Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety

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CRD summary
The authors concluded that school-based anxiety prevention and early intervention programmes clearly worked and their wider implementation should be encouraged and supported. The authors’ conclusions reflected the evidence available, but should be interpreted bearing in mind the poor quality of the included studies, variability among studies and lack of follow-up data.

Authors’ objectives
To assess the effectiveness of school-based prevention and early intervention programmes in reducing or preventing anxiety.

Searching
PubMed, PsycINFO and The Cochrane Library were searched for English-language publications between 1987 and February 2008. Search terms were reported. Reference lists were searched.

Study selection
Randomised controlled trials (RCTs) that assessed the effectiveness of structured school-based programmes (delivered as part of the formal school curriculum or as an after-school endorsed activity) in reducing or preventing symptoms or incidence of anxiety, or building resilience in children (aged five to 12 years) or adolescents (aged 13 to 19 years) were eligible for inclusion.

Included studies were of children and adolescents aged between seven and 17. Universal school-based prevention and early intervention programmes used relaxation, communication skills, cognitive-behavioural therapy (CBT) with or without psychoeducation and exercise. Indicated school-based prevention and early intervention programmes used CBT or psychoeducation plus social skills training plus exposure. Selective school-based programmes used CBT with or without psychoeducation and social learning plus modelling and were aimed at behavioural problems, parental divorce or personality specific cognitive distortions. Programme leaders included graduates, researchers, teachers and mental health professionals. The number of sessions ranged from eight to 18 (or were described as a year long). Most sessions lasted between 60 and 90 minutes. Controls included waiting list, no intervention and attention controls.

One reviewer screened titles and abstracts; it was unclear how many reviewers screened full papers for inclusion.

Assessment of study quality
Two reviewers assessed the quality of the studies based on three criteria from the Jadad scale: randomisation, double blinding, and withdrawals/dropouts. Scores could range from zero to 5. School-based programmes rarely receive scores above three due to difficulties in achieving double blinding.

Data extraction
Two reviewers independently extracted means and standard deviations to calculate standardised effect sizes using Cohen’s d or phi. Discrepancies were resolved by discussion.

Methods of synthesis
Data were presented narratively for overall outcomes and by type of intervention programme. Narrative comparisons were made for intervention target population (adolescents versus children), intervention content, intervention delivery agent (teachers versus other programme leaders) and type of control (studies that used an attention control versus studies that included a wait list or no intervention control).

Results of the review
Twenty-seven RCTs (n=6,496, range 12 to 1,045) were included in the review. Sixteen RCTs (17 study arms) were universal school-based programmes (n=4,671), eight were indicated school-based programmes (n=1,183) and three were selective school-based programmes (n=642). Three RCTs scored a quality rating of 3 (one universal and two indicated school-based programme studies); 17 scored 2 and six scored 1; just under half of the studies reported random allocation. 52% had no follow-up data past post-test. Where reported, follow-up duration ranged from four to 36 months.

Twenty-one of 27 studies (78%) reported statistically significant improvements in symptoms of anxiety at post-test and/or follow-up (effect size range 0.11 to 1.37). Evaluation by intervention type showed conflicting findings for indicated interventions.

Eleven of 16 (69%) of universal interventions reported statistically significant improvements at post-test (effect size range 0.31 to 1.37) and two also reported significant improvements at follow-up. One other study that had not reported significant improvements at post-test reported a significant improvement at follow-up. Two selective interventions showed significant improvements at post-test (effect size 0.11 and 0.39), but did not report follow-up data.

Further comparisons showed that 50% of studies (n=3) delivered to children compared to 81% of studies (n=12) delivered to adolescents showed significant improvements in anxiety. The other comparisons indicated that the significant effects were not dependent on intervention content, delivery agent or type of control.

Authors' conclusions
School-based anxiety prevention and early intervention programmes clearly work and their wider implementation should be encouraged and supported.

CRD commentary
The review question was clear and supported by appropriate inclusion criteria. Appropriate sources were searched for relevant studies, but potentially relevant studies may have been missed as the search was restricted by language and there was no apparent attempt to locate unpublished data. Study quality was assessed using appropriate criteria and was generally poor. Data extraction and validity assessment were performed in duplicate; it was unclear whether this was the case for study selection, so reviewer error and bias could not be ruled out. A narrative synthesis was appropriate given the variability among studies. The authors acknowledged some of the limitations with the included studies and variability in effect sizes, and highlighted the need for long-term, high-quality research.

The authors' conclusions reflected the evidence available, but should be interpreted bearing in mind the poor quality of the included studies, variability among studies and lack of follow-up data.

Implications of the review for practice and research
Practice: The authors did not state any implications for practice.

Research: The authors stated that future research should be adequately powered in terms of sample size and studies should be transparent in their processes and of greater quality. Future studies should include high standard comparisons (attention controls), should focus on long-term implementation by classroom teachers or associated staff and should assess the effects of booster sessions and involvement of parents.

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