CRD summary
This review addressed the effectiveness of targeted/indicated activities aimed at promoting the mental well-being of children in primary education. The authors concluded that earlier studies were less applicable to current settings, while later studies of complex interventions offer benefits but with high cost implications. This was a well-conducted and reported review, and the conclusions are likely to be reliable.

Authors' objectives
To assess the effectiveness of targeted/indicated activities aimed at promoting the mental well-being of children in primary education.

Searching
MEDLINE, EMBASE, ERIC, CINAHL, ASSIA, DARE, the Cochrane Database of Systematic Reviews, the Cochrane CENTRAL Register, SIGLE, Sociological Abstracts and PsycINFO were searched; the search dates were not given. In addition, the authors searched relevant websites, screened relevant systematic reviews and the references of included studies, and contacted experts to identify additional primary studies and eligible papers. Only papers published in English after 1990 were considered for selection.

Study selection
Studies were eligible for inclusion if they were randomised controlled trials (RCTs), or cluster RCTs, that compared a school-based intervention of at least 1 month with either no intervention or a comparative intervention. The included interventions were required to conform to pre-set setting and duration criteria (details provided). Studies that adopted a 'whole school' to promote mental well-being, or any intervention that focused on the prevention of bullying or violence, were excluded as these areas are covered by related reviews. The population of interest was school-children aged 4 to 11 years in primary education, and the included papers covered state schools, independent schools and special education environments. The outcomes of interest were aspects of mental well-being: emotional, psychological or social.

Two reviewers selected the studies and any disagreements were resolved by discussion.

Assessment of study quality
The quality of the included studies was assessed using standardised criteria according to the NICE Centre for Public Health Excellence Methods Manual. This includes items on randomisation, attrition or drop-out rates, and the validity of the outcome measures used. Studies were graded as 1++, 1+ or 1- in order of quality. Generalisability was assessed for each study based on their population, intervention, setting (political and structural similarities to the UK), and practice or policy. The applicability was then rated from A to D according to adapted statements from the NICE Methods Manual, with A representing the most applicable and D the least applicable.

One reviewer performed the validity assessment, and a second independent reviewer checked its accuracy. Any disagreements were dealt with by consensus and discussion with a third reviewer where necessary.

Data extraction
The mean differences (and standard deviations) between the intervention and control groups were extracted, where possible, for each outcome variable.

One reviewer extracted the data, which a second independent then checked for accuracy. Any disagreements were dealt with by consensus and discussion with a third reviewer where necessary.
Standardised mean differences (SMDs), with 95% confidence intervals (CIs), were calculated and pooled using a random-effects meta-analysis where interventions and outcome measures were judged to be comparable. Heterogeneity was assessed using $\chi^2$ and $I^2$; the results of meta-analyses were presented only where no significant heterogeneity was detected, otherwise a narrative synthesis was undertaken. The results were grouped according to the focus and aim of the intervention: emotional or conduct disorder-focused programmes.

**Results of the review**

Thirty-two primary studies (48 papers) were included in this review (the overall number of participants was unclear). The majority of studies were USA based.

**Emotional disorders.**

Anxiety (5 studies): all of these studies used cognitive-behavioural therapy (CBT) interventions and were rated as 1++ on quality. All showed beneficial effects of the intervention programmes. Two studies showed that brief targeted interventions (9 to 10 weeks) successfully reduced anxiety problems developing in children who were identified as showing precursor symptoms. Two studies of indicated interventions suggested that anxious school refusers and children of divorce show sustained benefit compared with controls, and one study showed increased benefits when parent training was combined with child CBT.

Mood disorders (5 studies): all of these studies used CBT interventions to prevent or reduce depressive symptoms; one was rated 1++ on quality and the others as 1+. One study looked at interventions targeted towards a subgroup of children exposed to violence and found significantly fewer symptoms of mental ill health and fewer reports of psychosocial dysfunction by parents in the CBT group. The other 4 studies reported mixed results, which may have been affected by co-morbidity in the study sample and lack of clear diagnoses in one trial.

**Conduct and hyperkinetic disorders (targeted solely at young people).**

Attention deficit hyperactivity disorder (ADHD; 2 studies): both studies used multicomponent interventions based on CBT. One addressed ADHD symptoms, while the other focused on helping teachers to identify ADHD and respond appropriately. No significant differences were found between the intervention and control groups on the outcome measures reported.

Conduct and oppositional defiant disorder (6 studies): 4 studies used interventions focused on peer norming and negative attribution reversal techniques, reporting modest effects and lack of long-term impact. Two studies found that peer mentoring was successful in developing pro social skills and social standing in aggressive children.

**Conduct disorders and oppositional defiant disorder (multicomponent interventions).**

These interventions targeted both young people and their parents and teachers. All 14 interventions (29 papers) were targeted towards children with or at risk of conduct and/or oppositional defiant disorders. The narrative synthesis suggested that some programmes found improvements in social problem-solving, development of positive peer relationships and academic achievement. Four studies were entered into a meta-analysis, giving an SMD of 0.06 (95% CI: -0.07, 0.19) that suggested no significant benefit for the intervention groups.

**Authors' conclusions**

Earlier small-scale clinical studies with clinical staff may have less applicability to current classroom settings. Later studies have focused on large, multicomponent longitudinal trials and indicated useful effects, but there are financial implications around the implementation of such programmes.

**CRD commentary**

This review presented a broad question but was adequately supported by detailed inclusion and exclusion criteria. The searches were extensive and covered relevant databases, although only studies reported in English were included, thus potentially introducing language bias. The review methodology was reported clearly and the use of two or more reviewers was likely to have reduced the chance of error or bias affecting the review. Meta-analysis was used where possible, otherwise a clear narrative synthesis summarised the results. This was a well-conducted review and the
conclusions are likely to be reliable.

**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 will need to address the move into phase IV research (long-term implementation) and evaluate the effects of such programmes in real life circumstances.

**Funding**

NICE.

**Bibliographic details**


**Indexing Status**

Subject indexing assigned by CRD

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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.