A systematic review of school-based interventions to prevent bullying

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CRD summary
This review concluded that a number of school-based interventions can directly reduce bullying, especially multidisciplinary interventions. However, indirect outcomes are not consistently improved by interventions and curriculum changes affect bullying behaviours less often. These findings should be viewed with caution given the limitations in the review methods and data.

Authors' objectives
To evaluate school-based interventions to reduce and prevent bullying.

Searching
MEDLINE, EMBASE, PsycINFO, ERIC, the Physical Education Index, Sociology: A SAGE Full-Text Collection, and the Cochrane CENTRAL Register were all searched as of 23rd August 2004; the search terms were reported. The bibliographies of articles and reviews were also checked. Only English language studies were eligible for inclusion in the review.

Study selection
Study designs of evaluations included in the review
Studies with control groups were eligible for inclusion in the review.

Specific interventions included in the review
Studies evaluating any school-based intervention aimed at reducing or preventing bullying were eligible for inclusion. The included interventions varied but were divided into five categories: curriculum interventions, multidisciplinary or whole-school interventions, targeted social and behavioural skills groups, mentoring and increased social work support.

Participants included in the review
Studies that included either primary or secondary schoolchildren were eligible for inclusion. All of the included studies recruited primary schoolchildren (first to eighth grade); six studies also included secondary school children (eighth grade plus).

Outcomes assessed in the review
Eligible studies had to report a follow-up evaluation with measured outcomes. Direct outcomes of bullying assessed in the review were bullying, victimisation, aggressive behaviour, violence, school responses to violence, and violent injuries. The review also included other indirect outcomes which may be indirectly related to bullying, such as school achievement, perception of school safety, self-esteem, and knowledge about or attitudes towards bullying. The actual outcomes reported by the included studies varied considerably but were classified as either direct or indirect. The most common outcomes were self-reported incidences of bullying and/or victimisation.

How were decisions on the relevance of primary studies made?
One reviewer initially screened the titles of articles and excluded those that obviously did not meet the inclusion criteria. This reviewer and a second reviewer (both blinded to the journal citation and article text other than the method sections) then independently reviewed all the remaining articles. Any disagreements were resolved through discussion and consensus.

Assessment of study quality
The authors did not assess 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?
Some differences between the studies were evident from the data tables and others were discussed in the text of the review. The studies were grouped according to the five categories of interventions and the outcomes grouped as direct or indirect.

Results of the review
Twenty-six studies (n=24,246, where stated) were included in the review. The studies were mainly pre-test post-test studies with control groups that may or may not have been chosen randomly. In addition, 7 randomised controlled trials (RCTs), one randomised matched-pairs study, 2 cohort studies and 2 quasi-experimental studies were included. Units of allocation and analysis varied between and within the studies, including individual children, classes and whole schools. The majority of the studies were conducted in either the USA or Europe.

Curriculum interventions (10 studies).
The studies reported inconsistent decreases in bullying and several reported an increase in bullying associated with curriculum interventions. Six of the studies reported no significant improvements in bullying. Of the 4 studies that did show less bullying and victimisation in the intervention group, three also showed bullying increased in certain populations or with certain measurement tools.

Whole-school, multidisciplinary interventions (10 studies).
Two studies evaluated the Olweus Bullying Prevention Program in primary and secondary school children. One study, conducted by Olweus, reported beneficial effects of the programme; the other reported increased bullying in the intervention group. Of the remaining 8 studies, seven (six of primary schools and one of primary and secondary schools) reported positive outcomes associated with the intervention group. Five of these studies reported decreases in bullying or victimisation, while the other two only reported indirect outcomes.

Social and behavioural skills group training interventions (4 studies).
One study of third-grade students reported that social-skills group training resulted in a decrease in aggression, bullying and antisocial affiliations for previously aggressive children. The remaining 3 studies in older children (two of bullying victims and one of aggressive children) failed to result in clear changes in outcome associated with the intervention group.

Other interventions (2 studies).
One study of increasing the number of school social workers focusing on problem behaviours, including bullying, reported a significant decrease in bullying amongst primary schoolchildren but a worsening amongst secondary schoolchildren. Self-reported thefts, truancy, fighting and drug use also improved significantly. Another study assessing a mentoring programme for ‘at risk’ children reported that the intervention was associated with significantly fewer reports of bullying, physical fighting and feeling depressed in the preceding 30 days.

Authors' conclusions
A number of school-based interventions directly reduce bullying, especially multidisciplinary interventions. Curriculum changes, however, affect bullying behaviours less often. Indirect outcomes are not consistently improved by school-based intervention.
CRD commentary
This review answered a clear but broad research question. A number of electronic databases were searched for relevant studies, but there may be a risk of publication and language bias given the limited search for unpublished studies and the inclusion of only English language studies. Some attempts were made to reduce the risk of reviewer error and bias when assessing the eligibility of the studies, but it is unclear whether similar steps were taken when extracting the study data. Since the authors did not assess study validity it is difficult to assess the reliability of the data, though some were obviously from weaker study designs and this was not considered in the synthesis of the results.

Overall, the authors' broad inclusion criteria resulted in the assessment of a very large heterogeneous evidence base, which necessitated the use of a narrative synthesis, grouping studies according to broad intervention and outcome categories. Data tables were used to ease the reader's overall interpretation of the data. However, the data were potentially biased through the frequent use of self-reported outcomes and disparities in the units of allocation and assessment used (i.e. individual, class or whole school). The authors acknowledged these limitations along with problems associated with isolating effective component(s) within complex interventions. A number of the interventions were also only evaluated in single studies of sometimes limited statistical power.

Overall, the limitations in the review data and methods suggest that the authors' findings should be interpreted with caution, especially as there appears to be some evidence to suggest that the interventions may also increase bullying. In addition, the authors acknowledged that the generalisability of the findings is also unclear since the studies were all conducted in the USA and Europe.

Implications of the review for practice and research
Practice: The authors stated that there is fairly consistent evidence to suggest that well-planned interventions can significantly reduce children's bullying behaviour, particularly if a whole-school multidisciplinary approach is used. However, curriculum or targeted social-skills groups may actually worsen bullying and victimisation. Caution should therefore be exercised and interventions should not be assumed to be effective.

Research: The authors stated that additional research into bullying behaviours and anti-bullying interventions is required.

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