

Executive summary

Health promoting schools and health promotion in schools: two systematic reviews

D Lister-Sharp¹

S Chapman²

S Stewart-Brown^{2*}

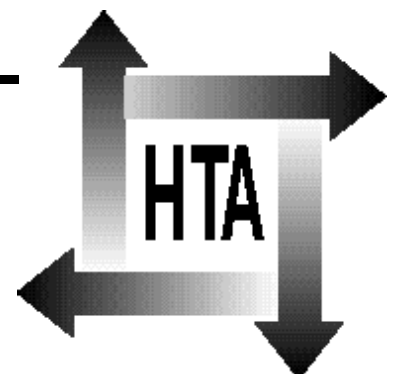
A Sowden¹

¹ NHS Centre for Reviews and Dissemination, University of York, UK

² Health Service Research Unit, Department of Public Health, University of Oxford, UK

* Corresponding author

**Health Technology Assessment
NHS R&D HTA Programme**





Executive summary

Objectives

The objectives of this study were to:

- evaluate the effectiveness of school-based health promotion interventions through:
 - a systematic review of primary studies of the effectiveness of the health promoting schools approach
 - a systematic review of existing reviews of the effectiveness of other health promoting interventions in schools in the following areas: nutrition, exercise, safety, psychological aspects of health, sexual health, substance use, personal hygiene, environmental issues and family life education
- indicate areas where further research is needed
- make recommendations for practice in the UK, if research findings permit.

Methods

Study selection

To be included in the review of the effectiveness of the health promoting schools approach, studies had to:

- be controlled studies or before-and-after studies evaluating school-based interventions involving health promoting activity in each of three areas: (i) the school ethos and/or environment, (ii) the curriculum, and (iii) the family and/or community; and demonstrate active participation by the school
- provide information about the components and delivery of the intervention
- report all evaluated outcomes.

To be included in the review of existing reviews of health promotion in schools, reviews of effectiveness of health promotion interventions in schools had to:

- provide evidence of a systematic search
- assess the quality of the research
- include some studies with a comparison group or some before-and-after studies
- report study details such as number of participants, give some details of the content of the interventions evaluated and include primary preventive interventions using a population approach.

Data sources

The following electronic databases were searched: ASSIA, BIDS, British Education Index, CINAHL, DHSS Data, Dissertation Abstracts, EMBASE, ERIC, MEDLINE, PsycINFO, PsycLIT, SIGLE, Sociofile. Reference lists were checked to identify other relevant studies, relevant web pages were scanned, and requests for unpublished data were made to people working in the field.

Data extraction

Data were extracted by one reviewer, using a pro forma, and checked by a second reviewer. The methodological quality of both primary studies and reviews were assessed and commented upon.

Data synthesis

A quantitative synthesis was judged impractical due to the multiplicity of outcomes and incomplete reporting of all the components of the interventions. A qualitative synthesis is presented.

Results

Review of primary studies of the health promoting schools approach

The search identified 1067 titles and abstracts relevant to health promoting schools. Of these, 111 appeared to be either useful background material or evaluations of interventions and were obtained. Twelve studies met the inclusion criteria.

Available evidence of effectiveness

Few studies were available for this review, and only two of these were adequately powered randomised controlled trials. None of the schools involved in the studies had implemented all the components of the health promoting schools approach. The evidence available to support the health promoting schools approach was limited but promising. The approach can be shown to impact on the social and physical environment of the school in terms of staff development, school lunch provision, exercise programmes and social atmosphere. Although failing to demonstrate effectiveness in all studies, the approach was successful in some in improving aspects of health-related behaviour such as dietary intake and aspects of health such as fitness. There is some evidence that this approach is able to impact positively on aspects of mental and social well-being such as self-esteem and bullying, which have previously proved difficult to influence.

Costs

Insufficient information was given to be able to comment on relative costs, but in the UK study of health promoting schools a small financial investment in schools was considered important for success.

Theoretical bases of effective interventions

Although the interventions tested in these studies clearly drew implicitly on a number of health promotion theories, the theory base was explicitly stated for only two interventions.

Review of reviews of health promotion in schools

Over 200 reviews of the effectiveness of school health promotion were identified. Of these, 32 met the inclusion criteria.

Available evidence of effectiveness

Systematic reviews of effectiveness are available in the following areas: nutrition and exercise, safety, psychological aspects of health, sexual health, substance use and personal hygiene. Most of the studies included in the reviews originated from outside the UK; mostly from North America. Reviews varied in their methodological quality.

Almost all the interventions, for which this outcome was reported, demonstrated improved health knowledge, which is an important prerequisite for future health. The impact of interventions on attitudes, health-related behaviour and health was much less reliable. Some effective or partially effective interventions have been identified in most areas, but many were ineffective, and a few were shown to have adverse effects. Interventions to promote healthy eating and fitness, prevent injuries and abuse, and promote mental health were the most likely to be effective and those to prevent substance misuse, promote safe sex and oral hygiene the least effective.

Effectiveness of different approaches

Most interventions have used classroom (curriculum) approaches only. Some interventions combined a classroom approach with

changes to the school ethos and environment or with family and community involvement. Although the environmental approaches varied in the different areas of health need, interventions which included these approaches were more likely to be effective than those which did not. Interventions involving families varied in intensity and approach and in many reviews were inadequately described, but overall interventions incorporating this approach were more likely to be successful than those that did not.

Effective components of classroom approaches

Assessment of the effectiveness of different components was limited by inadequate reporting of intervention content. Against a background of relative ineffectiveness there is evidence that substance use programmes incorporating normative education and resistance skills were more likely to be effective than those which did not. Programmes involving peers were most common in substance misuse reviews. They varied in approach and intensity, and in some studies were inadequately described. Substance misuse interventions incorporating this approach were, however, more likely to be effective than those which did not. There was evidence that stress management and life skills training had a positive impact in interventions addressing psychological aspects of health.

Theoretical bases of effective interventions

Reviews often failed to report explicitly the theoretical basis of interventions. From the very limited evidence available there are indications that programmes based on social learning theory and social influences are the most effective.

Conclusions

The health promoting schools approach

The health promoting schools initiative is a new, complex, developing initiative, and the optimum method of evaluation is currently under debate. There are indications that this approach is promising. The development of programmes to promote mental and social well-being would be likely to improve overall effectiveness and the impact of staff health and well-being needs more consideration. The development of measures of mental and social well-being is important for future evaluation. Continued investment, and ongoing evaluation are necessary to provide evidence about the effectiveness of this approach.

Health promotion in schools

This review of reviews has shown that school health promotion initiatives can have a positive impact on children's health and behaviour but do not do so consistently. It would appear that most interventions are able to increase children's knowledge but that changing other factors which influence health, such as attitudes and behaviour, is much harder to achieve, even in the short-term. Overall, a multifaceted approach is likely to be most effective, combining a classroom programme with changes to the school ethos and/or environment and/or with family/community involvement. This is consistent with the health promoting schools approach.

Implications and recommendations

Implications for practice in the UK

Evidence would support:

- Continuing experimentation with the health promoting school initiative taking into account the potential importance of the health and well-being of school staff. Ensuring that experimentation is accompanied by evaluation.
- Where schools are still providing meals and commercial considerations permit, improving the content of school meals and promoting healthy options.
- Encouraging and supporting physical activity in schools, but not on a compulsory basis.
- Experimenting with school-based clinics providing advice on contraception and safe sex, and coordinating with sex education in the classroom.
- Experimenting with involving parents in school health promotion initiatives.
- Experimenting with programmes which make use of peers.
- Establishing school injury prevention programmes particularly those covering cycle helmets.
- Encouraging debate and developing consensus on the mental and social goals of health promoting schools.
- Developing methods to improve mental and social well-being within the context of the health promoting school initiative.
- Investing small amounts of finance in schools which are interested in developing health promotion initiatives.

Recommendations for research

Recommendations for commissioners of research

- Invest in primary UK-based studies of health promoting school initiatives giving priority to those which aim to promote the social and mental well-being of staff and pupils.
- Commission the development of new outcome measures for school health promotion interventions (see recommendations for research below).
- Commission a review of primary studies of school-based family life education programmes and a further review of school mental health promotion programmes.
- Encourage and enable further debate on the value of including studies using observational and qualitative methodologies in reviews of effectiveness of health promotion interventions.
- Commission a further review in this area in two years time, taking into account the outcome of the debate proposed in the fourth point in recommendations for research below.

Recommendations for researchers

- Ensure that process evaluation which describes the way in which programmes have been implemented is undertaken and reported in all studies of health promotion in schools.
- Develop valid and reliable measures for evaluating the outcome of the health promoting school initiatives, particularly those measuring mental and social well-being for children and adults. Incorporate these in all studies of health promotion in schools.
- Investigate the relationship between staff health and well-being and that of pupils taking account of research which has been conducted on staff morale and the social ethos of schools.
- Research the impact of randomisation on participation in health promotion intervention studies and continue the debate on methods of evaluating school health promotion interventions. Investigate costs and benefits of very large trials of health promotion programmes.
- Ensure that future reviews of school health promotion programmes include a systematic search and critical appraisal of studies and that they describe the development of interventions, and their content and implementation as well as the design and implementation of the studies.

Recommendations for journal editors and peer reviewers

- Ensure, in publications of studies of school health promotion interventions, that the following are reported: the theoretical basis or assumptions underpinning the interventions; the content of the interventions; and the process of delivery.

Publication

Lister-Sharp D, Chapman S, Stewart-Brown S, Sowden A. Health promoting schools and health promotion in schools: two systematic reviews. *Health Technol Assess* 1999;3(22).

NHS R&D HTA Programme

The overall aim of the NHS R&D Health Technology Assessment (HTA) programme is to ensure that high-quality research information on the costs, effectiveness and broader impact of health technologies is produced in the most efficient way for those who use, manage and work in the NHS. Research is undertaken in those areas where the evidence will lead to the greatest benefits to patients, either through improved patient outcomes or the most efficient use of NHS resources.

The Standing Group on Health Technology advises on national priorities for health technology assessment. Six advisory panels assist the Standing Group in identifying and prioritising projects. These priorities are then considered by the HTA Commissioning Board supported by the National Coordinating Centre for HTA (NCCHTA).

This report is one of a series covering acute care, diagnostics and imaging, methodology, pharmaceuticals, population screening, and primary and community care. It was identified as a priority by the Primary and Community Care Panel and funded as project number 95/37/01.

The views expressed in this publication are those of the authors and not necessarily those of the Standing Group, the Commissioning Board, the Panel members or the Department of Health. The editors wish to emphasise that funding and publication of this research by the NHS should not be taken as implicit support for the recommendations for policy contained herein. In particular, policy options in the area of screening will be considered by the National Screening Committee. This Committee, chaired by the Chief Medical Officer, will take into account the views expressed here, further available evidence and other relevant considerations.

Reviews in *Health Technology Assessment* are termed 'systematic' when the account of the search, appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

Series Editors: Andrew Stevens, Ruairidh Milne and Ken Stein
Monograph Editorial Manager: Melanie Corris

The editors have tried to ensure the accuracy of this report but cannot accept responsibility for any errors or omissions. They would like to thank the referees for their constructive comments on the draft document.

Copies of this report can be obtained from:

The National Coordinating Centre for Health Technology Assessment,
Mailpoint 728, Boldrewood,
University of Southampton,
Southampton, SO16 7PX, UK.
Fax: +44 (0) 23 8059 5639 Email: hta@soton.ac.uk
<http://www.hta.nhsweb.nhs.uk>

ISSN 1366-5278