Peer-led and adult-led school drug prevention: a meta-analytic comparison

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Authors' objectives
To examine the relative effectiveness of peer-led and adult-led drug prevention programmes.

Searching
MEDLINE and PsycLIT were searched and the references of the included studies and selected reviews were checked.

Study selection
Comparative designs of any design were eligible for the review. Of the included studies, 11 out of 12 were randomised. Randomisation was conducted at the school or class level, whereas analysis was at the individual level.

Specific interventions included in the review
Only studies of school-based drug prevention programmes were eligible for inclusion. To be included, the study had to compare a school-based programme run by peers with the same programme run by an adult (teacher, clinician or other adult). Some of the included studies involved a third programme led by an expert. The peers were either of the same age or older. In some studies the peers led the intervention, in others they assisted the adults, but in most their exact role and details of any training they had received was unclear. The content of the interventions varied. Most focused on preventing the use of tobacco, but some also included the prevention of alcohol or marijuana and one study targeted alcohol use only.

Participants included in the review
The inclusion criteria for the participants were not stated explicitly. Since the interventions had to be school based, the participants were all school students, mostly grade 7; one study targeted grade 11 and 12 smokers. Whilst not stated, it appears that the remaining studies included a general student population selected by grade or age only. The vast majority of the studies were conducted in the USA.

Outcomes assessed in the review
The specified outcome measure was substance use, with at least a pre-test post-test measure. The timing of the post-test assessments ranged from one month to three years. Other measures of the effect of the intervention, such as knowledge, attitudes or skills, were not used in the review.

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
Studies were assessed on a range of methodological criteria. The author does not state how the validity assessment 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 outcome measurements from the individual studies were converted into a generic effect size. In this review the effect size $d$ was calculated by dividing the difference in the average scores of the peer- and adult-led interventions (peer-led minus adult-led) by the average of their standard deviations.
Methods of synthesis

How were the studies combined?
The calculated effect sizes were combined in a meta-analysis using a random-effects model. Pooled estimates of effect were calculated for all substance use, post-test and at one and two years; for tobacco use, post-test and at one and two years; for peer versus teacher, post-test and at one year; and for peer versus expert, post-test and at one and two years.

How were differences between studies investigated?
The high level of diversity between the included studies was largely ignored, except that a random-effects model for the meta-analysis was selected rather than a fixed-effect model. Heterogeneity was tested for by calculating the Q statistic. The high degree of heterogeneity identified was discussed in the text.

Results of the review

Twelve studies (n=12,400) were reviewed.

Despite the enormous diversity of the identified studies they were included in a meta-analysis. The results of the meta-analysis for all substance use indicated that peer-led interventions were more effective than adult-led interventions at post-test (d=0.24; z=2.65; p<0.1), but not at the one-year follow-up (d=0.16; z=1.41; p not significant) or two-year follow-up (d=0.08; z=1.18; p not significant). Comparisons of effects on tobacco use only gave similar results.

Authors’ conclusions

Peer-led programmes were somewhat more effective than adult-led interventions but, overall, it is not so much the leader, be it peer, teacher or expert, that is the decisive factor in the effectiveness of the drug prevention programme. The authors further concluded that the effectiveness of such programmes is determined by multiple factors such as the contents of the programme, the number of sessions, the use of booster sessions, age group, and the interaction between students during the sessions.

CRD commentary

The review was conducted reasonably well, although the inclusion criteria were rather general, thus permitting the inclusion of a diverse group of studies. The literature search was adequate, although studies may well have been missed. Details of the conduct of the review were limited. The meta-analysis presented did not take into account the wide diversity of the interventions studied, nor the high degree of heterogeneity identified between them. Thus, the authors' conclusions regarding the relative effectiveness of peer-led and adult-led interventions can only be accepted with caution. In addition, the more general conclusions about other important factors may well be true, but were not derived directly from the present review.

Implications of the review for practice and research

The author did not state any implications for further research and practice.

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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.