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School Health Promotion

Achievements, Challenges and Priorities

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Health Promotion in Schools – The Context for a Consideration of Evidence

Are schools effective in building the health and well-being of their students? What evidence do we have to explore this question and what are the gaps? What do we need to do in the next decade to improve the quality of the evidence and the ways we collect, interpret and disseminate it?

This chapter addresses these questions. However, before they are examined, it is important to provide a brief explanation about school health and what actually happens in schools to promote the health and well-being of the school, its students and employees.

Schools have long been viewed as important settings for promoting the health and social development of children. In many countries, the first schools were often established by churches, charities and other Non Government Organisations (NGOs), to socialize and take care of the children whose parents had moved into cities during industrialization. Later, health education was introduced in schools, driven primarily by the medical fraternity with exhortations about the dangers of various diseases. The school was, and still is, seen by many as a site for health messages, materials, and prevention programs. Consequently, we have seen a wide variety of issue-specific and narrowly framed approaches to school health promotion come, stay or go across the educational landscape. Active schools (designed to increase physical activity), drug-free schools (designed to prevent drug use in, near, and beyond school), and safe schools (designed to prevent intentional and unintentional physical and psychological harm) are just three examples of approaches developed in response to specific societal health issues. Interestingly, these health driven models developed separately from models derived from the human services sector such as community schools (which utilize the school building, during and after school hours, and community agencies collectively to benefit principally students, but also the broader community) or full-service schools (which provide a wide range of medical, dental, psychological, social, and other services within or very near the school). The education sector also developed their own holistic models, including effective schools

(with: a safe and orderly environment; climate of high expectations for success; effective instructional leadership; clear and focused mission, opportunity to learn and student time on task; frequent monitoring of student progress; and home-school relations) and learning communities which encourage teachers and local community groups collectively to design and adapt their teaching methods and goals to address the unique needs of students and stakeholders in their own communities).

Interestingly, the health driven models developed separately from models derived in the education sector such as community schools and full service schools. These were terms applied to a whole of school approach in addressing educational actions to build stronger links with the community, extend the services (e.g. psychological and health) available to students and staff, create supportive social and physical environments and extend the curriculum beyond the classroom. It is not surprising that those working within schools feel pressured by the expectations placed on them by of these congruent but sometimes competing frameworks, particularly where they see similarities or differences in the different models.

Another approach, which combined teaching and learning with the delivery of preventive health services and measures to maintain a healthy physical and social environment in the school, emerged in Europe and North America in the 1980s and 1990s (Allensworth & Kolbe, 1987; Young & Williams, 1989). This multi-faceted approach gained impetus from the emerging, concepts and principles about health promotion that were reflected in the Ottawa Charter (WHO, 1984; WHO, 1986).

The concept of school-based and school-linked health promotion evolved along similar, yet slightly different paths on five continents. In Europe it was called the Health Promoting School (Young & Williams, 1989). With the support of the European Commission and the Council of Europe, the European Network for Health Promotion Schools (ENHPS) was established and is now present in over 43 countries in the region. In North America, the concept of Comprehensive School Health Education was used widely in the 1980s denoting a curriculum-focused approach. This was broadened in the 1990s to “Coordinated” and “Comprehensive” programs and approaches to depict the use of multiple interventions from multiple agencies. (Kolbe, 1993; WHO, 1991). The Western Pacific Region of the WHO developed “Guidelines for Health Promoting Schools” for its 32 member states in 1995 (WHO, 1996). Developments similar to these have fostered Health Promoting Schools (HPS) and Coordinated School Health (CSH) in Latin America, North America, South America, the Middle East, Asia, and Africa.

However, there is still confusion about what school health is, which has major implications for assessing its effectiveness. The WHO Expert Committee (1997) noted some confusion with the concept. Is it an **outcome** (a “healthy” school), an **approach** (emphasis on different agencies working together), a set of **values** (based on a holistic view of health and well-being), an issue **specific program** (coordinated interventions to prevent one problem) or a **coordinated set of programs and services** (to address several health problems or to promote health in general)? Clearly, each of these perspectives led to different measures of success.

Schools are primarily focused on maximizing educational opportunities and outcomes for their students. How does the HPS/CSH approach contribute to enhancing learning processes and educational outcomes? If we truly recognize this as the main priority of the education sector, what does this mean for measuring effectiveness? Measurements of the effectiveness and quality of health promotion in schools need to take account of the mainstream methods used in the education system if they are to be valued by schools (Young, 2005).

There is a consolidated body of evidence which indicates that healthy students learn better and that improving the knowledge, competencies and health status of the young people will improve learning outcomes (WHO, 1997; Sinnott, 2005; National Foundation for Education Research, 2004; Scottish Council for Research in Education, 2002; Taras, 2005a; Taras, 2005b; Taras & Potts-Datema, 2005a; Taras & Potts-Datema, 2005b). In addition, in most countries, the health and education systems share similar values about what underpins educational experiences at school. Some of these common values include respect for self and others; respect for lifelong learning; respect for the environment; and upholding principles of social justice and equity.

We need to view schools as a means or setting through which several sectors can promote health, academic achievement and social development (Tones, 2005). This will mean that the measures for success and the evidence of effectiveness will include a mixture of health indicators and educational measures. What we choose to assess, and what values we place on the data, will affect how different sectors perceive the effectiveness of health-related initiatives in schools.

Evidence of Effectiveness of School Health

What Types of Evidence are Reported and Valued?

The answer to this question depends on the sector undertaking the evaluation. In schools, teachers usually wish to see if students have attained the knowledge and competencies of the health curriculum. Procedures are put in place to check knowledge, understanding, ability to analyze health data, skills in synthesizing and evaluating information and in creating or designing an action or strategy, e.g. a balanced diet for a week. Many believe the education sector should not measure personal health behavior changes as a result of the school-based health promotion program, nor attempt to assess an education program on health in terms of biological measures (e.g., reduce excessive BMI, cholesterol levels, etc.). Schools simply should assess if the educational components of their program have been achieved. Many school health programs are written in educational language focused on achieving educational outcomes relating to knowledge and understanding, skill development and to demonstrate an ability to explore attitudinal issues in the affective domain, e.g. gain an appreciation of . . . ; list the factors which . . . ; assess the issues . . . ; evaluate alternatives to . . . ; demonstrate the procedures to . . .

The health sector usually seeks evidence to ascertain if the “intervention” has resulted in a reduction in health risk behaviours and/or an increase in protective health behaviours, and sometimes changes in health status. The word “intervention” is often used as it indicates a special program or project over a finite amount of time, which focuses on a health issue, e.g. nutrition, sexuality, oral health. Evaluation of such studies regularly involves control groups and the application of evaluation methods designed to check if the intervention design produced the desired behavioral outcome(s) or health status changes. For example, in a physical activity program, the measures could include increased physical activity (behavior) and/or changes in aerobic capacity (health status).

The evidence suggests it is possible to have changes in student’s health behaviors through school health initiatives. However, it appears that in order to achieve these outcomes the “intervention” (educational initiative or whole school program) needs to be of substantial intensity, exist over a number of years and connect with student’s families, their peer group, relevant agencies, professionals, and the community. There is evidence to support the view that multiple approaches have stronger effects than, for example, a classroom-only approach if behavior changes or changes in health status are the goals. The resources to support these interventions are substantial and often rely on the health sector or donor organizations to fund them. This level of support is often beyond the expectations, priorities, and resources of schools.

Teachers adapt and modify programs and learning experiences according to needs, knowledge and interests of students. The classroom and school is a flexible place with lessons and activities being shaped, modified and contextualized by the issues of the day and certain school-based policies, practices and priorities (e.g., theme days, excursions, illnesses, and time limitations). The complexity of school communities can also make it difficult to find control groups that take account of all the important variables that could influence the outcomes in a comparative experimental study. In addition there are potential ethical issues in depriving control schools of particular innovative approaches which could be beneficial to improving education and/or health outcomes.

There is clearly a tension between what constitutes evidence for the education and health sectors and what benchmarks should be applied to the methodologies to ascertain if the evidence is admissible (Kemmer, 2006). This tension occurs because both sectors often have different expectations of a school health program. Schools see learning as cumulative over the time a student is in school (up to 12 years and usually at least 6). Literacy, numeracy, and other core school programs build knowledge and competencies over many years, taking into account a student’s cognitive and physical development. They don’t expect major behavioral outcomes in less than one year, or even after two or three. The evidence shows that it is unrealistic to expect health “interventions” which are supported with limited and short-term funding, to make much difference in behavior change.

Recently, there has been an increased focus on looking at the evidence of quality practice in schools to assess if schools are undertaking their health promotion and education work in ways that reflect the evidence of effectiveness.

The frameworks of HPS/CSH are based solidly on the evidence of effective schooling, integrated approaches to health improvement and recognition of those components in school communities which influence health (e.g., policies, environment, partnerships, and skill acquisition). Evidence has been gathered extensively about what schools actually do in health promotion using the HPS/CSH framework (Lee, St.Leger & Moon, 2005; Marshall et al., 2000). This “audit” type evidence has provided schools and health and education authorities with comprehensive maps about what is happening and how comprehensive it is. It is proving very useful in assisting schools and authorities to concentrate on the gaps and to provide opportunities to affirm quality work in schools through award systems (Moon et al., 1999; Lee, Cheng & St. Leger, 2005).

Science has already demonstrated the benefits for young people of a healthy diet, appropriate physical activity, correct hygiene practices, social connectedness, etc. More effective and useful evaluations for school health initiatives need to unpack the circumstances that enable or inhibit the achievement of these goals, rather than only seek to prove that the program changes health status or certain behaviors.

Achievements of School Health Promotion

There have been many published evaluations of school health initiatives in the last twenty years. In the last decade researchers have interrogated this body of evidence in meta-analyses to synthesize the findings of the studies. These findings have subsequently generated evidence-based guidelines for school health promotion that also draw on evidence from the educational literature about innovation and change in schools, leadership and educational outcomes.

It is not the purpose of this chapter to summarise these studies in detail. Table 8.1 provides some of the examples of the meta-analyses and the evidence-based guidelines for whole school health.

Recent evidence suggests that the way the school is lead and managed, the experiences students have to participate and take responsibility for shaping policies, practices and procedures, how teachers relate to and treat students and how the school engages with its local community (including parents) in partnership work, actually builds many health protective factors and reduces risk taking behavior (Stewart-Brown, 2006; Blum et al., 2002, Patton, Bond, Carlin, Thomas, Butler, Glover, Catalano & Bowes, 2006). Many of these gains have occurred without a specific health “intervention.” It appears that a whole school approach which encourages and recognizes student participation and which overtly addresses the building and maintenance of a caring school social environment may be the most effective way in achieving both health and educational outcomes.

The school health promotion programmes that were effective in changing young people’s health or health-related behaviour were more likely to be complex, multifactorial and involve activity in more than one domain (curriculum, school environment and community). These are features of the health promoting schools approach, and to this extent these findings endorse such approaches. The findings of the synthesis also support intensive interventions of long duration. These were shown to be more likely to be effective than

TABLE 8.1. Major studies of effectiveness

| Issue | Evaluations, Analyses and Reviews |
|---|---|
| • Nutrition | Gortmaker et al. (1999) Campbell et al. (2001) Sahota et al. (2001) |
| • Physical Activity | Dobbins et al. (2001) Timperio et al. (2004) |
| • Sexuality | Silva (2002) Kirby (2002) |
| • Drugs | Tobler & Stratton (1997) Lloyd et al. (2000) Midford et al. (2000) National Drug Research Institute (2002) |
| • Mental Health | Browne et al. (2004) Wells et al. (2003) Green et al. (2005) American Counselling Association (2006) |
| • Whole School Approach Health Promoting School (HPS) Coordinated School Health (CSH) | Lister-Sharp et al. (1999) Blum et al. (2002) West, Sweeting & Leyland (2004) Patton et al. (2006) Stewart-Brown (2006) |
| • Quality Practice Guidelines | European Network of Health Promoting Schools (1997) United States' Centers for Disease Control and Prevention (2003) Clift & Jensen (2005) Lee et al. (2006) St.Leger (2005) Task Force on Community Prevention Services (2006) |

interventions of short duration and low intensity. This again reflects the Health Promoting Schools approach, which is intensive and needs to be implemented over a long period of time. (Stewart-Brown, 2006, p17)

A Framework for Research and Evaluation in School Health Promotion

School health initiatives have been or can be conceptualised with a focus, alternatively or in combination as:

- A. Specific Outcomes
- B. Essential School Health Promotion Processes
- C. Evaluation Approaches (from both health and education perspectives)

As shown in Table 8.2, the *School Health Promotion Outcomes* component identifies all those outcomes where there is evidence to support the particular achievement. Part B, *School Health Promotion Processes*, identifies the diversity

TABLE 8.2. A framework for research and evaluation in school health promotion

| A. School Health Promotion Outcomes | |
|---|---|
| <ul style="list-style-type: none"> • Health knowledge, attitudes, skills, intents • Health behaviours • Health outcomes • Education participation • Cognitive performance • Education achievement • Social outcomes • Economic outcomes | |
| B. School Health Promotion Processes | |
| <ul style="list-style-type: none"> • Developing a nurturing and supportive psychosocial environment • Creating a safe and healthy physical environment • Delivering education that informs, motivates and empowers students and employees to assure individual, family, community, national and global health • Providing necessary health services • Developing healthy food and eating policies and practices • Creating opportunities and skills for enjoyable physical activity • Providing counselling, psychological and social services • Improving the health, productivity and quality of life of school employees • Integrating efforts of students, families, school employees and public, not-for-profit and private-sector community agencies – during both school hours and non-school hours • Implementing a Health Promoting School (HPS), or whole setting approach, integrating all of the above processes as an integral part of the school, instead of implementing a discrete process to attain a discrete outcome | |
| C. Evaluation Approaches | |
| Health Sector | Education Sector |
| <ul style="list-style-type: none"> • Research syntheses (including meta analyses) • Randomised Control Trials (RCTs) • Cohort studies • Outcome Research (case-control studies) • Case studies • Expert opinion | <ul style="list-style-type: none"> • Case studies / action research / histories / biographies • Surveys / correlational studies / cohort analysis • Group comparisons / controlled experimental design • Longitudinal studies / follow-up studies • Research syntheses (including meta analyses) |

of successful processes (usually in complex combinations) which enable the outcomes to be achieved. Part C identifies the *Evaluation Approaches* mainly used by the health and education sections to collect the evidence. Traditionally, the health sector values Randomised Controlled Trials (RCTs) higher than case studies and expert opinion in terms of the significance of using such an approach. In educational evaluation the focus is on students, classrooms, schools and systems either separately or in combination. Whilst RCTs are occasionally used, it is impossible to ensure that which is implemented is uncontaminated by the teaching-learning dynamic that occurs in schools between teachers and students. Educational initiatives often change the conditions that made them work in the first place and are often difficult to replicate (Pawson, 2006).

Education research seeks to discover the factors that enable a program/intervention to have a reasonable chance of achieving the successful outcomes elsewhere. For the education sector to understand the causal connections in school health promotion it needs to “. . . understand outcome patterns rather than seek outcome regularities” (Pawson, 2006, p22).

The challenge is for both the health and education sectors to appreciate and understand what constitutes evidence in each sector and to recognize that there is a history of accepted approaches in each sector in gathering that evidence. Areas of overlap are present and need to be used as a starting point to ensure research and evaluation in school health promotion is more cognizant of the setting from which it is gathered and more in tune with how the findings will generate policy improvements and be more useful to practitioners, particularly teachers, in improving their practices.

Gaps in the Evidence

Whilst there is considerable evidence available about the outcomes of school health promotion on which to make some reasonable assumptions about policies, resource allocations, and priorities, there are still a number of gaps that need to be addressed.

Uncertainty about the Outcomes of School Health

What is the most valuable evidence concerning school health promotion? Is it the achievement or not of the goals of the program which may be evaluated in terms of, for example, knowledge, competencies, behaviors, biomedical changes, cognitive processes (e.g., analytical skills), and/or educational attributes? Or is it perhaps the unintended outcomes of the health promotion initiatives (e.g., new partnerships, increased parental involvement, and students being more questioning of policies and practices)? We risk missing out on the richness of school health activities by evaluating a narrow set of pre-determined outcomes. The importance of one's health (and education) are not levels of attainment that are only to be valued by certain designated standards (e.g., being within a certain body mass index (BMI) range, not smoking, high grades, such as an A in Mathematics). They are more than that. They are resources for living and have many components that have different degrees of importance to people as they go through life. There is the need, in addition to assessing standard outcomes for school health promotion interventions, to look more creatively at what constitutes successful outcomes and with an increased input from students, teachers and parents in determining them. This should give us a more holistic appreciation and understanding of all the effects of school based health promotion. Analyzing this data will enhance the quality of our models and programs.

Shared and Participatory Evaluation

Education systems, and many schools, often spell out in detail what expectations they have of students at certain ages, in terms of knowledge and competencies in the different aspects of the curriculum. This invariably includes health. Has the health sector done this? Should it do this? And should it be done in collaboration with the education sector and parents? What is the place of students in such negotiations? It is useful to explore these questions further.

Children's physical, mental, intellectual, emotional, and spiritual development proceeds at varying rates according to biological, social, cultural, environmental, and behavioral determinants. What "health assets" should a child have at the end of primary school, the end of secondary school, or at a certain age (e.g., 14 years of age)? Are there gender and cultural variations?

A case can be made for key stakeholders in each country and/or community to identify these age-related assets. This will enable groups to be more insightful about the relative importance of the assets, to be more strategic in collaboratively developing ways to facilitate the achievement of these assets and to be more empowered to own the local issues and collectively think of ways of addressing them. Most HPS/CSH frameworks and plans express explicitly the importance of school-family-community-health sector links. Yet, there is a major gap in the evidence about a shared set of student expectations regarding these health assets. It may be more effective for students and pivotal members of the local community to be involved more explicitly in identifying these, rather than as secondary and passive partners in a pre-determined program developed away from the school. This should ensure increased collaboration in evaluating initiatives designed to improve the health assets of school students. It will also mean methods of collecting the evidence are better aligned to the strategies used to achieve the outcomes.

The Paucity of Evidence from Low-Income Countries

The vast majority of evidence about the effectiveness of health promotion in schools is from developed countries. Many of the published reports of school health from low-income nations tend to describe what happened, and assess changes in knowledge before and after the intervention. Yet, the authors of this chapter have all seen examples of exciting and excellent approaches to school health in low-income regions of the world. There is much to learn from these approaches, but until priorities are set to better evaluate these approaches and initiatives, and allocate adequate resources, we will continue to have this as a major gap in the evidence.

Limited Recognition of Evidence from the Education Sector

There is a wealth of evidence from education research about the nature of what constitutes effective teaching and learning approaches; change and innovation in schools; leadership in schools; and effective schools. This is accessible through

many peer reviewed journals, books and reports from governments, NGOs, research institutes, and universities. The findings have shaped the development of schools and their educational practices to varying degrees for many years. But, this evidence has too frequently been overlooked by the health sector as it has developed its own approaches to address those societal health issues which impact on school students now and in the future.

In some countries there is evidence of practical collaboration between the health and education sector in relation to measuring the effectiveness of Health Promoting Schools. In Scotland, for example, indicators of health promotion effectiveness have been built into the existing quality indicators which were used in the education sector to help embed health promotion actions within the education mainstream. Similar initiatives have occurred in Hong Kong, in many European countries, and in regions in North America. Such partnerships have demonstrated that whilst there are still substantial gaps in knowing about the full evidence picture, specialist groups and individuals are beginning to seek to understand what makes for effective schooling and health promotion actions, to utilize each others tools of measurement, to acknowledge the evidence from different disciplines and sectors, and to ask questions about it.

Evidence about Costs and Benefits

There have been very few cost-benefit and cost-effective studies about a whole school approach in the literature. Rothman and colleagues made a number of claims about whole school health in their detailed study in 1994. They argued an integrated whole school approach using the HPS/CSH framework was very cost-effective (Rothman, Ehreth, Palmer, Reblando & Luce, 1994). But Stewart-Brown and colleagues found no evidence of cost-effective studies examining whole school approaches in their two meta-analyses in 1999 or 2006 (Lister-Sharp, Chapman, Stewart-Brown & Sowden, 1999; Stewart-Brown, 2006).

There have been some topic-specific cost studies published. For example, school health promotion can be cost-effective and cost-saving in improving health, illustratively by preventing tobacco use (Wang, Crossett, Lowry, Sussman & Dent, 2001); obesity (Wang, Yang, Lowry & Wechsler, 2003); human immunodeficiency virus and other sexually transmitted diseases (Wang, Davis & Robin, 2000); and screening for Chlamydia (Wang, Burstein & Cohen, 2002).

What do these cost benefit/effective studies tell us about school health promotion? They suggest that certain topical approaches can be effective in terms of their costs. But what about a whole school approach? Are there cost-benefit/cost-effectiveness studies about the mainstream of schooling (e.g., school-based numeracy and literacy, and civic education)? The education sector rarely looks at cost-benefit/cost-effective approaches to the core areas of schooling because it is very difficult to identify valid indicators. The diversity of practices in the dynamics of the teacher-student, student-student engagements makes it methodologically complex to even design such studies.

The education sector views the processes and outcomes of school education as an important value and essential part of a society's obligations. School health promotion needs to be viewed in the same light.

Challenges in Evaluating School Health Promotion

Dissemination of the Evidence of Effectiveness

There has been considerable evidence published in the last decade about the effectiveness of interventions in schools to address health issues of young people, now and into their future. However, both the health and education sectors have not adequately summarized this evidence and made it accessible and understandable to specific groups and practitioners involved in school health. It is essential that teachers know what constitutes quality practice in classroom health programs and that they and principals, school nurses and counselors know about and understand the potential of whole school approaches to health which improve both educational and health outcomes for their students.

The educational research literature indicates school administrators play a major role in leading innovation and change. If more schools are to embrace a HPS/CSH framework to school health, then it is vital that they are informed about the benefits of HPS/CSH, particularly those related to educational outcomes. School administrators and teachers rarely, if ever, read the research and evaluation literature on school health. A challenge for both the health and education sectors is to interpret evidence-based information to school administrators and teachers specifically to enable them to facilitate better planning and implementation of school health initiatives without compromising the integrity of the research and evaluation findings.

Other key stakeholders who need ongoing and unambiguous access to research and evaluation data include public health administrators who connect with the education sector; curriculum designers who develop courses of study, classroom content, and practice guidelines; policy makers whose policies impact on schools – particularly those from the health, education, and community services sectors; and professionals who participate in school health programs (e.g., nurses, youth workers, and counselors).

Convincing the Health Sector about Realistic Expectations in Schools

A school's core business is to maximize learning outcomes, not solve health problems. A significant challenge for the health sector is to describe health issues more in educational terms and in ways that the education sector and schools in particular can embrace to enrich their educational mandate. This means expanding the evidence of effectiveness of school health to incorporate educational outcomes.

The time spent at school by students is finite. There are many priorities of schooling, including building numeracy and literacy skills; scientific and artistic competencies; societal, historical, and cultural dimensions; to name a few. Also, schools are expected to develop generic values (e.g., respect, honesty, trust, and tolerance). Too frequently, the “health program” is presented as an addition, rather than being integrated into the fundamental work of schools. It is often predicated on the assumption, that after the provision of some knowledge about the health issue and certain associated skills, healthy behaviors will follow. A challenge is to convince the health sector about the evidence of the major factors influencing young people’s health viz. media, peer group, family, community, and to encourage health and education to work together to incorporate these influential factors in their school focused health promoting initiatives and associated evaluations.

Effective Ways of Persuading the Education Sector about the Values of School Health Promotion

Schools are busy places. The number of hours in the day, and number of weeks in the year that children attend school is finite. Teachers and school administrators are usually obligated to teach a prescribed curriculum program. They and their students are engaged in an interactive learning program which has certain milestones of accountability (e.g., regular tests of the students learning outcomes and teacher appraisal). School health, whilst integral to many school educational programs, is often raised to higher levels of importance by the health sector and governments to address certain community health issues (e.g., poor hygiene, drug misuse, including tobacco and alcohol, and obesity). This places pressure on schools and teachers. The argument from the health sector, for schools to embrace these extra funded programs, is often based on using the school as a site of access to be able to inform and skill students in healthy practices. Rarely have schools been informed and persuaded that “healthy students learn better.”

More evidence needs to be established about the most effective ways of integrating school health programs into the regular routines of schools, school boards and education ministries. We need examples about how schools can integrate health into their school improvement planning and accountability procedures. How can education and health ministries do their planning and budgeting together as it relates to school health? What surveillance and monitoring activities can be jointly implemented effectively by both systems? How can local school boards and health authorities work together most effectively?

What evidence will convince schools and educational administrators that school health promotion will enhance student learning? For many years the health sector has assumed that because there is some data to suggest this may be the case, the schools will enthusiastically embrace health promoting initiatives. We need to interrogate this evidence more thoroughly and where studies are lacking, carry out research to see what health gains are most influential in improving learning outcomes.

Before we can persuade the education sector to embrace school health promotion and its organization frameworks of HPS/CSH more widely, we need to build a stronger and more specific evidence base to underpin our beliefs about the value of school health promotion to educational outcomes.

Equity and Social Justice Issues

School health promotion should be a fundamental component of education provision throughout the world. Sadly, in many low-income countries, poor sanitation and impure drinking water are the main health issues for young people. In many countries, it is a challenge to make clean water and sanitation available and to provide knowledge and skills for students on hygiene. The school as a setting where students can be accessed for immunization and student health checks is vital in building the health and well-being in most low income countries. The same also applies to many developed countries.

Evidence shows that if girls attend school, then not only their own health, but the health of their families will improve considerably (Blum et al., 2002; WHO, 1995). Girls, in some countries, are excluded from educational opportunities and also boys are sometimes forced to leave school early to assist with chores and generating the family income. Both these factors have substantial health impacts on these young people, now and into the future.

In many developed countries students feel alienated from school. There is a close correlation between their school attendance and participation and their health risk behaviors – the less attendance and involvement in school, the higher the risk behavior (Symons et al., 1997; Blum et al., 2002; Patton et al., 2006). This evidence from these and other researchers needs to be acknowledged more by the health sector in designing school based interventions. It appears some of these longer-term evaluations are strongly suggesting that it may be more important and effective to address the way the school is conducted and how participatory and democratic its processes are, than to take a health issue and seek to change specific student behaviors.

A challenge for schools is to make it a place where students want to be. The more students participate in and have some control over their learning, the more empowered they are. Higher educational achievements and increased health protective behaviors will follow. The HPS/CSH model is predicated on students being part of the planning and action scenarios. Supporting teachers to develop the skills and equipping them with resources to practice these principles is a challenging priority and there is little evidence about effective approaches. The increasing problems of obesity/overweight in developed countries provide schools with opportunities for staff to work collaboratively with students and the community to shape policies and engaging practices which facilitate students being more involved with food and eating, and physical activities in both the school and local community. School health promotion initiatives, such as this, will provide us with an excellent opportunity to be more rigorous and comprehensive in our research and evaluation studies as we seek evidence across all the

components of the HPS/CSH approach to assess what works and why, and under what circumstances.

Empowerment and its Evaluation

The HPS/CSH framework places significant emphasis on empowering students and building their capacities in health behaviors, policies, and knowledge. This is where students can have a key role in running their schools' food services; deciding on policies and procedures around bullying; acting as mentors and friends to young students; and linking with community groups, to collectively address health impacting issues (e.g., environmental degradation and community safety). A challenge is to build students' "action competencies" (Jensen & Jensen, 2005) where it is appropriate and taking into account the students cognitive, physical, cultural and social developmental stages. As a consequence of this focus, teachers need to rethink school health away from focusing most efforts in the classroom. Challenges exist to have schools embrace whole school approaches to health promotion and to build the capacity of teachers to use teaching methods and techniques that facilitate student empowerment. This has implications for evaluations of such approaches. The evidence needed to make judgements about the effectiveness of health promotion initiatives directed at empowering students is more complex than simple measures testing students' knowledge or understanding. It places extra burdens on teachers to collect this data. Both the health and education sectors, and researchers in the field need to address this issue, and develop clear, practical and accessible techniques to collect information about student empowerment.

In the last decade many countries have begun to address staff health and well-being in addition to health promotion for students. But it raises questions. Where resources are finite, should the focus be both on students and staff health promotion, or on one group only? What is the evidence that suggests that interventions to promote staff health result in better teaching and enhanced student outcomes? Should the school as a Health Promoting Worksite be treated separately from the Health Promoting School? Who is more important when resources are limited? Where is the balance, if any, between empowering students and teachers?

Assessing School Health Outcomes

What should be evaluated in school health promotion? Who makes these decisions and is there a program logic in place that means the expected outcomes are related to the strategies used and the intensity of the intervention (e.g., resources and time)? The World Health Organisation's Expert Committee on School Health identified five types of indicators for school health interventions (WHO, 1995). They are:

1. Children's health status (e.g., height for age, total caloric intake);
2. Learning ability, attendance and learning achievement (e.g., literacy and numeracy skills, basic learning competencies);

3. Behaviors affecting health (e.g., tobacco use, physical activity);
4. Quality of the physical and psychosocial environment (e.g. water and sanitation quality, policies and practices in schools); and
5. School health program implementation (e.g. curriculum, access to health services, links with local community).

However most of the evaluations in the last decade appear to be focused on health behavior change. There has been a paucity of evaluations addressing educational outcomes on students (2) and not many which look at the changes in schools' policies and practices that enhance health (4). All five evaluation areas are necessary to gain an understanding of school health.

We need more studies which seek to inform the education sector, in particular, about the influence of school health activities on educational indicators for students, and school policies and practices. A challenge is to involve both the education and health sectors negotiating evaluation measures about any school health initiative or program at the beginning of the planning process.

School Health Promotion Effectiveness – Priorities for the Next 10 Years

There is now a considerable body of evidence to enable reasonable judgements about the effectiveness of school health promotion to be made. However there are a number of issues to be addressed in the next decade to enable a more complete and comprehensive picture to emerge. Consequently, administrators, practitioners, and policy makers can have a stronger evidence base on which to make decisions and enhance practice. The main priorities are:

- Increase collaboration between the health and education sectors in planning, implementing, and evaluating School Health Promotion.
- Improve the dissemination of the evidence of effectiveness to schools.
- Establish more realistic expectations for school health promotion.
- Build a stronger evidence base on effective School Health Promotion approaches in low-income countries.

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