Screening as an approach for adolescent suicide prevention

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CRD summary
This review found that suicide screening programmes may improve the identification of adolescents in need of treatment. The authors' cautious conclusions are supported by the results presented, but should be interpreted with caution given possible limitations in the review methods and the failure to consider study quality.

Authors' objectives
To evaluate screening in the prevention of suicide in adolescents.

Searching
MEDLINE and PsycINFO were searched (dates not given); the search terms were reported. Reference lists from relevant reviews and empirical studies were screened and experts in the field were contacted for additional studies.

Study selection
Study designs of evaluations included in the review
No inclusion criteria relating to the study design were specified. The included studies were diagnostic accuracy studies, randomised controlled trials (RCTs) and surveys.

Specific interventions included in the review
Studies that assessed suicide prevention or suicide screening were eligible for inclusion. The following screening tools were evaluated: the Columbia Suicide Screen, the Risk of Suicide Questionnaire, the Suicidal Ideation Questionnaire (SIQ), the Suicidal Ideation Questionnaire JR (SIQ-JR), Diagnostic Predictive Scales, the Suicide Risk Screen and the Suicide Probability Scale.

Reference standard test against which the new test was compared
No inclusion criteria relating to the reference standard were specified. The reference standard in the included studies was the Diagnostic Interview Schedule for Children 2.3 (DISC 2.3), used either alone or in combination with suicidal ideation or prior suicide attempt, Suicidal Behaviour Interview, suicide attempts over a 4-month or 3-year period, SIQ score, SIQ-JR score, clinician's rating of direct suicide risk and clinician's rating of global risk assessment.

Participants included in the review
Studies of adolescents or youths were eligible for inclusion. The mean age of the participants ranged from 13.6 to 16 years. The studies included both males and females from a range of ethnic backgrounds.

Outcomes assessed in the review
The authors stated that studies had to report data on the sensitivity and specificity to be included. However, the review also included studies that evaluated the effectiveness of screening programmes and assessed suicide attempts, knowledge, help-seeking behaviour, distress, type and timing of follow-up, and several other outcomes.

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

Assessment of study quality
The authors did not state that they assessed validity.

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

**Methods of synthesis**

How were the studies combined?
The studies were combined in a narrative.

How were differences between studies investigated?
Differences between the studies were discussed in the text.

**Results of the review**

Seventeen studies were included: 7 studies were validation studies of suicide screening instruments (at least 4,407 participants) and 10 studies reported on the evaluation or implementation of suicide screening programmes (number of participants unclear).

Screening tools for suicide prevention in adolescents (7 studies).

The sensitivity ranged from 48 to 100% and the specificity from 37 to 96%.

Evaluation of screening programmes (10 studies).

Two RCTs randomised adolescents/groups to receive suicide screening or a control intervention. One study reported that there were fewer suicide attempts in the treatment group than in the control group; the other reported no difference between the groups. There was no difference in help-seeking behaviour between the groups.

All other studies were surveys of populations in which suicide screening had been implemented and were mainly school based. One study reported an increase in help-seeking following the intervention, with no adverse reactions associated with screening; another reported a decrease in suicide attempts following the introduction of the screening programme. One study reported that the intervention was difficult to implement and dropped the screening programme after a short period. Other studies did not report any conclusions regarding the effectiveness of the screening programmes.

**Authors' conclusions**

Youth suicide screening programmes may improve the identification of adolescents in need of treatment. Further research is needed on how screening programmes can be used efficiently.

**CRD commentary**

The review of the diagnostic accuracy of screening instruments addressed a focused question that was supported by inclusion criteria defined in terms of the intervention, population and outcome. However, inclusion criteria were less clear for the review of the effectiveness of screening programmes, especially with respect to the outcomes. The search seemed appropriate although the search dates were not reported, and attempts were made to locate unpublished studies. Details of the review process were not reported, so it is not possible to determine whether appropriate steps were taken to minimise bias. Study quality was neither assessed nor discussed, thus the validity of the included studies remains unclear.

Details of the studies and their findings were summarised in tables, which greatly helps the interpretation of the results. A narrative synthesis was appropriate given the nature of the topic, however, the synthesis presented was very difficult to follow. The authors' cautious conclusions are supported by the results presented, but should be interpreted with caution given possible limitations in the review methods, differences between the studies and the failure to consider study quality.
Implications of the review for practice and research

Practice: The authors did not state any implications for practice.

Research: The authors stated that further research is required to determine how suicide screening programmes can be introduced efficiently and where they should be introduced.

Bibliographic details

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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.