A systematic overview of the effectiveness of public health nursing interventions: an overview of adolescent suicide prevention programs

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Authors' objectives
To summarise the evidence on the effectiveness of adolescent suicide prevention curricula programmes.

Searching
MEDLINE, CINAHL, PsycINFO and the Social Sciences Citation Index were searched from 1980 to 1995 using the keywords 'adolescents' and 'suicide prevention', 'stress management', 'assertiveness', 'aggression', 'depression', 'community mental health' and 'evaluation'. Eighteen key journals were handsearched back 5 years, and reference lists of identified articles were examined to locate other potentially relevant articles (post-1980).

Study selection
Study designs of evaluations included in the review
Prospective intervention studies with a control group were included.

Specific interventions included in the review
The majority of studies used some form of educational programme based on a suicide prevention curriculum provided by teachers, counsellors or psychologists. One study evaluated post-suicide group counselling.

Participants included in the review
Adolescents, most frequently high-school students in Grades 9 and 10, were included.

Outcomes assessed in the review
The outcomes assessed included suicide risk, knowledge, attitudes, coping, hopelessness and empathy. Measurement tools are listed.

How were decisions on the relevance of primary studies made?
All articles were reviewed by a primary reader and a subset reviewed by a second reader. The level of agreement was calculated (kappa = 0.80).

Assessment of study quality
The validity of the articles was assessed using a measurement tool described by Ciliska et al. (see Other Publications of Related Interest no 1). The validity criteria examined included: method of allocation to study groups; level of agreement to participate in the study; control for confounding variables; method of data collection including pre-testing of data collection tools; and percentagel of participants available for follow-up. Criteria were rated pass, moderate or fair, and articles were then judged strong, moderate or weak, depending on the ratings of the 5 criteria. The included trials were independently assessed for validity by two readers. Any discrepancies were resolved through discussion.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the authors performed the data extraction.

Methods of synthesis
How were the studies combined?
The results of the studies were combined qualitatively, according to the outcome measured.
How were differences between studies investigated?
No statistical test of heterogeneity was conducted.

Results of the review
Eleven studies (n=4,221) were included: 3 quasi-random controlled trials, 5 cohort studies, 1 retrospective matched cohort and 2 trials of Solomon Four Group Design.

Of the 3 studies examining changes in suicide risk, 2 showed a significantly greater reduction in suicide risk, specifically depression, anxiety and emotionality, than the control groups. There were no differences in suicide risk between counselled and control participants in the third study.

The reviewed studies demonstrated a relatively consistent, positive impact of programmes on knowledge related to suicide. Of the 8 studies that evaluated changes in knowledge, 6 found that knowledge increased.

Nine studies examined the effects of the suicide prevention programmes on students' attitudes relating towards disclosure of suicidal intention, seeking help from adults and professionals, and helping suicidal peers. Both beneficial and harmful effects of the programmes were found for these measures.

Four studies examined the effects of the suicide prevention programmes on self-rated measures of coping. Results were inconsistent, with 2 studies showing a significant positive change in coping skills, 1 showing no significant difference between intervention and control groups, and another showing a reduction in maladaptive coping in girls but an increase in boys.

Three studies included measures of hopelessness. Two studies showed no significant differences between intervention and control groups, the third study demonstrated a decrease in hopelessness for girls but an increase for boys.

One study evaluated empathy. An increase in empathy was demonstrated for girls undergoing a suicide prevention programme, but not for boys.

Authors' conclusions
The findings of this review must be considered in light of the serious methodological limitations of the studies reviewed. The evidence suggests there may be both beneficial and harmful effects of suicide prevention programmes for adolescents. The literature suggests that more broadly-based comprehensive school-based health programmes should be evaluated for their effectiveness in addressing the determinants of adolescent risk behaviour.

CRD commentary
The review uses a sound search strategy, it is clear in its methodology and provides good detail on the primary studies included.

Bibliographic details

Other publications of related interest

2. Macfarlane A. Education programs designed to prevent suicide have both beneficial and harmful effects. Evidence-Based Health Policy and Management 1997;1:90.
Indexing Status
Subject indexing assigned by CRD

MeSH
Adolescent; Adolescent Health Services /standards; Educational Measurement; Health Education; Health Knowledge, Attitudes, Practice; Program Evaluation; Research Design; School Health Services /standards; Suicide /prevention & control

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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.