on whether they included all the people who initially responded to the advertisements, or only those people who completed their assessment materials. The costs ranged from $45.56 to $96.98 per participant.

**Synthesis of costs and benefits**
The costs and benefits were not combined as the study was, in effect, a cost-consequences analysis.

**Authors' conclusions**
Both types of intervention studied were effective in reducing the alcohol intake of problem drinkers and were associated with a low cost per patient.

**CRD COMMENTARY - Selection of comparators**
The authors stated that they compared two kinds of "distance intervention", both using advertising, telephoning and postal services, but they also implicitly compared these types of intervention with a do nothing approach, which was chosen to represent current practice in many settings. However, they did not have a sample of problem drinkers for whom nothing was done over the study period in order to make the conclusions valid. Note: since this abstract was
written we have been informed by the authors that, for ethical reasons it was not possible to use a true "do-nothing" control. However, they state that "the control group used was as close to do nothing as would be allowed ethically".

Validity of estimate of measure of effectiveness
The source of the effectiveness data was a single study. The study design was appropriate for comparing the two kinds of "distance intervention", but was not appropriate for comparing them with a do nothing approach. The initial study sample was representative of the study population, but there was a significant dropout rate. The study sample was reported to have been similar to samples in prior studies of brief interventions. The patient groups were shown to be comparable at analysis. The validity of the effectiveness analysis was limited since a do nothing group was not compared and the method of sample selection was not reported. Also, a sensitivity analysis on the health outcomes was not performed. The fact that the outcomes were analysed for treatment completers only represents the main drawback to the study.

Validity of estimate of measure of benefit
The authors did not derive a summary measure of health benefits. The study was, in effect, a cost-consequences analysis. The health benefits were therefore those associated with the effectiveness outcomes.

Validity of estimate of costs
The authors did not explicitly report a perspective with regard to the costs. Thus, it is not possible to assess whether all the relevant categories of costs were included in the analysis. Although the authors stated that the study sample had had few alcohol-related hospitalisations or arrests, including the costs of these might well have reduced further the costs of the interventions under study. The authors did not separately cost the two types of intervention studied. The costs and the quantities were not presented separately, which makes the generalisability of the cost results to other settings difficult. The resource use quantities were taken from a single study and were very broadly defined, while the prices were taken from the authors' setting. No other sources were used. In addition, there were no statistical or sensitivity analyses of the quantities or prices. These facts limit the interpretation of the results. The price year was not reported, which will prevent any possible inflation exercises.

Other issues
The authors compared their results with those of other studies. They were concerned with the generalisability of their effectiveness results, and pointed out that their study sample was nearly all white and did not include problem drinkers who had already had treatment or self-help. However, they were not concerned with the generalisability of the cost results. The authors did not present their results selectively and their conclusions reflected the scope of the analysis. It would have been very helpful had the authors attempted to cost the two kinds of intervention separately, as one of the aims of the paper was to provide evidence for choosing between the two interventions. It can be safely assumed that the costs of non-individualised information would be lower. Hence the cost of this intervention would be lower still in comparison with the benefits of reduced alcohol consumption. The authors did not report any further limitations of their study.

Implications of the study
Despite the limitations highlighted, the authors' results show strong evidence that low-cost confidential information posted to problem drinkers, who were recruited via the media, can reduce their alcohol consumption.

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