

PERSPECTIVES

Schools for health, education and development: a call for action

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SUMMARY

In 2007, the World Health Organization, together with United Nations and international organization as well as experts, met to draw upon existing evidence and practical experience from regions, countries and individual schools in promoting health through schools. The goal of the meeting was to identify current and emerging global factors affecting schools, and to help them respond more effectively to health, education and development opportunities. At the meeting, a Statement was developed describing effective approaches and strategies that can be adopted by schools to promote health, education and development. Five key challenges were identified. These described the need to continue building evidence and capturing practical experience in school health; the importance of improving implementation processes to ensure optimal transfer of evidence into practice; the need to

alleviating social and economic disadvantage in access to and successful completion of school education; the opportunity to harness media influences for positive benefit, and the continuing challenge to improve partnerships among different sectors and organizations. The participants also identified a range of actions needed to respond to these challenges, highlighting the need for action by local school communities, governments and international organizations to invest in quality education, and to increase participation of children and young people in school education. This paper describes the rationale for and process of the meeting and the development of the Statement and outlines some of the most immediate efforts made to implement the actions identified in the Statement. It also suggests further joint actions required for the implementation of the Statement.

Key words: school health promotion; school health; education and development

BACKGROUND

International development and cooperation on school health

Over the past 30 years, there have been several international initiatives to define and advance the role of schools in promoting and protecting health. In the more recent past, in 1995, the World Health Organization (WHO) facilitated a process leading to the establishment of the *Global School Health Initiative*. This Initiative advanced a comprehensive and integrated methodology for school health that has become widely known as *Health Promoting Schools* (HPS). This Initiative and the HPS concept were built upon the pioneering work and experience of many other programmes such as the European Network of HPS, established in 1992; important work by UNESCO stretching back to the late 1980s which focused on health and nutrition; the Child Friendly School Initiative by UNICEF and related programmes from the UNDP and the UNFPA (Bundy *et al.*, 2006). The World Bank has also played an active role in supporting school health and nutrition programmes during this period.

Since the establishment of the Initiative, programmes to migrate, adapt and advance the HPS methodology have been implemented in all six WHO Regions, and HPS Networks have been established within and between the countries.

At the *Education for All* World Education Forum in Dakar, in April 2000, agreement was reached among major United Nations agencies to harmonize actions around common elements in each of their respective approaches to school health. UNESCO, UNICEF, WHO, the World Bank and several non-governmental organizations agreed on a common structure for school health initiatives known as the Focusing Resources on Effective School Health (FRESH) framework. Other international agencies have since joined FRESH as partners. A survey among FRESH partners in 2006 revealed that the FRESH framework has been used as the basis for school health advocacy with governments and provided practical guidance to health and education ministries, as well as bringing together partners working in different sectors. The FRESH website and toolkit have played an important role in enabling access to resources and materials to support school health

programmes (Attawell, 2006). In 2006, the partners renewed their commitment to the FRESH framework and to its goals and objectives and to further strengthen collaborative work between the partners.

Evidence of progress and continuing challenges

Inspired and supported in part by these different initiatives and programmes, many countries, regions and individual schools have made progress in implementing actions to promote and protect the health of school students and the wider school community. This progress is increasingly well documented in evidence of the effectiveness of school health projects and programmes in combating a number of health issues, including malaria and worm infections, malnutrition, sexual and reproductive health, as well as hand washing and hygiene education (Del Rosso and Marek, 1996; UNAIDS, 1997; Xu *et al.*, 2000; Vince-Whitman *et al.*, 2001; Guinan *et al.*, 2002; Sidibe and Curtis, 2002; UNICEF and IRC, 2005; Kirby *et al.*, 2006; Shordt, 2006; Biddlecom *et al.*, 2007; Jukes *et al.*, 2007; Kirby *et al.*, 2007; Migele *et al.*, 2007). There is also compelling but less consistent evidence of the effectiveness of school health programmes that address non-communicable diseases and risk factors, such as unhealthy diets (Gortmaker *et al.*, 1999; Campbell *et al.*, 2001; Sahota *et al.*, 2001), physical inactivity (Dobbins *et al.*, 2001; Timperio *et al.*, 2004) and harmful use of alcohol and drugs (Tobler and Stratton, 1997; Lloyd *et al.*, 2000; Midford *et al.*, 2000; National Drug Research Institute, 2002), violence and mental health (Wells *et al.*, 2003; Browne *et al.*, 2004; Green *et al.*, 2005; American Counselling Association, 2006; Stewart-Brown, 2006). However, even when positive behavioural outcomes are achieved, these are not always sustained over time, or broadened in impact through dissemination. Therefore, there remains major challenges to ensure greater consistency in implementation of effective strategies, and to develop better strategies for dissemination and for maintenance of effects.

The progress to date provides some scope for optimism, but new challenges emerge with regularity (Lister-Sharp *et al.*, 1999; St Leger *et al.*, 2007). This constantly evolving environment requires continued research and innovation on school health promotion and the potential

for school interventions to have an impact on emerging, more complex or insidious risks to health. Addressing the underlying social determinants of health and achieving success in reducing the gaps in health and academic outcomes between students of lower and higher socioeconomic backgrounds is increasingly recognized as a priority in this context.

To ensure that school health programmes make a useful contribution to the wider initiatives needed to narrow social and health inequities, it remains a priority that interventions have greatest impact on the health of students from disadvantaged backgrounds. We are challenged to improve the health of the poorest, fastest.

Rationale for a technical meeting and a meeting statement

As indicated above, research and practical experience in school health programmes have grown markedly in the past 10 years. This growing body of evidence and practitioner experience on the effectiveness of these many programmes provides important testimony to the progress achieved so far. It remains important to find ways to share and migrate the lessons learned to date, and determine processes to close the gaps in knowledge, especially those related to social and economic determinants of health.

The *Technical Meeting on School Health* reported in this paper was organized to consolidate what has been learnt from regions and countries since the WHO Expert Committee meeting in 1995, and to consider new global factors affecting schools. The purpose of the meeting was to pool knowledge and experience so as to provide direction and leadership for future strategies to better respond to current and emerging challenges to the health of children and young people, including improved learning outcomes and health and reduced inequities in health. The meeting sought to build on existing partnerships among national and international organizations specifically by bringing together the health, education and development sectors to focus on their many common goals (St Leger and Nutbeam, 2001). The meeting also provided the opportunity to identify new priorities for research for the next decade, while also providing guidance for future policies and actions to respond most effectively to the challenges identified above.

Process

Ten months prior to the Technical Meeting WHO convened a Steering Committee with participants from all six WHO regions, as well as representatives from major UN agencies. The steering committee advised WHO on the background and the programme for the Technical Meeting. The meeting was organized along five tracks, namely:

- (i) evidence of the effectiveness of school health promotion,
- (ii) implementation of HPS and other school community programmes,
- (iii) the role of schools in alleviating social and economic disadvantage,
- (iv) impact of the media on health behaviour of children and adolescents,
- (v) partnerships for promoting health and education for all school-age children.

At the Technical Meeting, each track involved a plenary session drawing upon papers that were commissioned from around the world for this meeting, and several interactive parallel sessions. A drafting group for the meeting statement met several times during the meeting to finalize the joint statement.

A working draft of the meeting statement was developed by the WHO Secretariat with input from track leaders. It was then revised twice during the Technical Meeting, based on presentations in plenary and parallel sessions and discussions and in light of the comments received from meeting participants. The statement was approved by the meeting participants at the final session of the Technical Meeting.

Throughout the development and finalization of the Statement, the participants maintained the focus on setting strategic directions, guiding principles and detailing action points without going into the details of the priorities and programmes of individual organizations.

STATEMENT

The full text of the Statement is set out in Figure 1.

DISCUSSION

This statement is notable in the extent to which it promotes recognition of the fundamental

Background

In 2007, the World Health Organization and the Pan Canadian Joint Consortium for School Health (JCSH) co-hosted a Technical Meeting on Building School Partnerships for Health, Education Achievements and Development (Vancouver, 5-8 June 2007), with the participation of education and health experts from about 30 countries and United Nations agencies. The Meeting built upon earlier work to develop strategies that will enable schools to respond more effectively to current and emerging health concerns and development challenges. This statement and the **Call for Action** appended to it are a reflection of collective concerns and ideas about effective approaches and strategies that can be adopted by schools to promote health, education and development.

Schools make a difference — evidence of progress

Every child has the human right to education, health and security. The central role of schools is teaching and learning, but they are also a unique community resource to promote health and development for children, families and teachers. Education, health and other sectors must work together as partners to develop the full potential of young people, mitigating the impact of social and economic disadvantage. There has been significant progress in achieving improved health and educational outcomes over the past decade through school-based health, education and development initiatives. The consensus on the core components of an effective school programme — **policy, skills-based health education, a supportive social and physical environment, community partnerships and health services**—derives from decades of experience of implementing school health initiatives. Different countries and international organizations use different terms, although all are based on the same fundamental evidence and principles.

- The relationship between school enrolment and participation and improved health outcomes is well established, especially for girls. Since 2000, there has been sustained, albeit inconsistent, progress in achieving higher rates of school participation in all parts of the world.
- The strong association between good health and academic achievement and school completion is now well understood. School health and education programmes contribute to the achievement of Education for All and the Millennium Development Goals.
- Better evidence has led to improved school programmes that have helped local communities and countries to promote healthy lifestyles and environments to combat communicable diseases such as diarrhoea, worm infections and sexually transmitted diseases, including HIV. School programmes have been important agents for change in addressing risk factors for non-communicable diseases, such as unhealthy eating and tobacco consumption, as well as improving mental health and reducing alcohol and illicit drug use, violence and injuries.
- Effective practice has included approaches that combine traditional health education with more comprehensive, whole-school approaches that create a supportive physical, social and learning environment, and bring together the combined resources of parents, local communities and organizations.
- School health promotion strategies are now better tailored to meet the needs of specific regions and health issues.

Fig. 1: Schools for health, education and development: a call for action.

importance of the relationship between quality education for all to the health of future generations. This relationship is most apparent in low- and middle-income countries, but observable in all countries. Achieving school participation and

promoting literacy are fundamental to public health. The statement also reflects the real concern of participants at the meeting about intractable, socio-economically determined differences in vulnerability, risk and health status

Meeting current and emerging challenges

Much progress has been made, but much remains to be done. Five **key challenges** were identified as important in maintaining progress across all regions and countries:

Building evidence and experience: Studies from high-income, middle-income and low-income countries indicate that a whole-school approach to health and development is effective in promoting and protecting health and improving academic achievement. Such approaches involve the school community in deciding on the most relevant combination of strategies, school policies and ways to improve the physical and social environment for students and enhance the relationships between the school, parents and the local community.

Our challenge is to develop and sustain effective school health programmes in low-income countries and communities in ways that link schools with community development, and continue to adapt and develop new methods for working with schools and school workers operating in adverse social circumstances in all countries.

Strengthening implementation processes: Progress in achieving widespread implementation of school health initiatives and sustaining their results is observable in many schools and across countries. Implementation has not always been achieved as rapidly or broadly as desirable. Agreements between the education and health sectors, laying down clear roles for each, must be concluded and implemented from the beginning of the collaboration process. Using data from both sectors is crucial for advocacy and programme design. Tools and processes that actively engage all stakeholders are essential in turning concepts into action. Attention to context and local social and economic determinants will optimize the success of implementation.

Our challenge is to commit the human, technical and financial resources required for implementation. Investment is needed in professional development for education and health professionals, leading to a shared understanding of the concepts and skills required to manage the implementation process—planning, delivery and evaluation.

Alleviating social and economic disadvantage – promoting equity: Schools are not able to eliminate disadvantage in their societies on their own, but they can work effectively with communities and other agencies to alleviate the impact of this disadvantage, through greater coordination and intensity of action. Participation in high-quality schooling is fundamental in achieving equity and progress. Schools in low-income countries face enormous challenges, often lacking a basic school infrastructure, and frequently having to overcome the most basic challenges of poor hygiene, inadequate food and the prevention of communicable diseases. Schools can also contribute to community, economic and social development programmes and be a resource for the entire community.

Our challenge is to respond to the needs of young people in highly adverse circumstances. Schools that serve indigenous peoples face many of the same economic disadvantages, but also need to interpret concepts such as school health programmes in more culturally relevant terms. This includes showing respect for traditional forms of knowledge and the important role of self-determination in indigenous societies. Schools also play a critical role in communities or countries whose infrastructure and social fabric

Fig. 1: Continued.

between and within populations. By emphasizing these issues, the statement achieves a close alignment of goals with the education, health and development sectors, and is highly compatible with the emerging WHO strategy to address the social determinants of health (Commission on

the Social Determinants of Health, 2007). The major challenges reflected in the statement are to more widely implement what we know to be effective, and to achieve optimal harmony among the different partner organizations with a stake in the action necessary to achieve implementation.

have been destroyed by war, natural disaster or epidemics. They are symbolic and practical focal points in the rebuilding of communities and countries, and have a direct role to play in building resilience and enriching the lives of young people, particularly refugee and migrant children, in such circumstances. Schools that serve disadvantaged communities must ensure that curricula, health services and social environments are relevant to the challenges and strengths of their communities, and respond effectively to the challenge posed by high levels of school attrition.

Harnessing media influence: Media and mass communication, which are both a cause and a consequence of globalization, are influencing lifestyles and shaping our modern global culture. The media are a force for good in education and communication, but can have a negative influence on schoolchildren when used in irresponsible marketing practices. Children and adolescents are particularly vulnerable to advertising because of their limited comprehension of the nature and purpose of commercial appeals.

Our challenge is to develop school health activities, materials and media that harness positively the potential of all media, including the new media, for the advancement of education and health goals in schools. Our challenge is also to ensure that school students develop their knowledge and understanding of the media and its potential to influence and exploit young people. School education about media influences will not be sufficient by itself: a supportive regulatory environment is needed to address the advertising of harmful products and services.

Improving partnerships among different sectors and organizations: Effective, sustainable action to promote school health depends upon formal and consensual sharing of responsibilities between health, education and other sectors. Impressive progress can be achieved when the actions of the different agencies and sectors are harmonized and committed to promoting health and education through schools. This is most obvious where collaboration takes place between local agencies and national ministries of education and health. It also includes other agencies and ministries that impact on the health and education of school students. Harmonization at the international level among intergovernmental and international organizations can maximize cost-effectiveness and avoid unnecessary duplication, contradiction and confusion at country level.

Our challenge is to achieve coordination of effort and partnerships in school health programmes, enabling partners to share their visions, set targets, pool resources and delineate their actions. The FRESH (Focusing Resources on Effective School Health) framework is one mechanism where coordination between international agencies could be optimally achieved. Other mechanisms at national and regional levels exist to coordinate the effective use of resources at these levels. Our challenge is to promote cross-learning between high-income, middle-income and low-income countries, and to find meaningful ways to engage the private sector with school communities in ways that are mutually beneficial and where the purpose and integrity of school programmes are not compromised.

A call for action

Achieving the potential offered by schools requires leadership at national, community and school level, reflected in a genuine commitment to investing in education and in the health of school students and their teachers.

Fig. 1: Continued.

Implementing the statement

In a recent editorial, St Leger asks challenging questions about the purpose of declarations, charters and statements, whether their intentions are being achieved, who uses them, whether they are right and whether they could

have been developed better to facilitate more universal ownership and implementation (St Leger, 2007).

The focus of this statement is to articulate a strategic agenda of issues and re-invigorated set of directions in school health and development

The participants in this Meeting call for leadership by local school communities, governments and international organizations in five broad areas of action to attain education, health and development goals over the next decade.

- **Invest in education** to achieve the highest possible levels of enrolment, participation and school achievement. This will bring health, social and economic development benefits at all levels of society.

- **Build school infrastructure** to create a stimulating, socially supportive, hygienic and safe environment that fosters high-quality learning, social development and healthy choices for students, parents and teachers.

- **Invest in capacity** to support professional development programmes which will build the capabilities of teachers and health professionals to plan, implement and evaluate school health initiatives. This includes support for the effective use of traditional media as well as new media, and increasing access to those technologies; and full use of existing databases as well as the collection and use of disaggregated social and economic data on health and education achievements for planning, reporting on progress and research.

- **Implement what we know to be effective** through investment in the dissemination of good practice throughout the education and health sectors, by adaptation of successful programmes to the local context, culture and political conditions, and by achieving the collaboration required for implementation.

- **Harmonize action among partners for sustainable partnerships** by improving the communication of ideas and the benefits of school health programmes across the health and education sectors, by supporting a variety of communities of practice that are relevant to the local needs and priorities of schools, and by developing and strengthening networks to exchange information and knowledge, especially in low-income countries and among United Nations organizations.

The participants of this Technical Meeting pledge to advocate and act in ways that reflect their different circumstances and opportunities and to intensify efforts to secure high-level political support in countries, to keep health and education for all high on the national and global development agenda, and to ensure that countries fulfill their commitment to achieving the targets set by international agreements and declarations such as Millennium Development Goals and Education for All.

8 June 2007

Note: This statement reflects the collective views of an international group of experts, participants in the WHO/JCSH Technical Meeting on Building School Partnerships for Health, Education Achievements and Development (Vancouver, 5-8 June 2007). It does not necessarily represent the decisions or the stated policy of the World Health Organization, the Pan Canadian Joint Consortium for School Health or any other of the organizations represented at the Vancouver meeting.

Fig. 1: Continued.

programmes in order to improve health, learning and development through schools. Unless the statement is implemented and evaluated by countries, professions and the voluntary sector, it runs the risk of remaining a declaration of aspirations. This has been a concern for the Statement's authors and sponsors, and a range of actions has been taken following the meeting to disseminate and to make use of the Statement.

For example, immediately after the Vancouver Meeting, the WHO Eastern Mediterranean Regional Office used the Statement as the basis for the development of strategic directions for the future institutionalization of the health promotion concept in both health and education sectors in many countries in the Region. The Eastern Mediterranean Network of Health-Promoting Schools was also established in collaboration with

UNESCO, the Islamic Educational Scientific and Cultural Organization and other development partners and Member-States in the Region. In the Americas' Regional Office (AMRO/PAHO), the Ibero-American Technical Meeting on health and education was held by the Brazilian government with the support of PAHO and the *Convenio Andrés Bello*. The meeting aimed to analyse the strategic alliance of health, education and development and reflect on the HPS Initiative in the Ibero-American region within the framework of the Vancouver Statement which was translated into Spanish. The meeting was also a means to strengthen interagency collaboration. It brought together technical officers from the Ministries of Health and Education from 10 countries in the region, two UNESCO- OREALC, UNICEF as well as three WHO Collaborating Centres on Health Promotion.

UNESCO has recently committed itself to three critical and interconnected issues for 2008 and beyond. First, to tackle equity and inclusion by reaching those who have been excluded from basic education. Second, to address quality of education, and third to provide technical support and guidance to countries committed to advancing EFA. In pursuing these priorities, UNESCO will make a major direct and indirect contribution to the achievement of the priorities for action identified in the Statement.

Similarly, the World Bank which supports both the education and the health sectors has continued to work with the founding agencies and an even broader partnership to take forward the joint commitment to the countries. The Vancouver Statement reinforces and supports the original vision of the FRESH Framework.

The Joint Consortium for School Health mobilized the health and education sectors of jurisdictional governments across Canada by providing them with the Statement and related briefing materials, and encouraging them to take action in their own jurisdiction. The Consortium continues to mobilize its members to take action in full support to the implementation of the Statement.

The Schools for Health in Europe network (SHE network), formerly known as the European Network for Health Promoting Schools (ENHPS), has used the Statement as one of the sources for defining the new Terms of Reference for SHE, subsequently published at the website www.schoolsforhealth.eu.

The International School Health Network (ISHN) has convened an expert working group to develop a more culturally relevant approach to school health, basic educational achievement and social development for aboriginal schools and communities. The project will include an international Dialogue Circle to develop a more relevant HPS framework based on traditional knowledge, aboriginal/indigenous values and a strength-based approach. The ISHN has also initiated a project that will define a more comprehensive and coherent approach to alleviating disadvantage and promoting equity through school-based and school-linked programmes. Experts and representatives from several countries have defined a list of issues and programmes that are particularly relevant to low-income communities within high-income countries. The project will make use of the Community Schools approach that is similar to HPS but which places more emphasis on community-school partnerships in addressing complex social and economic problems such as poverty, social alienation and geographical isolation. Linkages with the social welfare and crime prevention sector will be emphasized as well.

The Education Development Center (EDC), a partner in the development of the Vancouver Statement and WHO Collaborating Center, has followed up on key recommendations from the Statement by entering into a contract to publish a book with case studies from around the world in school health promotion. In doing so, EDC has worked with authors from around the world to refine the case studies that were prepared for the Vancouver meeting, to add additional cases and to analyse them in regard to identifying factors that support the implementation of school health programmes. The book is planned for publication in early 2009.

Joint actions needed

Despite all of these efforts, the proper and effective implementation of the Statement requires concerted effort among national and international organizations through existing and new partnerships, organizations, networks and other collaborative mechanisms. This will require all agencies to recognize the strong coincidence of interest between their respective missions and priorities, and the strategies

identified in the Vancouver Statement. Action is therefore warranted to harmonize efforts among different organizations, as each has its own priorities for action.

Effort must be made by international organizations, such as the FRESH partners, the International School Health Network, and professional organizations such as the International Union for Health Promotion and Education (IUHPE) and Education International (EI) to consider the priorities identified in the Statement as well as initiatives at the national and international levels, so models of best practice can be created and shared. There is also a need to harmonize actions among partners by achieving consensus on a set of key performance indicators to support the efforts that need to be made by key partners for practice, policy development and research globally to address the priorities. To this end, two initiatives are being undertaken. First, the Partnership for Child Development (PCD) and Save the Children US have taken the initiative urging the FRESH partners to take the lead in coordinating the development of a global monitoring and evaluation framework for School Health and Nutrition programmes. Secondly, together with other partners, the IUHPE is also in the process of organizing a series of international discussions through innovative webinars and building a website online, for example, through Wikipedia.

CONCLUDING REMARKS

The Statement that resulted from the Technical Meeting in June 2007 will only be useful if it is implemented at the country level. To implement the statement, a worldwide partnership is needed and actions among key partners must be harmonized. While UN Agencies, international NGOs and professional associations are taking the lead to shape the agenda and develop common frameworks, organizations at the country level also have to develop action plans with clear and measurable outcomes and timelines, taking their social, economic and political context into account. Effort must also be made to develop mechanisms and processes to reach marginalized people and communities in all countries.

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REFERENCES

- American Counselling Association. (2006) Effectiveness of school counselling. <http://www.counseling.org/Files/FD.ashx?guid4757e7f7-85ad-456b-88c3-5fb6a60b9eba> (last accessed 11 October 2006).
- Attawell, K. (2006) *Focusing Resources on Effective School Health (FRESH)*. Draft. Issues Paper. UNESCO, Paris.
- Biddlecom, A., Hessburg, L., Singh, S., Bankole, A. and Darabi, L. (2007) *Protecting the Next Generation in Sub-Saharan Africa: Learning from Adolescents to Prevent HIV and Unintended Pregnancy*. Guttmacher Institute, New York.
- Bundy, D., Shaeffer, S., Jukes, M., Beegle, K., Gillespie, A., Drake, L. et al. (2006) School-based health and nutrition programs. In Jamison, D., Breman, J., Measham, A., Alleyne, G., Claeson, M., Evans, D. et al. (eds), *Disease Control Priorities in Developing Countries*, 2nd edition. Oxford University Press and the World Bank, New York, pp. 1091–1108.
- Browne, G., Gafni, A., Roberts, J., Byrne, C. and Majumdar, B. (2004) Effective/efficient mental health programs for school age children: a synthesis of reviews. *Social Science and Medicine*, **58**, 1367–1384.
- Campbell, C., Waters, E., O'Meara, S. and Summerbell, C. (2001) Interventions for preventing obesity in childhood. A systematic review. *Obesity Reviews*, **2**, 149–157.
- Commission on Social Determinants of Health. (2007) *Achieving Health Equity: From Root Causes to Fair Outcomes. Interim Statement*. World Health Organization, Geneva, p. 25.

- Del Rosso, J. M. and Marek, T. (1996) *Class Action: Improving School Performance in the Developing World through Better Health and Nutrition*. World Bank, Washington, D.C.
- Dobbins, M., Lockett, D., Michel, I., Beyers, J., Feldman, L., Vohra, J. *et al.* (2001) *The Effectiveness of School-based Interventions in Promoting Physical Activity and Fitness among Children and Youth: A Systematic Review*. McMaster University, Ontario.
- Gortmaker, S., Peterson, K., Weicha, J., Sobol, A., Dixit, S., Fox, M. *et al.* (1999) Reducing obesity via a school-based interdisciplinary intervention among youth: planet health. *Archives of Pediatrics and Adolescent Medicine*, **153**, 409–418.
- 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**, 30–36.
- Guinan, M., McGuckin, M. and Ali, Y. (2002) The effect of a comprehensive handwashing program on absenteeism in elementary schools. *American Journal of Infection Control*, **30**, 217–220.
- Jukes, M. C. H., Drake, L. J. and Bundy, D. A. P. (2007) *School Health, Nutrition and Education for All Levelling The Playing Field*. Cabi Publishing, Wallingford Oxfordshire and Cambridge, MA.
- Kirby, D., Obasi, A. and Laris, B. (2006) The effectiveness of sex education and HIV education interventions in schools in developing countries. *World Health Organisation Technical Report Series 938*, pp. 103–150, discussion 317–341.
- Kirby, D., Laris, B. and Roller, L. (2007) Sex and HIV education programs: their impact on sexual behaviours of young people throughout the world. *Journal of Adolescent Health*, **40**, 206–217.
- Lister-Sharp, D., Chapman, S., Stewart-Brown, S. and Sowden, A. (1999) Health promoting schools and health promotion in schools: two systematic reviews. *Health Technology Assessment*, **3**, 1–207.
- Lloyd, C., Joyce, R., Hurry, J. and Ashton, M. (2000) The effectiveness of primary school drug education. *Drugs: Education, Prevention and Policy*, **7**, 109–126.
- Midford, R., Lenton, S. and Hancock, L. (2000) *A Critical Review and Analysis: Cannabis Education in Schools*. New South Wales Department of Education and Training, Sydney.
- Migele, J., Ombeki, S., Ayalo, M., Biggerstaff, M. and Quick, R. (2007) Diarrhea prevention in Kenyan school through the use of a simple safe water and hygiene intervention. *American Journal of Tropical Medicine and Hygiene*, **76**, 351–353.
- National Drug Research Institute. (2002) *The Prevention of Substance Use, Risk and Harm in Australia: A Review of the Evidence*. Commonwealth Department of Health and Ageing, Canberra.
- Sahota, P., Rudolf, M., Dixey, R., Hill, A., Barth, J. and Cade, J. (2001) Randomised control trial of a primary school based intervention to reduce risk factors for obesity. *British Medical Journal*, **323**, 1–5.
- Shordt, K. (2006) *Review of Handwashing Programs*. International Water and Sanitation Centre, Delft, The Netherlands.
- Sidibe, M. and Curtis, V. (2002) Hygiene promotion in Burkina Faso and Zimbabwe: new approaches to behaviour change. Nairobi, Water and Sanitation Program-Africa Region (Field Note 7 in the Blue Gold Series). www.wsp.org.
- St Leger, L. (2007) Declarations, charters and statements—their role in health promotion. *Health Promotion International*, **22**, 179–181.
- St Leger, L. and Nutbeam, D. (2001) A model for mapping linkages between health and education agencies to improve school health. *Journal of School Health*, **70**, 45–50.
- St Leger, L., Kolbe, L., Lee, A., McCall, D. and Young, I. (2007) School health promotion: achievements, challenges and priorities. In McQueen, D. and Jones, C. (eds), *Global Perspectives on Health Promotion Effectiveness*. Springer Science+Business Media, LLC, New York.
- Stewart-Brown, S. (2006) What is the evidence on school health promotion in improving health or preventing disease and, specifically, what is the effectiveness of the health promoting schools approach? WHO Regional Office for Europe, Copenhagen.
- Timperio, A., Salmon, J. and 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**, 20–29.
- Tobler, N. and Stratton, H. (1997) Effectiveness of school-based drug education programs: a meta analysis of the research. *Journal of Primary Prevention*, **18**, 71–128.
- UNAIDS Best Practice Collection. (1997) *Impact of HIV and Sexual Health Education on the Sexual Behaviour of Young People: A Review Update*. UNAIDS, Geneva, Switzerland.
- UNICEF and IRC. (2005) *Water, Sanitation and Hygiene Education for Schools: Roundtable Proceedings and Framework for Action*. UNICEF, New York.
- Vince-Whitman, C., Aldinger, C., Levinger, B. and Birdthistle, I. (2001) *EFA 2000 Assessment: Thematic Study on School Health and Nutrition*. UNESCO, Paris.
- Wells, J., Barlow, J. and Stewart-Brown, S. (2003) A systematic review of universal approaches to mental health promotion in schools. *Health Education Journal*, **103**, 197–220.
- Xu, L.-S., Pan, B.-J., Lin, J.-X., Chen, L.-P., Yu, S.-H. and Jones, J. (2000) Creating health-promoting schools in rural China: a project started from deworming. *Health Promotion International*, **15**, 197–206.