

PROMOTING HEALTH IN SCHOOLS FROM EVIDENCE TO ACTION

1. Introduction

Who is this document for?

This publication is for you. It is for people with an interest in what happens in our schools. It is particularly for those who create policy and implement the actions that flow from good policy, such as politicians, government departments, non government organisations (NGOs), regional education authorities, school boards/councils, school directors, principals, head teachers, advisors and school health coordinators. Although this document is written primarily for policy-makers it is also for teachers, parents and students as the effective promotion of health is an inclusive, participatory process.

What is health promotion in schools?

Health promotion in a school setting could be defined as any activity undertaken to improve and/or protect the health of all school users.* It is a broader concept than health education and it includes provision and activities relating to: Healthy School Policies, the school's physical and social environment, the curriculum, community links and health services.

What does this document set out to do?

It sets out to explain how and why the promotion of health in schools is important; how good school management and leadership is the key and how promoting health in schools is based on scientific evidence and quality practices from all over the world. We summarise the evidence¹ for you and show you how individual health issues, such as healthy eating, substance misuse and mental health, relate to a holistic view of health and health promotion. It is written to support health promotion development and innovation in education systems. It is a positive document because we believe there is a good story to tell. We aim to inspire you and assist you in your important work in seeking to improve the lives of all our young people.

Why is the promotion of health in schools important?

World-wide, education and health are inextricably linked. In simplest terms: healthy young people are more likely to learn more effectively;

- ◆ health promotion can assist schools to meet their targets in educational attainment and meet their social aims; young people that attend school have a better chance of good health;
- ◆ young people that feel good about their school and who are connected to significant adults are less likely to undertake high risk behaviours and are likely to have better learning outcomes;
- ◆ Schools are also worksites for the staff and are settings that can practice and model effective worksite health promotion for the benefit of all staff and ultimately the students.

Are there guidelines for health promotion in schools?

This publication complements an associated document, *Achieving Health Promoting Schools: Guidelines for Promoting Health in Schools*,² also published by the International Union for Health Promotion and Education (IUHPE), which looks in more detail at the broad principles of establishing and sustaining health promotion in schools. These guidelines are available in seven languages at present: Arabic, Chinese, English, French, Portuguese, Russian and Spanish -

http://www.iuhpe.org/index.html?page=516&lang=en#sh_guidelines.

* See *Explanation of specific terms used in this document* in the final section

2. Why should education and health policy-makers work together?

In many countries of the world, government health ministries and education ministries work separately with different goals. However, the evidence is growing from across the world that health and education are inextricably linked to each other and to other issues, including poverty and income level. This is evident in the importance the United Nations Millennium Development Goals attach to education and health in setting out their development targets. It is now clear that education has the power to improve not only economic prosperity in a country, but that it has a major effect on health outcomes. This is particularly true of girls in developing countries, where improved education leads to smaller, healthier families and lower infant mortality rates.

It has been known for over one hundred years that providing healthy food and social support at school is one method of improving attendance and enabling young people from disadvantaged backgrounds to benefit from the education provided. Healthy young people that attend school tend to learn better and good education leads to healthier people. Sometimes the difference between cause and effect may not be clear. Moreover, there may be intermediate factors or more complex routes, such as good education leading to better economic development, which may result in people having more control over their lives and better health. We do not totally understand all of the complex ways that health and education interact, but we certainly know enough about promoting health in young people to improve their educational outcomes and lives in general.

We make the case that not only does the provision of good education improve health outcomes, but also that there is research evidence demonstrating that actively promoting health in schools can improve both educational and health outcomes for young people. In fact, there is evidence that health promotion in schools can support and give added value to schools as they strive to meet a whole host of social aims through their curricula and a whole school approach.*

The publication *Achieving Health Promoting Schools: Guidelines for Promoting Health in Schools*,² referred to earlier, sets out the knowledge that we have about sustaining health promotion programmes or strategies in a country. A key aspect of this is the important dialogue and partnership between education and health ministries at government level. *Guidelines for Promoting Health in Schools* states that it is necessary to: "...ensure there is continuous active commitment and demonstrable support by governments and relevant jurisdictions to the ongoing implementation, renewal, monitoring, and evaluation of the health promoting strategy (a signed partnership between health and education ministries of a national government has been an effective way of formalising this commitment.)"

We now know that the countries that have such a joint policy commitment or signed agreement between government departments are among the leaders in developing and sustaining the growth of health promoting schools.*

* See *Explanation of specific terms used in this document* in the final section

3. The concepts of health education and health promotion in relation to schools

In section 5, which follows, there is a summary of important findings from research and evaluation studies of health education and health promotion in schools. Before reviewing these, it is important to be clear about the meaning of our language and the associated concepts.

As stated in the introduction, health promotion in a school setting could be defined as any activity undertaken to improve and/or protect the health of all the school community. *Health education* in a school is a communication activity and involves learning and teaching pertaining to knowledge, beliefs, attitudes, values, skills and competencies. It is often focused on particular topics, such as tobacco, alcohol, nutrition; or it may involve reflecting on our health in a more holistic way.

Both health promotion and modern concepts of education also share a participative approach. Health promotion in a school community may include activities relating to the following six components:

Healthy School Policies

These are clearly defined in documents or in accepted practices that promote health and well-being. Many policies promote health and well-being e.g., policies that enable healthy food practices to occur at school; policies which discourage bullying.

The School's Physical Environment

The physical environment refers to the buildings, grounds and equipment in and surrounding the school such as: the building design and location; the provision of natural light and adequate shade; the creation of space for physical activity and facilities for learning and healthy eating.

The School's Social Environment

The social environment of the school is a combination of the quality of the relationships among and between staff and students. It is influenced by the relationships with parents and the wider community. It is about building quality connections among and between all the key stakeholders in a school community.

Individual Health Skills and Action Competencies

This refers to both the formal and informal curriculum and associated activities, where students gain age-related knowledge, understandings, skills and experiences, which enable them to build competencies in taking action to improve the health and well-being of themselves and others in their community and that enhances their learning outcomes.

Community Links

Community links are the connections between the school and the students' families, plus the connection between the school and key local groups and individuals. Appropriate consultation and participation with these stakeholders enhances the health promoting school and provides students and staff with a context and support for their actions.

Health Services

These are the local and regional school-based or school-linked services, which have a responsibility for child and adolescent health care and promotion through the provision of direct services to students including those with special needs.

It is important to acknowledge that the concept of health promotion is familiar to many working in the health sector. Many in the education sector have a broad concept of the term curriculum and would describe several or all of the above six components as being part of the extended or whole curriculum of the school. Therefore, many in the education sector do not make this distinction between health education and health promotion in the same way as in the health sector. This is not necessarily a problem, but requires mutual understanding and respect for each others' conceptual frameworks and associated language when working in partnership. Both the education and health sectors have a common goal to provide opportunities for school students to be more empowered about health and related issues as they go through school. This need for partnerships and a collaborative approach involving the education and health sectors in school health promotion is universal, and there are indications that it is now being addressed in many parts of the world. This is exemplified in "Case Studies in Global School Health Promotion"³ which explores a wide range of quality case studies from Africa, the Americas, Europe, the Eastern Mediterranean, Asia and the Western Pacific. It provides many examples of good planning, implementation and collaborative approaches.

4. The relationship of a topic approach to a holistic approach

Historically health education in schools tended to be based on a topic approach within the classroom, which meant working separately on issues such as smoking, alcohol, physical activity, healthy eating, sexuality and relationships, safety, mental health, etcetera. This is still reflected today in some of the initiatives in schools on, for example, obesity or substance misuse. This can be problematic or ineffective as such approaches are sometimes based on assumptions relating to human behaviour, which are difficult to justify and not supported by evidence. First of all it is known that all the 'topics' interact and are not separate at the behavioural level. For example, teenage sexual activity can be linked to alcohol/ drug use. Second, there is a risk that health will be seen solely at the level of the individual and their relationship to the topic being explored, when in fact the social environment is very often vital in determining behaviour. Third, there is a tendency within the topic approach to assume that human behaviour is completely based on knowledge and reasoning, and treats the important dimension of the emotions as a separate topic, when in fact mental and emotional aspects are integral to all the health issues.

This is not to say that a topic approach has no place in school health education or in the promotion of health in schools. It is an argument for making sure that if a topic is being explored, that possible connections are made to other topics in the classroom and in the wider life of the school. This can enable students to consider the issue in the reality of the social and environmental contexts of their lives. There are uniting themes that can cut across topics at a theoretical and pedagogical level. The life skills and competencies, which we wish young people to develop in the context of health promoting schools, can be important and common to all health topics. For example, the skill of being assertive or having the ability to critically reflect on their role as individuals in a complex society with conflicting values about health.

A health promoting school approach can provide holistic support for innovative work in the curriculum. For example, a school curriculum on healthy eating can be supported by the students playing an active part in all related aspects of food provision in the school. This could include features such as :

- ensuring healthy school food is available at breakfast or lunch time;
- providing an attractive environment for food consumption that takes account of students' wishes;
- developing a policy on snack provision;
- ensuring fresh water is available in classrooms;
- encouraging students to develop skills in food cultivation, preparation and purchase with involvement of parents and local food organisations;
- making provision for related physical activity initiatives, such as safe and active routes to schools or secure bicycle storage;
- making links with associated issues, such as mental and emotional health, the cultural role of food, and the role of the media in marketing food.

When considering the research evidence on health promotion in schools, it is evident that some of the research focuses specifically on topic aspects. This research is important and valid, but in some cases may be reviewing curriculum-only approaches, which do not necessarily reflect the developing philosophy of a whole school or health promoting school approach.

This is an argument for being cautious about interpreting the results on topic based studies as the research on whole school approaches, whilst less comprehensive to date, is very promising in that it suggests that a whole school approach is more likely to be effective than a classroom-only approach in terms of a range of outcomes. There is clearly a need for more research on whole school approaches to help us understand how this works and why it may be the case. However, there is associated research in the field of effective schools (not specific to health) that may help us to understand what features of schools will support effective school-based health promotion and how school based health promotion can contribute to effective schools.

The vast majority of the evidence emerges from topic based research and evaluation studies. As indicated in the above paragraph, the evidence on a whole school approach is very promising but less comprehensive. Although the whole-school approach is the most effective way to promote health in schools, this document provides the reader with summaries of evidence on the topic approach, but argues that these should be integrated into a whole-school approach.

Section 5 summarises the research and evaluation studies and provides the key findings and evidence on school health promotion and school health education. This evidence is predominantly from meta-analyses that compile, compare and analyse major references in each of the described fields, but some specific pieces of research are also included.

5 The Scientific Basis for the Art of Promoting Health in Schools - the Evidence

In the last twenty five years there have been many hundreds of refereed papers, books, and evaluation reports identifying the effects of initiatives promoting health in schools. Additionally, most of these analyses have attempted to identify why the initiatives worked and why they didn't.

The following is a brief summary of the major findings of these studies. Meta-analyses, which are summaries and reviews of existing research, have been used as the main source of the data. The results demonstrate the substantial congruence between three fields:

- the research and evaluation literature on school health;
- what constitutes successful learning and teaching in schools; and
- what makes schools effective in achieving education, health and social outcomes.

Evidence examining most of the major school health issues and relevant evidence from the education research and evaluation literature are identified. There is also a provision of brief summaries of 'what works' and the problematic issues, and a list of selected references with a focus on meta-analyses. Those wishing more specific detail are encouraged to read these as a way of probing more deeply.

Evidence about....

THE HEALTH PROMOTING SCHOOL (HPS)

The HPS is a whole school approach to enhancing both the health and educational outcomes of children and adolescents through learning and teaching experiences initiated in the school.

It sometimes has different names in various regions, e.g., Comprehensive School Health, Coordinated School Health, etc. Common to all of the frameworks are the six components explored earlier:

- * *Healthy School Policies*
- * *The School's Physical Environment*
- * *The School's Social Environment*
- * *Individual Health Skills and Action Competencies*
- * *Home and Community Links*
- * *Health Services*

Evidence suggests that →

- both education and health outcomes are improved if the school uses the HPS approach in addressing health related issues in an educational context; ^{3, 4, 5}
- multifaceted approaches are more effective in achieving health and educational outcomes than classroom only or single interventions; ^{3, 4, 6}
- the factors affecting learning are mostly influenced by social-emotional factors, e.g. student teacher interactions, school culture, classroom climate, peer group relationships; ^{5, 7, 8, 9}
- social-emotional factors are pivotal to the way a HPS operates and how schools achieve their education and health goals; ^{4, 7, 10}
- a whole school approach, where there is coherence between the school's policies and practices that promote social inclusion and commitment to education, actually facilitates improved learning outcomes, increases emotional wellbeing and reduces health risk behaviours. ^{6, 11, 12, 13}

Evidence has existed for over thirty years about the effects of health on the educational outcomes of children and adolescents. The core business of schools is to maximise learning outcomes. Healthy students learn better. It is therefore important for schools to recognise what they can do to enhance their learning goals through creating a school community that utilises the evidence of effectiveness so as to optimise learning opportunities for all students.

Effective schools provide students with opportunities to build their educational and health assets.

Effective schools: ^{14, 15, 16, 17, 18, 19}

- utilise learning and teaching methods that are evidence based;
- actively involve students in creating learning experiences;
- facilitate cooperation among students;
- provide prompt feedback to students;
- invest in capacity building experiences for all staff;
- establish and promote high expectations;
- respect diverse talents and ways of learning;
- permit adequate time for learning tasks;
- ensure there is consultation between parents, students and teachers in establishing the school's direction;
- establish programmes and facilities for students with special needs;
- provide clear leadership from the Principal/Director in establishing a school climate of trust, respect, collaboration and openness.

The *Achieving Health Promoting Schools: Guidelines for Promoting Health in Schools* document provides details on what works and issues that have the potential to inhibit health promotion development and sustainability in schools. The following section is extracted from the document.²

What works

- ◆ Developing and maintaining a democratic and participatory school community.
- ◆ Developing partnerships between the policy makers of the education and health sectors.
- ◆ Ensuring students and parents feel they have some sense of ownership in the life of the school.
- ◆ Implementing a diversity of learning and teaching strategies.
- ◆ Providing adequate time for class-based activities, organisation and coordination, and out of class activities.
- ◆ Exploring health issues within the context of the students' lives and community.
- ◆ Utilising strategies that adopt a whole school approach rather than primarily a classroom learning approach.
- ◆ Providing ongoing capacity-building opportunities for teachers and associated staff.
- ◆ Creating an excellent social environment which fosters open and honest relationships within the school community.
- ◆ Ensuring a consistency of approach across the school and between the school, home and wider community.
- ◆ Developing both a sense of direction in the goals of the school and clear and unambiguous leadership and administrative support.
- ◆ Providing resources that complement the fundamental role of the teacher and which are of a sound theoretical and accurate factual base.
- ◆ Creating a climate where there are high expectations of students in their social interactions and educational attainments.

Issues which have the potential to inhibit health promotion development and sustainability in schools if not addressed systematically

- Some school health initiatives in the past have been funded over a short project base, contain unrealistic expectations and/or do not take a whole school approach.
- Initiatives need to actively involve all stakeholders, including the students, as a sense of ownership is essential for sustainability.
- The necessity to provide the education sector with evidence about the advantages a health promoting strategy can offer schools in improving educational outcomes.
- Health promotion outcomes occur in the medium to long-term.
- Evaluation is difficult and complex.
- Health sector funding often risks distorting a health promotion approach to a traditional public health agenda of morbidity and mortality.
- The education sector has certain language and concepts, which have different meanings to those in the health and other sectors, and vice versa. Time, partnerships and mutual respect are needed to build a shared understanding.

Evidence by Health Topics....

MENTAL AND EMOTIONAL HEALTH

Mental health initiatives in schools seek to build the social, emotional and spiritual wellbeing of students to enable them to achieve education and health goals and to interact with their peers, teachers, family and community in ways that are respectful and just.

The evidence shows successful mental health initiatives:

- are well designed and grounded in tested theory and practice; ^{20, 21, 22}
- link the school, home and community; ^{10, 11, 22, 23}
- address the school ecology and environment; ^{10, 22, 23, 24}
- combine a consistency in behavioural change goals through connecting students, teachers, family and community; ^{8, 23, 24}
- foster respectful and supportive relationships among students, teachers and parents; ^{12, 22, 24}
- use interactive learning and teaching approaches; ^{8, 17}
- increase the connections for each student. ^{10, 24, 25, 26}

SUBSTANCE USE AND MISUSE

The evidence shows that school-based drug reduction initiatives are more likely to be effective if the programmes are interactive rather than teacher-centred; focus on life skills, e.g. refusal skills, assertiveness; take a whole school approach; link with the family and local community; and address the improvement of connections for students.

The evidence also indicates that:

- effect sizes (at best) are modest, but compare well with results of clinical trials; ^{4, 12, 27, 28, 29}
- some successful gains may include a short term delay in use and or short term reduction in usage; ^{27, 29, 30}
- positive effects are more likely to occur influencing tobacco, than alcohol or illicit drugs; ^{4, 28, 31}
- specific programmes are more likely to have no effects or harmful effects on alcohol use; ³⁰
- teaching staff, who understand mental health issues, achieve higher health and educational outcomes for the students. ^{4, 12}

HYGIENE

The scientific evidence about the health benefits for children and adolescents of hand washing, drinking clean water and using proper sewage systems is very strong. However there are limited quality published outcomes of the initiatives taken by schools to promote healthy hygiene.

The evidence indicates that in developing countries well designed and implemented initiatives, which have included a whole school approach involving the physical environment, links with the health sector, and which have suitable policies and curriculum, have increased school attendance rates and reduced worm infestations (mainly through the provision of worm eliminating drugs), but have had minimal effects on sustaining students' hygiene-related behaviours.^{32, 33}

SEXUAL HEALTH AND RELATIONSHIPS

Sexual health and relationships education programmes, when conducted by trained and empathic educators:

- Increase sexual knowledge; may increase safe sex practices;^{34, 35, 36}
- may delay the time of first sexual intercourse resulting in young people reporting on better communication in their relationships.^{37, 38}

Evidence indicates such programmes do not promote earlier or increased sexual activity in young people.^{4, 34, 39}

Schools that explicitly promote and build school connectedness for students are strongly associated with reduced sexual activity in adolescence.^{23, 25, 34}

HEALTHY EATING AND NUTRITION

Initiatives and programmes that follow evidence-based teaching practices and a whole school approach have been shown to regularly increase student knowledge about food and diet. However, changes in student eating behaviours have been less successful. Girls tend to benefit more than boys and some quality initiatives have reported a modest increase in vegetable consumption.

Those initiatives which did achieve some biological and behavioural changes had some or all of the following features:

- a whole school approach;^{40, 41}
- links with parents and food preparation at home;^{8, 42, 43}
- consistency between the taught curriculum and food availability in the school;⁴²
- programme longevity (over three years) and regular inputs by staff and students in planning and implementing activities;^{11, 44}
- on-going capacity building opportunities for staff.^{4, 11}

PHYSICAL ACTIVITY

The evidence suggests that:

- physical activity initiatives in schools are most effective if they adopt a comprehensive approach; e.g. the development of skills, establishing and maintaining suitable physical environments and resources, upholding supportive policies to enable all students to participate;^{4, 21, 45}
- daily physical activity at school improves pupils' motivation and has no negative effects on cognitive development even though less time may be available for cognitive tasks;^{42, 45, 46, 47, 48}

- there is a strong direct correlation between being physically active at school and undertaking physical activity in adulthood; ^{42, 49}
- students gain more benefit from physical activity if they have opportunities to be active at regular times during the school day; ^{21, 42}
- if students collaborate with school staff in deciding the type of physical activity to be undertaken, which could include other activities not viewed as sport, such as dance, then they will be more committed to participation; ^{50, 51}
- biological measures, e.g. body mass index (BMI), blood pressure measures and measures of oxygen use, have limitations and may be ineffective in assessing physical fitness levels of growing young people and other outcomes of school-based physical activity; ⁴⁹
- programmes that cater for student diversity in areas such as ethnicity, physical ability, gender and age are more effective in terms of student participation and engagement. ^{4, 42}

The large body of evidence summarised in this document, both by health topic and around health promoting schools, supports the need for a whole school approach where policies and practices coherently improve the school environment thus promoting enhanced educational outcomes as well as the health and well being of the whole school community.

Resources & References

RESOURCES

There are many materials to assist schools and their partners in the health and education sectors to plan, implement and evaluate initiatives in school health. These are in the form of evidence based guidelines, surveillance tools, assessment approaches etc. Many of these can be found on the websites of international organizations, as well as those country and regional organizations (e.g. health and education ministries and non government organizations (NGOs)), with responsibilities for promoting the health and educational outcomes of young people. A number of these are identified in the *References* section.

INTERNATIONAL SOURCES FOR GUIDELINES, INFORMATION, MONITORING, EVALUATION TOOLS, ETC

- » Centres for Disease Control and Prevention (CDC) - www.cdc.gov
- » Education Development Centre (EDC) Boston - www.edc.org
- » Focus Resources on Effective School Health (FRESH) – a partnership between WHO, UNICEF, UNESCO, and the World Bank - www.freshschools.org
- » International Union of Health Promotion and Education (IUHPE) - www.iuhpe.org
- » Schools for Health in Europe (SHE) - www.schoolsforhealth.eu
- » United Nations Education, Scientific and Cultural Organisation (UNESCO) - www.unesco.org
- » World Health Organisation (WHO) and its regional offices in Africa, the Americas, South East Asia, Europe, Eastern Mediterranean and the Western Pacific - www.who.int
- » Health Behaviour in School-Aged Children international study - www.hbsc.org

REFERENCES

1. For those wishing to read more about the types of evidence used in health promotion and school health promotion go to two chapters of the book edited by McQueen, D. V. & Jones, C. M. (2007) *Global Perspectives on Health Promotion Effectiveness*. New York: Springer Science & Business Media: Chapter 8 - St Leger, L. Kolbe, L., Lee, A., McCall, D. & Young, I. (2007). "School Health Promotion – Achievements, Challenges and Priorities" and Chapter 17 – McQueen, D. V. (2007) "Evidence and theory continuing debates on evidence and effectiveness".
2. "Achieving Health Promoting Schools: Guidelines for Promoting Health in Schools" – 2nd Edition of the document formerly known as "Protocols and Guidelines for Health Promoting Schools" (2008) – The International Union for Health Promotion and Education (IUHPE) - http://www.iuhpe.org/index.html?page=516&lang=en#sh_guidelines.
3. Vince Whitnam, C. and Aldinger, C. (eds) (2009) "Case Studies in Global School Health Promotion" Springer, New York, XVII, 404p., ISBN: 978-0-387-92268-3.
4. Stewart-Brown, S. (2006). "What is the evidence on school health promotion in improving school health or preventing disease and specifically what is the effectiveness of the health promoting schools approach?" Copenhagen: World Health Organization.
5. Vilnius Resolution. 3rd European Conference on health promoting schools: "Better Schools through Health", June 2009. <http://www.schoolsforhealth.eu/>.
6. Moon, A., Mullee, M., Rogers, L., Thompson, R., Speller, V. & Roderick, P. (1999). "Helping schools become health promoting: An evaluation of the Wessex Healthy Schools Award." *Health Promotion International*, 14, 111-122.
7. Greenburg, M., Weissberg, R., Zins, J., Fredericks, L., Resnik, Hand Elias, M. (2003) "Enhancing school based prevention and youth development through coordinated social, emotional and academic learning". *American Psychologist* 58: 6-7, pp466-474.
8. Weare, K and Markham, W. (2005) "What do we know about promoting mental health through schools?" *Promotion and Education* 12; 3-4, pp118-122.
9. West, P., Sweeting, H. & Leyland, L. (2004). "School effects on pupils' health behaviours: evidence in support of the health promoting school." *Research Papers in Education*, 19, 31, 261-291.
10. Bond L, Patton GC, Glover S, Carlin JB, Butler H, Thomas L et al. "The Gatehouse Project: can a multilevel school intervention affect emotional well being and health risk behaviours?" *Journal of Epidemiology and Community Health*. 2004;58: 997–1003.
11. Lister-Sharp, D., Chapman, S., Stewart-Brown. S. & Sowden, A. (1999). "Health Promoting Schools and Health Promotion in Schools: Two Systematic Reviews." *Health Technology Assessment*, 3, 1-207.
12. Victorian Health Promotion Foundation (2000) "*Mental Health Promotion Framework*". VicHealth, Melbourne.
13. Young, I and Currie C (2009) "The HBSC study in Scotland: can the study influence policy and practice in schools?" *International Journal of Public Health*. pp271-277, Birkhauser Verlag, Basel.
14. Fullan, M. (2001) *Leading in a Culture of Change* Jossey Bass, San Francisco.
15. Graham, C., Cagiltay, K., Lim, B., Craner, J. and Duffy, T. (2001) "*Seven Principles of Effective Teaching*". University of North Carolina.
16. Masters, G. (2004) "Beyond political rhetoric: what makes a school good" *OnLine Opinion – e Journal of Social and Political Debate*.
17. Muijs, D. and Reynolds, D. (2005) *Effective Teaching: Evidence and Practice* Paul Chapman Publishing. London.
18. Rowe, K. (2008) *Effective Teaching Practices* ACER, Melbourne.
19. Wallin, J. (2003) "Improving School Effectiveness" *ABAC Journal* 23: 1 pp51-72.
20. Green, J., Howes, F., Waters, E., Maher, E. and Oberklaid, F. (2005). "Promoting the social and emotional health of primary school aged children: reviewing the evidence base for school-based interventions." *International Journal of Mental Health Promotion*, 7, 2, 30-36.
21. Shepherd J., et al. (2002) "Barriers to, and facilitation of, the health of young people: a systematic review of evidence on young peoples views and on interventions in mental health, physical activity and healthy eating." *Volume 2 – Complete report – Evidence for Policy and Practice Information and Coordinating Centre*, London.
22. Wells, J., Barlow, J. & Stewart- Brown, S. (2003). "A systematic review of universal approaches to mental health promotion in schools." *Health Education Journal*, 103, 4, 197-220.
23. Patton, G. Bond, L., Carlin, J., Thomas, L. Butler, H., Glover, S., Catalano, R. & Bowes, G. (2006). "Promoting social inclusion in schools: A group-randomized trial on student health risk behaviour and well-being." *American Journal of Public Health*, 96, 9 pp1582-1587.
24. Browne, G., Gafni, A., Roberts, J., Byrne, C. & Majumdar, B. (2004). "Effective/efficient mental health programs for school age children: a synthesis of reviews." *Social Science and Medicine*, 58, 1367-1384.
25. Blum, R. McNeely, C. & Rinehart, P. (2002). *Improving the odds: The untapped power of schools to improve the health of teens*. Center for Adolescent Health and Development, University of Minnesota.
26. McNeely, C. Nonnemaker, J. and Blum, R. (2002) "Promoting School Connectedness: Evidence from the National Longitudinal Study of Adolescent Health" *Journal of School Health* 72: 4 pp138-146.
27. White, D. and Pitts, M. (1998) "Educating young people about drugs: a systematic review" *Addiction* 93: 10, pp1475-1487.

28. McBride, N. (2003) "A systematic review of school drug education" *Health Education Research* 18: 6 pp729-742.
29. Stead, M. and Angus, K. (2007) *Literature Review of the Effectiveness of School Drug Education*. University of Stirling.
30. Tobler, N. & Stratton, H. (1997). "Effectiveness of school-based drug education programs: a meta analysis of the research." *Journal of Primary Prevention*, 18, 1, 71-128.
31. Thomas R., (2002) "School-based programmes for preventing smoking" *The Cochrane Database of Systematic reviews*. Issue 2, Article N° CD001293.
32. Brian, A. and Haggard, S. (2003) *Hygiene Promotion: Evidence and Practice*. School of Hygiene and Tropical Medicine. London.
33. Kremer, M. and Edward, M. (2001) *Worms: Education and Health Externalities in Kenya*. Poverty Action Lab. Paper No.6. Coalition for Evidence Based Policy.
34. Kirby, D. (2002). "The impact of schools and school programs upon adolescent sexual behaviour" *Journal of Sex Research*, 39, 1, 27-33.
35. Young Song E., Pruitt, B., McNamara, J. and Colwell, B. (2000) "A meta-analysis Examining Effects of School Sexuality Education Programs on Adolescents Sexual Knowledge 1960-1997". *Journal of School Health*, Vol 70:10 pp 412 – 416.
36. Thomas, M. (2002) "Abstinence-based programs for the prevention of adolescent pregnancy: A review" *Journal of Adolescent Health* 26:pp 5-17.
37. Kirby, D. (1997) *No Easy Answers: Research Findings on Programs to Reduce Teen Pregnancy* The National Campaign to Prevent Teen Pregnancy. Washington, DC.
38. Silva, M. (2002). "The effectiveness of school-based sex education programs in the promotion of abstinent behaviour: a meta-analysis." *Health Education Research*, 17, 4 471-481.
39. Henderson M, Wight D, Raab G, Abraham C, Parkes A, Scott S, Hart G. (2007) "The impact of a theoretically based sex education programme (SHARE) delivered by teachers on NHS registered conceptions and terminations: final results of cluster randomised trial". *British Medical Journal*; 334:133-135.
40. Gortmaker, S., Peterson, K., Weicha, J., Sobol, A., Dixit, S., Fox, M. & Laird, N. (1999) "Reducing obesity via a school-based interdisciplinary intervention among youth: Planet Health." *Archives of Pediatrics & Adolescent Medicine*, 153, 409-418.
41. Sahota, P., Rudolf, M., Dixey, R., Hill, A., Barth, J. & Cade, J. (2001). "Randomised control trial of a primary school based intervention to reduce risk factors for obesity." *British Medical Journal*, 323, 1-5.
42. Lobstein, T. and Swinburn, B (2007) "Health Promotion to Prevent Obesity: Evidence and Policy Needs" in McQueen, D. & Jones, C (eds.) *Global Perspectives on Health Promotion Effectiveness*. New York: Springer Science & Business Media.
43. Perry, C. (1988) "Parent Involvement with children's health promotion: The Minnesota Home Team." *American Journal of Public Health*. 78:11156-11160.
44. Campbell, C., Waters, E., O'Meara, S. & Summerbell, C. (2001). "Interventions for preventing obesity in childhood. A systematic review." *Obesity Reviews*, 2, 149-147.
45. Timperio, A., Salmon, J. & Ball, K. (2004). "Evidence-based strategies to promote physical activity among children, adolescents and young adults: review and update." *Journal of Science and Medicine in Sport*, 7, 1, 20-29.
46. Sibley BA, Etnier JL. (2003) "The relationship between physical activity and cognition in children: A meta-analysis." *Pediatric Exercise Science*, 15:243-256.
47. Van Beurden, E., Barnett, L., Zask, A. Dietrich, U., Brooks, Land Beard, J. (2003) "Can we skill and activate children through primary school physical education lessons? – a collaborative health promotion intervention" *Preventive Medicine* 36: pp493-501.
48. World Health Organisation (2007) *WHO Information Series on School Health – Promoting Physical Activity in Schools*, WHO, Geneva.
49. Dobbins, M., Lockett, D., Michel, I., Beyers, J., Feldman, L., Vohra, J. & Micucci, S. (2001). *The effectiveness of school-based interventions in promoting physical activity and fitness among children and youth: a systematic review*. Ontario: McMaster University.
50. Donovan, E. (2001) *PDHPE Literature Review – A report for the NSW Board of Studies*. University of Wollongong, Sydney.
51. Weiss, M. (2000) "Motivating kids in physical activity" *Research Digest – Presidents Council on Physical Fitness and Sports*. Vol3, Issue 11, p1-8.

EXPLANATION OF SPECIFIC TERMS USED IN THIS DOCUMENT

School users

The term 'school users' refers to everyone who attends a school and who interacts with it. This includes the students, teachers, all other school staff, health personnel, parents, school governors, school visitors and the wider community who interact with the school. The terms 'school community' or 'whole school community' refer to similar concepts.

Whole school approach

This term refers to an approach which goes beyond the learning and teaching in the classroom to pervade all aspects of the life of a school. For example a whole school approach to the promotion of healthy eating could include learning and teaching, parental involvement in food preparation, school meals, breakfast clubs, and controlling vending machines and advertising within the school. The term is useful as it is readily understood by both education and health practitioners.

Health Promoting Schools

Health promoting schools take a whole school approach to the promotion of health. WHO states that 'A health promoting school can be characterized as a school constantly strengthening its capacity as a healthy setting for living, learning and working.' Promoting health through schools. Report of a WHO Expert Committee on Comprehensive School Health Education and Promotion.

WHO Technical Report Series N°870. WHO, Geneva, 1997

'Towards this goal, a health promoting school engages health and education officials, teachers, students, parents and community leaders in efforts to promote health. It fosters health and learning with all the measures at its disposal, and strives to provide supportive environments for health and a range of key school health education and promotion programs and services. A health promoting school implements policies, practices and other measures that respect an individual's self esteem, provide multiple opportunities for success, and acknowledge good efforts and intentions as well as personal achievements. It strives to improve the health of school personnel, families and community members as well as students, and works with community leaders to help them understand how the community contributes to health and education. WHO's Global School Health Initiative aims at helping all schools to become "health promoting" by, for example, encouraging and supporting international, national and sub-national networks of health promoting schools, and helping to build national capacities to promote health through schools.'

Authors: Lawrence St Leger, Ian Young, Claire Blanchard, Martha Perry.

Acknowledgements: Many thanks to all the authors and reviewers for their contributions, to all the health and education practitioners and officials, researchers and evaluators and all who attended the review workshops in many parts of the world / provided valuable feedback on the various drafts, and to the IUHPE and CDC for sponsoring this document.



The production of this document has received financial support from the United States Centers for Disease Control and Prevention (CDC), an Agency of the Department of Health and Human Services, under Cooperative Agreement Number CDC RFA DP07-708 on Building Capacity of Developing Countries to Prevent non-Communicable Diseases. The content of this document is solely the responsibility of the authors and does not necessarily represent the official views of CDC.

42 Boulevard de la Libération, 93203 Saint Denis Cedex, France, Tel: +33 1 48 13 7120; Fax: +33 1 48 09 1767
Email: iuhpe@iuhpe.org ; Website: www.iuhpe.org