The effectiveness of school-based curriculum suicide prevention programs for adolescents

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Authors' objectives
To summarise the evidence about the effectiveness of school-based curriculum suicide prevention programmes for adolescents.

Searching
MEDLINE, CINAHL, PsycINFO, and the Social Sciences Index were searched online from 1980 to June 1, 1998. The keywords used were 'adolescents' and 'suicide prevention', 'stress management', 'depression', 'community mental health' and 'evaluation'. The Public Health Effectiveness database was also searched. Eighteen key public health and adolescent-related journals were handsearched from 1990 to 1998. These included the American Journal of Health Promotion, Journal of Adolescence, Journal of Adolescent Health Care, Journal of School Health, Public Health Nursing, Suicide and Life-Threatening Behavior, and the Canadian Journal of Public Health. Relevant references (1980 onwards) from each article were identified, retrieved and reviewed. To be included, the studies had to be published in a peer-reviewed journal.

Study selection
Study designs of evaluations included in the review
Prospective studies with a control or comparison group, including before-and-after studies, were eligible for inclusion. The actual studies were published, peer-reviewed, prospective studies with a comparison group; there were no randomised trials.

Specific interventions included in the review
To be included, the studies had to evaluate a school-based curriculum suicide prevention programme for adolescents and describe an intervention within the scope of public health practice. The interventions used in the studies involved suicide education and general coping skills training. The intensity and duration of the sessions ranged from a single 1.5-hour session to 180 sessions of 55 minutes each held over 2 semesters or 10 months. The intervention was most commonly provided by regular school teachers with additional training, followed by school counsellors or social workers, mental health specialists, and a school nurse. The intervention location was always the high school.

Participants included in the review
To be included, the studies had to evaluate a school-based curriculum suicide prevention programme for adolescents. The actual participants were students (pupils) from Grades 8 to 12, including sophomore high school students.

Outcomes assessed in the review
To be included, the studies had to provide information on client-focused outcomes and/or cost. The outcomes were classified into five categories. The most commonly measured outcomes included those in the categories of knowledge, attitudes or intentions (89%), mental health status and development (56%), satisfaction with programme (33%), health risk behaviours (22%), and social health indicators (11%). Six of the nine studies measured outcomes within one month of the intervention. The remaining three studies measured outcomes at 10 weeks, 5 to 10 months and 18 months of the intervention.

How were decisions on the relevance of primary studies made?
Two independent reviewers rated the articles for quality. Any differences in ratings were discussed; consensus was reached on all ratings.

Assessment of study quality
The relevant articles were rated for quality using a quality assessment tool, which had been developed, pre-tested and modified. The tool assessed the following criteria: selection bias, i.e. representativeness of the sample and percentage of
selected individuals who agreed to participate; study design; control for confounders; blinding of outcome assessors and study participants; reliability and validity of data collection methods; and withdrawals and drop-outs. Each of the 6 criteria was rated as 'strong', 'moderate' or 'weak' according to pre-established guidelines, and each study was then assigned a global rating of 'strong', 'moderate' or 'weak'. For the 'strong' category, there had to be a minimum of 4 criteria rated as 'strong' and no 'weak' ratings. For the 'moderate' category, there could be less than 4 'strong' ratings and a maximum of one 'weak' rating. A 'weak' rating meant that 2 or more criteria were rated 'weak'. Two independent reviewers rated the articles for quality. Any differences in ratings were discussed; consensus was reached on all ratings.

Data extraction
Details of the data extraction were reported in a previous review (see Other Publications of Related Interest).

Methods of synthesis
How were the studies combined?
The studies were combined narratively.

How were differences between studies investigated?
Differences between the studies were investigated in terms of the outcomes and quality.

Results of the review
Nine controlled studies were included.

Evidence from five studies indicated that programmes might improve suicide-related knowledge and attitudes, in addition to mental health indicators such as perceived stress, reduced anger and increased self-esteem. When findings from four less rigorous studies were taken into account, negative programme effects were identified, especially for males who may be at higher risk for suicide. Thus, the evidence indicated mixed results with both significant and non-significant impact on the outcomes of suicide risk behaviours and suicide-related knowledge and attitudes. Furthermore, the evidence indicated both beneficial and harmful effects of the programmes. Some studies indicated detrimental effects of the programmes on suicide-related attitudes, hopelessness and coping, particularly among males who are at greater risk of suicide.

Authors' conclusions
The findings of this review indicated that there is currently insufficient evidence to support school-based curriculum suicide prevention programmes for adolescents. The literature suggests that more broadly based comprehensive school health programmes should be evaluated for their effectiveness in addressing the determinants of adolescent risk behaviour.

CRD commentary
This was a methodologically sound review from which reasonable conclusions were drawn. The review question was formulated clearly, and the study inclusion criteria were appropriate. The search was adequate, though unpublished studies were excluded, as were non-English language and non-Canadian based studies. The included studies were assessed for methodological quality against predefined criteria.

The conclusions are appropriate given the results.

Implications of the review for practice and research
Practice: The authors state that there is insufficient evidence to support a school-based curriculum suicide prevention programme for adolescents.

Research: The authors state that further research is warranted. This should evaluate the following: the impact of
comprehensive school health programmes, of which curriculum-based interventions may be a part, on the health of adolescents; the effect of curriculum programmes on actual suicidal behaviour such as suicide attempts or completions; interventions that effectively target specific groups of adolescents; and programming tailored to adolescents, in particular males, who have been identified as high-risk for suicide.

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