

A Needs Assessment of Public Health Professionals: Supporting the Implementation of  
Ontario's 2010 Revised Elementary Health and Physical Education Curriculum

Ishan Angra, B.P.H.E., B. Ed.

Submitted in partial fulfillment of the requirements for the degree of  
Master of Arts in Applied Health Sciences  
(Health & Physical Education)

Supervisor: Dr. James Lloyd Mandigo, Ph.D.

Faculty of Applied Health Sciences  
Brock University  
St. Catharines, Ontario

Ishan Angra © August 2010

## Abstract

Based on the Comprehensive School Health framework, Ontario's *Foundations for a Healthy School* (2009) outlines an integrated approach to school health promotion. In this approach the school, community and partners (including public health) are fully engaged with a common goal of youth health. With the recent introductions of the *Ontario Public Health Standards* (2009) and the revised elementary health and physical education curriculum (2010), the timing for a greater integration of public health with schools is ideal. A needs assessment was conducted to identify the perceived support required by public health professionals to implement the mandates of both policy documents in Ontario. Data was collected for the needs assessment through facilitated discussions at a provincial roundtable event, regional focus groups and individual interviews with public health professionals representing Ontario's 36 public health units. Findings suggest that public health professionals perceive that they require increased resources, greater communication, a clear vision of public health and a suitable understanding of the professional cultures in which they are surrounded in order to effectively support schools. This study expands upon these four categories and the corresponding seventeen themes that were uncovered during the research process.

## Acknowledgements

My time at Brock University has been incredibly rewarding and I am very fortunate to have had the opportunity to complete my graduate studies with such amazing professors, staff, colleagues and friends. I am a proud graduate of the Department of Physical Education and Kinesiology, Faculty of Applied Health Sciences, and I wish them all the best in the future.

First of all, I would like to thank my supervisor, my mentor and my friend Dr. James Mandigo for all his support during this process. Your guidance and enthusiasm during my degree helped me reach this point and for that I am eternally grateful. I would also like to thank the rest of my committee, Dr. Nancy Francis, Dr. (soon!) Madelyn Law and my external Dr. Aniko Varpalotai. My project would not have been as successful without your fantastic suggestions and feedback. I would also thank you all for taking the time to steer me through the challenges and frustrations that accompany any graduate work. I could not have asked for a better committee to work with!

I would also like to express my gratitude to Ophea, the public health professionals that contributed to my work, the many professors I was privileged to take courses with, and my friends (a.k.a the Centre Crew). Thank you Drew, Margaret, Jen and Chris from Ophea for your invaluable help with my research. And thank you Debbie, Bev and Jane and the staff in the Faculty of Applied Health Sciences for always pointing me in the right direction.

Finally, I would like to thank my family. Thank you for the love and the never ending support whatever I do or wherever I go. I would not be here without you and I will forever remember that. I love you Mom! I love you Komal! I love you Roberta!

## Table of Contents

<b>Abstract</b>	<b>2</b>
<b>Chapter 1 - Introduction</b>	<b>9</b>
<i>Background</i>	9
Health and School Health Promotion.	10
Schools.	12
Public Health.	14
<i>Purpose of the Study</i>	15
<i>Research Question</i>	16
<i>Significance</i>	17
<b>Chapter 2 - Review of the Literature</b>	<b>18</b>
Health and Health Promotion.	18
History of Health Promotion and Health Education in Schools.	19
A Holistic Approach to Health Education.	21
The School as a Setting.	22
Curriculum.	24
Comprehensive Approaches to School Health.	24
Social Ecological Theory.	27
Health Promoting Schools.	28
Comprehensive School Health.	29
Curriculum and Instruction Pillar.	30
Healthy Physical Environment Pillar.	30
Social Support and Healthy Policy Pillar.	31

Support Services and Partnerships Pillar.	31
Comprehensive School Health in Canada.	32
Ontario's Healthy Schools.	34
Healthy Schools in Ontario's Health and Physical Education Curriculum.	34
<i>Public Health as a Partner in Schools</i>	36
Core Competencies for Public Health Professionals in Canada.	36
Public Health in Ontario and The Ontario Public Health Standards.	37
Public Health in Schools.	38
<i>Public Health in Comprehensive School Health</i>	39
Healthy Physical Environment Pillar.	39
Support Services and Partnerships and Social Supports Pillars.	40
Curriculum and Instruction Pillar.	41
Difficulties in Evaluating Comprehensive School Health Framework.	42
<i>Future Research.</i>	43
<b>Chapter 3 – Research Process</b>	<b>44</b>
<i>Methodology</i>	44
Interpretivist Paradigm.	46
Theoretical Framework.	47
Needs Assessment Approach.	48
Rationale for Needs Assessment Approach.	49
Defining Needs	50
Research Partner – Ontario Physical and Health Education Association.	50
Participant Selection.	52

	6
<i>Methods</i>	53
Participants and Sample Size.	53
Data Collection Procedures.	54
Facilitated Roundtable Discussion.	55
Teleconference Focus Groups.	56
Individual Interviews.	59
<i>Data Analysis</i>	60
Document Content Analysis.	61
Data Analysis for Focus Group and Interview Data.	62
<i>Ethics</i>	64
Research Ethics Board Approval.	64
Informed Consent.	64
Confidentiality.	64
<i>Trustworthiness</i>	65
Member checking.	65
Researcher Journaling.	65
<b>Chapter 4 – Results</b>	<b>67</b>
<i>Findings</i>	67
<i>Resources</i>	69
Professional Development and Training.	69
Progressive and Standardized Instructional Materials.	70
Ongoing Research and Evaluation.	71
Additional Funding.	72

	7
Increased Staffing.	72
<i>Communication</i>	73
The Need for Open Dialogue.	73
Coordinated Messages.	74
Greater Collaboration.	75
Knowledge Transfer.	76
<i>Vision for Public Health</i>	77
Uniform Philosophical Outlook.	77
Effective Policy.	78
Clearly Defined Roles.	79
Stronger Relationships and Partnerships.	80
Advocacy.	81
<i>Understanding the Professional Culture</i>	83
Professional Hierarchies.	83
Language.	84
School Norms.	85
<b>Chapter 5: Discussion and Conclusions</b>	<b>86</b>
<i>Discussion</i>	86
Within Public Health.	86
Between Public Health.	90
Across Public Health.	92
<i>Implications</i>	95
<i>Future Directions</i>	97

Teachers.	97
<i>Limitations</i>	97
Uncertainty surrounding revised HPE curriculum.	98
The Use of Teleconferences for Focus Groups.	98
<i>Conclusions</i>	99
<b>References</b>	<b>101</b>
<b>Appendix A</b>	<b>112</b>
<b>Appendix B</b>	<b>113</b>
<b>Appendix C</b>	<b>114</b>
<b>Appendix D</b>	<b>116</b>
<b>Appendix E</b>	<b>117</b>
<b>Appendix F</b>	<b>118</b>
<b>Appendix G</b>	<b>119</b>
<b>Appendix H</b>	<b>120</b>
<b>Appendix I</b>	<b>121</b>
<b>Appendix J</b>	<b>122</b>

## **Chapter 1 - Introduction**

### **Background**

The declining health of children and youth has become a critical issue of concern in Canada (Active Healthy Kids Canada, 2010; Tremblay et al., 2010). With evidence indicating increasing rates of childhood obesity, high levels of physical inactivity, and declining levels of aerobic fitness, muscular strength and flexibility in Canadian children and youth, the concern is more than justified (Leitch, 2007; Tremblay et al., 2010). Statistics such as 87% of children and youth aged 5 to 19 in Canada are not meeting the minimum Canadian guidelines for daily physical activity (Canadian Fitness and Lifestyle Research Institute, 2008) and 26% of Canadian children and youth aged 2 to 17 being overweight or obese (Shields, 2006) exemplify the need for action in improving the health of children and youth in Canada. This need for action should commence immediately and schools and their health promotion programs are an ideal start. The World Health Organization (2000) identified schools as the most important settings for children and youth to develop the attitudes, skills and knowledge to lead healthy active lifestyles. As children and youth spend many hours everyday in schools, and are essentially a captive audience in a controlled environment, schools are efficient and cost effective venues for health and wellness programs (Cameron, Wolfe & Craig, 2007; Mandigo, 2010). However, as the issue of child and youth health is complex, so are potential solutions. Although schools have the potential to improve the lifestyles of children and youth, there are several barriers that prevent the implementation of health programs. Barriers include lack of resources and funding, competing priorities (literacy, numeracy) for time, non-supportive physical environments, and generalist teachers

among others (Canadian Fitness and Lifestyle Research Institute, 2009; Mandigo, 2010). Despite these barriers, educators and public health professionals recognize that schools and the activities that occur within them have a large and significant role to play in the health and learning of children and youth (Anderson, Kalnins & Raphael, 1999; Jourdan, Samdal, Diagne & Carvalho, 2008). The key is to foster school programs that focus on improving the health of children and youth and develop partnerships with groups and stakeholders that share the same goals.

**Health and School Health Promotion.** Developing and implementing programs that promote the health of children and youth is an important practice that requires many partners working together with a common purpose (Anderson, Kalnins & Raphael, 1999; McCall, 1999). However, as significant as the process of promoting the health of young people may be to communities, it has been tremendously complex to put into action. The difficulty stems from a child's health and wellness being influenced by many determinants, including family income, social support networks, personal health networks, personal health practices and coping methods, genetics, education and the physical environment of the home and school (McCall & Roberts, 2006; Public Health Agency of Canada, 2008). Furthermore, factors such as the need for a universally recognized definition of health; an established and accepted approach to health promotion; or for an ideal setting for where health promotion should take place, have caused many frustrations for health educators, public health workers, health care professionals and other concerned community stakeholders. With each particular professional group having their own definition of health with accompanying separate approaches and agendas, there is a strong disconnect and confusion in the health

messages that reach the youth. For this reason, the health promotion messages directed at youth and children are not always successful. In order for there to be greater success, a unified, comprehensive approach is necessary (Anderson, 2002).

The Comprehensive School Health framework provides a unified and multifaceted approach to youth and child health promotion (McCall & Roberts, 2006). The Comprehensive School Health framework outlines the need for collaboration among all sectors and ensures that youth health is the focal point. Realizing the complexity of health, the World Health Organization (WHO) adopted an inclusive outlook on health as part of the Ottawa Charter in 1986. The WHO (1986) state that:

to reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health, is, therefore seen as a resource for everyday life, not the objective of living (p. 1).

Inspired by this vision, Anderson, Kalnins and Raphael (1999) define health as:

a resource for daily living...a positive concept that emphasizes the idea that healthy young people are those who can cope with the demands of daily life and manage the many challenges that accompany maturation and puberty, changing cognitive abilities and the demands of school and employment. (p. 6)

This definition of health is a combination of the views that have dominated health care, public health and educational (schools) settings. It incorporates the visions that health is an absence of disease and that health is a development or behaviour, to which many health care and public health professionals subscribe (Anderson et al., 1999; St. Leger, Kolbe, Lee, McCall & Young, 2007). Unlike other characterizations of health, the view

of health as a resource provides a holistic approach to the promotion of youth health and incorporates the whole person, including physical, psychological, spiritual and social aspects that play a part in the process. To eliminate the disconnect between these components of health, a holistic view of health would benefit all the sectors that are involved in the health promotion of youth, especially by schools and public health agencies.

**Schools.** Schools are effective settings to improve and promote the health and well-being of our children and youth and help them develop lifelong healthy behaviour patterns (Dooris et al., 2007; U.S. Centers for Disease Control, 2009; WHO, 2000). Additionally, schools provide a daily opportunity for children to learn and practice healthy behaviours and skills through planned activities and curriculum (Mckenzie & Kahn, 2008). In September 2010, a revised health and physical education curriculum will be implemented in Ontario's elementary schools (Tallon, 2008). A year later, the revised secondary school health and physical education curriculum will be introduced to Ontario's high school students (Tallon, 2008). These curricular revisions will be the first in more than a decade and are intended to ensure that the material taught to the students in Ontario is current, age appropriate and relevant. The matter of relevance is of particular importance, as since the last curriculum revision in 1998, many shifts in health and physical education philosophy and the needs of students have occurred.

Philosophically, there has been a shift from a skills based approach to physical education to a health-based, physically active approach (Ng, Gannon & Halas, 2006). The catalysts for this shift in philosophy include the high rates of obesity among students; the sedentary, inactive lifestyles of students and the lack of participation in health and

physical education classes beyond grade nine (Wharry, 2002). Furthermore, schools are facing pressure to address societal issues such as school safety (including school violence and bullying), healthy eating, sexuality, sexual health, internet safety, gambling and many others (OPHEA, 2008). Some of these issues did not exist in 1998 to the extent that they do now; a sign that the curriculum must change along with the students and meet their needs. These issues, combined with other health issues such as healthy eating, smoking prevention, and alcohol and substance use and abuse, are addressed in the revised health and physical education curriculum as they are important to school communities (OPHEA, 2008). It is important to note that these school health issues mirror larger societal health issues that are being addressed by public health agencies across the province (Anderson, Kalnins & Raphael, 1999).

The revised health and physical education curriculum went through eleven review components before it was implemented in 2010. These review components include research and consultation with Ontario Faculties of Education; benchmarking to compare with curricula across Canada and internationally; and perhaps the most crucial step of focus groups and consultations with teachers, administrators, school board health and physical education consultants and a multitude of stakeholder groups including public health (Tallon, 2008). In total, fourteen focus groups were held in six different regions across Ontario and comments, recommendations and critiques were reported for further revisions (Tallon, 2008). The key point to acknowledge is that Ontario's revised health and physical education curriculum was developed through a comprehensive consultation and feedback process with educators, students, experts, stakeholders and community groups involved in the revisions. Although public health was consulted during the health

and physical education curriculum review process, the revised health and physical education curriculum does not require that schools work directly with public health nor is there any legislation to require them to do so. This is not a new phenomenon to the health and physical education curriculum, but it is an important note to consider when addressing the mandates of public health professionals.

**Public Health.** In Canada, the public health agencies focus primarily on the health and wellbeing of the whole population through the promotion and protection of health and the prevention of illness (Public Health Agency of Canada, 2008). With the directive of engaging the entire Canadian population, public health activities span across the federal, provincial and municipal levels of government (Public Health Agency of Canada, 2008). In Ontario, the provincial mandate of public health falls to the 36 public health units across the province. On January 1, 2009, the Ontario Public Health Standards were released by the province's Ministry of Health and Long Term Care (Ontario Ministry of Health and Long Term Care, 2008). The Ministry states that "the Ontario Public Health Standards outline the expectations for boards of health, which are responsible for providing public health programs and services that contribute to the physical, mental, and emotional health and well-being of all Ontarians" (Ontario Ministry of Health and Long Term Care, 2008, p.1). Included in this mandate are many requirements for public health agencies to collaborate with school boards and schools within the Comprehensive School Health framework. The guidelines require public health to support schools in the development of healthy physical and social environments, the implementation of healthy policies and partnerships and assist with instruction and programs. Essentially, the Ontario Public Health Standards mandate public health to

collaborate with schools to initiate the four pillars of the Comprehensive School Health framework. The four pillars of the Comprehensive School Health framework include: curriculum and instruction (about health); a healthy social and physical environment; social support and healthy policy (from parents, peers, policy-makers, staff and community); and support services and partnership (for youth and parents).

The regional public health agencies in Ontario are staffed by a variety of professionals with extensive expertise in health, wellness and health promotion. The structure of the 36 public health units across the province varies from unit to unit, with the backgrounds of the staff differing. The majority of the public health units in Ontario include the following professionals on staff: nurses, nutritionists/dieticians, health promoters (under various titles), public health inspectors, hygienists and doctors (typically the medical directors). It is these individuals who fall under the title of ‘public health professional’ and those who work in or with schools are referred to as ‘school public health professionals’.

### **Purpose of the Study**

The Comprehensive School Health framework calls for an integrated approach to school health promotion in which the community, partners and stakeholders are fully engaged with a common goal of health (McCall & Roberts, 2007). This is unmistakably a goal that both public health and schools have in common. From the point of view of the schools this goal is seen through the focus of the Ontario Health and Physical Education curriculum which is “to help students develop a commitment and a positive attitude to lifelong healthy active living and the capacity to live satisfying, productive lives” (Tallon, 2008, p. 1). From the perspective of public health the goal is “to improve the overall

health of the population and to overcome health inequalities” (Toronto Public Health, 2009). With the recent release of the Ontario Public Health Standards and the imminent release of the revised elementary health and physical education curriculum, the timing for bringing these two institutions together is ideal.

Unfortunately, there exists a paradox with the role of public health in Ontario’s schools. Although public health is mandated through the Ontario Public Health Standards to play a role with schools, this requirement is not mutual. As the health and physical education curriculum does not explicitly require schools to work with public health units. As a result, public health professionals have to decide what they can offer schools to be welcomed as a partner in health promotion. Furthermore, public health professionals must reveal what it is that they require to embrace this partnership with schools and do so effectively.

The purpose of this study is to identify what Ontario’s school public health professionals feel they need in order to meet the mandates of the Ontario Public Health Standards and support the implementation of the revised 2010 elementary health and physical education curriculum. In addition, the study will outline requirements and feedback that will be of benefit to public health professionals in Ontario.

### **Research Question**

Thus, the research question is:

What are the perceived requirements by Public Health Professionals to effectively support the implementation of Ontario’s 2010 revised Elementary Health and Physical Education curriculum?

**Significance**

Since 2007, the Government of Ontario has established an unprecedented number of policies and programs dedicated to improving the health and well-being of children and youth in the province. Two of these recently released policies directly impact professionals in public health: the Ontario Public Health Standards and the revised elementary health and physical education curriculum. The Ontario Public Health Standards, released in January 2009, include requirements for public health to collaborate with schools and school boards. The revised elementary health and physical education curriculum, which will be implemented in September 2010, acknowledges the critical importance of collaboration between school staff, families and community leaders to achieve positive health and learning outcomes for children and youth. With the release of these policies, the timing for a greater integration of public health and schools is ideal. In order for the integration of the two institutions to be a reality, the professionals involved need to assess and address what is required to meet their mandates and how this can be done collaboratively. Specifically, public health professionals will need to uncover the gaps and opportunities to support the implementation of the new health and physical education curriculum.

## Chapter 2 - Review of the Literature

This chapter presents an outline of the relevant literature on health and health promotion in schools. An historical overview of how health education and health promotion came into schools leading up to the holistic Comprehensive School Health Framework that has been adopted today is provided.

**Health and Health Promotion.** Colquhoun (1990) explains that “health is something which we all experience either physically or socially and therefore we all have some understanding of what it means to be healthy or to be ill” (p. 225). As this is the case, health can be characterized in many different ways depending on the lens through which it is being viewed (Anderson, Kalnins & Raphael, 1999). In the World Health Organization constitution of 1948, health is defined as “a state of complete physical, social and mental wellness and not merely the absence of disease or infirmity” (WHO, 2009). This definition has not been modified since 1948, but unfortunately it is not a reality in practice. For most health care professionals, especially those in medical settings, healthy individuals are those who are free of physical and mental illness or disorder (Anderson, Kalnins & Raphael, 1999; United States Office of Technology Assessment, 1993). This is a characterization of health that dominated our health care systems for years and became the norm in a prescriptive approach to health.

In 1974, Minister of National Health and Welfare, Marc Lalonde presented what later became the “Lalonde Report” to the Canadian House of Commons (Lalonde, 1974). In his report entitled ‘A New Perspective on the Health of Canadians’, Lalonde proposed an alternative to this medical and systems approach to health issues of the time. In what became the first government report to introduce the concept of ‘health promotion’,

Lalonde suggested that improving health in the future would be multidimensional in nature and the result of interplay between changing individual lifestyles, the quality of the environment, human biology and health services (Lalonde, 1974). A comprehensive approach to health promotion would develop from the World Health Organization's Ottawa Charter for Health Promotion (1986), and Lalonde's holistic health philosophy would be the foundation for a shift in the approach to health promoting activities in Canada.

**History of Health Promotion and Health Education in Schools.** As the approaches to health evolved, so have those to school health education (WHO, 1997). The origins of health education can be linked to the health difficulties in England during the late eighteenth and early nineteenth centuries (Denman, 2001). As large populations were migrating to the cities during the Industrial Revolution, the overcrowding, lack of proper housing and sanitation spawned regular epidemics of life threatening infections. The knowledge of medicine was in its infancy and the local governments and health services were both poorly organized and developed, and as a result many people died. Advances in knowledge about the transmission of disease began to develop in the middle of the nineteenth century, and schools were being used for "teaching about cleanliness, physical environment and hours of work" (Denman, 2001, p. 27) to improve the health and living conditions of the population. With schooling becoming mandatory in the second half of the nineteenth century, hygiene classes on proper hand washing, toileting and safe water use became the basis of the health education curriculum (St. Leger, 2004). Other countries would follow suit as there was a push to develop policies to change the

social conditions and physical environments in an attempt to improve health (St. Leger, 2004).

In Canada, the government in Ontario was building hospitals, forming boards of health and maintaining clean water for their population (Ontario Government Archives, 2009). Unfortunately, this was not enough, as the end of the nineteenth century and beginning of the twentieth century was marked by outbreaks of typhoid, cholera and smallpox. The epidemics of infectious diseases prevented children from going to school and precipitated the province assigning nurses to schools to both treat the sick children and promote public health education (Ontario Government Archives, 2009). Public health nurses became the main component of government health promotion activities and they were responsible for visiting mothers and newborn babies, immobile elderly people, Aboriginals living on reserves and school children. As the focus of public health in Ontario shifted towards health education and disease prevention, public health nurses carried out large vaccination and public awareness campaigns in the communities and schools (Ontario Government Archives, 2009). Immunization was seen as *the* method for preventing disease.

The early health education programs in schools shared the medical model approach to health promotion and disease prevention (Lynagh, Schofield, & Sanson-Fisher, 1997). The health information was presented to students through a moralistic curriculum in the hope that the knowledge would change behaviour. The assumption behind this health education approach was the belief that a change in an individual's knowledge about a subject area would lead to change in attitudes and in turn change in behaviours. However, with the approach not based on any theoretical framework, there

was little change in behaviour produced and it became clear that this assumption was flawed (St. Leger, 2006; Lynagh, Schofield, & Sanson-Fisher, 1997). Among the other criticisms was the focus on the individual student or the individual health behaviour. Health and education professionals realized that successful school health promotion was not about simply raising awareness or targeting an individual behaviour, but a more holistic approach that included multiple components to addressing the health issue (WHO, 1997).

**A Holistic Approach to Health Education.** A holistic approach to youth health is rooted in the World Health Organization proclamations on health promotion (St. Leger, 2001; St. Leger, 1999; Stewart-Brown, 2006). Both the Declaration of Alma-Ata in 1978 and the Ottawa Charter for Health Promotion in 1986 introduced the strategy of a multifaceted approach to health promotion (WHO, 1978; WHO, 1986). Whereas previous approaches to well-being focused on the behaviours of individuals, Alma-Ata (1978) called for “multisectoral approaches to health promotion and for public participation in developing and providing health programmes” (Stewart-Brown, 2006, p. 7). The Ottawa Charter (1986) further expanded upon this development by drawing attention to the environment and settings in health promotion initiatives. The five key health promotion actions that were devised as a result were to build healthy public policy, create supportive environments, strengthen community action, develop personal skills and reorient health services. Furthermore, schools were identified as a key setting and vehicle through which these actions could occur (Anderson et al., 1999). Ultimately, the Alma-Ata (1978) and Ottawa Charter (1986) proclamations would become the foundation upon which

comprehensive approaches to school health would emerge (Stewart-Brown, 2006; St. Leger, 1999; St. Leger, 2001).

### **The School as a Setting.**

The Ottawa Charter (WHO, 1986) acknowledges that:

Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love. Health is created by caring for oneself and others, by being able to take decisions and have control over one's life circumstances, and by ensuring that the society one lives in creates conditions that allow the attainment of health by all its members. (p. 3)

The school is an ideal setting for a youth-aimed health promotion intervention such as Comprehensive School Health because it has such a broad influence on young people (Anderson, 1999). Sallis and McKenzie (as cited by McKenzie & Kahan, 2008) state that:

[B]ecause they [schools] exist in all communities, are attended by nearly all children, provide safe environments, and often facilities, equipment and trained personnel, schools have been identified as the institution with the primary responsibility for promoting physical activity and health. (p. 173)

Furthermore, within a Comprehensive School Health framework, they are the hub of health promotion for the area and are central (though not alone) to the health of the community. Anderson (in press) asserts that “schools have the potential to not only prepare the next generation of children and youth with the requisite skills to make healthy choices, but also can serve as a hub within a community that supports its healthy development” (p. 5). Schools are an important social and physical environment for

children and communities and any changes within them or through them can have an impact on student and community health (Parcel, Kelder & Basen-Engquist, 2000).

In schools, the curriculum and instruction play significant roles in promoting health to students (Anderson, Kalnins & Raphael, 1999). From an instruction perspective, teachers have been identified as a significant influence on the lives of their students and they are vital in providing invaluable information and guidance for their students, both health related and otherwise (Cohall et al., 2007). In order for a comprehensive health approach to be effective in a school setting, there needs to be support and cooperation at the teacher and administrator level for the vision that Comprehensive School Health represents (Viig & Wold, 2005). This begins with a solid curriculum that is developed using the Comprehensive School Health framework and its ideals and has been developed with all the voices and considerations of all stakeholders (e.g. teachers, administrators, students, parents, community partners) involved.

It should be noted that although the school has been identified as the ideal setting for youth health promotion, the Comprehensive School Health framework requires the support of parents and families, support organizations and communities as the school cannot support health on its own (Anderson, 1999). The problem lies with schools being frequently expected to address a multitude of health and social issues within a community and do not have sufficient resources to do so (Parcel et al., 2000). The lack of resources includes: schools receiving inadequate funding from governments, being over burdened due to over population, and having to deal with time constraints for communicating their messages (and curriculum) (St. Leger, 1999). The school can play a central role in the health promotion of the community, but partnerships with outside agencies and in

particular public health agencies are essential to alleviate any burdens that they may encounter. As St. Leger (2004) states, “schools are viewed by the health sector and the community as playing a key role in solving society’s health problems” (p. 405) and schools can meet this role if they are adequately supported. Essentially, as Miller (2003) states:

the challenge...within a school settings approach is to develop models that reinforce key values of health promotion and can actually be applied to the realities that schools operate within, and that can deliver benefits not only to the organization (school) and students, but also to the teachers, support staff, parents and the wider community. (p. 13)

**Curriculum.** The term ‘curriculum’ is problematic in that it generates different meanings depending on the educational setting (Penney, 2006). Educators have yet to agree upon what curriculum exactly entails, where it is carried out, by whom and how. With that said, it is acknowledged as being socially constructed and composed by the social, political and cultural influences of where it is situated (Penney, 2006). For clarification and simplicity, curriculum will refer to “all those planned activities of a school, whether done formally or informally, and which are encouraged and pursued with the interests of the pupil in mind” (Arnold, 1988, p. 117).

**Comprehensive Approaches to School Health.** The World Health Organization Expert Committee on Comprehensive School Health Education and Promotion (1997) outlined the following applications of the five key actions of the Ottawa Charter specific to the school setting:

- to promote public policies for school health that provide resources for and embody a commitment to enhanced health and education;
- to foster supportive environments that are the result of assessment and improvement of the physical and psychosocial environments of the school;
- encourage community action that supports the process of health promotion and the linkages between the school and other relevant institutions;
- to promote personal skills development (through both curriculum and the teaching and learning process) that emphasizes specific health-related behaviour as well as the skills needed to support health throughout life;
- to re-orient health services in the school and the community so that they:
  - provide enhanced access to services within the school as well as referral to the external health system;
  - identify and implement specific health interventions that are best carried out through the school (e.g. every day immunization);
  - integrate curative and preventive interventions. (p. 16)

Comprehensive approaches to school health have been demonstrated to be the most effective school health interventions in changing young people's health or health related behaviour (Stewart-Brown, 2006; McCall, 2003). As St. Leger (2005) states "school programs that are integrated, holistic and strategic appear to produce better health and education outcomes than those which are mainly information based and implemented only in the classroom" (p. 145).

There are several prominent approaches to school health models designed to be comprehensive in nature and based on the Comprehensive School Health framework.

'Health Promoting Schools', 'Coordinated School Health', and 'Comprehensive School Health,' are the dominant examples of the models in the literature. The Health Promoting School is the World Health Organization's model itself, while the Coordinated School Health model is based on the work of Allensworth and Kolbe (1987) and is prominent in the United States. The Comprehensive School Health framework has been adopted by the Public Health Agency of Canada and is the basis for the Ontario Healthy Schools Framework (See Appendix A for a breakdown of the components involved in each of the models). Although the models vary slightly, they share many principles and a common philosophical approach to school health (Joint Consortium for School Health, 2010). Essentially, any comprehensive approach to school health should include the subsequent goals that have been adapted from those composed by the World Health Organization (1997):

- Fosters health and learning with all the measures at its disposal;
- Engages health and education officials, teachers, teachers' unions, students, parents, health providers and community leaders in efforts to make the school a healthy place;
- Strives to provide a healthy environment, school health education, and school health services along with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, opportunities for physical education and recreation, and programmes for counselling, social support and mental health promotion;

- Implements policies and practices that respect an individual's well being and dignity, provide multiple opportunities for success, and acknowledge good efforts and intentions as well as personal achievements;
- Strives to improve the health of school personnel, families and community members as well as pupils; and works with community leaders to help them understand how the community contributes to, or undermines, health and education (p. 86).

**Social Ecological Theory.** The term 'ecology' is grounded in biology and broadly refers to how organisms interact and relate with one another and their environments (Stokols, 1992). Ecological theories and approaches have evolved from these roots into various social, psychological and health disciplines to recognize the complexity of human behaviour. Ecological theories provide a general framework for understanding the nature of influence and interaction between individuals and their social and physical environments (Stokols, 1992). These interactions between individuals and their social and physical environments are the foundation for comprehensive approaches to school health promotion. More specifically, the theoretical basis for comprehensive approaches to school health can be linked to a social ecological model to health promotion (McLeroy, Bibeau, Steckler & Glanz, 1988; Miller, 2003). In their Ecological Model for Health Promotion, McLeroy et, al. (1988) suggest that behaviour is influenced by a combination and interaction of the following: (i) intrapersonal factors (attitudes, skills, knowledge), (ii) interpersonal processes and primary groups (family, friends, coworkers), (iii) institutional factors (school, work settings), (iv) community factors (relationships between organizations, institutions, informal networks), and (v) public

policy (laws and policies at the municipal, provincial and federal levels). The social ecological perspectives acknowledge the influence of the interaction between individuals and their socio-cultural and physical environment (Stokols, 1992). As Miller (2003) states, “an ecological approach recognizes that individuals live in social, political, and economic systems that shape behaviours and access to the resources they need to maintain good health” (p. 14). Comprehensive socio-ecological models consider a multitude of influences on individuals, including individual, socio-cultural, environment, behaviour and policy, all of which impact an individual’s ability to make healthy choices and lead healthy lifestyles. With comprehensive approaches to school health promotion, it is important that all these influences be considered and included in programs and curriculum development, as well as the fostering of partnerships with groups and stakeholders with similar goals.

**Health Promoting Schools.** The World Health Organization (as cited by Anderson, 2004) defines the Health Promoting School as “a school that is constantly strengthening its capacity as a healthy setting for living, learning and working” (p. 4). Derived from the Ottawa Charter (1986) by the World Health Organization and the European Commission and Council of Europe, the Health Promoting Schools model is based on the philosophical outlook of community and school health promotion. As a product of the Comprehensive School Health framework, within a Health Promoting School, the school is the focal point and the setting through which the community’s health promotion takes place. It should be noted that within the literature practitioners and academics commonly use Comprehensive School Health and Health Promoting Schools interchangeably, with Health Promoting Schools adopted widely in Europe and

Australia and Comprehensive School Health in North America. For the purposes of this study, Comprehensive School Health will refer to Health Promoting Schools based interventions as well as those based on the Comprehensive School Health approach.

**Comprehensive School Health.** Comprehensive School Health is an approach to health that activates “the entire school and its community to optimize opportunities for student learning about and through health” (Anderson, 2002, p.2). The focus is to link the many policies, programs and services that are presented in schools, health agencies and the community together with a common goal of health promotion (McCall, 1999). This approach should improve not only the health behaviours of individual students, but also those of the community where the students live and attend school. As a framework that is built using a ‘ground up approach’ to set a foundation in the community, it is dependent on all of its parts to be successful and effective (McCall, 1999). Schools functioning within a Comprehensive School Health model acknowledge that schools can have a positive effect on the health and wellness of their students and embrace a holistic view of health that includes the physical, social, mental, and emotional wellbeing of students (Allensworth, 1995). The Comprehensive School Health framework is essentially an overarching umbrella whereby schools consider the multiple pillars in their approach to education. The Comprehensive School Health model that has been adopted by Health Canada consists of four defining pillars: curriculum and instruction (about health), a healthy social and physical environment, social support and healthy policy (from parents, peers, policy-makers, staff and community), support services and partnership (for youth and parents) (Public Health Agency of Canada, 2005; McCall, 1999). (See Appendix B).

**Curriculum and Instruction Pillar.** The curriculum and instruction pillar focuses on the curriculum content and the manner through which students receive information about health. This includes: active health promotion through comprehensive curriculum, varied material, lifestyle-focused physical education and various learning strategies for students from kindergarten to grade twelve. Information that is conveyed to students focuses on health and wellness, health risks and health problems and is conveyed across the curriculum regardless of the subject (e.g., health can also be studied as part of family studies and/or social studies). The teacher plays a key role in instruction and, if done so effectively, allows students to develop knowledge, attitudes, skills and behaviours for healthy decision-making. Furthermore, instruction and curriculum promote self-efficacy, foster the development of life skills such as health literacy, problem solving and communication skills (Anderson et al., 1999; McCall, 1999; Public Health Agency of Canada, 2005). Physical and health education curriculum is an integral component to school health promotion as it has demonstrated the ability to increase levels of physical activity in students, increase extra-curricular participation, active transportation and provide activity space for community members (Trudeau & Shephard, 2005).

**Healthy Physical Environment Pillar.** Another pillar in the Comprehensive School Health model is a healthy physical environment. This pillar refers to a clean and safe physical environment that helps prevent injuries and disease and facilitates pro-health behaviours. The physical environment can extend to travel to and from school and includes appropriate sanitation, lighting, noise and other environmental standards; clean air; measures for promoting safety and preventing injuries; healthy food services; policies

to ban tobacco, drugs and alcohol in the school and measures for preventing overcrowding. To be considered a healthy physical environment, the school must meet all of these criteria (Public Health Agency of Canada, 2005; McCall, 1999; Anderson et al., 1999).

**Social Support and Healthy Policy Pillar.** The Comprehensive School Health framework also includes a pillar dedicated to social support and healthy policy. This pillar refers to the psychological and social support available within the school environment and in relation to the home and community. This support can be informal in the form of friends, peers and teachers or formal through school and public policies, rules, clubs or support groups. This pillar takes into account how the school operates and which school and public policies are in place. The rationale is that this environment can assist students to grow into active contributing members of society if they are treated with respect and encouraged to participate in the development of the policy. Positive health role models, peer support, a positive school climate, family support, and appropriate public policy all contribute to a healthy psychosocial environment. In order to ensure coordinated social support occurs in the school, a positive school climate that encourages: healthy behaviour, the involvement of stakeholders including health care professionals, parents, the community, the local media and comprehensive wellness and wellness awareness programs should be included (Public Health Agency of Canada, 2005; McCall, 1999).

**Support Services and Partnerships Pillar.** The final pillar of the Comprehensive School Health framework is support services and partnerships. This pillar is directed at students and their families. These support services may include health,

social and psychological services and are ideal for the early identification and treatment of problems that can lead to potentially long term difficulties. For example, public health agencies have established sexual health units in most communities to address issues of sexuality, birth control and sexually transmitted infections. Although the majority of these services may not be the responsibility of the school, it can be a well-situated access point and an economical delivery point for the services. The various organizations that are responsible for the delivery of these services include public health units, social service organizations and non-governmental health agencies. The support services for schools and students may include health appraisal and monitoring, guidance services, treatment and rehabilitation services, social services and referrals (Public Health Agency of Canada, 2005; McCall, 1999).

**Comprehensive School Health in Canada.** The Canadian Association for School Health (CASH), Physical and Health Education Canada (PHE Canada), the Joint Consortium for School Health (JCSH) and Health Canada have created awareness for the Comprehensive School Health cause since 1988 and have helped each province across Canada develop their own school health association (MacDougall & Laforet-Fliesser, 2009). Although Comprehensive School Health programs have been developed at various levels in Canada, there is no formal research that demonstrates the effectiveness of the interventions. Unfortunately, Canada has not adopted Comprehensive School Health as readily as other countries and this may be attributed to the following factors:

Comprehensive School Health interventions are complex and difficult to implement in a meaningful way and Comprehensive School Health requires support in the form of willing teachers, administrators, communities and stakeholders (Deschesnes et al., 2003).

The issues of feasibility and the conditions under which Comprehensive School Health can be implemented and sustained are consistently raised and are further limiting factors to implementation. However, it should be noted that the concern over specific health issues such as obesity, diabetes, substance and tobacco use and chronic disease is leading to a shift in support for coordinated approaches to health and is resulting in some changes in government philosophies and policies (Ronson & MacDougall, 2003).

The countries that have been successful in implementing Comprehensive School Health initiatives have done so primarily because they have embraced the holistic approach to health and health promotion that it is founded upon (Marshall et al., 2000; Viig & Bente, 2009). Furthermore, countries such as Norway and Australia have built Comprehensive School Health principles into their school curricula and are starting to incorporate them into policies as well, leading to greater awareness and acceptance by teachers and practitioners (Viig & Bente, 2009). The support from teachers, administrators and government officials appears to be available for the implementation of Comprehensive School Health in these countries. It should also be noted that Scandinavian countries and Australia have developed into leaders in youth health promotion and using schools as settings for these initiatives is ideal (Turunen et al., 1999; Marshall et al., 2000). Within a Comprehensive School Health framework, schools are the hub of health promotion for the area and are central (though not alone) to the health of the community. Schools are an important social and physical environment for children and communities and any changes within them or through them can have an impact on student and community health (Parcel, Kelder & Basen-Engquist, 2000).

**Ontario's Healthy Schools.** In Ontario, the Comprehensive School Health Framework has been adopted as the Healthy School model (MacDougall & Laforet-Fliesser, 2009). Under the direction of the Ontario Physical and Health Education Association (Ophea), the Ontario Association for the Supervision of Physical and Health Education (OASPHE) and the Ontario Healthy Schools Coalition (OHSC), the vision is that all youth in Ontario will be educated in a Healthy School (MacDougall & Laforet-Fliesser, 2009). These three non-governmental organizations were strongly supported as the Ontario Ministry of Education and Ministry of Health Promotion dedicated staff to the Healthy Schools program in 2003 (MacDougall & Laforet-Fliesser, 2009). Since 2003 Healthy Schools policy changes have included Sabrina's Law (Anaphylactic regulation), daily physical activity (DPA) requirements in elementary schools, healthier foods being available in schools and the release of the Foundations for a Healthy School Framework based on the Comprehensive School Health Framework in December of 2006 (Ontario Ministry of Education, 2009). The Foundations for a Healthy School Framework outlines a common approach and philosophy for Healthy Schools in Ontario and should allow for greater integration and coordination between educational stakeholders and partners in the province (MacDougall & Laforet-Fliesser, 2009). Like the Comprehensive School Health framework, Foundations for a Healthy School is based on four pillars: a healthy physical environment, a supportive social environment, community partnerships and high-quality instruction and programs.

**Healthy Schools in Ontario's Health and Physical Education Curriculum.** A revised elementary health and physical education curriculum was released in Ontario on January 18, 2010 to be implemented in September 2010 (Ontario Ministry of Education,

2010). The document presents a comprehensive and balanced approach to health and physical education as part of the revision. The revised curriculum is composed of three related strands: healthy living, active living, and movement competence: skills, concepts and strategies. The healthy living strand focuses on assisting students to use their understanding of health concepts to make healthy choices and to develop a respect for their personal health in relation to others and the world around them. The movement competence strand focuses on developing fundamental movement skills and concepts and prepares students for lifelong participation of physical activity; while the active living strand will help students develop the passion for lifelong physical activity and learn how to develop and improve their personal fitness. Another set of expectations related to living skills such as personal, interpersonal and critical and creative thinking skills are included with the expectations of each grade and are interwoven with the three strands (Ontario Ministry of Education, 2010). The updates to the content in topics such as healthy eating, sexual health and mental health reflect contemporary issues in students' health that are relevant and meaningful. Furthermore, it is important to note that the revised health and physical education curriculum is the cornerstone to the high-quality instruction and programs pillar of Ontario's Foundations for a Healthy School and relies heavily upon the other three pillars to support Ontario's Healthy School initiatives. A comprehensive approach to health is profoundly situated in the revised curriculum and it outlines the necessity for strong community partnerships such as public health in its effective implementation (Ontario Ministry of Education, 2010).

## **Public Health as a Partner in Schools**

Comprehensive approaches to school health rely greatly on partnerships with community partners and stakeholders (Anderson, 2004 ). A key partner for health promotion in schools and school boards are public health agencies and their professionals. The Public Health Agency of Canada describes that their mission is “to promote and protect the health of Canadians through leadership, partnership, innovation and action in public health” (Public Health Agency of Canada, 2008). Essentially, the focus of public health agencies is health promotion, prevention, and community health (Smith, 2003). In Canada, jurisdiction over public health is shared between the federal and provincial levels of government, with the Public Health Agency of Canada working collaboratively with all levels of government and stakeholders to support responsibilities (Canada Public Health Agency, 2009). Additionally, municipalities play an active role in community public health programming under the supervision of provincial health ministries (Jackman, 2000).

**Core Competencies for Public Health Professionals in Canada.** The core competencies for public health professionals in Canada were developed by the Public Health Agency of Canada through extensive consultation with public health agencies, regional units and professionals across the country. The specific core competencies “are the essential knowledge, skills and attitudes necessary for the practice of public health” (Public Health Agency of Canada, 2007, p. 1) and were developed to ensure that there was a baseline of what is expected of public health to meet its core functions in improving and promoting health. In total, there are 36 core competencies that fall under seven categories including: public health sciences; assessment and analysis; policy and

program planning, implementation and evaluation; partnerships, collaboration and advocacy; diversity and inclusiveness; communication; and leadership (Public Health Agency of Canada, 2007). The core competencies for public health professionals guide their practice and directly influence what they perceive their professional role to be in the public health setting. Furthermore, the core competencies are especially important to recognize and acknowledge for public health professionals as they reflect on what they perceive to need to be effective in these roles.

**Public Health in Ontario and The Ontario Public Health Standards.** In Ontario, there are 36 regional public health units that are responsible for specific geographic areas across the province (See Appendix C for Ontario Public Health Unit listing). The Ontario Health Protection and Promotion Act (HPPA) provides the legislative mandate for public health practice in the province and includes the Ontario Public Health Standards (Ontario Ministry of Health and Long Term Care, 2008). The Ontario Public Health Standards are guidelines for public health in Ontario that outline the programs and service that regional public health units are required to provide in the province (Ontario Ministry of Health and Long Term Care, 2008). The Ontario Public Health Standards are divided into five program standards that categorize the focus of the guidelines; they are chronic diseases and injuries; family health, infectious diseases; environmental health; and emergency preparedness (Ontario Ministry of Health and Long Term Care, 2008). The specific requirements of public health are communicated for each of the program standards.

Additionally, the Ontario Public Health Standards require public health units and professionals to work with school boards and schools using a Comprehensive School

Health approach in promoting the health of students. Specifically, public health units are mandated to work with schools and school boards to:

influence the development and implementation of health policies and the creation or enhancement of supportive environments to address the following topics: healthy eating, healthy weights, comprehensive tobacco control, physical activity, alcohol, and exposure to ultraviolet radiation. Public health units are also required to conduct oral health screening and maintain immunization records of students and are directed to work with schools as community partners to address other issues important for child and youth health. (Ontario Ministry of Education, 2010, p. 13)

It is important to note that school boards and schools are not required to work with public health units in accordance with legislation.

**Public Health in Schools.** In order to completely understand partnerships between public health and schools, it is important to recognize who public health professionals are and what they can offer (Varpalotai & Leipert, 2006). The roles and responsibilities of these public health professionals are regulated by the Ontario Public Health Standards, with their practice founded on principles of health promotion, illness and injury prevention and primary health care (nurses) (Varpalotai & Leipert, 2006). Within a school setting, public health nurses, health promoters or other community public health professionals are the frontline workers for any partnerships. A community public health unit would include a school team that is staffed by public health nurses with specific areas of specialization (sexual health, nutrition), staff physicians, and in some cases health promotion consultants and nutritionists. With that said, it is typically the

public health nurse who is working directly with schools and teachers, while health promoters and other public health professionals function in support roles. The type of support the public health nurse can provide for the school is dependent upon a variety of factors, including the interest of teachers on health issues; individual school and school boards needs and concerns; and the availability and expertise of the nurses (Varpalotai & Leipart, 2006). It is important to note that the makeup of each public health unit is different, with not all units having school teams or resources designated for schools (MacDougall & Laforet-Fliesser, 2009). Not all public health units in Ontario have the capacity for a 'school team'. Many of Ontario's 36 public health units encompass rural and remote communities that cover large geographic areas. These health units face the challenges of scarce resources to cover these vast areas and as a result are not able to support all health promoting activities such as having 'school teams' (Varpalotai & Leipert, 2006).

### **Public Health in Comprehensive School Health**

**Healthy Physical Environment Pillar.** Although the condition of the physical school environment would fall under a public health mandate, a connection between public health and schools within a Comprehensive School Health framework is not identified in the Canadian literature. With that said, research based on American schools confirmed that decisions regarding where a school is built, how a school is designed and how it is maintained have key implications for the health and learning of the children who spend time in the school (Everett Jones, Brener & McManus, 2003). Furthermore, it was identified that as school nurses are not present at schools everyday, supplies for universal precaution and advanced first aid training is necessary to ensure student and

staff safety during emergencies when the school nurse is unavailable. The essential role of public health in the design and implementation of school anti-tobacco and junk food bans was also identified in the literature (Everett Jones, Brener & McManus, 2003). From a community standpoint, the physical environment of the workplace and homes were identified as public health concerns and fall under the mandate of public health agencies to some extent (Heloma, Jaakkola, Kahkonen & Reijula, 2001; Krieger & Higgins, 2002). Significant legislation and policy has been dedicated to reducing smoking in public spaces, including workplaces. For example, Heloma et al. (2001) identified that worker exposure to environmental tobacco smoke decreased significantly after legislation banning smoking indoors was passed. With regards to the home environment, public health agencies have limited mandates, but nonetheless make suggestions. Guidelines for sanitation, crowding, inadequate ventilation and other home related health issues are suggested and housing is identified as a determinant of health, but the extent of which public health workers can implement policy changes is limited (Krieger & Higgins, 2002).

**Support Services and Partnerships and Social Supports Pillars.** From a practical standpoint, these pillars of the Comprehensive School Health framework can be addressed by community public health agencies in collaboration with the schools in the community. After all, the Comprehensive School Health framework is based on partnerships within the community and a partnership between education and public health would be ideal for learning (Anderson et al., 1999). This is not to say that there are not already collaborations that occur between schools and community public health agencies. Local public health agencies tend to initiate immunization programs, sexual health

programs, hygiene programs and healthy skin programs among others that are directed at schools (Smith, 2003; Anderson et al., 1999). With new educational curricula implemented that requires schools and community public health agencies to partner for specific health promotion programs, it is imperative that these partnerships be fostered and be given the opportunity to grow.

**Curriculum and Instruction Pillar.** Within a community health setting, public health professionals are identified to play a significant role in health promotion and health education initiatives that would fall under the curriculum and instruction pillar (St. Leger, 2001; Nutbeam, 2000). Health education campaigns are commonly used by public health agencies as they are essential for bringing awareness to public health issues such as smoking, substance use, nutrition, immunizations and sexual health (Nutbeam, 2000). Furthermore, mass media health promotion campaigns have become a major tool for public health practitioners, utilizing significant amounts of time and funding. Despite the significant investment in resources, these health promotion interventions experience varying success (Randolph & Viswanath, 2004).

From a broader perspective, public health agencies are integral in the development of health literacy within the community (Nutbeam, 2000). Nutbeam (2000) defines health literacy as “the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health” (p. 264). The belief is that by improving access to health information and the ability to use it, health literacy becomes an empowerment tool (Nutbeam, 2000). It should be noted that schools have long been viewed as ideal settings for developing health literacy and within a Comprehensive School Health

framework public health professionals would play a role in the process (St. Leger, 2001). This role is further defined in Ontario's revised elementary health and physical education curriculum, as the document outlines the importance and need for schools to partner with public health to provide a health focused curriculum to the students. The problem lies in the follow through of this policy and working out how it can be implemented.

**Difficulties in Evaluating Comprehensive School Health Framework.** The complex nature of schools is a barrier to evaluation of the Comprehensive School Health framework (Cushman, 2008). As Comprehensive School Health is a broad approach, there are many strands and components that need to be measured and accounted. Unfortunately, the researchers are not always in control of these components, but their extraneous influence must be considered nonetheless. Moon et al. (2000) note that for example the media can have a powerful influence on attitudes during the intervention and this can be helpful or detrimental to the program depending on the message.

The financial requirements of Comprehensive School Health interventions can be large and funding agencies tend to focus on behaviour change as a measure of effectiveness, and therefore completely ignoring the process which is just as important (Moon, 2000; Viig & Wold, 2009). In order to rationalize large investment of funds, significant changes in behaviour are required by funding agencies and governments and this is difficult to demonstrate over short time spans. Changing behaviour over a short term, particularly health behaviours is extremely difficult and as a result, health promoting school projects cannot be evaluated by looking at measurable outcomes (Moon et al., 1999).

**Future Research.** A large disconnect between public health agencies, public health professionals and schools is evident in the literature. Specifically, a lack of focus on the support services and social support pillars of the Comprehensive School Health framework has been identified and is an area that requires further research to develop best practice guidelines for school/public health agency partnerships and collaborations. What do public health agencies and professionals require to successfully partner with schools and effectively implement a Comprehensive School Health approach? With regards to curriculum and instruction, what role do public health unit and public health professionals play in supporting the implementation of curriculum and what do they need to do so effectively? Overall, the studies suggest that a Comprehensive School Health framework is a positive development in school health promotion, but more research within the framework is still necessary. From a Canadian perspective, studies focusing on Comprehensive School Health are needed, especially at the provincial level with education being a provincial mandate in Canada.

### **Chapter 3 – The Research Process**

This chapter outlines the research process that I followed to uncover the perceived requirements of public health professionals to support the implementation of the revised elementary health and physical education curriculum and I came to choose this area if research. This includes detailed descriptions of how I am situated in the research, the philosophical stance that guided the methodology and research design and how the study was organized. A complete account of the methods used describes how the data was collected and analyzed in order to answer the research question.

#### **Situating Myself in the Research**

To provide a clear picture of the research process, it is important that I situate myself in the research study and describe how I arrived at the decision to focus my research on the areas of schools and public health. Arriving to this decision was a very personal process and it was one that I found incredibly challenging. As I reflect on my past experiences, it is clear that my educational background, my profession as a teacher and my passion for promoting the health of children has led me to believe in the Comprehensive School Health Framework and the philosophy to health that it presents.

My post secondary education begins with my undergraduate degree in physical and health education and a Bachelors of Education that I completed soon after. I followed into both of these programs because of my passion for physical activity and health as well as my joy for teaching. This passion was further ignite at the end of my education degree, as I had the opportunity to pursue an internship in the British Virgin Islands as part of a Health Promoting Schools initiative that my professor had commenced with the three Caribbean nations. During the internship, I worked predominantly with the physical

education department at the only high school on the island of Tortola teaching classes across all 'forms' (grade levels). Once per week I also had the opportunity to work with the science department teaching various science classes. It was this experience that ultimately led to me being offered a position as a science/health education teacher at the end of the internship.

I ended up teaching in the British Virgin Islands for a total of two years and it was an incredibly rewarding and challenging experience. As a beginning teacher, the workload is large and can be overwhelming. This was exasperated by the fact that I had moved to a new country with a new culture and different expectations with regards to education. It was during this time that I also realized the poor health of my students. My students were visiting the many candy and fast food trucks outside the school's grounds on a daily basis. My students were eating fried chicken wings and drinking fluorescent coloured soda pop for multiple meals during the day and it was evident in the high rates of youth obesity that plague the island. Unfortunately, poor diet and little physical activity were not the only unhealthy behaviours that my students were demonstrating. After the first month of teaching, I realized that three of my students were pregnant. Furthermore, there was no formal sex education in the curriculum until the final year of high school, and based on the ages of the student pregnancies was far too late. I needed help as an educator and more importantly the students needed help and information and it was not coming from the school itself. The island did not have the programs or capacity for a public health system either, so although the health problems were starting to be acknowledged, the weight fell on the school. I believe it was this experience in the British Virgin Islands that has led me to pursue research in public health and helped me realize

the critical role that schools can play in developing healthy communities. It was this experience that initiated my decision to pursue this study.

## **Methodology**

In order to gain a greater context of the institution of public health and greater understanding of public health professionals, I chose to use a qualitative research process. Qualitative research data is descriptive, tells a story, and acknowledges the investigator as part of the research and all of these qualities are vital to answering my research questions (Patton, 2002). Using qualitative research methods to observe, discuss and interact with public health professionals will provide a more authentic portrayal and understanding of what they perceive their requirements to be in order to be successful in their roles (Patton, 2002).

**Interpretivist Paradigm.** According to Willis (2007), a paradigm is a set of beliefs and assumptions, worldview or framework that directs research and practice in a discipline. The paradigm:

contains the investigator's assumptions not only about the manner in which an investigation should be performed (i.e., methodology), but also in how the investigator defines truth and reality (i.e., ontology) and how the investigator comes to know that truth or reality (i.e. epistemology). (Plack, 2005, p.224)

The interpretivist paradigm is based on the viewpoint that the nature of reality is socially constructed and constantly changing and therefore subject to individual interpretation and reinterpretation (Willis, 2007; Greene, 1998). The root of the interpretivist paradigm is the premise of contextualized meaning, where information and knowledge is subjective and context specific (Greene, 1998). This view of reality carries over to research, which

is therefore also socially constructed as well as the meanings or reality that it creates (Willis, 2007). Ultimately, the interpretivist viewpoint on reality is reflected in its outlook on the purpose of research and evaluation (Willis, 2007).

From the interpretivist perspective, the purpose of research is to provide a greater understanding of a particular situation or context (Willis, 2007). This contextual understanding is particularly important to the interpretation of the data or information that is gathered during the research process. As Schwandt (2000) states “to find meaning in an action, or to say one understands what a particular action means, requires that one interpret in a particular way what actors are doing” (p. 191). In the interpretivist paradigm, the researcher concentrates on understanding the phenomenon or action being studied through continuous and in-depth contact and relationships with those involved (W.K. Kellogg Foundation, 1998). The rationale for this paradigm was determined by the desired outcomes of my research and how the assumptions of the paradigm match the research inquiry. With the eventual outcomes of this study being to understand the circumstances and context of the school public health professionals in Ontario, with the recent release of the Ontario Public Health Standards, and the imminent revised elementary health and physical education curriculum and uncover their perceived requirements to support these policies, an interpretivist paradigm is most appropriate (Willis, 2007).

**Theoretical Framework.** The Comprehensive School Health model is grounded in social ecological theories of human behaviour and health promotion (Miller, 2003). Social ecological approaches recognize the multiple factors at the individual, social, and environmental levels that influence health behaviours (McLeroy et al., 1988).

Furthermore, a dynamic interplay among these various factors is acknowledged to influence health behaviours. The Comprehensive School Health framework also acknowledges a multifaceted approach to health promotion and is the theoretical framework used to guide this research.

**Needs Assessment Approach.** As this study used a qualitative research process as the basis of inquiry, the needs assessment approach I used was qualitative in nature. A qualitative based needs assessment allowed for greater exploration of the research questions and the issues that impact the respondents or participants and with greater depth (Reviere et. al., 1996; Tutty & Rothery, 2001). Furthermore, this study is grounded in an interpretivist world view, and as such it is important to draw the connection between the needs assessment approach and the interpretivist view. The interpretivist stance on evaluation (needs assessment) is to understand the context that is being evaluated from many different perspectives and uses the experiences and testimony of those directly involved in the process or setting as part of the research (Greene, 1998).

A needs assessment study gathers information and knowledge about the requirements of populations or groups in their communities (Tutty & Rothery, 2001). As needs assessments are practical in nature, in most settings they tend to be used to develop new services, evaluate and design programs or interventions and develop or revise policy (Reviere, Berkowitz, Carter & Ferguson, 1996). Reviere et. al. (1996) elaborate further on needs assessments, stating that they are a:

process of providing usable and useful information about the needs of the target population – to those who can and will utilize it to make judgements about policy

and programs. Needs assessment is population-specific, but systemically focused... and outcome-oriented. (p. 6)

Furthermore, needs assessment results can be used by practitioners seeking understanding of their organization or programs, as well as for ways of improving aspects of their practice or new ways of meeting their goals and mandates. The goal is to uncover the ‘needs’ of the program or organization and accordingly facilitate a practical change process that will address them (Altschuld & Kumar, 2005).

**Rationale for Needs Assessment Approach.** The stakeholders or stakeholding audience “is a group of persons having some common characteristics...that has some stake in the performance (or outcome or impact) of the evaluand [evaluatee], that is, and is somehow involved in or affected by the entity being evaluated” (Guba & Lincoln, 1981, p. 304). School health programs have many stakeholders involved in the process that are either directly or indirectly tied to the process (See Appendix D) (St. Leger, 2000).

However, for this study, the term ‘stakeholders’ refers specifically to the individuals who are experiencing the ‘need’ that is being studied, the public health professionals. As the research question focuses on the needs of public health professionals to implement the revised health and physical education curriculum and to meet their mandate as outlined by the Ontario Public Health Standards, a needs assessment approach that deals with these stakeholders directly is most appropriate. Furthermore, as direct stakeholders in the research, public health professionals are an essential group to consult and play a role in the research process and the needs assessment approach inherently encompasses this. The input of those being studied is highly valued as “the more explicit and open the process,

the greater the likelihood that results will be accepted and implemented” (Mckillip, 1998, p. 265).

**Defining Needs.** The concept of what exactly is a ‘need’ is subjective and is not necessarily shared among others as a common understanding (Tutty & Rothery, 2001). For the purpose of this inquiry, a ‘need’ will refer to a support without which public health professionals cannot effectively meet their mandate as per the Ontario Public Health Standards within a Comprehensive School Health framework. Essentially, it is the public health professional who will define what it is that they feel or perceive that they need and I will be as articulate as possible in my description of these feelings and perceptions.

**Research Partner – Ontario Physical and Health Education Association.** For this research study I partnered with the Ontario Physical and Health Education Association (Ophea), a provincial not for profit organization that is dedicated to promoting healthy active living through advocacy, program development and various supports (Ophea, 2010). As a program development and support organization, the majority of Ophea’s work has been with and for schools and teachers. Ophea has always partnered with other community groups and stakeholders that shared similar mandates and visions of healthy communities, but these projects were typically not as involved as this research. Recognizing that with the release of the Ontario Public Health Standards in January 2009, public health professionals across Ontario were required to play a larger (different) role in school health promotion and health and physical education programs, Ophea targeted the public health population. The fit made sense as Ophea is comprised of

experts with schools, while public health would be looking to work with schools in a different capacity than before and needed the expertise to do so.

My first contact with Ophea was a conference call with a director (name and position withheld for confidentiality) in September 2009. During this call, the director outlined the direction that Ophea was moving in regards to supporting public health professionals who worked in schools. Ophea had two main areas of focus for their work with public health professionals. The first area was the Ontario Public Health Standards policy and how public health units had embraced and handled their new mandates with schools. The second area of focus was with the revised curriculum. With the revised elementary health and physical education curriculum to be released in a year, how public health units were beginning to prepare for a curriculum change would be significant. This is especially true considering the magnitude to which the curriculum document had changed and the fact that most public health units would not be aware for months. The goals of Ophea were to address these two areas of focus while further developing their relationship with public health professionals in Ontario. As my research interests matched Ophea's goals, at the end of the conference call the director and I decided a partnership would be beneficial to both of us. I was hired to work for Ophea as an external researcher/consultant and assist them with their goals (which were similar to mine for this study) and they would gain me access to public health professionals that worked in schools. I was compensated financially for my work with Ophea, but the organization did not have any ownership or influence on this study's research.

Ophea was the gatekeeper for this research study. With Ophea's assistance and support I was able to gain access to the school public health professionals who were the

participants in my study. Ophea's involvement in this research was mostly logistical and financial in nature. They organized and secured funding for the facilitated roundtable discussion in October, 2009, the attendance of the public health professionals at the Ministry of Education workshops in January and February, 2010 and coordinated the focus groups with the public health professionals in March, 2010 (I will elaborate further later in this chapter).

**Participant Selection.** The participants for this study were selected based on purposeful sampling (Patton, 2002). This means that the participants who were chosen to take part in the study were intentionally and strategically chosen because they are “information-rich cases...from which one can learn a great deal about issues of central importance to the purpose of inquiry” (Patton, 2002, p. 230). In other words, the participants were chosen “based on a set of attributes” (Stringer, 2007, p. 43). For this study, the ‘information rich’ or ‘attribute rich’ cases were in the form of the public health professionals. It was specifically the public health professionals whose direct responsibilities include working with schools, school health programs and teachers who were intentionally recruited to take part in this study. The rationale for selecting school public health professionals as participants for this study lies primarily with their role in the execution of the Ontario Public Health Standards and supporting of the implementation the revised elementary health and physical education curriculum. Although the number of staff dedicated to school health may vary between regional public health units, the expectations of the units are outlined in the Ontario Public Health Standards.

## **Methods**

**Participants and Sample Size.** In qualitative studies there are no rules for sample size as that is dependent on what is being asked in the study, the purpose of the inquiry, what is necessary and several other study specific factors (Patton, 2002). With that said, qualitative studies generally have a smaller sample size that allows for the researcher to gain and collect in-depth data from each of the participants (Patton, 2002). This study placed an emphasis on understanding the needs of the school public health workers as they implement Comprehensive School Health in their regions and look forward to the future implementation of the revised elementary health and physical education curriculum.

To gain a complete perspective of the requirements of school public health professionals across Ontario, all 36 regional public health agencies were invited to participate in the project. The participants involved in the needs assessment were the school public health professionals who participated in the facilitated roundtable discussion, the teleconference focus groups or the individual interviews. Only data obtained through these methods was included in this study. Table 1 provides a breakdown of the total number of participants and public health units that participated in each method. Table 2 provides an overview of the positions held by the participants in the study.

Table 1:  
Total Participant Breakdown by Method

	Facilitated Roundtable Discussion	Teleconference Focus Groups	Individual Interviews
Timeline	October 2009	March 2010	April 2010
Total Number of Participants	52	88	16
Number of Public Health Units Represented	31 of 36	34 of 36	10 of 36
% of Public Health Units Represented	86%	94%	28%

Table 2:  
Breakdown of Participants by Position

	Facilitated Roundtable Discussion	Teleconference Focus Groups	Individual Interviews
Dietician/Nutritionist	8	5	1
Health Promoter/Promotion Specialist/Educator/Liaison	12	19	4
Program Manager/Supervisor/Coordinator	16	25	6
Public Health Hygienist	0	2	1
Public Health Nurse	16	37	4
Total:	52	88	16

**Data Collection Procedures.** In order to collect data, I utilized three data collection methods within the needs assessment approach. The data for the needs assessment was collected from October 2009 to April 2010 and utilized the three following methods (refer to Figure 1):

1. One document analysis (from a document created at an in-person, facilitated roundtable discussion);
2. Five teleconference focus groups;
3. Ten individual health unit follow-up interviews.

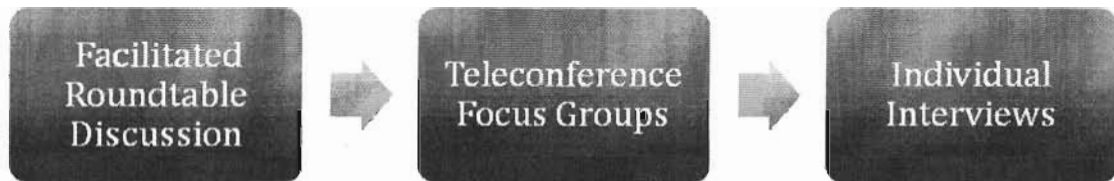


Figure 1

**Facilitated Roundtable Discussion.** In October 2009, Ophea hosted a day long Planning and Professional Development Roundtable for public health professionals across Ontario. Each of Ontario's 36 public health units was invited by Ophea to participate in the event that took place at the Nattawasaga Inn in Alliston, Ontario. The participants in the roundtable represented 31 of the 36 public health units in Ontario, with a total of 52 public health professionals in attendance. The roundtable was facilitated by Ophea staff and was designed to solicit feedback on how Ophea could support public health professionals to address key policies such as the Ontario Public Health Standards, the pending revised elementary health and physical education curriculum, and the Foundations for a Healthy School Framework. My role during the day-long session was to assist the Ophea staff with initiating the activities and question sessions, as well as take detailed notes that would support the responses that the public health professionals provided.

The morning was allocated to update the public health professionals on some of the major changes to the revised curriculum and provide them an opportunity to preview

several sections of the document. The afternoon was spent on discussions that focused on how public health units were currently supporting schools, what they were planning to do in the future and what kind of support they needed to meet their mandates. The participants were divided into groups of six to eight to allow for all individuals to offer input on a series of questions prepared ahead of time by Ophea staff (See Appendix G for a list of the Facilitated Roundtable Discussion questions). Ophea staff members, other professionals in key non-governmental organizations who acted as table leaders and myself transcribed the answers provided by the public health professionals onto chart paper. After the session, I compiled, condensed and transcribed these answers and additional notes into a single document entitled 'Ophea's Public Health Roundtable Facilitated Discussion Notes'. The document was shared with all participating health units using a private, password protected Wiki (a website that allows for individuals to review and edit documents) to ensure it accurately reflected the discussion and feedback of the roundtable. This document is a source of data for this study.

**Teleconference Focus Groups.** Focus groups are characterized by an indirect style of interviewing with an aim to stimulate multiple viewpoints on a topic (Kvale & Brinkmann, 2009). The focus group approach was chosen for several reasons. The first being that within a focus group format, the participants can hear each other's comments and the belief is that they will build and elaborate upon the ideas of the others (Patton, 2002). Furthermore, public health professionals tend to be very possessive of their time, especially after work hours. A focus group allowed me to gain access to the data of multiple public health professionals at the same time and only need to schedule one meeting. Finally, focus groups can be viewed as social gatherings and allow for an

exchange of thoughts and ideas that can provide depth to the data and are also enjoyable for the participants (Patton, 2002).

As part of the release of the revised elementary health and physical education curriculum, the Ontario Ministry of Education (EDU) organized two-day regional professional development workshops across the province in January and February 2010. Twelve of these workshops were in English and four were in French. Ophea received provincial government funding to send one representative from each of Ontario's 36 public health units to attend a workshop in their respective region. As there were both English and French language sessions, public health units were permitted to send staff to attend both the English and the French EDU workshops. Within two weeks of the final workshop, public health professionals working with schools who had attended either the English or French EDU sessions were recruited to take part in teleconference focus groups. Each public health unit was invited to participate through email and asked to choose their availability from a list of five prescheduled dates confirmed by telephone to participate by Ophea staff, with the number of participants per health unit ranging from one to five based on availability and interest. The goal of these focus groups was threefold: to gain feedback on the EDU training sessions; to learn how individual health units intended to support the revised elementary health and physical education curriculum and to decipher what supports or resources they required to do so (See Appendix H for a list of Teleconference Focus Group Questions).

In total, there were five teleconference (telephone based) focus groups, with between 11 to 22 participants on each and 34 of 36 public health units being represented (See Table 3 for breakdown). The teleconference focus groups took place in a conference

room at Ophea’s head office in Toronto, with one Ophea staff, an Ophea consultant, an external consultant and myself on each call with the participants. The Ophea consultant was responsible for facilitating the calls due to her extensive facilitating experience and expertise, while I asked follow up questions when appropriate. All five focus groups were one hour long and were digitally recorded with both the written (letter of consent – See Appendix F) and verbal permission of the participants by the teleconference service provider. At the beginning of each teleconference focus group I introduced myself as both an external consultant for Ophea and a graduate student from Brock University. The participants were informed that I would be using the responses from the focus groups for both a final report for Ophea as well as my thesis for Brock University. The teleconference data was transcribed by the teleconference service provider and sent to me within one week of the call. The transcripts were transcribed with the identities of the participants and health units.

Table 3: Teleconference Focus Groups Breakdown

Focus Group #	Date	# of Public Health Units	# of Participants
1	March 22, 2010	4	12
2	March 23, 2010	6	15
3	March 24, 2010 (AM)	9	18
4	March 24, 2010 (PM)	10	22
5	March 29, 2010	5	11
<b>Totals:</b>		<b>34</b>	<b>88</b>

**Individual Interviews.** Interviews are effective data collection methods because they allow the participants to describe their situation in their own terms (Stringer, 2007). The rationale for utilizing interviews in addition to the other data collection methods was to further examine what school public health professionals required to effectively support the revised elementary health and physical education curriculum and to confirm and elaborate on the data that had already been collected during the teleconference focus groups. I developed the semi-structured interview guide using the prominent topics from the focus groups (See Appendix I). As data obtained from semi-structured interviews varies from person to person, the idea was to add further breadth to the findings (Patton, 2002).

As a follow up to the teleconference focus groups, I conducted ten individual health unit interviews with public health professionals from across Ontario in April 2010. A week after the final teleconference focus group, I asked Ophea to send recruitment emails to participants from the focus groups representing twelve public health units. I purposely recruited the twelve individual health units based on their geographic locations to provide a regional representation of the health units in the province. In total, ten public health units agreed to the interviews. Due to cost and proximity, I conducted only three of the interviews in person and the other seven were conducted on the telephone. The number of participants in each interview ranged from one to five participants depending on the size of the health unit and the availability of staff and the participants. All participants were to have taken part in the teleconference focus groups. At the beginning of each interview I introduced myself as both an external consultant for Ophea and a graduate student from Brock University. The participants were informed that I would be

using the responses from the interviews for both a final report for Ophea as well as my thesis for Brock University. I transcribed the notes from the interviews, including verbatim quotes, immediately following the session. The interviews varied in length, but were between 50 to 75 minutes.

**Table 4: Individual Health Unit Interviews Breakdown**

Interview #	Date	Telephone/In-Person	# of Participants
1	April 14, 2010	Telephone	1
2	April 14, 2010	Telephone	1
3	April 15, 2010	Telephone	1
4	April 16, 2010	Telephone	1
5	April 16, 2010	In-Person	1
6	April 19, 2010	Telephone	1
7	April 21, 2010	In-Person	1
8	April 27, 2010	Telephone	1
9	April 28, 2010	In-Person	5
10	April 28, 2010	Telephone	3
<b>Totals:</b>			<b>16</b>

### **Data Analysis**

The challenge of qualitative analysis lies in making sense of massive amounts of data. This involves reducing the volume of raw information, sifting trivia from significance, identifying significant patterns, constructing a framework for communicating the essence of what the data reveal. (Patton, 2002, p. 432)

I divided the data analysis into two stages; analyzing the Facilitated Roundtable Discussion document and then analyzing the transcribed scripts and notes from the focus groups and interviews. I completed the document analysis before I completed the synchronous analysis of the focus group and interview data.

**Document Content Analysis.** At the end of the day-long facilitated roundtable discussion, the responses to the questions that were provided during the entire session and the additional notes that I took were compiled into a document entitled ‘Ophea’s Public Health Roundtable Facilitated Discussion Notes’ I analyzed the document that was produced from the facilitated roundtable discussion using a content analysis approach. Content analysis usually refers to qualitative data reduction and sense making that identifies core meanings and consistencies in a volume of qualitative material (Patton, 2002). With the goal of the analysis to uncover core consistencies and meanings in the form of themes and patterns, the content analysis I conducted included the following steps (Krippendorff, 1980):

- I defined the source and context of the data, by identifying the setting in which the data was collected.
- As I read through the document, there were patterns that emerged and as a result, I coded the data by reducing it into meaningful and manageable meaning units (key phrases and sentences) that were placed into categories and themes.
- Categories are defined as “a group of content that shares a commonality” (Graneheim & Lundman, 2004, p. 107). Furthermore, the categories should be considered as exhaustive overarching groups that are mutually exclusive from one another (Krippendorff, 1980). This means that when possible, data should not fit

into more than one category and should be easily identified through the codes (Graneheim & Lundman, 2004). Themes refer to descriptive findings or patterns in the data that are reoccurring and can be grouped (Patton, 2002). The themes fit into the overarching categories and as Graneheim and Lundman (2004) state “creating themes is a way to link the underlying meanings together in categories” (p. 107).

To ensure reliability, as in stability (the same coder gets the same results every time) and reproducibility (the same text being coded in the same theme by different people), I asked a second researcher (a staff member from Ophea) to independently review the document and substantiate the categories and themes that I had suggested after my analysis (Stemler, 2001). As Weber (1990) remarks “to make valid inferences from the text, it is important that the classification procedure be reliable in the sense of being consistent: Different people should code the same text in the same way” (p. 12). Both myself and the second researcher agreed on the categories and themes that were assigned to the data after consultation and revisiting the transcripts one more time and confirmed the categorization of the data.

**Data Analysis for Focus Group and Interview Data.** This study is a needs assessment of Ontario’s public health professionals, so the analysis of the data was to uncover what the participants in this study perceived they required in order to successfully implement the Ontario Public Health Standards and support the revised elementary health and physical education curriculum. As there was substantially more data from the focus groups and interviews than the facilitated roundtable discussion, the data analysis was a more complex process. The focus group interviews were transcribed

verbatim by the teleconference service provider, while I transcribed the individual interview notes word-for-word as well to assure authentic interpretations of the data were possible. I ensured that the transcribed focus group scripts were available to the participants for member checking and feedback.

During the analysis, I merged the focus group and interview data. This meant that the transcripts from the focus groups and interviews were analyzed synchronously. The data was analyzed using inductive analysis, and involved finding patterns, themes and categories that emerged from the data (Patton, 2002). In inductive analysis, the themes and patterns emerge out of the data; therefore, meaning coding was used (Patton, 2002). Meaning coding involves attaching keywords to a section of text to allow for later identification (Kvale & Brinkmann, 2009). As I read through the data I broke down the interview transcripts into coded meaning units and then assigned themes that could be identified in the data and used in later analysis.

Patton (2002) discusses that interpretation can take three forms: making the obvious obvious, making the obvious dubious and making the hidden obvious. The first level of interpretation involved assigning broad categories and corresponding themes to these 'obvious' findings. This refers to the categories and themes that emerged after reading through the focus group and interview transcripts only one time. The second and third level of interpretations involved doing the same, but reading the transcripts several more times to uncover the less obvious and critical findings. As I repeatedly revised the transcripts, I uncovered key similarities between the categories and themes that emerged and notes from my researcher journal. At the roundtable, and during the teleconference

focus groups, I had taken down observational notes and ideas and they were utilized during the analysis of the data for confirmation of interpretations.

### **Ethics**

**Research Ethics Board Approval.** In order to begin data collection, an application for ethics review for the proposed research study was submitted to the Brock University Research Ethics Board (REB) in December 2009 and was subsequently approved in February 2010 (See Appendix E).

**Informed Consent.** The public health professionals were fully briefed on the purpose of the research, the main features of the design and the role that they were playing in the study prior to them becoming participants. Participants were made aware that their participation was voluntary and that they were free to withdraw from the study at any time (Kvale & Brinkmann, 2009). A letter of informed consent was provided to the participants in advance of their teleconference focus group session or interview and signed letters were either faxed or collected at the interview (Patton, 2002). A template of the informed consent letter can be found in Appendix F.

**Confidentiality.** The need for confidentiality is important as there are issues that may be voiced during the focus group sessions that could possibly damage professional and personal relationships. The participants of the study were informed that all personal information as well as all data including voice recordings and transcripts would remain confidential. Pseudonyms were used in all written documents to assure confidentiality. To further ensure confidentiality, computer files were password protected and paper work was kept in a locked cabinet.

## **Trustworthiness**

**Member checking.** Member checking refers to the participants of the study being given opportunities to review the data and conclusions that the investigator has formulated based on the analysis of the data (Willis, 2007). A week after the facilitated roundtable discussion, the document entitled ‘Ophea’s Public Health Roundtable Facilitated Discussion Notes’ with the responses of the public health professionals and additional notes was uploaded onto a password protected Wiki. The participants in this study were given the opportunity to review the transcribed facilitated roundtable discussion notes through the online Wiki. Based on the data provided by the Wiki, all 52 participants reviewed the document and two participants left messages on the Wiki’s with additional information to add to the document.

The teleconference focus group and interview transcripts were also made available to the participants of the study. The public health professionals were informed after the focus groups and the interviews that the transcripts and notes were available to look over within a week of their session. In total, one transcript for an interview was requested.

**Researcher Journaling.** Reflective journals are an effective way of recording thoughts during the data collection and analysis (Willis, 2007). I kept a journal to record thoughts, ideas and observations that were made before, during the roundtable and focus groups and after the interviews. In total, I wrote sixteen standard letter sized pages and the notes I gathered through the journaling were used to supplement the data obtained through the focus groups and interviews.

**Analyst Triangulation of Themes.** To ensure reliability, as in stability (the same coder gets the same results every time) and reproducibility (the same text being coded in the same theme by different people), I requested that a second researcher (a staff member from Ophea) to independently review the document and substantiate the categories and themes that I had suggested (Stemler, 2001). The second researcher confirmed all of the categories and 18 of 19 themes. After we both went through the transcript data an additional time, all 19 themes were confirmed as well.

## Chapter 4 – Results

This chapter presents the findings from the document analysis, focus groups and interviews using key quotes and observations from the data that were collected. The critical categories and themes that emerged during the analysis of the data provided a greater understanding of the requirements of public health professionals as they support the implementation of the revised elementary health and physical education curriculum.

### Findings

A number of categories and themes were elicited from the data collected at the roundtable discussion, teleconference focus groups and individual interviews. The categories and themes are summarized below in Table 5. The table also outlines the data source from which each category and theme originated (roundtable, focus groups or interviews). The table is followed by full descriptions of the categories and themes and several key quotes from the participants. The quotes provide support for the categories and themes and further highlight the findings uncovered from the data. The participants remain completely anonymous and have not been linked to the quotes or their health unit. To denote that findings represent a variety of participants from the study, pseudonyms have been assigned to the quotes. In total, four categories and seventeen themes were identified from the data analysis process. Please note that the corresponding themes could be considered specific areas of focus within each of the overarching umbrella categories.

Table 5: Summary of Categories and Themes

Categories	Themes	Data Sources		
		Roundtable	Focus Groups	Interviews
<i>Resources</i>	Professional Development & Training	*	*	*
	Progressive and Standardized Instructional Materials	*		
	Ongoing Research and Evaluation	*		
	Additional Funding	*		
	Increased Staffing	*		
<i>Communication</i>	Need for Open Dialogue	*	*	*
	Coordinated Messages	*		
	Greater Collaboration	*		
	Knowledge Transfer		*	*
<i>Clear Vision for Public Health</i>	Uniform Philosophical Outlook	*	*	*
	Effective Policy	*		
	Clearly Defined Roles	*	*	*
	Stronger Relationships & Partnerships	*	*	
	Advocacy		*	*
<i>Understanding the Professional Culture</i>	Professional Hierarchy			*
	The Language of Schools	*	*	*
	School Norms and Cultures			*

## **Resources**

The resources category refers to the participants declaring that there was a lack of resources that prevented them from effectively supporting the implementation of the health and physical education curriculum. *Resources* are tangible supports that public health professionals require to deliver their mandate to schools. This broad category includes areas such as professional development, instructional materials, research, staff and funding requirements that participants identified were lacking and are required to ensure successful support of the revised health and physical education curriculum and to assist in developing stronger relationships with school boards. Professional development sessions that increase knowledge among public health professionals about the curriculum and other educational policies, along with continued research, evaluation, and dissemination of best practices, were highlighted as essential to effectively support schools.

**Professional Development & Training.** The public health professionals acknowledged the need for ongoing training on the comprehensive school health approach and what it entails; the health and physical education curriculum and other relevant policy; and on teacher roles, responsibilities and needs. Moreover, they stressed their need to not only learn the information, but the practical (how), putting theory into practice aspects as well. Learning how to connect with school boards and school administrators was identified as key to any professional development. Making the professional development practice ongoing and having it jointly developed between public health, education, Ophea and other partners were also suggested. As one participant stated:

*[We are interested in learning] how we could easily get into the schools, even starting at the school board and how you might even suggest we work with the teachers or what we could bring to them... Often we're finding that the boards are really looking out for their teachers and say they have enough to do, so we really want to show them that we can help them and how we could [help]...it's a bit of a barrier for us to begin with. -Sue, Health Promoter*

Another participant suggested that:

*The Ministry training was great, but we need sessions that are public health focused as well. Something that is geared towards public health, in our language and that we can take away and use. -Fiona, Manager, Public Health*

**Progressive and Standardized Instructional Materials.** The public health professionals recognized the need to update and standardize their instructional and promotional materials. It was suggested that existing materials be reviewed and evaluated and new standardized materials be developed collaboratively among the public health units (and Ministries of Education and Health Promotion). It was also highlighted that new instructional materials need to target the school aged children in a more relevant and progressive manner as youth in Ontario today are more media and technologically savvy. The majority of the requests for instructional and support materials were for French language resources; resources for challenging topics (i.e. sexuality, sexual health, etc.); dental health resources; resources that match revised curriculum to the Ontario Public Health Standards; and resources that identify the key differences between the previous and revised elementary

health and physical education curriculum. It was noted that resources should be created with a public health focus. A centralized database for the resource materials was also mentioned.

*I'm interested in not duplicating things that are being done, so if Ophea has a great website with all the resources that schools can access, I wouldn't want to spend time here duplicating resources that are already out there.*

- Sylvia, Public Health Nurse

**Ongoing Research and Evaluation.** Ongoing research, evaluation and assessment was suggested as a system of ensuring accountability and providing data to support the initiatives that public health would like to implement with schools and school boards. Although best practice research is being utilized in program development, there is a shortage of follow up evaluation for program improvements and reassessments. It was also suggested that best practice research continuously be employed to develop all public health messaging and awareness campaigns and therefore incorporate all risk factors to health instead of focusing on one.

The public health professionals expressed the need to have schools and school boards voice to them exactly what they need from public health. It was suggested that this information could be obtained through a needs assessment that would involve teachers, principals and school board administrators and would inform public health what is working and what is not. The data will prove invaluable to public health units in developing approaches and plans that address the priorities of schools as well and use limited public health resources more efficiently. As a participant commented:

*[W]e'd like to figure out what the school boards and schools want...how we can support them and what would work for them, whether it's data, resources, etc.*

- Rania, Public Health Nurse

**Additional Funding.** The public health professionals highlighted the issue of funding as imperative to how they operate and are able to support schools. It was made clear (especially during the facilitated roundtable) that funding would be integral to any changes to support public health involvement in schools. As most funding is government-based, advocacy and awareness to the ministries is imperative to solicit funding for additional staff, program and resource development, evaluation and any additional supports that are necessary. Furthermore, the funding needs to be realistic and sustainable to avoid program cuts in the future (e.g. tobacco youth engagement program).

*Our funding structure is complicated and I understand that, but funding programs that are the hot issue and cutting funding from programs that are successful is a problem. [T]he funding for programs needs to be sustained.*

- Rajeev, Health Promoter

**Increased Staffing.** Public health professionals cited the issue of staffing in two separate areas of their work. First, public health units need to offer all schools in the province support in the form of staff (nurses, nutritionists, health promoters). Currently, some health units (especially rural health units) do not provide direct staff support to the schools in their region (i.e. no formal 'school teams' in their public health unit) and this was deemed a serious problem to supporting schools. Second, a need for new staffing was a strongly identified need for public health.

The new staffing would come in the form of more nurses and health promoters appointed to work specifically with schools, as well as multi-disciplinarians with backgrounds in both education and public health (curriculum liaisons). These individuals would be employed at both the ministry level and in the public health units and would liaise between public health and schools. When asked about the role of her public health unit in schools, a participant exclaimed:

*[W]e also don't have a school health team and we don't have nurses or health promoters in the schools...so how do we start capacity building in schools?*

-Sook-Yin, Public Health Manager

### **Communication**

The communication category includes interaction of any form between and within public health, schools and stakeholders and refers to the participants expressing that there were difficulties in this area (communication) preventing them from supporting schools more effectively. This category focuses on how public health can communicate more effectively internally with each other and externally to its partners to more successfully fulfill its mandate. The participants highlighted the need for clear and consistent messaging to schools and the need for greater collaboration between health units to effectively achieve their mandates.

**The Need for Open Dialogue.** The public health professionals articulated a tremendous need for open communication between all those who are involved in Ontario's Healthy Schools and the Foundations for a Healthy School Framework. This includes public health directly communicating with schools (teachers, principals); school boards (administrators, superintendents); government agencies (Ministry of Education

and Ministry of Health Promotion); and other public health units. Consistent direct communication was identified as essential for the Foundations for a Healthy School Framework to operate efficiently and consistently. The Ministry of Education revised elementary health and physical education curriculum training sessions were praised for beginning that process, but it was urged that it continue.

*[I]t was a huge benefit to have attended the Ministry training sessions. I think both from an education perspective and from a Public Health perspective. It certainly brought boards that were not already working in partnership together with Public Health units and gave them the opportunity over the course of two days to really look at coming up with a plan as to how Public Health can support while we were there.* - Marco, Health Promoter

*Thank you very much, (Health Unit Name omitted), because your story sounds very similar to our story and we're going through a reorganization, as well, new team members, managers, new directors. So we'd be curious to hear your progress as you go through this experience and hear from your learnings and if you could continue to share with us. And if there's other health units in the province who are in a similar situation, if they could also share their learnings with us, what's working, how they're progressing, I think that would help us, as well.* - Constance, Public Health Nutritionist

**Coordinated Messages.** Participants were persistent that public health must communicate a clear, coordinated message to schools, partners and communities regarding their roles and expectations within the Foundations for a Healthy School

Framework. It was suggested that coordination could be established through the development of scope of service guidelines that outline exactly what messages should be expected of public health. Furthermore, participants noted that public health and the boards of education need to coordinate key messages so that they share the same approach and philosophy and are as a result more effective.

*[T]here is no specific funding from the province directly allocated to the implementation of physical and health education. So the more we can work together with Public Health and the [school] board to get the information out to teachers around the [revised] curriculum is key. So this can be coming from Public Health, as well as from the school board. I think that's huge.*

- Eva, Public Health Nurse

**Greater Collaboration.** The public health professionals acknowledged that having 36 public health units develop 36 individual resources for their jurisdictions was wasteful and unnecessary. Unfortunately, this is the case for almost all programs and campaigns in the province. Just as public health units must work on communicating more effectively with their partners, they must do so within and between units as well. This would mean increasing collaboration between departments within individual public health units and greater collaboration between the 36 public health units in the province. Participants also identified opportunities to network with peers from other public health units and developing/sharing resources and programs as effective approaches to building the capacity of public health within the Foundations for a Healthy School Framework. As one participant remarked:

*I think it's very important that health units not continue to develop resources, develop teaching tools that are so similar to either other health units or organizations such as Ophea. I think it's really important to communicate and I think it's great that Ophea's doing that database so that we're aware of what each other has to offer so that we can share and adapt these resources. Because we're giving out the same information and we're trying to reach the same goal.*

-Nancy, Public Health Nurse

**Knowledge Transfer.** The transfer of information and knowledge is a key responsibility of public health professionals. This theme refers to the dissemination of information (research, policy) within the public health units to the staff that require the knowledge on an ongoing basis and to the target audiences and populations. It was evident in the data that public health professionals were dependent on certain knowledge transfer methods that were not always appropriate to the setting or situation. This is a problem as effectively communicating or sharing knowledge and information requires using situation appropriate transfer methods; typically more than one. With a number of the public health units, there was a heavy reliance on efficient, but superficial methods of sharing information. For example, many of the participants that had attended the Ministry of Education curriculum training sessions appear to be relying heavily on a two-page summary of curriculum updates to communicate the changes in the revised document. The depth and understanding of the revised curriculum document required by school public health professionals cannot be attained through these types of transfer methods.

*We shared, particularly...that two-page document we were speaking of earlier, the one that [the Ministry of Education Curriculum Trainer]*

*developed, regarding the changes...*

– Lucy, Public Health Nurse

### **Vision for Public Health**

The *Vision for Public Health* category refers to the need for a clear vision for Public Health Units to meet their mandate with schools according to the Ontario Public Health Standards. This theme relates to official mandates such as policy requirements as well as to informal mandates such as philosophical understandings of ‘health’ as a holistic and multidimensional concept. The need for role clarity within the institution of public health and with respect to service delivery within schools was identified as a requirement to move forward. Finally, the need for a champion to support public health’s contribution to schools was documented.

**Uniform Philosophical Outlook.** Several comments were made by participants relating to the philosophical views and outlook of public health professionals and the need for all professionals to have a clear vision of what the concept of health means in this context. Currently, there is not a consensus definition or outlook on what health is within the public health institution. The participants recognized that there were competing and conflicting definitions, with the ‘absence of illness’ medical and the holistic multidimensional views the most common. As the institution of public health is based on health promotion, it was suggested that they ensure that professionals are looking at health as a holistic concept that includes the psychosocial components of health as opposed to merely the physical aspects. A holistic and philosophical vision of health is important for public health professionals as that is how it is outlined in the

Foundations for a Healthy School Framework and the Ontario Public Health Standards that guide their practice.

*We [public health] need to stop looking at health as just being physical...[W]e need to focus more on the psychosocial aspects as well.*

- Neena, Public Health Nurse

**Effective Policy.** The fact that public health's mandate to work with schools is not reciprocal was identified as a prominent policy concern by the public health professionals. As there was no tension or requirement for schools to work with public health units, the mandates of public health units were more difficult to meet. To address this concern, the participants suggested that policy be developed by the Ministry of Education and the Ministry of Health Promotion that specifies roles, responsibilities and protocol for public health and schools. This policy would: make adoption of the Foundations for a Healthy School Framework compulsory for schools, school boards and public health; engage frontline public health professionals in the development process; and provide clear, sustainable directives for all parties involved. Essentially, the participants expect the provincial government ministries to provide guidance through policy to bridge public health and education (schools).

*I don't think there's a great partnership with the school board, especially on the higher end. It's just more us kind of going in and doing our work and leaving. So I'd like to see more policy stuff happen.*

- Sonya, Public Health Nurse

*With one of our school boards, we have a very unique partnership [that] we're right on board with. However, the [Ministry training session] was the first time that we actually met, and it was the first time that they were under the understanding that we do [value] the importance of partnership development and that we do have a mandate to partner together.*

– Alessandra, Public Health Nurse

**Clearly Defined Roles.** The public health professionals consistently mentioned the need for a definition of their roles, responsibilities and expectations. The lack of a definition was causing confusion for public units and schools and preventing public health from sufficiently supporting the schools in their regions. The defined role should be consistent across the province and across all public health units. Participants voiced concern that while the Ontario Public Health Standards mandates are consistent, the ways in which they are expected to be implemented are not. Furthermore, there is no clear idea of what is expected of public health by schools, school boards and stakeholders (NGO's, community agencies). These comments call for a clarification in the definition of the role of public health and public health professionals within the Foundations for a Healthy School Framework and a definite outline of what is expected of them by their partners.

*There is a need for role clarity...we need to know what they do, they need to know what we do and somehow we need to make this work...*

- Elisha, Manager, School Health Team

*We need a clear expectation or framework of public health's role with schools...*

- Natasha, Public Health Nurse

**Stronger Relationships and Partnerships.** The Foundations for a Healthy Schools Framework is based on coordinated partnerships between schools, the community (i.e. public health) and stakeholders. The need for public health to build and sustain solid partnerships and relationships with school boards, schools, community organizations, government agencies and other stakeholders was viewed as imperative. Working with parents and teachers to form and support school health committees and fostering community health groups were also identified as priorities. Public health and its partners need to recognize common goals and use their expertise to promote and foster healthy schools. The development of these strong relationships and partnerships not only adheres to the philosophical roots of the Foundations for a Healthy School Framework, but will also aid in its implementation and acceptance at all levels.

Relationships and partnerships were also identified as some of the greatest barriers to healthy schools and curriculum support. In some regions public health units identified poor or non-existent relationships with the school boards in their region and few partner organizations. These public health units identified the need for consultative support to help build these relationships with their school boards. While in other regions, health units were praising their positive and progressive relationships with their school boards and the creation of unique community partnerships (i.e. health unit partnering with local University's Faculty of Education).

*Going to the Ministry Physical Health and Education Curriculum training was the first time we actually met with one of our school boards. We are in a unique position that we do not have nurses in the schools, and so it's up to us to have the partnership with the school board.* - Lucille, Public Health Nurse

*We need to build partnerships across all levels and across all sectors...like public health nurses, schools, school boards, parks and recreation, community organizations and coordinate community agencies who have an interest in delivery of school-based services and get them involved.*

- Roberta, Health Promoter

**Advocacy.** The advocacy theme refers to the need for a group or agency to champion the role of public health professionals in supporting the revised elementary health and physical education curriculum within the Foundations for a Healthy School Framework. There was a perceived need by Ontario's public health units to advocate to the Ministry of Education and the Ministry of Health Promotion in order to solicit funding for specialized staffing, increase program and resource development, and improve public health's support to schools. Furthermore, the need to advocate for public health involvement in schools to both boards of education and schools was also identified.

More specifically, the public health professionals articulated the need for the provincial government, boards of education and schools to understand and support the involvement of public health professionals in Ontario's schools. It is difficult to build support for the role of public health professionals in schools when the groups that they are working with (school boards, schools and government) do not recognize or value what they can offer. Using the Foundations for a Healthy Schools Framework as a guide, it is imperative that the key role that public health plays in supporting healthy schools and communities be recognized and supported.

*I have gone into schools to run workshops and I can tell that the teachers are thinking. "Who are you to tell me what to do?" and that is because they do not know what I can do for them.* – Rowena, Public Health Nurse

The need for a champion or advocate for public health translates to the need for a knowledge broker as well. A knowledge broker establishes and supports relationships between stakeholders, organizations or institutions (in this case public health, education and government) and facilitates sustained knowledge exchange between these groups. By allowing the groups to communicate and understand each other's needs so that they are better able to understand each other's goals, more is accomplished. This is done by establishing priorities for the decision makers and by promoting the use of research-based evidence and evaluation. The knowledge broker creates a model or plan that allows for effective practice (Canadian Health Services Research Foundation, 2003). Public health requires a knowledge broker for its role with education and schools. The participants were adamant that there needed to be improvements in the dynamics between public health and education/schools as well as between public health and the Ministries (Education, Health Promotion and Health and Long Term Care). The participants did not mention the Ontario Public Health Association, the Association of Local Public Health Agencies or other support organizations and their support of public health's work with schools.

*We need a link to the Ministries and between the Ministries because they don't hear us. We need someone to give our feedback to them.*

– Lloyd, Public Health Manager

## **Understanding the Professional Culture**

This category refers to how the various professions and practitioners (i.e. nurses, health promoters, nutritionists) within the institution of public health perceive or value one another's role. The Foundations for a Healthy School Framework calls for a coordinated approach to school health promotion and this coordination is necessary both between and within individual institutions and organizations. The following interpretations were not based on explicit comments; however, it was made evident through the language used by participants in the study that there were professional differences between public health practitioners based on their roles. Additionally, this category examines the uniqueness of schools and the corresponding cultures (language and norms) that schools possess as an institution. They have a unique identity and are intimidating settings for individuals that are not in schools on a regular basis. As schools possess specific and different norms, expectations, requirements, a unique population and their own language, school public health professionals need to be aware of these idiosyncrasies to adequately support the schools they work with.

**Professional Hierarchies.** A perceived professional hierarchy in this situation refers to the perceived classification of professions that exists in some public health units. Professional hierarchies are commonly found in other institutions and professions (including schools, hospitals) and are not unique to public health. With that said, they do have an impact on the effectiveness of those involved. These perceived hierarchies in public health units intensify the silos that exist within public health units that are divided into departmental programs (i.e. chronic diseases and injuries programs, environmental health programs etc.) and professions (i.e. nurse, health promoter, dietician etc.) as well.

This silo-effect is potentially preventing public health from supporting schools to their best ability. The greatest apparent drawback to these hierarchies is that the key skills and knowledge of all public health professionals are not being shared or utilized efficiently. It is important to note that the job description of health promoters in public health units requires a graduate degree in public health, health promotion or a health related field. This level of education would typically ensure a solid foundation in health issues and health promotion that could be of great use in supporting school health programs. Additionally, the territoriality created by these hierarchies is particularly evident when it comes to public health units with 'school teams' or teams that work directly with schools. These teams are almost always composed exclusively of nurses. This completely ignores the unique skill set that other practitioners could bring to these frontline school teams. When asked if they wanted health promoters on the school teams that worked in school in their public health unit, these participants responded:

*They [health promoters] do not have all the experience we [nurses] have and it's just easier for just us [nurses] to be in the schools.* - Martine, Public Health Nurse

*A health promoter just wouldn't have the training that I do...I do not even know what their background would be...I think maybe a Bachelor's degree...either way, I would prefer that things remain the way they are now [with only nurses in the schools].* - Ana-Lucia, Public Health Nurse

**Language.** Like many other professions, teachers have jargon that is unique to them. Participants stated repeatedly that they desired to become familiar with educational language, especially with regards to the curriculum document itself. Many

public health professionals remarked that it was important that they understand the educational vocabulary and be able to use it to adequately support the teachers with whom they worked.

*They have a completely different language! If you look at the curriculum, what do some of the words mean? What do I need to know? What is a rubric?*

- Lacy, Public Health Nurse

*We need to learn the 'edu-speak' and understand teachers' language...*

- Salima, Public Health Nurse

*Some of us really are just not working a lot with the education system, so I found this curriculum really had a lot of detail about Healthy Schools, and it's a whole different language for some people. For instance, 'health literacy', what exactly does that mean?*

- Charlene, Public Health Nurse

**School Norms.** The manner in which schools operate and the practices that have been established and acknowledged within them form their norms. Schools have a unique set of norms and expectations that would not be known or recognized by those who are not part of the educational institution. Public health professionals expressed a desire to uncover and gain an understanding of school norms to support their work with schools. An understanding and awareness of these school norms would be beneficial to public health units and school public health professionals looking to gain entry into schools.

*I do not know how schools work... What are the procedures? What do schools do? We don't get what they do!*

- Laura, Public Health Nurse

## Chapter 5: Discussion and Conclusions

### Discussion

To more clearly understand and make sense of the data, it was evident that there were three main ways that the perceptions of public health professionals regarding the revised health and physical education curriculum could be organized and understood. This section has been framed to highlight the requirements of public health professionals *within* the institution of public health and individual public health units, *between* public health units and *across* public health and its partnerships. Key findings from the four main categories are elaborated upon while looking at the themes of within, between and across public health.

**Within Public Health.** When concentrating on the institution of public health, it is imperative to address the core competency statements of public health in Canada. The core competencies statements for public health in Canada outline the fundamental knowledge, skills and attitudes required for practice within public health (Public Health Agency of Canada, 2007). As they were developed after a thorough consultation process with public health units and professionals across Canada, they are an accurate representation of what is required for effective practice in public health in Canada. The 36 core competencies that are identified are classified under the following seven categories: public health sciences; assessment and analysis; policy and program planning, implementation and evaluation; partnerships, collaboration and advocacy; diversity and inclusiveness; communication; and leadership (Public Health Agency of Canada, 2007). It is interesting to note that all seven categories from the core competencies are represented in the themes that were uncovered in this study with the exception of

additional funding and increased staffing. This emphasizes the directness that was offered by the participants during the study. Please note that although the first category in the core competencies titled 'Public health sciences' refers to educational and professional qualifications that go beyond professional development and training, it includes ongoing professional development, continuously updating knowledge and lifelong learning as well.

In continuing to look 'within' public health units, it is important to acknowledge that the Ontario Public Health Standards require that public health units collaborate with schools to address areas such as chronic disease prevention, prevention of injury and substance misuse, sexual health and other general population health issues (Ontario Ministry of Health and Long Term Care, 2008). Moreover, these mandates are to be addressed with schools using a Comprehensive School Health based framework in Ontario's Foundations for a Healthy School (Ontario Ministry of Education, 2009). In order to facilitate this process, public health units have developed 'school teams' composed of primarily nurses that focus on implementing these health promotion programs in schools. Conversely, not all public health units in Ontario possess these health units or the resources to develop the capacity for their creation. It is common for public health units in rural and remote areas to suffer from a scarcity of resources that prevent them from involvement in important health promoting activities (Varpalotai & Leipert, 2006).

Resource deficiency was well documented in the findings of this study. This was especially true of the smaller, rural public health units and they did not hesitate to emphasize that their units suffered from a need for additional funding and staffing for

program design and implementation. These points were made clear and repeated during the roundtable, focus groups and interviews. However, there were a few public health professionals from these smaller health units that preferred their smaller stature. They acknowledged that they were deficient in the funding, staffing and infrastructure when compared to some of the larger units, but not having these resources required that these units be more creative and eliminated the bureaucracy and red-tape of larger organizations. As a result, these health units were able to develop low cost and effective health promotion campaigns that would not be given permission to run in larger public health units (refer to [www.areuready.ca](http://www.areuready.ca)).

The 'communication' within the public health units was highlighted as an area of concern by the public health professionals. A key finding was the idea of knowledge transfer and how it could be improved within public health units. Knowledge transfer refers to how information and knowledge (policy, research) is disseminated within an organization (Canadian Health Services Research Foundation, 2003). With a revised health and physical education curriculum about to be implemented, the transfer of information within the individual public health units is integral to effectively being able to support it. There are many significant changes to the revised curriculum document and all public health professionals who work with schools need to be fully informed about the revisions and understand how they fit with their mandates. Unfortunately, the information and knowledge from, for example, the Ministry of Education training sessions was not always communicated and shared within the individual public health units and not all school public health professionals are up to date with the changes to their practice. Furthermore, in some instances there was a heavy reliance on passive methods to share

information such as Powerpoint presentation slides and a two page, superficial summary that was distributed at the training sessions.

In addressing the ‘clear vision’ category within the institution of public health and the individual public health units, the issue of a uniform and consistent philosophical outlook is of value. As public health has evolved into an institution that promotes health by creating supportive physical, social and emotional environments and supporting healthy lifestyles, and it is these holistic views of health that are to be embraced (Nutbeam, 2000). For the most part, this is the reality as these health promoting principles are intertwined into the Core Competencies of Public Health in Canada, the Ontario Public Health Standards and now the revised physical education curriculum that guide and influence public health practice. However, when there is a ‘crisis’ such as the H1N1 pandemic this past year, the vision of public health shifts back to its old roots in managing sickness and disease. During the H1N1 pandemic all health promotion programs and initiatives in Ontario, including school programs were put on hold or cancelled, leaving the province’s schools without any public health support for at least half of the school year (Ontario Ministry of Health and Long Term Care, 2010). Now, whether or not this action was justified is up for debate, but public health cannot effectively support schools with such a temperamental vision of health.

Finally, when analyzing the category of professional culture within public health, the theme of professional hierarchy is of concern. Hierarchies are a “classification of people according to authority or rank” (Jones, 2010, p.38) and they are common in public health (managers, supervisors, medical directors) and found in virtually every workplace. However, a perceived professional hierarchy refers to a classification that is not explicit

and exists only in the professional culture of the workplace environment. Again, perceived professional hierarchies may exist in many other workplaces and professions including schools (teacher–vice-principal–principal–superintendent) and hospitals (nurse–doctors–surgeons), but it is important to note that they seem to be impacting the support that public health is providing schools in some cases. This is particularly clear when looking at the makeup of the school teams (for those health units that have the capacity for them) that are the frontline workers in public health’s support of schools. The school teams are typically 99% nurses and the participants (who are nurses) in the study have made it clear that they would like it to remain this way. With lack of training, expertise and ability as well complicating the system being offered as explanations for this stance, highly trained, qualified professionals such as health promoters are prevented from working with and supporting schools and teachers.

**Between Public Health.** The Comprehensive School Health framework outlines the need for a unified and multifaceted approach to child and youth health promotion, with collaboration among all sectors and stakeholders (McCall & Roberts, 2006). This refers to schools and public health collaborating to support the implementation of the revised health and physical education curriculum, but this also refers to collaboration between the public health units in Ontario. In order for public health to be effective in meeting the mandates of the Ontario Public Health Standards and supporting the health and physical education curriculum in schools, all 36 public health units need to begin collaborating regularly on program development, evaluation, and advocating for effective policy.

A highlight of what is required of public health to improve the communication and vision between the public health units is greater collaboration and relationships with each other. And in order for the collaboration of the 36 public health units in Ontario to become a reality, 'tension' is required. Currently, public health units are required to collaborate with schools and they can do so at arm's length as the schools and schools boards are complex organizations that make it difficult for outsiders to enter. Add the fact that schools are not legislatively required to reciprocate the relationship and public health units do not feel the tension of being proactive with schools and needing to collaborate with one another. Creating tension in the form of policy that instructs schools to consult with public health units on a continual basis for health promotion programming within the schools and public health units will look for activities to maximize resources. Collaborating more regularly with other public health units would be a fallout of this process.

As public health units look to solidify their position as partners in health promotion with schools, they will need to increase the research and evaluation between public health units to assess best practice and effective programming (Anderson et al., 2002). From the perspective of this study, the research was well received with 31 of 36 (86%) public health units represented at the facilitated roundtable discussion and 34 of 36 (94%) public health units represented in the teleconference focus groups. With the interviews, 10 of 12 (83%) of public health units accepted the invitation to participate which signals a willingness to facilitate research between public health units. The problem therefore lies in the resources to initiate a greater amount of research in the field and developing a culture that incorporates research in their practice.

### **Across Public Health.**

Public health holds a significant, historical and longstanding position in the health promotion of children and youth in schools and are viewed as leaders across all partnerships by all groups and stakeholders involved (Ontario Government Archives, 2009). The holistic nature of the Comprehensive School Health framework and Ontario's Foundations for a Healthy School continues to foster this role, but with a focus of linking the many policies, programs and services that are presented in schools, the public health agencies and the community together with a common goal of health promotion (MacDougall & Laforet-Fliesser, 2009; McCall, 1999). The school is at the center of the approach, playing a central role in the health promotion of children and youth and does so with strong partnerships with outside agencies, community groups, stakeholders and in particular public health (St. Leger, 1999). In Ontario, this process is guided by the Ontario Public Health Standards for public health and the health and physical education curriculum within the schools. The key is to link the two policies so that they are effective in enacting the Foundations for a Healthy School and therefore create settings that maximize the health and wellness of children and youth (See Figure 2 below).

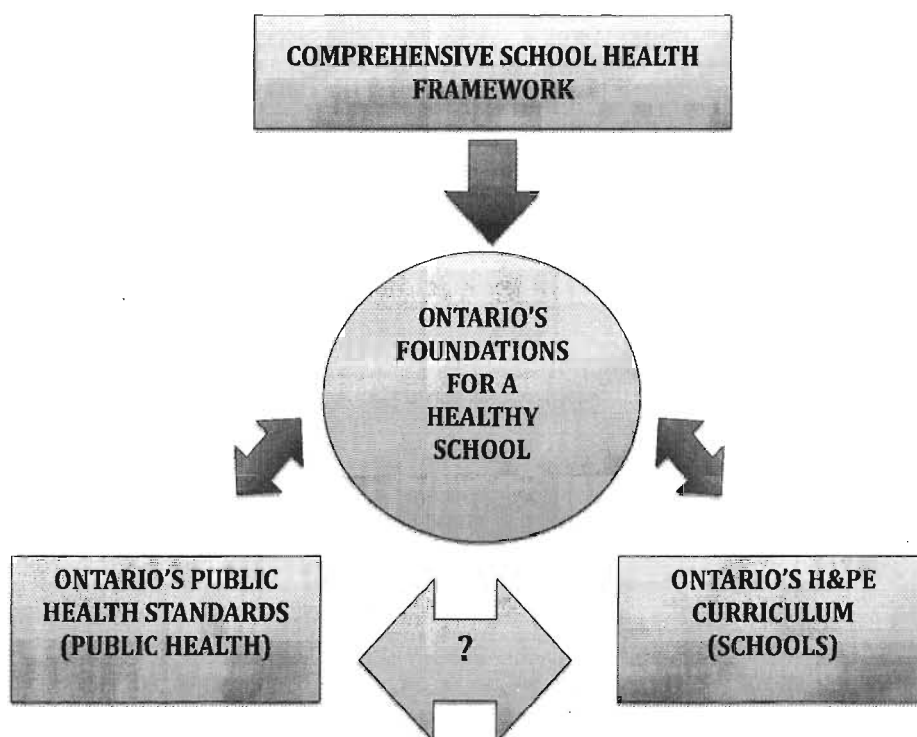


Figure 2: Linking Public Health and Schools

Resources such as staffing, adequate funding and professional development and training are regularly lacking in public health units and prevent the development and nurturing of partnerships across the communities in which they are located. Public health professionals admitted that they cannot begin to sustainably foster the relationships with schools to support Comprehensive School Health and the curriculum due to this lack of resources. St. Leger (2000) stresses that government ministries and public health must come together to provide professional development opportunities in order to facilitate the shift in thinking and practice that fosters Comprehensive School Health. Furthermore, the barriers to advancing the Comprehensive School Health approach are the lack of resources that create the “inadequate collaboration among the agencies whose expertise and resources are necessary to design and implement effective school health programmes” (St. Leger, 2000, p. 82).

In evaluating public health's communication and vision across its partnerships and collaborations with other group and stakeholders, it is clear that there is a need for a knowledge broker. A knowledge broker establishes and supports relationships between stakeholders, organizations or institutions (in this case public health, education and government) and facilitates sustained knowledge exchange between these groups (Canadian Health Services Research Foundation, 2003). The findings of this study suggest that there is a definite need for a knowledge broker that can foster collaboration and communication between public health professionals, educators and government ministries, as illustrated in the model below (Figure 3). This knowledge broker would play a critical role in communicating the needs of teachers to public health professionals and in summarizing the aspects of the curriculum where public health could play a role. Similarly, the knowledge broker would be able to communicate to teachers the roles and responsibilities of public health and address issues of training and professional development. Finally, this knowledge broker would be responsible for advocating for a holistic view of health, highlighting the possibilities of collaboration between schools and public health, to the relevant government ministries. Professional support organizations are in ideal positions to become knowledge brokers as they have the expertise and are highly respected by schools, teacher and public health professionals. Ultimately, it will be the schools (and school boards), public health units and government ministries that will have to make the decision as to what group (if any) would be an appropriate knowledge broker.

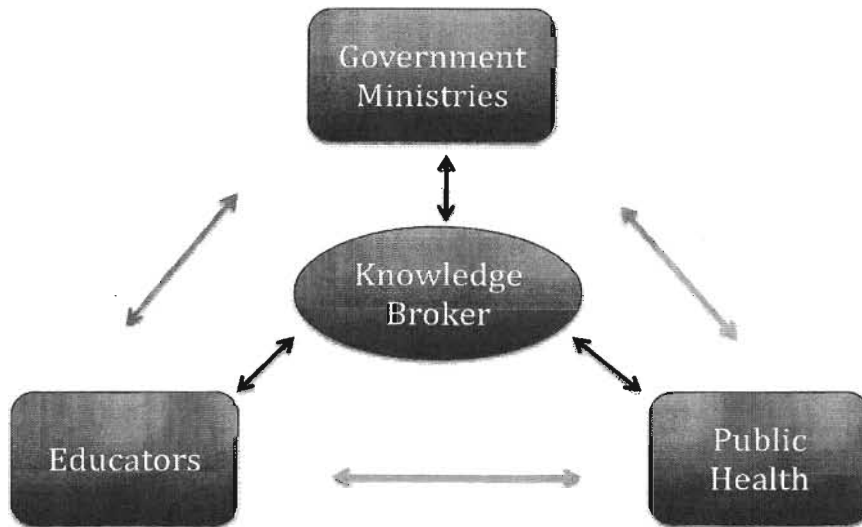


Figure 3: Model for Public Health in Schools

### Implications

The following are some key areas and opportunities of focus for public health to improve support of schools and education and their role in the process. These opportunities were identified through the analysis of the needs assessment data.

(i) As public health professionals expressed that there was a lack of resources, there is a need to develop channels of support for public health professionals that mirror the support that health and physical education teachers receive from their professional organizations. The support from the Ontario Public Health Association and the Association for Local Public Health Agencies needs to increase tremendously or other professional support groups will fill the void. The support could include instructional and support materials, resource manuals, professional development and training sessions, an online centralized database, and the maintenance of a list serve. Developing and implementing training and professional development opportunities for public health

professionals to gain insight into school policy and curriculum delivery should also be considered.

ii) Public health professionals articulated that there was a need for a defined vision with 'role clarity' and a champion to promote their work with school and facilitate their relationships and partnerships with schools, school boards and government ministries. Public health must therefore create channels of advocacy to the Ministry of Education, the Ministry of Health Promotion, Ministry of Health and Long Term Care, the boards of education and the schools themselves. This can include fostering opportunities for inter-professional sharing and interaction between the groups (e.g. roundtable); developing tools that market and showcase the benefits of the relationship; and looking for opportunities to solicit funding and support for specialized staffing, increased program and resource development and a greater presence in schools. This should also assist in determining and clarifying the role of public health in schools. Through consultation with public health professionals and the Ministry of Health Promotion, there is a need to outline and define a specific role for public health in schools and communicate this role to the schools and school boards.

(iii) Public health professionals expressed the need to improve the methods in which they communicated with each other and their partners. There is a need to coordinate opportunities for collaboration between public health units, boards of education, schools, stakeholders and community partners on an ongoing basis. This could come in the form of continuing with the Planning and Professional Development Roundtable (making it an annual event); and organizing consultations to foster relationships between public health units and school boards of education.

iv) Public health professionals alluded to schools being complex and intimidating settings to enter. As schools are unique settings that possess specific cultures, language and norms, public health needs to look at developing great partnerships with teachers to facilitate entry and access. Public health possess their own cultures, language and norms as an institution and there is a need to mesh the public and school cultures for the partnership to be effective and child and youth health promotion programs to be successful.

### **Future Directions**

**Teachers.** Feedback from teachers about the role of public health in supporting the implementation of the health and physical education curriculum was not solicited due to time and resource constraints. As teachers are experts with regards to curriculum, their feedback would have been useful to this study by adding a varied perspective on the issues covered. Furthermore, teachers' knowledge of Comprehensive School Health principles and their partnerships with public health professionals were frequently mentioned by participants in the study. It is recommended that future research on this topic solicit the opinions of teachers in a similar comprehensive needs assessment approach. This should include a needs assessment of schools and school boards with regards to their specific needs of public health and the development of best practice guides.

### **Limitations**

Despite the comprehensive nature of this study to uncover the perceived requirements of public health professionals in supporting the implementation of the

revised elementary health and physical education curriculum, there were limitations to its findings.

**Uncertainty surrounding revised HPE curriculum.** During the research process (January 2010), the revised elementary health and physical education curriculum was officially released by the Ministry of Education on their website. Three months after its release, controversy surrounding growth and development topics within the curriculum document occurred. This resulted in the provincial government withdrawing the revised health and physical education curriculum for further consultation. This can be considered a limitation to this study, which rests on the premise that public health has a key role to play in supporting the implementation of this curriculum.

**The Use of Teleconferences for Focus Groups.** As was mentioned earlier, telephone based focus groups were utilized to collect data in this study. The use of telephone conference calls to facilitate the focus groups was justified by the large geographic distance of the participants in the study, the limited time during which to collect the data and the funding. Conducting focus group interviews on the telephone is not ideal, as there is no visual of the participants (facial expressions, feedback) and they can essentially be doing as they please on their end. Additionally, as was the case with several participants in the study, it is easy to simply repeat the answers of others or become invisible during the call and offer very little input.

**Bias.** The issue of bias can be considered a limitation for this study for two main reasons. The first issue of bias is due to the involvement of Ophea as a research partner. Although, Ophea did not have any direct involvement in the final analysis or findings of the research, I developed a professional relationship with the organization and was

dependent on their resources to obtain data for this study. It is important to acknowledge that I was employed by Ophea during the data collection process, but my dual role as graduate student and Ophea external consultant was made clear to participants.

The second issue of bias surrounds the way in which the data was collected during the teleconference focus groups and the individual health unit interviews. As both the focus groups and interviews involved managers or supervisors participating along with staff that they directly supervise, it is important to acknowledge that professional power dynamics may have biased some of the responses of the participants. For the teleconference focus groups, 25 of 34 health units included managers or supervisors in addition to frontline staff. With the interviews, 6 of 10 of the health units were represented by managers or supervisors. With managers and supervisors being in attendance while sensitive and critical issues surrounding their public health units were being discussed, it is possible that frontline staff may have held back in some of their responses and may not have been as honest or critical as they may have liked due to political or professional pressure.

## **Conclusions**

The purpose of this study was to uncover the perceived requirements of school public health professionals in order to support the implementation of the revised elementary health and physical education curriculum. Through a comprehensive needs assessment, several key requirements were uncovered. School public health professionals noted that to effectively support the upcoming revised elementary health and physical education curriculum they would need: a substantial improvement to the lack of *resources* (especially greater professional development and training, instructional

materials, ongoing research and evaluation, additional funding and increased staffing); to improve *communication* (with open dialogue, coordinated messages, greater collaboration and effective knowledge transfer); a clear *vision of public health* (with a uniform philosophical outlook, effective policy, defined roles, stronger relationship and partnerships and advocacy on their behalf) and finally a clear understanding of their *professional culture* and that within schools (especially the professional hierarchies; the language and school norms and culture within their institution).

## References

- Active Healthy Kids Canada. (2010). Report card on Physical Activity for children and youth. Retrieved June 28, 2010 from <http://www.activehealthykids>.
- Allensworth, D., & Kolbe L. J. (1987). The school health program: Exploring an expanded concept. *Journal of School Health*, 57(10), 409-412.
- Altschud, J. & Kumar, D. (2005). Needs assessment. In S. Mathison (Ed.), *Encyclopaedia of Evaluation*, Thousand Oaks: Sage.
- Anderson, A. (2002). Using comprehensive approaches to health to make schools smarter, stronger and safer. *Physical and Health Education Journal*, 68, 2-11.
- Anderson, A. (2004). Health promoting schools – a community effort. *Physical and Health Education Journal*, 70, 4-13.
- Anderson, A. (In press). *Better Health, Better Schools, Better Learners*. Toronto: Thompson Educational Publishing Inc.
- Anderson, A., Kalnins, I. & Raphael, D. (1999). Partners for health: Schools, communities and young people working together. *Physical and Health Education Journal*, 65, 15-25.
- Arnold, P.J. (1988). *Education, movement and the curriculum*. London: The Falmer Press.
- Bodkin, A. (2008). More than a sum of its parts: Elements of a sustainable healthy school initiative (unpublished Master's thesis). Deakin University, Melbourne, Australia.
- Canadian Fitness and Lifestyle Research Institute. (2008). Sedentary activities among children. Retrieved April 7, 2010 from <http://www.cflri.ca>.

Canadian Health Services Research Foundation. (2003). Knowledge brokering.

Retrieved May 23, 2010 from [http://www.chsrf.ca/keys/use\\_knowledge\\_e.php](http://www.chsrf.ca/keys/use_knowledge_e.php).

Cohall, A.T., Cohall, R., Dye, B., Dine, S., Vaughan, R.D. & Coots, S. (2007).

Overheard in the halls: What adolescents are saying, and what teachers are hearing, about health issues. *Journal of School Health*, 77, 344-350.

Colquhoun, D. (1990). Images of healthism in health-based physical education. In D.

Kirk & R. Tinning (Eds.), *Physical education, curriculum, and culture: Critical issues in the contemporary crisis*, (pp. 225-252). Bristol, PA: The Falmer Press, Taylor & Francis Inc.

Cushman, P. (2008). Health promoting schools: A New Zealand perspective. *Pastoral*

*Care in Education*, 26, 231-241.

Denman, S. (2001). *Health promoting schools in action*. London, UK: Routledge

Falmer.

Deschesnes, M., Martin, C. & Hill, A. J. (2003). Comprehensive approaches to school

health promotion: How to achieve broader implementation? *Health Promotion International*, 18, 387-396.

Dooris, M., Poland, B., Kolbe, L., De Leeuw, E., McCall, M.S. & Wharf-Higgins, J.

(2007). Healthy settings: Building evidence for the effectiveness of whole system health promotion – challenges and future directions. In D.V. McQueen & C.M. Jones (Eds.), *Global Perspectives on Health Promotion Effectiveness* (pp. 327-352). New York: Springer.

- Everett Jones, S., Brener, N.D. & McManus, T. (2003). Prevalence of school policies, programs, and facilities that promote a healthy physical school environment. *American Journal of Public Health, 93*, 1570.
- Graneheim, U. & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today, 24*, 105–112.
- Heloma, A., Jaakkola, MS., Kahkonen, E. & Reijula, K. (2001). The short-term impact of national smoke-free workplace legislation on passive smoking and tobacco use. *American Journal of Public Health, 91*, 1416.
- Greene, J.C. (1998). Quality program evaluation: Practice and promise. In N.K. Denzin & Y.S. Lincoln (Eds.), *Collecting and Interpreting Qualitative Materials* (pp. 372-399). Thousand Oaks: Sage Publications.
- Jackman, M. (2000). Constitutional jurisdiction over health in Canada. *Health Law Journal, 8*, 95.
- Joint Consortium for School Health. (2010). *What is comprehensive school health?* Retrieved January 30, 2010 from [http://eng.jcsh-cces.ca/index.php?option=com\\_content&view=article&id=40&Itemid=62](http://eng.jcsh-cces.ca/index.php?option=com_content&view=article&id=40&Itemid=62).
- Jourdan, D., Samdal, O, Diagne, F. & Carvalho, G.S. (2008). The future of health promotion in schools goes through the strengthening of teacher training at a global level. *Promotion and Education, 15*, 36-38.
- Krieger, J. & Higgins, D.L. (2002). Housing and health: Time again for public health action. *American Journal of Public Health, 92*, 758-769.
- Krippendorff, K. (1980). *Content analysis*. Thousand Oaks, California: Sage

Publications Inc.

- Lalonde, M. (1974). *A new perspective on the health of Canadians*. Ottawa: Health and Welfare Canada.
- Lee, A., Cheng, FK, Fung, Y. & St. Laurent, L. (2009). Can health promoting schools contribute to the health and wellbeing of young people? The Hong Kong experience. *Journal of Epidemiology and Community Health*, 60, 530-536.
- Leitch, K.K. (2007). Reaching for the top: A report by the advisor on healthy children and youth. Retrieved July 4, 2010 from <http://www.hc-sc.gc.ca/hl-vs/pubs/child-enfant/advisor-conseillere/index-eng.php>
- Lynagh, M., Schofield, M. J. & Sanson-Fisher, R. W. (1997). School health promotion programs over the past decade: A review of the smoking, alcohol and solar protection literature. *Health Promotion International*, 12, 43–60.
- MacDougall, C. & Laforet-Fliesser, Y. (2009). Canada: The evolution of healthy schools in Ontario, Canada: Top-down and bottom-up. In C. Vince Whitman & C.E. Aldinger (Eds.), *Case Studies in Global School Health Promotion: From Research to Practice* (pp. 143-157). New York: Springer.
- Mandigo, J. (2010). Presenting the evidence: Quality daily physical education for Canadian children and youth. *PHEnex*, 2, 1-15.
- Marshall, B.J., Sheehan, M.M., Northfield, J.R., Maher, S., Carlisle, R. & St. Leger, L.H. (2000). School based health promotion across Australia. *Journal of School Health*, 70, 251.
- McCall, D. (1999). Comprehensive school health: Help for teachers from the community. *Physical and Health Education Journal*, 65, 4-8.

- McCall, D. (2006). *The history and future of school health in Canada and other countries*. Retrieved October 30, 2009 from <http://www.safehealthyschools.org/CSHTrendReport.pdf>.
- McCall, D. & Roberts, G. (2007). *Comprehensive school health – Canadian Consensus Statement*. Retrieved on November 2, 2009 from [http://www.ctf-fce.ca/publications/health\\_learning/Issue1\\_Article2\\_EN.pdf](http://www.ctf-fce.ca/publications/health_learning/Issue1_Article2_EN.pdf).
- Mckenzie, T.L. & Kahan, D. (2008). Physical activity, public health and elementary schools. *The Elementary School Journal*, 108, 171.
- Mckillip, J. (1998). Needs Assessment. In L. Bickman & D. J. Rog (Eds.), *Handbook of applied social research methods* (234-256), Thousand Oaks: Sage Publications.
- McLeroy, KR, Bibeau D, Steckler A, & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education Quarterly*, 15(4), 351-377.
- Miller, G. (2003). Ecological Approach to School Health Promotion. Review of Literature for CIHR sponsored project on *The Multifaceted Potential of the School as an Environment for Health Promotion*. Retrieved from <http://www.schoolhealthresearch.org/downloads/miller.pdf> on April 4, 2010.
- Moon, A. (2000). Evaluating the health promoting school. *Health Education*, 100, 237-241.
- Ng, C, Gannon, G & Halas, J. (2006). *The challenges of teaching “fitness” in an era of physical inactivity: Examples of effective practice*. *Physical and Health Education Journal*, 72, 2- 6.

- Nutbeam, D. (2000). Health literacy as a public health goal: A challenge for contemporary health education and communication strategies into the 21<sup>st</sup> century. *Health Promotion International*, 15, 259-268.
- Ontario Government Archives. (2009). *Public health nurses: Bringing health home*. Retrieved October 28, 2009 from <http://www.archives.gov.on.ca/english/on-line-exhibits/health-promotion/health-home.aspx>.
- Ontario Healthy Schools Coalition. (2005). *Comprehensive school health handout*. Retrieved March 28, 2009 from [www.opha.on.ca/resources/chs\\_handout.pdf](http://www.opha.on.ca/resources/chs_handout.pdf).
- Ontario Ministry of Education. (2009). *Healthy Schools*. Retrieved December 2, 2009 from <http://www.edu.gov.on.ca/eng/parents/healthyschools.html>.
- Ontario Ministry of Education. (2010). *Elementary health and physical education curriculum*. Retrieved March 1, 2010 from <http://www.edu.gov.on.ca/eng/curriculum/elementary/health.html>.
- Ontario Ministry of Health and Long Term Care. (2008). *Ontario Public Health Standards*. Retrieved December 1, 2009 from [http://www.health.gov.on.ca/english/providers/program/pubhealth/oph\\_standards/ophs/progstds/pdfs/ophs\\_2008.pdf](http://www.health.gov.on.ca/english/providers/program/pubhealth/oph_standards/ophs/progstds/pdfs/ophs_2008.pdf).
- Parcel, GS., Kelder, SH. & Basen-Engquist, K. (2000) The school as a setting for health promotion. In *Setting for Health Promotion* (pp. 87-120). California: Sage Publications.
- Penney, D. (2006). Curriculum construction and change. In D. Kirk, D. Macdonald & M. O'Sullivan (Eds.) *The Handbook of Physical Education* (pp. 565-579). Thousand Oaks: Sage Publications.

- Public Health Agency of Canada, Government of Canada. (2008). *About the agency*. Retrieved March 29, 2009 from [http://www.phac-aspc.gc.ca/about\\_apropos/index-eng.php](http://www.phac-aspc.gc.ca/about_apropos/index-eng.php).
- Public Health Agency of Canada, Government of Canada. (2008). *Comprehensive school health*. Retrieved Feb. 19, 2009 from <http://www.phac-aspc.gc.ca/dca-dea/7-18yrs-ans/comphealth-eng.php>.
- Public Health Agency of Canada, Government of Canada. (2007). Core competencies for public health in Canada. Retrieved June 27, 2010 from <http://www.phac-aspc.gc.ca/ccph-cesp/index-eng.php>.
- Randolph, W. & Viswanath, K. (2004). Lessons learned from public health mass media campaigns: Marketing health in a crowded media world. *Annual Review of Public Health, 25*, 419-437.
- Reviere, R., Berkowitz, S., Carter, C.C., & Graves Ferguson, C. (1996). *Needs assessment: A creative and practical guide for social scientists*. Washington: Taylor & Francis Publishers.
- Ronson, B & MacDougall, C 2003, *Background paper on health promoting schools prepared for the Ministry of Health and Long-Term Care*, Ontario Healthy Schools Coalition, Toronto.
- Schiels, M. (2006). Overweight and obesity among children and youth. *Health Reports, 17*, 27-42.
- Schwandt, T.A. (2000). Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics, and social constructionism. In N.K. Denzin & Y.S.

- Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 189-213).  
Thousand Oaks, CA: Sage.
- Smith, J. (2003). *Education and public health: Natural partners in learning for life*.  
Virginia: Association for Supervision and Curriculum Development.
- St. Leger, L. (1999). The opportunities and effectiveness of the health promoting primary school in improving child health – a review of claims and evidence. *Health Education Research, 14*, 51-69.
- St. Leger, L. (2000). Developing indicators to enhance school health. *Health Education research, 15*, 719.
- St. Leger, L. (2001). Schools, health literacy and public health: Possibilities and challenges. *Health Promotion International, 16*, 197-205.
- St. Leger, L. (2004). What's the place of schools in promoting health? Are we too optimistic? *Health Promotion International, 19*, 405-408.
- St. Leger, L. (2005) Protocols and Guidelines for Health Promoting Schools. *Promotion and Education, 12*, 145–150.
- St. Leger, L., Kolbe, L., Lee, A., McCall, D. & Young, IM. (2007). School health promotion: Achievements, challenges and priorities. In: McQueen, D. & Jones, C. (Eds.), *Global Perspectives on Health Promotion Effectiveness* (pp. 107-124).  
New York: Springer.
- Stemler, S. (2001). An overview of content analysis. *Practical Assessment, Research & Evaluation, 7*.
- 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?* Retrieved March 1, 2009 from <http://www.euro.who.int/document/e88185.pdf>
- Stokols, D. (1992). Establishing and maintaining healthy environments: Toward a social ecology of health promotion. *American Psychologist*, 6-22.
- Stringer, E. (2007). *Action Research*. Los Angeles: Sage Publications.
- Tallon, E. (2008). *The Ontario curriculum: health and physical education, grades 1-12 curriculum review*. Retrieved on Dec. 12, 2009 from [www.ophea.net](http://www.ophea.net).
- Toronto Public Health. (2009). *Toronto public health – About us*. Retrieved November 5, 2009 from <http://www.toronto.ca/health/aboutus.htm>.
- Tremblay, M.S., Shields, M., Laviolette, M., Craig, C.L., Janssen, I. & Gorber, S.C. (2010). Fitness of Canadian children and youth: Results from 2007-2009 Canadian health measures survey. *Health Reports*, 21, 1-15.
- Trudeau, F. and Shephard, R.J. (2005) Contribution of school programmes to physical activity levels and attitudes in children and adults. *Sports Medicine*, 35(2), 89-105.
- Turunen, H., Tossavainen, K., Jokonen, S., Salomyaki, U. & Vertio, H. (1999). Initial results from the European Network of Health Promoting Schools program on development of health education in Finland. *Journal of School Health*, 69, 387-391.
- Tutty, L.M. & Rothery, M.A. (2001). *Needs Assessments*. In B.A. Thyer (Ed.) *The Handbook of Social Work Research Methods* (pp. 161-176). Thousand Oaks: Sage Publications.

U.S. Centers for Disease Control. (2009). *School health programs: Improving the health of our nation's youth - at a glance 2009*.

(<http://www.cdc.gov/nccdphp/publications/aag/pdf/dash.pdf> accessed December 2009).

U.S. Office of Technology Assessment. (1991). *Adolescent Health* (3 volumes).

Retrieved December 1, 2009 from

<http://onlinebooks.library.upenn.edu/webbin/book/lookupname?key=United%20States.%20Congress.%20Office%20of%20Technology%20Assessment>.

Varpalotai, A. & Leipert, B.D. (2006). Rural schools/rural communities: Partnerships between physical and health educators and public health nurses. In: E. Singleton & A. Varpalotai (Eds.). *Stones in the Sneaker: Active Theory for the Secondary School Physical and Health Educators*, (pp. 203-222), London, Ontario: The Althouse Press.

Viig, N.G. & Wold, B. (2005). Facilitating teachers' participation in school based health promotion – a qualitative study. *Scandinavian Journal of Educational Research*, 49, 83- 109.

W.K. Kellogg Foundation. (1998). W.K. Kellogg foundation evaluation handbook.

Retrieved December 1, 2009 from <http://www.wkkf.org/knowledge-center/Resources-Page.aspx>.

World Health Organization. (1978). *Primary health care. Report of the International Conference on Primary Health Care, Alma-Ata, USSR*. Retrieved March 1, 2009 from <http://whqlibdoc.who.int/publications/9241800011.pdf>.

World Health Organization. (1986). *Ottawa charter for health promotion: an International Conference on Health Promotion, the move towards a new public health*. Retrieved March 1, 2009 from [www.who.int/hpr/NPH/docs/ottawa\\_charter\\_hp](http://www.who.int/hpr/NPH/docs/ottawa_charter_hp).

World Health Organization. (1997). *Promoting health through schools. Report of a WHO Expert Committee on Comprehensive School Health Education and Promotion*. Retrieved November 2, 2009 from <http://hhd.org/resources/publications/promoting-health-through-schools-report-world-health-organization-expert-comm>.

## Appendix A

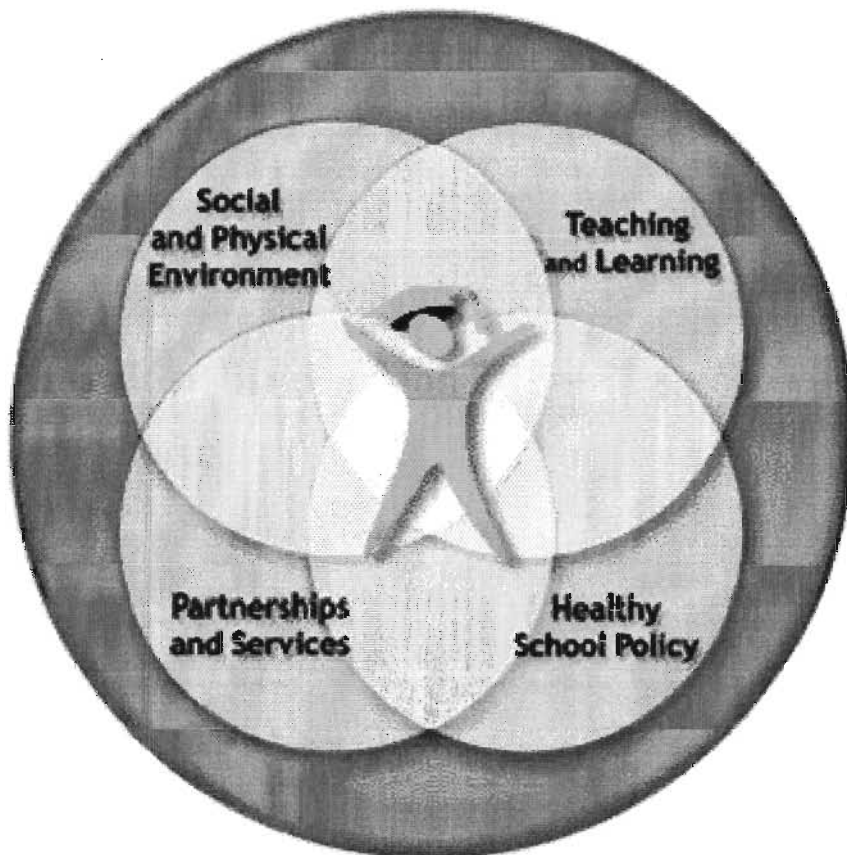
### Models of Comprehensive Approaches to School Health

	<b>World Health Organization Health Promoting Schools Model (WHO, 2009)</b>	<b>Coordinated School Health (Centers for Disease Control and Prevention, 2008)</b>	<b>Comprehensive School Health (Public Health Agency of Canada)</b>	<b>Healthy Schools (based on Comprehensive School Health)</b>
1	Teaching and Learning	Health Education	Curriculum and Instruction	High-Quality Instruction and Programs
2	Supportive Environments	Physical Education	Healthy Social and Physical Environment	Healthy Physical Environment
3	Working in Partnership	Health Services	Social Support and Healthy Policy	Supportive Social Environment
4		Nutrition Services	Support Services and Partnership	Community Partnerships
5		Counseling, Psychiatric and Social Services		
6		Healthy School Environments		
7		Health Promotion for Staff		
8		Family/Community Involvement		

(Modified from Bodkin, 2008)

## Appendix B

### Comprehensive School Health Model



(Joint Consortium for School Health, 2010)

## Appendix C

### Ontario's Public Health Units

**Algoma Health Unit** 6th Floor, Civic Centre, 99 Foster Drive Sault St. Marie, Ontario P6A 5X6 Tel: (705) 759-5287 Fax: (705) 759-1534 Web: <http://www.ahu.on.ca>

**Brant County Health Unit** 194 Terrace Hill Street Brantford, Ontario N3R 1G7 Tel: (519) 753-4937 Fax: (519) 753-2140 Web: <http://www.bchu.org>

**Chatham-Kent Health Unit** 435 Grand Avenue, P.O. Box 1136 Chatham, Ontario N7M 5L8 Tel: (519) 352-7270 Fax: (519) 352-2166 Web: <http://www.city.chatham.on.ca/healthunit>

**Durham Region Health Department** 1615 Dundas Street East, Suite 210 Whitby, Ontario L1N 2L1 Tel: (905) 723-8521 Fax: (905) 723-6026 Web: <http://www.region.durham.on.ca>

**Eastern Ontario Health Unit** 1000 Pitt Street Cornwall, Ontario K6J 5T1 Tel: (613) 933-1375 Fax: (613) 933-7930 Web: <http://www.eohu.on.ca>

**Elgin-St. Thomas Health Unit** 99 Edward Street St. Thomas, Ontario N5P 1Y8 Tel: (519) 631-9900 Fax: (519) 633-0468 Web: <http://www.elginhealth.on.ca>

**Grey Bruce Health Unit** 920 First Avenue West Owen Sound, Ontario N4K 4K5 Tel: (519) 376-9420 Fax: (519) 376-0605 Web:

<http://www.publichealthbrucegrey.on.ca>  
**Regional Municipality of Haldimand-Norfolk Health Department** 12 Gilbertson Drive, P.O. Box 247 Simcoe, Ontario N3Y 4L1 Tel: (519) 426-6170 Fax: (519) 426-9974 Web: <http://www.haldimand-norfolk.org>

**Haliburton, Kawartha, Pine Ridge District Health Unit** 200 Rose Glen Road Port Hope, Ontario L1A 3V6 Tel: (905) 885-9100 Fax: (905) 885-9551 Web: <http://www.hkpr.on.ca>

**Halton Region Health Department** 1151 Bronte Road Oakville, Ontario L6M 3L1 Tel: (905) 825-6060 Fax: (905) 825-8588 Web: <http://www.region.halton.on.ca/health/>

**City of Hamilton - Social & Public Health Services Department** 1 Hughson Street North Hamilton, Ontario L8R 3L5 **Mailing Address:** 71 Main Street West Hamilton Ontario L8P 3L5 Tel: (905) 546-3500 Fax: (905) 546-4075 Web: <http://www.health.hamilton-went.on.ca>

**Hastings & Prince Edward Counties Health Unit** 179 North Park Street Belleville, Ontario K8P 4P1 Tel: (613) 966-5500 Fax: (613) 966-9418 Web: <http://www.hpechu.ca>

**Huron County Health Unit** Health & Library Complex, R.R #5 Clinton, Ontario

N0M 1L0 Tel: (519) 482-3416 Fax: (519) 482-7820 Web: <http://www.srhip.on.ca/hchu>  
**Kingston, Frontenac and Lennox & Addington Health Unit** 221 Portsmouth Avenue Kingston, Ontario K7M 1V5 Tel: (613) 549-1232 Fax: (613) 549-7896 Web: <http://www.healthunit.on.ca>

**County of Lambton Community Health Services Dept.** 160 Exmouth Street Point Edward, Ontario N7T 7Z6 Tel: (519) 383-8331 Fax: (519) 383-7092 Web: <http://www.lambtonhealth.on.ca>

**Leeds, Grenville and Lanark Health Unit** 458 Laurier Boulevard Brockville, Ontario K6V 7A3 Tel: (613) 345-5685 Fax: (613) 345-2879 Web: <http://www.healthunit.org>

**Middlesex-London Health Unit** 50 King Street London, Ontario N6A 5L7 Tel: (519) 663-5317 Fax: (519) 663-9581 Web: <http://www.healthunit.com>  
Medical Officer of Health: Dr. Graham Pollett Board of Health Chair: Jennifer Roy

**Muskoka-Parry Sound Health Unit** 70 Pine Street Bracebridge, Ontario P1L 1N3 Tel: (705) 645-4471 Fax: (705) 645-8567 Web: <http://www.mpslu.on.ca>

**Regional Niagara Public Health Department**  
573 Glenridge Avenue St.  
Catharines, Ontario L2T 4C2  
Tel: (905) 688-3762 or 1-800-263-7248 Fax: (905) 682-3901 web:  
<http://www.regional.niagara.on.ca/niagara.html>

**North Bay and District Health Unit**  
681 Commercial Street North  
Bay, Ontario P1B 4E7 Tel: (705) 474-1400 Fax: (705) 474-8252 Web:  
<http://www.nbdhu.on.ca>

**Northwestern Health Unit**  
21 Wolsley Street Kenora,  
Ontario P9N 3W7 Tel: (807) 468-3147 Fax: (807) 468-4970 Web:  
<http://www.nwhu.on.ca>

**City of Ottawa - Public Health & Long Term Care Branch** 495 Richmond Road  
Ottawa, Ontario K2A 4A4  
Tel: (613) 722-2328 Fax: (613) 724-4191 Web:  
<http://www.city.ottawa.on.ca>

**Oxford County Board of Health**  
410 Buller Street Woodstock,  
Ontario N4S 4N2 Tel: (519) 539-9800 Fax: (519) 539-6206 Web:  
<http://www.county.oxford.on.ca/publichealth>

**Peel Health Department 44**  
Peel Centre Drive, 4th Floor  
Brampton, Ontario L6T 4B5  
Tel: (905) 791-7800 Fax: (905) 789-1604 Web:  
<http://www.region.peel.on.ca>

**Perth District Health Unit**  
653 West Gore Street

Stratford, Ontario N5A 1L4  
Tel: (519) 271-7600 Fax: (519) 271-2195 Web:  
<http://www.pdhu.on.ca>

**Peterborough County-City Health Unit**  
10 Hospital Drive  
Peterborough, Ontario K9J 8M1 Tel: (705) 743-1000  
Fax: (705) 743-2897 Web:  
<http://pcchu.peterborough.on.ca>

**Porcupine Health Unit 169**  
Pine Street South Timmins,  
Ontario P4N 8B7 Tel: (705) 267-1181 Fax: (705) 264-3980 Web:  
<http://www.porcupinehu.on.ca>

**Renfrew County & District Health Unit**  
7 International Drive  
Pembroke, Ontario K8A 6W5  
Tel: (613) 732-3629 Fax: (613) 735-3067 Web:  
<http://www.rcdhu.com>

**Simcoe Muskoka District Health Unit**  
15 Sperleng Drive Barrie,  
Ontario L4M 6K9 Tel: (705) 721-7330 Fax: (705) 721-1495 Web:  
<http://www.simcoehealth.org>

**Sudbury & District Health Unit**  
1300 Paris Street Sudbury,  
Ontario P3E 3A3 Tel: (705) 522-9200 Fax: (705) 522-5182 Web:  
<http://www.sdhu.com>

**Thunder Bay District Health Unit 999** Balmoral  
Street Thunder Bay, Ontario  
P7B 6E7 Tel: (807) 625-5900  
Fax: (807) 623-2369 Web:  
<http://www.tbdhu.com>

**Timiskaming Health Unit**  
221 Whitewood Avenue, Box  
1240 New Liskeard, Ontario  
P0J 1P0 Tel: (705) 647-4305  
Fax: (705) 647-5779 Web:  
<http://www.timiskaminghu.on.ca>

**Toronto Public Health 277**  
Victoria Street, 5th Floor  
Toronto, Ontario M5B 1W2  
Tel: (416) 392-7401 Fax: (416) 392-0713 Web:  
<http://www.city.toronto.on.ca/health/index.htm>

**Regional Municipality of Waterloo, Community Health Department P.O.**  
Box 1633, 99 Regina Street  
South Waterloo, Ontario N2J 4V3  
Tel: (519) 883-2000  
Fax: (519) 883-2241 Web:  
<http://chd.region.waterloo.on.ca>

**Wellington-Dufferin-Guelph Health Unit 205**  
Queen Street East Fergus,  
Ontario N1M 1T2 Tel: (519) 843-2460 Fax: (519) 843-2321

**Windsor-Essex County Health Unit**  
1005 Ouellette Avenue  
Windsor, Ontario W9A 4J8  
Tel: (519) 258-2146 Fax: (519) 258-6003 Web:  
<http://www.wechealthunit.org>

**York Region Health Services Department 17250**  
Yonge Street, Box 147  
Newmarket, Ontario L3Y 6Z1  
Tel: (905) 895-4511 Fax: (905) 895-3166 Web:  
<http://www.region.york.on.ca>

## Appendix D

### Stakeholders in School Health

<b>School Based</b>	<b>Health Sector</b>	<b>Education Sector</b>
Students	Government (municipal/provincial/federal)	Government (municipal/provincial/federal)
Teachers	Municipal public health clinics	Education researchers
School Administration	Non Government Organizations	International partners (UNESCO)
Support Personnel (nurses, counselors)	Health Researchers	
Parents	Private, commercial and philanthropic organizations	
	International partners (WHO)	

(Adopted and modified from St. Leger, 2000)

## Appendix E

DATE: 2/22/2010  
 FROM: Michelle McGinn, Chair  
 Research Ethics Board (REB)

TO: James Mandigo, Physical Education and Kinesiology  
 Ishan Angra

FILE: 09-141 MANDIGO  
 Masters Thesis/Project

TITLE: Making Healthy Schools a Reality: A Needs Assessment of Ontario's Public Health Professionals

The Brock University Research Ethics Board has reviewed the above research proposal.

DECISION: **Accepted as clarified**

This project has received ethics clearance for the period of February 22, 2010 to May 1, 2010 subject to full REB ratification at the Research Ethics Board's next scheduled meeting. The clearance period may be extended upon request. The study may now proceed.

Please note that the Research Ethics Board (REB) requires that you adhere to the protocol as last reviewed and cleared by the REB. During the course of research no deviations from, or changes to, the protocol, recruitment, or consent form may be initiated without prior written clearance from the REB. The Board must provide clearance for any modifications before they can be implemented. If you wish to modify your research project, please refer to <http://www.brocku.ca/research/policies-and-forms/forms> to complete the appropriate form Revision or Modification to an Ongoing Application.

Adverse or unexpected events must be reported to the REB as soon as possible with an indication of how these events affect, in the view of the Principal Investigator, the safety of the participants and the continuation of the protocol.

If research participants are in the care of a health facility, at a school, or other institution or community organization, it is the responsibility of the Principal Investigator to ensure that the ethical guidelines and clearance of those facilities or institutions are obtained and filed with the REB prior to the initiation of any research protocols.

The Tri-Council Policy Statement requires that ongoing research be monitored. A Final Report is required for all projects upon completion of the project. Researchers with projects lasting more than one year are required to submit a Continuing Review Report annually. The Office of Research Services will contact you when this form Continuing Review/Final Report is required.

Please quote your REB file number on all future correspondence.

MM/sp

Research Ethics Office  
 Brock University | Brock Research  
 Niagara Region | 500 Glenridge Ave. | St. Catharines, ON L2S 3A1  
 brocku.ca | T 905 688 5550 x3035 | F 905 688 074

## Appendix F

### Letter of Informed Consent

Date: **March 1, 2010**

Project Title: **Making Healthy Schools a Reality: A Needs Assessment of Ontario's Public Health Professionals**

**Student Principal Investigator:**

Ishan Angra  
Graduate Student  
Department of Physical Education and Kinesiology  
Brock University  
Ishan.angra@brocku.ca

**Faculty Supervisor:**

James Mandigo  
Associate Professor  
Department of Physical Education and Kinesiology  
Brock University  
905 688 5550 extension 4789  
jmandigo@brocku.ca

**INVITATION**

You are invited to participate in our research study on public health and the revised health and physical education curriculum. The purpose of this study is to conduct a needs assessment of Ontario's public health school professionals to build the capacity of public health to support the implementation of the revised HPE curriculum.

**WHAT'S INVOLVED**

As a participant, you will be asked to participate in a conference call focus group after your Ministry of Education Health and Physical Education curriculum training workshop. The conference call will be audio taped. Participation will take approximately an hour of your time.

**POTENTIAL BENEFITS AND RISKS**

Possible benefits of participation include contributing to the improvement of your professional practice; gaining exposure to the upcoming HPE curriculum through Ministry of Education directed workshops; and gaining the opportunity to interact with peers and develop resources that will be invaluable for their practice. There are no known or anticipated risks associated with participation in this study.

**CONFIDENTIALITY**

All information you provide will be considered confidential and grouped with responses from other participants. Given the format of this session, we ask you to respect your fellow participants by keeping all information that identifies or could potentially identify a participant and/or his/her comments confidential. Data collected during this study will be stored in a secure location on Brock University campus. Data will be kept for 3 years after which time the transcripts will be shredded and the electronic data erased. Access to this data will be restricted to the investigators.

**VOLUNTARY PARTICIPATION**

Participation in this study is voluntary. If you wish, you may decline to answer any questions or participate in any component of the study. Further, you may decide to withdraw from this study at any time and may do so without any penalty or loss of benefits to which you are entitled.

**PUBLICATION OF RESULTS**

Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available through the Principal Investigator or the Faculty Supervisor at the phone number and email addresses given above. The results will be available in September 2010.

**CONTACT INFORMATION AND ETHICS CLEARANCE**

If you have any questions about this study or require further information, please contact the Student Principal Investigator or the Faculty Supervisor using the contact information provided above. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University (File #: REB - 09-141 - MANDIGO). If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.

**CONSENT FORM**

I agree to participate in this study described above. I have made this decision based on the information I have read in the Information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## **Appendix G**

### **Facilitated Roundtable Discussion Questions**

1. What are you (your health unit) doing now to support schools?
2. In light of new policy directions, what do you (public health) think you will need to do?
3. Based on question #1 and question #2, how do we bridge the gap between what you're currently doing and what you need to do to support healthy schools and communities?
4. What kind of concrete, tangible supports do public health professionals need to implement/meet the Ontario Public Health Standards and to make healthy schools and communities a reality?
5. What are the top 3 supports you need to help you help schools and communities?

## Appendix H

### Teleconference Focus Group Questions

<b>Interview Questions – Main Questions</b>	<b>Prompt Questions – For further clarification and detail</b>
<p>How will you (health units) share the information you received about the revised H&amp;PE curriculum with your colleagues at the health unit?</p>	<ul style="list-style-type: none"> <li>• What ideas can you share with each other (from other health units) regarding how you will get the information to colleagues?</li> <li>• Any tips from past experiences with other initiatives? (ie Public Health Standards)</li> <li>• What do you think you need to carry out these plans?</li> <li>• What can Ophea do to support any of these initiatives?               <ul style="list-style-type: none"> <li>○ What individual skills/resources could OPHEA provide you with to effectively carry out these plans?</li> <li>○ What structural support could OPHEA offer to improve sharing the information/resources within your health unit?</li> </ul> </li> </ul>
<p>What type of support do you see your health unit providing schools to support the implementation of the revised H&amp;PE curriculum?</p>	<ul style="list-style-type: none"> <li>• Can you provide some examples?</li> <li>• Do you have anything tangible already complete?</li> <li>• Any changes from what you do now to support schools? Should there be?</li> <li>• What do you need to carry out these plans?</li> <li>• As you know, the revised HPE curriculum contains 3 strands – Active Living, Movement Competence and Healthy Living (all contain Living Skills). What do you see as the role of the public health professional in these strands?               <ul style="list-style-type: none"> <li>○ Which of these strands will pose the biggest challenge to your health unit to support?</li> </ul> </li> <li>• What can Ophea do to support any of these initiatives?               <ul style="list-style-type: none"> <li>○ What individual skills/resources could OPHEA provide you with to effectively carry out these plans?</li> <li>○ What structural support could OPHEA offer to enhance your role in the implementation?</li> </ul> </li> <li>• What do you see as public health’s role in the curriculum as a whole? What may be the challenges to broaden public health’s scope?</li> </ul>

## **Appendix I**

### **Interview Questions**

Tell me about how you see your role in the implementation of the revised HPE curriculum.

Can you tell me about your relationship with the school boards in your health unit's area?

Can you describe barriers that may prevent you from effectively supporting the implementation of the revised HPE curriculum? What are they?

Does your unit currently provide DPA support? If yes, what does it look like?

What topics/units/strands in the revised HPE curriculum do you find most challenging to implement? To support? Why?

Can you tell me how your health unit supports the needs of a diverse student population (as in race, ethnicity, religion, sexuality) in your communities?

What are some of the methods that your health unit uses to share information (e.g. policies, training) within the unit?

What supports could Ophea offer to enhance your role in the implementation?

## Appendix J

### Research Process Timeline

