Preventing suicide in young people: systematic review

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CRD summary
The review concluded that limited available evidence showed cognitive-behaviour therapy had promise and further research was required. This was a reasonably well-conducted review and the authors' conclusion appears to reflect the limited evidence available, but the possibility that some relevant trials were missed should be considered.

Authors' objectives
To determine the efficacy of interventions aimed at preventing suicide in adolescents or young adults with a recent history of suicidal ideation, suicide attempt and deliberate self harm.

Searching
Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE and PsycINFO were searched from 1980 to June 2010 for studies in English; search terms were reported. Conference abstracts from two major suicide prevention conferences (2003 to 2009) and reference lists from retrieved articles and previous reviews were searched.

Study selection
Randomised controlled trials (RCTs) of any psychological or therapeutic intervention for the management of suicide risk and deliberate self harm (where intent was not specified) in young persons (12 to 25 years) who presented to a clinical setting with a recent history (within six months) of suicidal ideation, suicide attempt and deliberate self harm were eligible for inclusion. The primary outcome was suicide-related behaviours (such as suicidal ideation, suicide attempt and deliberate self harm). Trials in which the intervention occurred in the context of a primary mental health disorder were included. Trials where the primary focus was treatment for a mental health disorder in which some participants had experienced suicidality were excluded. Trials in which interventions were aimed at clinicians were included only where the clinician worked with young people at risk.

Interventions included cognitive-behavioural therapy (with or without medication), individual and group psychological therapy, dialectical behaviour therapy, family therapies, youth nominated support team, emergency access card, compliance enhancement intervention and medication alone. Most interventions were delivered in an outpatient setting. Most participants came from in-patient or community mental health services following a suicide attempt or presentation for deliberate self harm. Four trials specifically targeted young persons with a mental health disorder (such as mood disorder, borderline personality disorder and psychotic disorder). Other included trials specifically excluded participants with severe psychiatric diagnoses.

Two reviewers independently selected trials for inclusion in the review; any disagreements were resolved by discussion with a third reviewer.

Assessment of study quality
Two reviewers independently assessed trial quality using the Cochrane Risk of Bias tool: random sequence generation, allocation concealment, blinded assessment of outcomes, number and reasons for drop-out reported, use of intention-to-treat analysis and selective reporting bias (results and/or data for outcomes reported). Disagreements were resolved by discussion.

Data extraction
Data were extracted to enable calculation of risk ratios for dichotomous outcomes and mean differences (or standardised mean differences for outcomes measured on different scales) for continuous outcomes.

The authors did not state how many reviewers performed the data extraction.

Methods of synthesis
Summary risk ratios, weighted mean differences or standardised mean differences, with 95% confidence intervals,
were calculated using a random-effects model. Statistical heterogeneity was assessed using $X^2$ and $I^2$. Subgroup analyses were planned in the event of significant statistical heterogeneity (presence of primary mental health disorder, risk characteristic at study entry and age). Sensitivity analyses were planned to account for study quality (adequate allocation concealment and attrition rate >50%).

**Results of the review**

Twenty-one RCTs were included (number of participants unclear): 15 published trials and six ongoing trials. Trial quality varied. Eight trials reported adequate randomisation procedures. Six trials reported adequate allocation concealment. Eight trials reported adequate masking procedures. Four trials used intention-to-treat analyses. Attrition rates ranged from zero to 79%. Eleven RCTs contributed to the meta-analyses.

There was no significant difference in suicide attempt or ideation for individual psychological therapy (two RCTs), group psychological therapy (three RCTs), family therapies (two RCTs), youth nominated support team (two RCTs) and emergency access card (one RCT). A significant reduction in suicide ideation was found with cognitive-behavioural therapy post intervention (one RCT) and at six months (one RCT) and nine months (one RCT) follow-up.

A significant reduction in self-harm incidents were found for dialectical behavioural therapy (one RCT) and cognitive-behavioural therapy at nine-month follow-up (one RCT) compared with control. No significant between-group differences were found for self-harm post intervention, six months follow-up and number of people who engaged in self-harm at nine-month follow-up with cognitive-behavioural therapy.

No outcome data were available for compliance enhancement intervention versus treatment as usual (one RCT), medication versus cognitive-behavioural therapy (one RCT), medication versus cognitive-behavioural therapy plus medication and cognitive-behavioural therapy versus cognitive-behavioural therapy plus medication.

**Authors’ conclusions**

Limited evidence suggested that individual cognitive-behavioural therapy based interventions showed promise. Further research was required.

**CRD commentary**

The review question was supported by defined inclusion criteria. An adequate literature search was conducted. The search included attempts to minimise publication bias, but was restricted by language and so may have missed some trials. Appropriate steps were taken to minimise risks of error and bias for study selection and assessment of study quality; whether similar measures were taken during data extraction was unclear.

Study quality was assessed using relevant criteria and the evidence was considered to be somewhat varied. The methods used to synthesise data were appropriate (sensitivity analyses included). Very few trials contributed to each outcome of interest.

The authors’ conclusion appears to reflect the limited evidence available, but the possibility that some relevant trials were missed should be considered.

**Implications of the review for practice and research**

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

Research: The authors stated that future trials should minimise risks of bias, employ standardised definitions of key outcomes, use similar measures administered at similar time points and report results for all outcomes. The need for a high-quality RCT investigating attachment-based family therapy, as well as the development and testing of innovative interventions among young people at risk, was highlighted.

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Orygen Youth Health, Australia.

**Bibliographic details**

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.