Behavioral self-control training for problem drinkers: a meta-analysis of randomized control studies

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Authors' objectives
To test the overall effectiveness of behavioural self-control training for problem drinking.

Searching
PsycLIT was searched from 1984 to 1997 for studies published in the English language, using the following keywords: 'behavioural self-control (training)', 'self-control (training)', 'controlled drinking', 'harm reduction' and 'moderation management'. The reference lists of the identified papers were also examined for further references.

Study selection
Study designs of evaluations included in the review
Randomised controlled trials (RCTs) were included.

Specific interventions included in the review
Behavioural self-control training. Studies that compared this to a control were eligible for the review. In the studies included in the review, the control was one of the following: abstinence training; standard programme; education; no contact; information; coping skills; waiting-list controls; counselling; or self-monitoring only.

Participants included in the review
Alcoholics, drunk drivers or problem drinkers were included.

Outcomes assessed in the review
The outcome measures were divided into those assessing the volume of alcohol consumption and those documenting alcohol-related difficulties. Owing to the existence of multiple outcome measures, 49 distinct drinking-related effect sizes were calculated for the 17 investigations. In studies incorporating conceptually similar outcome measures or follow-ups that varied by less than 6 months, the measure or follow-up producing the median effect size for that particular group was selected.

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

Assessment of study quality
Only RCTs were included in this review. No further assessment of validity was performed.

Data extraction
The author does not state how the data were extracted for the review, or how many of the reviewers performed the data extraction.

The categories of data extracted included: author; year; populations and numbers; outcome measure; the length of follow-up; mean scores; and the effect size and its standard error. The effect sizes for continuous outcome measures were calculated using the standard mean difference statistic (details provided in the paper). The effect sizes for categorical outcome measures were calculated from odds ratios constructed from 2x2 tables, and converted to the standard mean difference statistic (details provided in the paper).
Methods of synthesis
How were the studies combined?
The pooled estimates of effect size were calculated using the formulae provided by Hedges et al. (see Other Publications of Related Interest). The effect sizes for continuous outcomes and categorical outcomes were pooled separately. A fixed-effect model was used.

How were differences between studies investigated?
Heterogeneity across all 17 studies was tested by calculating the Q statistic.

Results of the review
Seventeen studies (approximately 1,118 participants) were included.

There was no statistically-significant heterogeneity across the included studies. The fixed-effect model yielded a combined effect size for the entire sample of 17 studies of 0.33 (standard error 0.08), which was of sufficient magnitude to reject the null hypothesis of no relationship between behavioural self-control training and outcome (Z>1.96). Behavioural self-control training was superior to no intervention or alternative non-abstinence-orientated interventions, but was not statistically significantly better than abstinence-programmes. Additional analyses found behavioural self-control training to be equally effective for use with alcohol-dependent and problem-drinking individuals, and for follow-ups spanning several months to several years.

Authors’ conclusions
Compared with no treatment and non-abstinence-orientated interventions, behavioural self-control training for problem drinkers succeeded in reducing the amount of alcohol consumed and the degree to which a person experienced drinking-related difficulties.

CRD commentary
This systematic review addressed an appropriate question and used well-defined inclusion criteria for the participants, intervention and study design. The search for relevant studies utilised only one electronic database and was limited to English language studies. Thus, it is possible that some relevant studies will have been missed by the reviewers. The quality of studies included in the review was reasonable in that only RCTs were included in this review. However, no further assessment of the quality of the studies was attempted. The outcomes included in the review were varied and, therefore, were converted into generic effect sizes, thus enabling a meta-analysis to be performed. There was no statistical heterogeneity but clinical diversity between the studies for other aspects, particularly outcomes, was not discussed.

The author’s conclusions appear to be justified based on the evidence presented. However, they should be accepted with caution on account of the possibility of missed studies, the small overall sample sizes, and the diverse outcomes and participants included in this review.

Implications of the review for practice and research
Practice: The author did not state any implications for practice.

Research: The author states that ‘Further research into the relative benefits of abstinence programmes and behavioural self-control training requires larger-scale studies with longer-term follow-ups and outcome measures that are clinically relevant and reliable’.

Bibliographic details
**Other publications of related interest**

**Indexing Status**
Subject indexing assigned by CRD

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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.