



REPORT

OCTOBER 2002

Barriers to, and Facilitators of, the Health of Young People

**A systematic review of evidence on young people's
views and on interventions in mental health,
physical activity and healthy eating**

Volume 1: Overview

The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) is part of the Social Science Research Unit, Institute of Education, University of London



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A searchable database including the studies in the reviews, alongside this report, is available on the EPPI-Centre website (<http://eppi.ioe.ac.uk>)

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PREFACE

Who needs to read this report?

This report synthesises the results of three systematic reviews on the barriers to, and facilitators of, mental health, physical activity and healthy eating amongst young people, with a view to making recommendations about how their health can be promoted. There are many useful messages for policy-makers, commissioners, practitioners, young people and their parents, and researchers who are involved in health promotion for young people. In particular, the key messages of this review can help:

- **policy-makers**, by highlighting where current policy relevant to promoting young people's health is supported by research evidence and where there are contradictions or gaps;
- **health authorities and other services** involved in implementing the National Service Frameworks for mental health and cardiovascular disease, to examine the evidence-base for action within this population group;
- **health and education partnerships** involved in the National Healthy Schools Standard to advise schools on which school-based interventions can be effective (and which interventions are ineffective or harmful and which do not yet have evidence of effectiveness); and
- **services**, to gain an insight into what young people think should be done to promote their health and thus support the NHS's commitment to involving the public in the development and delivery of services.

Since part of the reviewing process involved assessing the amount and quality of the evidence available to services to help them promote health, this review also:

- outlines a future research agenda for promoting young people's health; and
- makes recommendations for how this research may best be conducted.

The topics of mental health, physical activity and healthy eating were chosen as they represent key areas to be addressed in the government's strategy for health. Mental health in particular is a very broad term that encompasses a huge variety of states of being. To divide each topic into manageable and relevant sections, the reviews were conducted in two stages. The first stage was a mapping and quality screening exercise, which was followed by a second stage of in-depth review of quality and findings. The specific topic areas prioritised for in-depth assessment in the mental health review, for example, included the prevention of suicide, self-harm and depression and the promotion of positive self-esteem, and coping.

Although there are links between topics (e.g. participating in physical activity can generate positive benefits for mental health), the three reviews were conducted separately with their own inclusion and exclusion criteria. For example, we did not aim specifically to locate studies that encouraged eating certain (healthy) foods as a

way of feeling better emotionally. However, some of the links between healthy eating, physical activity and mental health did emerge in the process of identifying cross-cutting themes and are therefore discussed in this report.

The three reviews form 'discrete' products and should be consulted individually by readers requiring specific information on the studies reviewed or detailed recommendations for policy, practice and research.

How to read this report

This report, in two volumes, summarises three systematic reviews, each using explicit rigorous methods to synthesise the evidence across the three topic areas. Therefore, it is necessarily lengthy. Complexity and length have also been increased because each review synthesises evidence from 'qualitative' research together with experimental evaluations of interventions, something that traditional systematic reviews usually do not do. Some readers will be interested in the whole report to get an overall picture of, not only the findings of the reviews, but about how we came to those findings. Others will want to be directed to the parts most relevant to their needs. Because of these differing needs, information has been repeated in some sections. The following guide will help readers make these decisions.

All readers are advised to read **Volume 1: Overview**. This gives an overall picture of the findings of the reviews and ends with explicit recommendations for:

- the types of interventions which have been demonstrated (through high quality evaluations) to have positive effects for promoting health amongst young people (and the types which have NOT been shown to be effective);
- involving and listening to the views of young people;
- the development of future interventions (i.e. those interventions which look promising but which need to be developed and tested further; gaps in the kinds of interventions which have been evaluated); and
- how best to evaluate interventions.

Taken together, these recommendations emphasise the need for different readers to work in partnership with each other to build on the current evidence-base.

The individual chapters of **Volume 2: Complete Report** flesh out the above sections in more detail and are fully referenced. **Readers who want:**

- **information on effective interventions and how to implement them** (e.g. practitioners, service commissioners, policy specialists) may be most interested in **chapter 3** (particularly section 3.3) which provides details of the types of interventions shown to be effective by high quality evaluations and **chapter 4** which illustrates whether/how these interventions match young people's views on the barriers to, and facilitators of, their health.
- **details of the views of young people on their health and how it might be promoted** (e.g. practitioners, service commissioners, policy specialists,

researchers) may be most interested in reading **chapter 3** (especially section 3.2) which describes the findings of studies which elicit young people's views, and **chapter 4** which compares young people's views to the interventions that have been evaluated.

- **guidance on the kinds of interventions they should be developing and testing further and why** in partnership with a range of stakeholders (e.g. practitioners, service commissioners, policy specialists, researchers, research commissioners) may be most interested in reading **chapters 4 and 5**.
- **a discussion of how the findings of the review relate to current policy and practice** may be interested in reading **chapter 4**.
- **recommendations on how best to involve young people in the development of interventions** may be most interested in reading section 6.3 of **chapter 6**.
- **recommendations on how to best to evaluate the effectiveness of interventions, and how to seek the views of young people** may be most interested in section 6.4 of **chapter 6**.
- **details about the methods used in the systematic reviews** should read **chapter 2**.

EXECUTIVE SUMMARY

This is a composite report which brings together the main findings and issues from a series of three systematic reviews from the health promotion stream of work at the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre)¹ at the Social Science Research Unit, Institute of Education, University of London. The series on the barriers to, and facilitators, of the health of young people aged 11 to 16 years comprises reviews in the area of the promotion of mental health, physical activity and healthy eating. The work has been commissioned by the Department of Health (England) because of the high priority given to the current and future health of young people.

BACKGROUND

The main goal of health promotion is to prevent ill-health and to enhance positive health, through encouraging people to adopt healthier lifestyles, and devising strategies to enable them to increase the control they have to influence their own health. Young people are often a target group for health promotion because they are considered to be susceptible or vulnerable to ill-health.

Many young people have sophisticated understandings of health, their behaviour and the wider socio-economic environment in which they live. To assume they all need to be targeted as passive recipients of a professionally-driven health promotion agenda is to deny their role as active agents in their own lives. The agenda should be more aligned with understanding their needs and motivating them to adopt and maintain healthy lifestyles at a time of their lives when they are facing any number of new experiences and situations.

Whilst young people need support during this time of intense change, there are particular reasons why it is important to address specific health issues. Mental health is one such priority area as it underpins many other aspects of health.

Mental health problems are a considerable cause of morbidity and mortality amongst young people. Mental health can also be seen as a 'resource' for reaching one's full potential. Promoting mental health may have the potential to not only help prevent mental illness but to deliver a wide range of health and social benefits. Prevalence of mental health problems among young people is high, with suicide a significant cause of mortality. There is a clear rationale for promoting mental health at a time when young people are experiencing profound changes.

Physical activity and healthy eating are influenced by, and in turn have influence on, mental as well as physical health. Evidence suggests increasing levels of inactivity and failure to follow healthy diets in young people. It is imperative to develop effective interventions to promote healthy eating and physical activity to tackle increases in conditions such as obesity. Initiatives need to address the many

¹ The EPPI-Centre was previously known as the Centre for the Evaluation of Health Promotion and Social Interventions (EPI-Centre)

influences on diet and exercise including age, gender, family, culture and socio-economic circumstances.

There have been calls for a more co-ordinated approach to health promotion with young people, particularly to address health inequalities. Cross government initiatives are in place, which emphasise joint working between agencies. Key policy strategies include Our Healthier Nation, the NHS Plan, and the National Service Frameworks for Mental Health and Coronary Heart Disease. Key initiatives include the National Healthy Schools Programme and the Health, Education, and Sports Action Zones.

AIMS

The overall series of reviews was guided by the following overarching research questions:

- What is known about the factors that promote or hinder young people's healthy behaviour across a number of health topics and settings?
- How well do these factors explain the health behaviour or behaviour change of young people?
- Which factors best explain young people's attitude to risk-taking and the relationship between these and health behaviour or behaviour change?
- How can we use the conclusions of this research to improve the efficacy of health promotion interventions for young people?
- What gaps in the research evidence exist, and how might these best be filled?

This series of reviews builds on previous work on systematic reviews of the effectiveness of health promotion. The series includes a wider range of study types than are normally included in systematic reviews of health promotion effectiveness. One of the central objectives of the reviews is to take further methodological work on identifying criteria for assessing the reliability of evidence from non-intervention research. The work builds on a previous descriptive mapping of health promotion research and young people, and on previous attempts to include non-intervention research in systematic reviews.

The aims of the three reviews summarised in this report were:

- To undertake a *systematic mapping* of research undertaken on the barriers to, and facilitators of, good mental health, physical activity and healthy eating amongst young people, especially those from socially excluded groups.
- To select a sub-set of studies to review *in-depth*.
- To *synthesise* what is known from these studies about mental health, physical activity and healthy eating barriers and facilitators amongst young people.
- To identify gaps in existing research evidence.

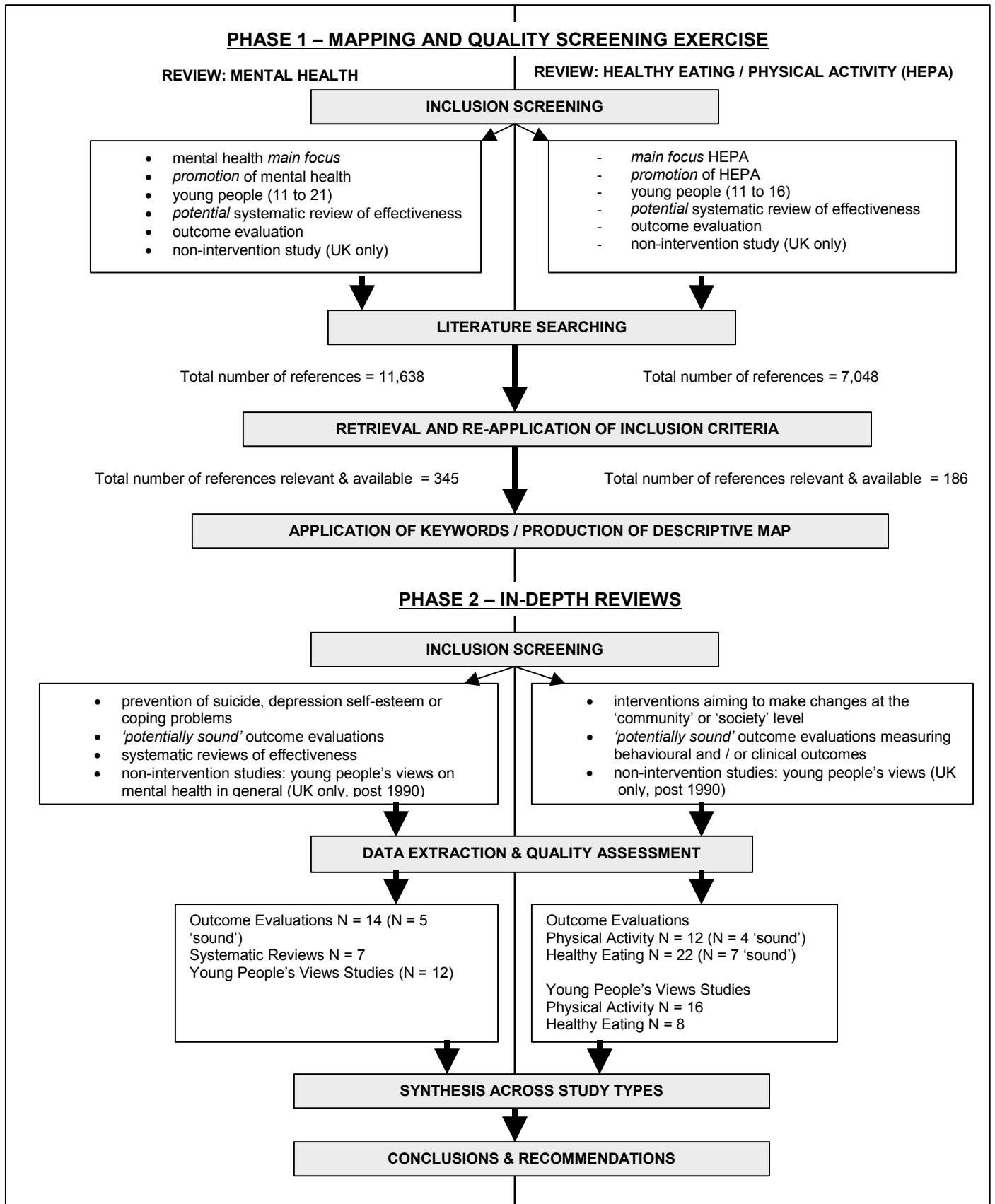
METHODS

This series of systematic reviews has a number of distinctive features that make it different from ordinary (non-systematic) reviews of the literature, and also from traditional systematic reviews of effectiveness. Research findings about the barriers to, and facilitators of, healthy lifestyles amongst young people can help in the development of potentially effective intervention strategies. Interventions can aim to modify or remove barriers and use or build upon existing facilitators. Barriers and facilitators in this series of reviews were categorised according to whether they reside at the individual, community or society levels. In evaluating barriers and facilitators to healthy lifestyles amongst young people, a range of research designs could be used. The reviews include a wide range of research types including both intervention research and 'non-intervention' research that describes factors influencing young people's health without introducing and evaluating an intervention. It was anticipated that by integrating findings about barriers and facilitators across different study types, guidance could be provided around effective interventions for current policy and practice. Recommendations for future development and evaluation would then follow on from this.

All three reviews were carried out in two stages: a descriptive mapping and quality screening exercise of all studies meeting the scope of the review, and an in-depth review of a sub-set of these studies (see Figure 1). The in-depth review topics were set after consultation with policy specialists and representatives from health promotion practitioner and researcher communities. Consultations suggested a focus on interventions that make changes at the community or society level to support young people in healthy lifestyles, as well as seeking young people's views related to their mental health, physical activity and healthy eating.

This report summarises the key findings of the three reviews with a view to identifying **overarching themes**. It seeks to identify common trends in the effectiveness of interventions and the views of young people in order to establish some of the key barriers to, and facilitators of, the health of young people, and any core approaches which have successfully addressed them. This may facilitate the development and implementation of interventions which benefit young people in many aspects of their lives, thus reducing the need for numerous, separate, fragmented strategies which may present inconsistent messages to young people, and may potentially be ineffective or even harmful.

Figure 1. Process of conducting the three reviews



RESULTS

The synthesis, which integrated young people's views and evaluated health promotion interventions across the areas of mental health, physical activity and healthy eating was framed around four themes: the school; family and friends; the self; and material and physical resources.

The **school** was both a barrier and a facilitator. Some of these barriers and facilitators have been addressed by soundly evaluated interventions, but gaps remain. The main issues were:

- Having a good selection of healthy options in the canteen. Two sound outcome evaluations found that interventions to increase availability of healthy foods throughout the school could be effective at increasing consumption.
- Having the opportunity to take part in more contemporary activities during physical education (PE) classes. Interventions which introduce new forms of exercise have been implemented but require more rigorous evaluation.
- Lack of adequate bicycle storage facilities. No evaluated initiatives were identified. However, 'whole school' approaches to health promotion may at least raise awareness of the status of facilities, which may prompt positive action to be taken.
- Inadequate changing and showering facilities; and uncomfortable gym kits. No evaluations of interventions to improve facilities were found.
- Teachers not always considered approachable for discussing health issues or obtaining information. Some teachers were perceived to have insensitive attitudes, particularly during PE. A systematic review which included some studies to promote better relationships between teachers and students found they could be effective, although to a limited degree.

Family and friends were likewise identified as both barriers to, and facilitators of, health. Some of the barriers and facilitators in this area have been taken into account by good quality evaluations of interventions, but these interventions have not always been effective, and some issues have yet to be adequately covered at all. The main issues were:

- Young people value confidentiality and often turn to their friends for emotional support. They also value the social aspects of leisure pursuits and physical activity. Two soundly evaluated interventions employed young people acting as peer educators to promote healthy eating and physical activity. There was less evidence favouring peer education or support in the area of mental health.
- Dysfunctional peer relationships, including exclusion, victimisation, and bullying impacted negatively on mental health. Evidence from previous systematic reviews shows that social skills training interventions can be effective. A reduction in bullying was one of several outcomes of a multi-component intervention included in one of these reviews.

- Parents sometimes discouraged participation in physical activity, and imposed constraints on freedom during leisure time on grounds of safety, culture, and gender. None of the soundly evaluated interventions addressed the root causes of parental concerns.
- Parents seemed to be supportive of healthy eating, particularly in the home, at least from the perspective of young people. Soundly evaluated interventions have been effective at encouraging healthy eating at home. Whilst some of the soundly evaluated interventions based in schools involved parents as much as possible, securing their participation was sometimes problematic.
- Young people cited parents and family as sources of emotional support. However, the evidence for the effectiveness of interventions to promote better family relations is mixed.

In relation to the theme of the **self** the issues raised by young people were complex, and only some have been dealt with in research:

- Young people expressed a raft of concerns, including worries about the future, security, their appearance, confidence and self-esteem. There has been some attention to improving self-esteem with two soundly evaluated interventions effective for outcomes such as knowledge and awareness. No interventions were found which attempted to build confidence specifically to take part in physical activity.
- Young people were motivated to take part in physical activity because of the sense of achievement it engenders, particularly when doing well in sports. Likewise getting good marks at school gave them a sense of pride. Willpower was seen as something that might help them to follow a healthy diet. In contrast, some young people spoke about their apathy in relation to leading healthy lifestyles, and others felt pressured to compete and achieve, leading to stress. Initiatives to motivate young people to achieve personal goals are generally lacking. However, interventions included in previous systematic reviews have attempted to modify classroom curricula, student ability and increase a sense of personal competence.
- Young people, particularly young women, were concerned about their appearance and body image, which had implications for their diet and engagement in physical activity. Dieting may be considered both a barrier and a facilitator, and studies addressing eating disorders were identified, but not reviewed in-depth. Sensible approaches to dieting were a feature of one soundly evaluated effective programme. Interventions to promote self-esteem, as mentioned above, may also have the potential to allay concerns over appearance.
- A range of strategies to deal with stress are employed by young people including listening to music, socialising, taking part in sport and exercise, as well as getting enough rest, or crying to release tension. Negative strategies included self-harm and drugs. There was at least one soundly evaluated intervention that encouraged young people to use positive methods of coping,

although this was generally not effective. Initiatives to tackle self-harm and drug taking have also been evaluated, although for the former effectiveness is limited.

- Many of the barriers to, and facilitators of, health were underpinned by the practical and material resources available to young people. Disappointingly, few initiatives which tackle structural issues have been evaluated.
- Young people, particularly older teenagers, were worried about financial security and employment prospects. Money and financial security were a source of emotional well-being.
- Participation in physical activity was sometimes prohibited by the cost of transport to amenities. Moreover, 'fast foods' were relatively cheap and easy to access. No evaluated initiatives were identified which addressed these issues.
- A lack of opportunities to participate in leisure activities was a cause of frustration, particularly for young men. Interventions to increase free opportunities to participate in leisure activities need further and more rigorous evaluation.
- In the area of nutrition, healthy food was not always easy to access (e.g. in school), whereas outlets providing fast foods were plentiful. Well designed evaluations have illustrated the effectiveness of increasing availability of healthy foods in schools and youth club settings.
- Poor transport infrastructure (e.g. lack of cycle paths) and socio-cultural tensions (e.g. racial prejudice, violence) were two of the root causes of concerns about safety. These impinge upon young people's freedom and opportunities for leisure. No evaluated initiatives were found which tackled these problems.
- Constraints on young people's time were identified which may have negative consequences for their health (e.g. large amounts of home work or responsibilities for domestic chores diverting time away from active pursuits). No evaluated initiatives were identified which aimed to achieve a more balanced curriculum, or culturally sensitive approaches to reducing young people's domestic responsibilities.
- Young people, when given the responsibility to prepare their own food, often relied on convenience foods, valuing their spare time for socialising and leisure pursuits. One soundly evaluated intervention encouraged young people to prepare healthy foods at home, but it is not clear how convenience can be achieved without a negative impact on nutrition.

CONCLUSIONS

Recommendations for policy and practice and future research are organised below into: recommendations for health promotion with young people, recommendations for future development and evaluation; recommendations for ways of involving young people in the development of interventions; and recommendations for conducting and reporting research.

Recommendations for health promotion with young people

This set of recommendations is based on the findings from the three reviews about interventions which have been demonstrated to have *positive, harmful or no effects* by well-designed outcome evaluations.

It is important to acknowledge that many of these interventions were delivered and evaluated outside of the UK. The majority were in the US (some with African American young people), with one in Finland, one in Norway and only one in the UK. The generalisability of these interventions to the UK needs to be considered carefully. It may be necessary to adapt their content, and this should be accompanied by thorough evaluation and monitoring to assess the extent to which they are acceptable to young people.

Cross-cutting recommendations

- A common theme was differences in effectiveness according to gender. For example, healthy eating and physical activity interventions tended to be more effective for young women than young men. Healthy eating seems to be a more salient topic for young women who are more likely to be concerned about their weight, whereas, endurance and fitness are more salient for young men. **There is a need to develop and evaluate separate interventions for young men and young women given the differences in effectiveness between genders in some of the interventions included in the reviews.**
- **Multi-component interventions are recommended wherever possible to promote young people's health.** The majority of the outcome evaluations included in the reviews were conducted in school settings, addressing classroom activities combined with school-wide initiatives, sometimes with the involvement of parents, community groups and the media. One notable example from the UK was the 'Wessex Healthy Schools Award' which adopted a whole school approach to health promotion, involving all members of the school community. All such interventions were associated with benefits and appear to be an effective way to reinforce the health promotion message in the many different settings in which young people live.

Recommendations specific to the promotion of mental health

- The current evidence on whether interventions to promote young people's mental health or prevent their mental illness are effective is conflicting. Findings from the

systematic reviews were inconsistent, and the outcome evaluations tended to be effective only for outcomes such as knowledge and awareness, rather than for symptoms of depression or measures of self-esteem. Effects also tended to be short lived and in some cases harmful effects were detected. **Given that evidence for effectiveness was conflicting, a critical perspective should be adopted when intervening, and questions such as 'Is this the right intervention? In the right population? In the right setting?' should be posed.**

- There is currently insufficient evidence to recommend school-based suicide prevention. Effects are limited and there is some evidence to suggest harm. **It may be more appropriate to frame interventions in terms of helping young people cope with stress and anxiety rather than focusing explicitly on suicide. The potential for doing harm as well as benefit should always be taken into account.**
- In terms of preventing depression, school-based sessions which provide information on recognising the symptoms of depression have not been effective. Interventions using skill development or behavioural techniques (e.g. modelling, role-playing, feedback and reinforcement) were more effective than non-behavioural techniques. Combinations of approaches are likely to be more effective. The impact of interventions might be strengthened if they are multi-component, with classroom-based activities complementing, for example, school ethos and functioning, as well as involving parents, youth groups, health services, and other agencies. **Future efforts to prevent mental illness or promote mental health should not rely on the presentation of information alone but should include skill development using behavioural techniques, and should be reinforced by support at different levels (e.g. classroom, school, home, community, society).**

Recommendations specific to the promotion of physical activity and healthy eating

- An intervention which aimed to support a 'whole school' approach to promoting health by encouraging schools to make changes in their organisational structure and philosophy was found to be effective for increasing self-reported healthy eating and physical activity in young women in one rigorous study carried out in the UK. **Based on a UK based evaluation study, a 'whole school' approach (i.e. one involving all members of the school community in developing and implementing health promoting changes in school organisation and structure) may be effective for increasing physical activity and healthy eating, primarily for young women aged 15 to 16 years.**
- A five year intervention which included a health screening initiative (with results fed back to pupils to set behavioural goals) alongside classroom-based educational activities, as well as initiatives to involve parents, led to increases in reported healthy eating and reductions in cholesterol and blood pressure in low-income African-American and Hispanic young people in the USA. **Multi-component school-based initiatives, as evaluated in one study, which promote healthy eating and physical activity involving classroom activities,**

parental involvement and risk factor assessment may be effective in some populations of young people.

- Interventions which increase the availability of healthy foods in secondary schools, complemented by classroom activities on the benefits of nutrition and school and community wide initiatives, were demonstrated to be effective for increasing reported healthy eating behaviour in two rigorous studies in the USA. **Increasing the availability of healthy foods in the school alongside classroom activities and media campaigns may be an effective way of promoting healthy eating.**
- Two rigorous evaluations in the USA of peer-led interventions in which young people educated each other and lobbied for health-supporting environmental changes in the school were generally effective at increasing reported healthy eating, particularly among young women. One of them also measured participation in physical activity as an outcome, but found no effect of the intervention. **Peer-led interventions which involve young people educating each other and lobbying for health-supporting environmental changes in the school may be beneficial, particularly for young women and mostly in terms of promoting healthy eating.**
- Whilst classroom activities to promote physical activity and healthy eating have been associated with benefits for young people, in some cases it was reported that teachers lacked the enthusiasm and skills necessary to deliver the interventions adequately. In particular, there was not always enough time for sufficient training and motivation. **Interventions which employ teachers to deliver interventions should allocate sufficient time for training, as this may be crucial to effectiveness.**

Recommendations for the future development and evaluation of interventions to promote health with young people

This set of recommendations is derived from the implications for research, policy and practice discussed in chapters 4 and 5. It aims to target the gaps between barriers and facilitators as identified by young people, and interventions which have been implemented to promote their health. The gaps have arisen either because there have been no attempts to evaluate interventions which tackle barriers and facilitators, or because such interventions have been poorly evaluated. The recommendations are of particular relevance to researchers as they outline where further research is required. However, they will also be relevant to policy makers and practitioners as they identify where initiatives need to be developed or modified. These all clearly highlight *the need for researchers, practitioners and policy makers to work in partnership.*

Interventions related to the school

- **Research is needed to ascertain how interventions to promote better teacher-student relationships can be more effective.** A number of current policy initiatives are in place to improve relationships through better teacher support and pupil empowerment. However, previously evaluated initiatives have only been partially successful in modifying psychosocial aspects of the

classroom. Any evaluation of new or existing approaches should conduct a process evaluation to establish which factors influence effectiveness, including whether or not the approach is acceptable to teachers and students.

- **Interventions to improve the school environment (e.g. better PE facilities) need to be complemented by evaluation of approaches to PE which help young people to feel comfortable about participating.** Schemes are in place to improve PE school facilities. But some young people report that PE is taught in an insensitive way that discourages them from taking part.
- **Specific programmes to promote health within a whole school approach require evaluating** (e.g. fruit only tuck shops). The whole school approach was found to be effective at increasing healthy eating and physical activity, mostly amongst young women. A variety of different initiatives can take place within the school and these need thorough evaluation.
- **More research is needed into the effects of incorporating young people's views into the planning of health promoting initiatives.** Current initiatives such as the National Healthy Schools Standard seek young people's input into planning and policy. However, in previous interventions where young people were encouraged to make suggestions for a more health-promoting school it is not clear whether changes were subsequently implemented. This may be an important factor in effectiveness.
- **There is a need systematically to review the evidence on the effects of interventions which encourage young people to achieve and succeed in school.** Achieving was something young people identified as a health facilitator, although the pressure to achieve could also cause stress. There are policy initiatives in place to empower young people to do well, but we did not search specifically for evaluations and interventions developed to promote young people's school achievement. Any existing evidence for effectiveness should therefore be appraised and summarised. Furthermore, any future primary evaluation should also focus on the mental and emotional effects of such programmes.
- **There is also a need for methodological research to establish effective ways of evaluating interventions in school settings.** Researchers have encountered a number of practical and philosophical problems when conducting research and evaluation in schools, including misconceptions by teachers about the purpose of evaluation. Teachers themselves could be asked about potential strategies that would encourage them to engage with the evaluation process. These strategies could then be tested for their effectiveness.

Interventions involving family and friends

- **Interventions which combine socialising with physical activity need to be developed and evaluated** as there appears to be a gap in the evidence base for this kind of initiative. Young people value the opportunity to spend time with their friends. However, they sometimes forfeit being active in order to spend time with their friends. Our searches did not find any interventions which attempted to integrate socialising with active pursuits. This is a promising area in need of investigation.

- **There is a need to collate the evidence for the effectiveness of interventions which utilise peer counselling techniques.** Young people often turn to each other for support or to discuss their problems. However, counselling approaches are considered distinct from education and have not been included in previous systematic reviews of peer education interventions, so a systematic review in this area is needed.
- **Interventions to promote better relationships within the family need further, more rigorous, outcome and process evaluation.** Evidence is required to back current initiatives to support parents experiencing conflict with partners and children, and multi-agency collaborations to promote family mental health. Existing evaluated interventions have been limited in their effectiveness, although this may be due to the relatively short duration of programmes.
- **Methodological research is required to establish how to maximise the involvement of parents in health promotion interventions.** This is recommended where appropriate to harness the influence that parents have over their children's lifestyles. Interventions which have attempted parent involvement have only tended to attract the most committed and health conscious parents.

Interventions involving the self

- **Further, more rigorous evaluation is required of interventions to address dieting within the context of promoting healthy eating (e.g. how to identify nutritious low fat meals; how to critique diets; 'sensible' approaches to weight loss).** Young people's concern over their appearance may prompt them to participate in physical activity, but may also encourage them to diet. Four of the outcome evaluations that we reviewed in-depth addressed dieting, but only one was judged to be methodologically sound.
- **Interventions which build on coping strategies that young people use to deal with stress, depression and anxiety need to be developed and evaluated.** These include physical activity and other pleasurable activities. Schemes are in place to provide more leisure and sports facilities and evaluation could measure the extent to which these are used by young people as a way of dealing with their problems.
- Young people do not relate to medically or professionally defined concepts such as 'mental illness', 'depression' or 'positive mental health' and they associate negative meanings with the term 'mental health'. Most of the interventions in this review, however, used these concepts in their intervention materials. **Future interventions need to make sure that their content and presentation is relevant to young people's own perspectives, and the context of their everyday lives, particularly in the area of mental health.**

Interventions involving practical and material resources

- **Multi-agency collaborations to promote mental health (e.g. Health Action Zone partnerships) should be evaluated for their potential to prevent self-harm and suicide.** School-based suicide prevention initiatives were found to be

limited in their effectiveness and multi-strategy programmes across different agencies/sectors are recommended in place of narrowly focused interventions.

- **Interventions to help young people gain employment should be assessed in terms of their ability to allay their fears and worries about their security and future.** Such concerns emerged as one of the most common issues troubling young people.
- **More rigorous evaluation is needed of interventions which make leisure and sports facilities and healthy foods more affordable to young people.** Evaluations of such initiatives were thin on the ground and the few initiatives which did address this issue suffered from methodological problems.
- **Current programmes to make leisure and sports facilities and healthy foods more accessible to young people should be evaluated.** Young people found it easy to access fast foods in their social environment, although it was unclear whether sources of healthy foods were necessarily lacking. In disadvantaged areas that accessibility is clearly a problem. Likewise, leisure and sports facilities were lacking in some areas, and the problem was compounded by inadequate transport facilities. Current schemes to increase access need to be tested carefully for their effectiveness.
- **Strategies to encourage greater uptake of free school meals should be tested.** Recent research has identified reasons why some pupils do not claim the meals to which they are entitled. Suggestions have been made for ways to overcome this which could be assessed for their effectiveness.
- **The evidence for the effectiveness of interventions to promote safer environments (e.g in terms of violence, crime, road safety) should be collated.** Young people cited things like racism, violence, crime, and road safety as issues which impinged upon their freedom and mobility. Schemes have been in place for some time to address some of these, although any evaluation would not necessarily have been included in this series of reviews. There is likely to be potential for systematic reviews to gather existing evidence on these topics and there is support for this by groups within the Cochrane and Campbell Collaborations. Where there are gaps in evaluation, controlled trials, preferably randomised, should be conducted, wherever possible.

Recommendations for involving young people in the development of interventions

This set of recommendations gives guidance for how practitioners and researchers can work in partnership with young people to develop interventions to promote their health:

- **Young people's views should be the starting point or any future developments of efforts to promote health.** In particular, there needs to be more investigation into the barriers to, and facilitators of, health. Young people need to be asked to specify, in their own words, the factors which inhibit or help them to lead healthy lifestyles.

- **Young people should always be consulted on matters concerning the promotion of their health.** This is not only an ethical imperative but also crucial in the development of potentially effective and acceptable interventions. Currently, from the information provided about the majority of evaluated interventions, young people have generally not been consulted either in intervention development or in the evaluation of intervention processes.
- **Young people should be involved as equal stakeholders in future agenda-setting for health promotion.** Young people have valuable knowledge about the barriers to, and facilitators of, health and require relevant, correct information and advice delivered in an appropriate and acceptable manner.
- **The views of socially excluded groups such as those from households on low incomes, from minority ethnic groups, those excluded from school and those with disabilities need to be sought.** Poor reporting of socio-economic characteristics in the young people's views studies meant that it was difficult to gauge the extent to which the young people studied were socially excluded. The fact that so many of the studies were conducted in schools using written questionnaires means that the views of those excluded or persistently absent from school or with poor literacy were not likely to have been sought.

Recommendations for conducting and reporting research

Outcome evaluation research

- **When possible, outcome evaluations should be conducted using the design of a randomised controlled trial and with individuals, families, schools, geographical areas or local authorities as units of allocation.** Whilst it is recognised that there are circumstances when this might not be possible, there are currently many missed opportunities for employing this design to evaluating effectiveness. Researchers need to work with practitioners (e.g. teachers, health promoters, Local Education Authority officials) to make use of opportunities to evaluate interventions in this way and policy-makers and research commissioners could do more to support and fund this.
- **Outcome evaluations should assess the impact of interventions in the long term, following up young people as they enter adulthood.** Although long-term evaluation might be costly, and present practical difficulties for researchers to maintain contact with participants, there is currently little evidence that programmes to promote mental health, physical activity and healthy eating with young people in their teens can have a lasting effect (beyond two years following intervention).
- **Outcome evaluations should always attempt to conduct integral process evaluations.** Only 10% of the outcome evaluations included in the mental health and healthy eating mapping and quality assessment exercises did this, whilst in the physical activity review the figure, at 4%, was even lower.
- **Key aspects of the methodology and results of outcome evaluations need to be reported in a detailed and consistent manner to promote confidence in their rigour.** Outcome evaluations did not consistently report pre-test and

post-test data of all participants as recruited into the study; establish the equivalence of intervention and control groups; or report the impact of the intervention for all outcomes targeted. These key aspects need to be reported as a minimum benchmark of quality. Authors should include information on the aims of the study and on the method of randomisation where used; should report the of numbers of participants assigned to intervention and control groups, should describe interventions and evaluation sufficiently to allow replicability, and include attrition rates. Concise writing styles, companion papers and the World Wide Web should allow full reporting.

Research on young people's views

- **Studies examining young people's views need to engage young people in a dialogue that is meaningful to them, avoiding inappropriate language.** . Studies often used checklists of pre-determined statements for young people to respond to, with no details of whether these were derived from what young people see as important or whether they found the language appropriate.
- **Studies examining young people's views need to seek informed consent and assure confidentiality/anonymity of responses.** It was often unclear as to whether or not consent had been sought from young people or their parents in these studies. Aside from being an ethical imperative, such actions may encourage young people to provide more honest responses and thus increase the validity of the findings.
- **The reporting of studies of young people's views and process evaluations also need to be more complete, as basic data are often missing.** The socio-demographic characteristics of young people who took part in studies were often poorly reported, making it difficult to judge the relevance and generalisability of the study findings. Detailed descriptions of the selection and recruitment of the sample, the methods used to collect and analyse data, and sample characteristics should always be presented. In addition, attempts to ensure the reliability and validity of the data collection and data analysis methods need to be made. An outline of how the study's findings contribute to the existing knowledge base should also be included.

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