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School of Human Kinetics

FACULTÉ, ÉCOLE, DÉPARTEMENT / FACULTY, SCHOOL, DEPARTMENT

The Physical Activity Habits and Body Image Perceptions of Students in a Rural Healthy Ontarian Elementary School

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THE PHYSICAL ACTIVITY HABITS AND BODY IMAGE PERCEPTIONS OF STUDENTS IN A RURAL HEALTHY ONTARIAN ELEMENTARY SCHOOL

by

TRACY MOORE

Hon. B.A. University of Ottawa, 2005

THESIS

Submitted to the Faculty of Graduate and Postdoctoral Studies
In partial fulfillment of the requirements
for the degree of Master's of Arts in Human Kinetics

School of Human Kinetics
University of Ottawa
December 2007

Your file Votre référence
ISBN: 978-0-494-41674-7
Our file Notre référence
ISBN: 978-0-494-41674-7

ACKNOWLEDGEMENTS

There are many people who have helped me to create my thesis. This acknowledgement section only touches on a few people, but there are so many more that have assisted and encouraged me to grow as a researcher, as a writer, and as a friend. First, I would like to thank my supervisor Dr. Charlotte Beaudoin for her guidance, support, and endless conversations that have helped me stay on track through out the experience of my thesis. I am fortunate to have chosen this path and to have worked with you on this research. I would like to thank my parents for continuing to support me through all of the challenges and accomplishments this experience has given me. Paula, for the countless hours spent editing and improving my thesis. Rhonda, for her continuous support and encouragement throughout my education. Thanks also to my colleagues, Zeina and Robin, who joined in the celebration of presenting my thesis in Greece. I would also like to extend my thanks to the school where my research was conducted; the vice-principal, the physical education teachers, and the seventh grade students who opened up their lives so that I could express their uniqueness. The environment created within their school is truly amazing, and without their contribution this research would not have happened. The experience of researching and writing my thesis was shaped by the people I encountered along the way; it would not have been the same without any one of you.

ABSTRACT

Since the Canadian educational reform in the 1990's, schools have included health education in their curriculum, and as all children under the age of 16 must attend school, on can ask "what better place to encourage health?" With this increased focus on health education, more schools are adopting a Comprehensive School Health (CSH) approach, yet as the CSH approach is not standardized in Canadian schools, school's choosing to adopt such principles must do so independently. In addition to independent adoption, school's who do chose to employ a CSH approach are under researched, resulting in little information on current CSH practices. This lack of research is prevalent in many countries, as researchers have acknowledged that the concept of the CSH approach is more advanced than its implementation (WHO, 1997). Therefore, by examining the physical activity habits and body image perceptions of rural students, this research sought to develop a better understating of a rural CSH approach. Results of this study demonstrated that this school's vice-principal and physical education teachers engaged in a series of health promoting initiatives. This school's joint development of their CSH approach was one of the factors that lead to their extensive application of the approach, as they benefited from the additional support of volunteers, government funding, pedagogical resources, and health professionals. With these unique opportunities, this school surpassed the level of CSH implementation that is presented in the current literature, by successfully implementing a Health Curriculum, a Healthy Environment, and providing an avenue for Health Services to begin. The students in this rural school demonstrated high levels of physical activity participation and body image satisfaction. Students credited their knowledge of health issues to their unique health education opportunities, parental and peer modeling, and their participation in regular physical activities.

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CHAPTER I

INTRODUCTION

The Comprehensive School Health approach is an integrated set of strategies that seeks to extend optimal physical, emotional, social, and educational development in children. This ecological approach to health education encompasses not only students and teachers, but also the school and community environment, links with parents, community resources, and government agencies (Deschesnes, Martin, & Hill, 2003). Through the implementation of health initiatives, the CSH approach develops Health Services, Health Education, and a Healthy Environment for the school community (World Health Organization, 1997). As an approach to health education, the principles for the CSH approach are gaining recognition all over the world. Yet, the CSH approach is not standardized in Canadian schools; instead, many schools in Canada independently adopt this approach and its principles. Therefore, with such successful results in other countries, why not research what Canadian schools are individually adopting?

The implementation of a Health Services, Health Education, and a Healthy Environment require top-down, bottom-up, and lateral relationships to develop an all encompassing approach, and incorporate all members of the school (Nader, 2000). It is with this perspective that the participants of this research represent top-down, bottom-up and lateral relationships. The top-down relationship, represented by a principal, includes overseeing implementation strategies, new programs, and initiatives involved in adopting and maintaining a CSH approach. The bottom-up relationship is represented by both teachers and students of the school. The teacher's role includes developing and facilitating health initiatives and programs for students. The students' role includes engaging in learning environments, and to a lesser extent helping to develop health programs and initiatives. The lateral relationship is represented by members of

the same relationship collaborating on initiatives and can occur at any level of the CSH approach. All of the top-down, bottom-up and lateral relationships are important in a CSH environment, as they all must contribute and work together benefit from the approach (Nader, 2000).

The 1990's educational reform saw Canada improve education so that it could meet the demands of society through the incorporation of health and technology into the school curriculum. As Canadian education is provincially based, Ontario implemented a new Health and Physical Education (HPE) curriculum, which addresses issues related to healthy living in children (Ontario Ministry of Education and Training, 1998). Although this new curriculum has been implemented for ten years, only two studies have conducted research on the Ontario HPE curriculum (Larkin & Rice, 2005; McVey, Tweed, & Blackmore, 2007). Further, as the CSH approach is not standardized in Ontario schools, the new HPE curriculum is one of the many programs that is bridging the gap between the current curriculum and the CSH approach. Therefore, with both the CSH approach and the Ontario HPE curriculum being under-researched in Ontario schools, a significant part of this research is that it includes both. With that said the selection criteria for this school is that it include one of the three CSH components: a Healthy Environment, a Health Curriculum, or Health Services.

By contributing to the limited amount of literature on body image and physical activity in the Ontario HPE curriculum, and within a school adopting a CSH approach; this research seeks to develop a better understanding of the physical activity habits and body image perceptions of students in a rural school adopting the Comprehensive School Health (CSH) approach. By interviewing the vice-principal and physical education teachers, this research will observe how the vice-principal promotes and facilitates the adoption and maintenance of the CSH approach,

further how the physical education teachers promote and teach physical activity and body image issues within the HPE curriculum. Once a clear understanding of the CSH environment is established, the physical activity habits and body image perceptions of students in a rural CSH school will be addressed.

CHAPTER II

RESEARCH CONTEXT

There are many definitions of the word "health"; the World Health Organization (1996) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". This definition was promoted in the world health report, to set a standard of health for all societies. The promotion of health and health education have been on the agenda for the World Health Organization (WHO) since the Ottawa Charter on Health Promotion in 1986 (World Health Organization). Since then, there have been several reports and world conferences on the topic of health promotion. The Jakarta Declaration in 1997 outlined the major factors in the promotion of health for all populations. It was at the Jakarta Declaration that education was declared an area for the implementation of healthy living for all societies (World Health Organization, 1997). Since the role of schools in health education has increased, the WHO has set forth health initiatives in the form of school policies, management practices, and social conditions, in hopes of promoting health education in schools and enabling children to develop in a healthy environment (World Health Organization, 1999).

Schools have to potential to be "the developing world's broadest and deepest channel for putting information at the disposal of families, school personnel, community members and students" (UNICEF, 1986, p.22). It was with this information that the WHO developed the initiatives for the Comprehensive School Health (CSH) approach (World Health Organization, 2000). Since then the CSH has been promoted in countries all over the world as an ecological approach to health education that is shaped by the environmental subsystems of family, community, and school, which complete the school environment (World Health Organization).

In Canada, a consensus statement on the Comprehensive School Health (CSH) approach was published in 1990, since then, national organizations in support of CSH have grown to include the Canadian Association of School Health (CASH), The Canadian School Board Association (CSBA), The Canadian Public Health Association (CPHA), The Canadian Association of Principals (CAP), The Canadian Medical Association (CMA), and The Canadian Teachers Federation (CTF) (Safe Healthy Schools). Yet with all of this support from school affiliated associations, the CSH approach is still not a formal part of Canadian education.

Comprehensive School Health Approach

The following section will discuss the Comprehensive School Health (CSH) approach. As a conceptual framework for this research, the principles for the implementation of such an approach into schools are presented.

As previously mentioned, the CSH approach is an integrated set of strategies that seeks to develop optimal physical, emotional, social and educational development in children (Deschesnes et al., 2003). Originally the CSH approach was based on eight components: planned sequential health education across the entire curriculum, school based health services, healthy school environment, daily physical education, nutrition services, counseling services, health promotion among school staff, and school / community integration of health promotion efforts (World Health Organization, 1997). However, due to the difficulty of implementing all eight components, the World Health Organization simplified the eight components into the areas of Health Services, Health Education, and a Healthy Environment (World Health Organization, 1997). The simplification allowed school communities to implement a broader range of health initiatives (World Health Organization, 1997). Currently, the simplified approach is used in

North America, Europe, and Australia (Lynagh, Schofield, & Sanson-Fisher, 1997; McLeod, 2004).

The CSH approach encompasses the students, teachers, school and community environment by forming links with parents, community organizations, and government agencies (World Health Organization, 2000). Relationships between everyone involved in the CSH approach can be simplified into three types of relationships: top down, bottom-up, and lateral. These relationships can represent a macro approach, and encompass the ministry of education and the school board, or they can also represent a micro approach, which includes the scope of the school. This research will use a micro approach, and as such, in a micro approach the top-down relationship refers to the principal, who conveys information from the top of the hierarchical ladder downwards for the teachers and students. A bottom-up relationship refers to the students and teachers implementing and designing programs and gaining the acceptance of the higher members of the school hierarchy. The lateral relationship refers to members at any level working together on an initiative (Nader, 2000). The implementation of the CSH approach into a school requires top-down, bottom-up, and lateral relationships to engage all members of the school community (Nader).

In a top-down relationship, the CSH approach is applied through the support and influence of the principal. The principal is seen as a major decision maker within the school, as he or she communicates initiatives and projects to the school board. The principal can allocate funds and coordinate professional development periods for the CSH approach (Leidl, 2005). The principal can also incorporate CSH initiatives into the current goals of the school which can increase the sustainability and compatibility of the CSH initiatives (Wiley & Howard-Barr, 2005).

In addition to the top-down relationship, the CSH also benefits from groups working together in a lateral relationship. Lateral partners can be found at any level of the CSH approach. An example of a lateral relationship provided by Winnail, Dorman, and Stevenson (2004) are seminars and symposiums, led by teachers for teachers that allow networking of ideas and initiatives between schools. This networking enables the teachers to coordinate opportunities and resources with other teachers in their school and school board (Weiler & Pigg, 2004). Teachers' support of the CSH initiatives encourages students in those initiatives (Klem & Connell, 2004).

Students partake in lateral relationships where they can positively influence each other. Student focused initiatives result in the inclusion of the students at a grassroots level. Inclusion can be small at first with simple guidelines. An example of this inclusion is outlined by Lounsbury, Gast and Smith (2005) where students were given the task of increasing student physical activity participation. The guidelines given were that the program be: during lunch hour, run by students-for students, and that it have a physical activity component. The program the student council created offered different team and individual sports, as requested by students. The program was run during the lunch hours three days a week. This is an example of how some initial work by a top-down member, in this case a principal, allowed the students to engage in the ownership of their initiatives and at the same time identify positive behaviors in the lifestyles of their peers. The lateral approach for students can also be compared to peer-learning. The comparison is through the knowledge and support by equals that fosters learning within similar social groups (Toppings, 2005). As the lateral approach in this example, is students working with students, the peer connection fosters learning, similar to the definition of peer learning.

Finally the bottom-up members work on implementation at a grassroots level. These members of school include the students, teachers and support staff (Nader, 2000). The inclusion of the students as bottom-up members of the school community allows them to have the opportunity to make positive changes in their own health and physical activity, as well as in those of others (Lounsbery, Gast, & Smith, 2005). Teachers and support staff are also key bottom-up members as they have insight into the best practices for classes and school facilities. In the application of the CSH approach, it is beneficial to include all parties in top-down, lateral, and bottom up initiatives, so as to receive support and create ownership for their initiatives. Additionally, when implementing the CSH approach, each school will develop unique partnerships and goals by using the resources in their environment (Vecchiarelli, Prelip, Slusser, Weightman, & Neuman, 2005).

The Canadian educational reform in the 1990`s was based on the fact that education needed to meet the demands of society. Comparatively, the Comprehensive School Health (CSH) approach is also aimed at meeting the demands of society, as it promotes health living (World Health Organization, 1997). As previously mentioned, education in Canada is provincial; therefore each province took measures to improve their education curriculum (Anonymous, 2007). In 1998, the Ontario Ministry of Education implemented new Arts, Language, French as a Second Language, Mathematics, Science and Technology, and Health and Physical Education curriculums for grades one through eight (Ontario Ministry of Education, 1997). Of particular interest to this research was the Health and Physical Education (HPE) curriculum, as the reform expanded the original Physical Education curriculum to include Health components. The HPE curriculum emphasized the need for shared responsibilities and safe environments in the promotion of health (Ontario Ministry of Education and Training, 1998).

The Ontario Ministry of Education has continued its reform and in 2004 encouraged all schools to become "Healthy Schools". By definition, a "Healthy School" provides "good food, daily physical activity and a healthy environment that supports the learning and growth that are vital to help students reach their full potential" (Ontario Ministry of Education). Another change to the Ontario educational curriculum was the introduction of the 20 minutes of Daily Physical Activity (DPA) in 2005 (Ontario Ministry of Education, 2005). The DPA component ensures that elementary students participate in a minimum of 20 minutes of physical activity each school day. It can therefore be argued that the new curriculum and changes in Ontario schools are bridging the gap between the current curriculum and a CSH approach.

Bridging the Gap with Health and Physical Education Curriculum

The Health and Physical Education (HPE) curriculum is built upon the three strands of Healthy Living, Active Participation, and Fundamental Movement Skills (Ontario Ministry of Education and Training, 1998). Each strand defines the specific tasks and expectations of students at each level of their elementary education. First, the Healthy Living strand provides students with "the knowledge and skills they need to develop, maintain, and enjoy healthy lifestyles" (Ontario Ministry of Education and Training, 1998. p.10), allowing them to make decisions and set goals that are directly related to personal health and well-being. The four components of the Healthy Living strand are Healthy Eating, Growth and Development, Personal Safety and Injury Prevention, and Substance Use and Abuse. Of specific interest to this research is the Healthy Eating component for grade seven students, as it includes body image components. Expectations for grade sevens are to examine the effects of healthy eating and physical activity on body shape and size, and on self-esteem. Students are asked to describe how

body image influences food choices, and are expected to identify factors affecting healthy body weight, such as food intake, physical activity or inactivity, and growth spurts (Ontario Ministry of Education and Training, 1998).

The goal of the Active Participation strand is to help students become fit, independent learners by focusing on interpersonal skills and relating fitness activities to healthy productive lives (Ontario Ministry of Education and Training, 1998). The Active Participation strand is based on the four components of Physical Activity, Physical Fitness, Living Skills, and Safety. Of specific interest to this research are the physical activity habits of students, which are represented in each of the four components for this strand.

Finally, the strand of Fundamental Movement Skills is essential for "an individual's development of effective motor skills and to the application of these skills in a wide variety of physical activities" (Ontario Ministry of Education and Training, 1998. p.18). This strand also emphasizes the inclusive nature of activity where all students are engaged regardless of their ability. The three components of Locomotion / Traveling, Manipulation, and Stability comprise the Fundamental Movement Skills strand. This strand is not of particular focus to this research, as it does not directly include the physical activity participation or body image components.

The HPE curriculum affirms that "meaningful health and physical education also require safe, health promoting environments, support services from the community and a school curriculum that makes health a priority" (Ontario Ministry of Education and Training, 1998. p.1). The CSH approach is built upon these same components as it focuses on Healthy Environments, Health Curriculum, and Health Services (World Health Organization, 1997). This curriculum change is bridging the gap between the Ontario education curriculum and the CSH approach.

Physical activity in schools is an important learning tool for students. However, student participation in physical activities requires further investigation (Constantinos, Plotnikoff, & Bercovitz, 2007). Studies show that there are numerous factors that influence s student's participation in physical activities (Poulsen & Ziviani, 2004). Student participation in physical activity is the topic of the following section.

Student Participation in a Physically Active Lifestyle

Researchers have concluded that student engagement in physical activity has been based on the environment, parents, peers, education, seasonal variations in activities, and the student's choice of what was appealing at that point in time (Almond & Harris, 1998; DiLorenzo, Stucky-Ropp, Vander & Gotham, 1998). More recently, research has extended to multilevel interventions dealing with the school, home, and community settings to examine the extent of influence these settings have on the physical activity habits of students (Biddle, Gorley, & Stensel, 2004; Spence & Lee, 2003; Tergerson & Kings, 2002). These three settings of home, school and community are also the same environments that promote healthy living in the CSH approach (Mukoma & Flisher, 2004). The following sections will outline research based on the school, home, and community settings. The first intervention setting for physical activity participation is that of the school.

Without support from surrounding resources, the potential for schools to influence the home and community life of the student is limited. This because "it is unrealistic for schools to facilitate such changes without the support of families and communities" (Weschler, Devereaux, Davis & Collins, 2000. p. S123). Yet, school environments have commonly been targeted as intervention sites, as they provide compulsory education for all children less than sixteen years

of age. Therefore, the importance of adopting the CSH approach is that by nature it combines the efforts of school, communities and homes. Additionally, as students are all required to attend school until 16 years of age, they would all be guaranteed to benefit from healthy living components until that age.

Research on in-school physical activity found that levels of physical activity in pre-adolescents' decreased with age. In lower grades, students participated in individual activities, yet by the sixth grade individual activities were replaced with team activities which declined in number regardless of gender. This change in activities was attributed to the types of activities promoted during physical education classes, as well as the fact that such team activities resulted in a small number of participants (Hovell, Sallis, Kolody, & Mckenzie, 1999). The promotion of alternate or non-standard physical education programs, which encouraged physical activity for participation not competition, were found more effective in engaging students (Biddle et al., 2004; Spence & Lee, 2003). Alternate and non-standard opportunities included Tai chi, curling, and yoga activities at other facilities or with external instructors; opportunities the students might not have had in a standard physical education class (Biddle et al.). In addition to non-standard physical education, students were also found to engage in small bursts of five to ten minute physical activities during recess (Santos, Guerra, Riberio, Duarte, & Mota, 2003).

The second physical activity intervention setting was that of the home. This setting was important as it included both sibling and parental influences. Modeling and social support from parents were influential, as parents who were engaged in their child's activates encouraged their participation, yet parents who were not as engaged did not necessarily encourage participation (DiLorenzo et al., 1998). Parental support was defined by attending games, transporting children to games and practices, and participating in physical activities with the child (Constantinos et al.,

2007; DiLorenzo et al.). Further research on pre-adolescents found that this influence extended to both mothers and fathers, and their influence on the child was more evident at different ages. The influences on pre-adolescents were mainly their mother, whereas the adolescent age group was generally influenced by their fathers (DiLorenzo et al.). Finally, activities chosen by pre-adolescents in home settings were ones that they found to be the most enjoyable, and provided them with the ability to be challenged and self-directed (Poulsen & Ziviani, 2004).

The third physical activity intervention setting was the community. Research on the community settings focused on the socioeconomic status of the community and the family. The results were mixed, as some studies found that physical activity was increased in low socioeconomic areas, whereas others found no increase (Almond & Harris, 1998). Findings with no variation in pre and post- test physical activity participation among low socioeconomic areas may be explained by ill researched interventions. An example given was the creation of a bike path in a low socioeconomic area. The intervention aimed at increasing physical activity by encouraging cycling, however due to the unsafe area, very few people used the cycling path (Spence & Lee, 2003). In community settings, access to facilities and programs, as well as time spent outdoors, were among the highest rated determinants of a student's engagement in physical activity (Sallis, Prochaska, & Taylor, 2000). The results on family socio economic status were also mixed and this was often attributed to family composition, as age and range in age of children determined physical activity levels (Sallis et al.).

When researchers compared physical activity levels in the three settings of school, home and community, questions were raised on the difference between rural and urban environments (Constantinos et al., 2007). The differences found between rural and urban physical activity participation have been attributed to the travel distance and availability of facilities (Constantinos

et al.). Rural students rarely traveled to school by an active means such as walking or cycling because of the extensive travel distances involved. However, traveling to school was a common means of physical activity for urban students. The proximity of recreational facilities was an important factor in the physical activity participation of rural residents, as lengthy distances meant less frequent use; whereas students in urban centers frequently used recreational facilities as they were within walking distance. Additionally, rural students who took a physical education class were more likely to engage in other physical activities; a trend not consistent with urban students (Constantinos et al.). This link for rural students was attributed to the accessibility of physical education classes in schools, and their longer travel distance from recreation and workout facilities. Therefore, school activities in rural areas should be a priority for rural students, as it may be their only means of physical activity.

In rural and urban areas, parental influence was positively associated with student engagement in physical activity. In rural areas, this influence was particularly important as parents were the main method of transportation to activities or facilities (Constantinos et al., 2007). However, another study found no difference in the physical activity levels between urban and rural pre-adolescents (Plotnikoff, Bercovitz, & Constantinos, 2004).

In summary, individual interventions in schools, homes, and communities all received limited success in implementing physical activity participation in pre-adolescents. The school interventions provided short-term goals; however the school was not able to make significant changes in the lifestyles of students without help from homes and communities (Weschler et al., 2000). The home interventions were able to target specific goals, and achieve small amount of success, and the community setting revealed mixed results where some interventions worked and others did not (Biddle et al., 2004; Constantinos et al., 2007; DiLorenzo et al., 1998; Spence &

Lee, 2003). Interestingly, of the three intervention settings studied, few studies focused on multiple settings and no studies combined all three settings. Of those few that employed a multiple setting intervention, none provided both long and short-term goals; all interventions were targeted at short-term goals. Several studies concluded that future research on physical activity participation should include both long and short term goals in multiple settings (Biddle et al.; Constantinos et al.; Sallis et al., 2000; Spence & Lee; Wechsler et al.).The development of long and short-term goals, in collaboration with school, home and community settings is the focus of the CSH approach. Therefore, the recommendations of these studies to find a setting that encompasses all settings and goals is in fact to research a Comprehensive School Health approach.

The following sections move from environmental influence on physical activity to the physical activity habits of students. Many of the studies presented were conducted on both male and female participants; however, due to the differences in interests and in patterns of participation, the results have been separated into sections based on gender.

Female Physical Activity Habits

Female physical activity influences were largely based on the non-competitive structure of the activity and on the social interaction encountered when participating in activities. Research into structured activities found that the presence of an inviting, non-competitive environment increased participation in female physical activities (Vu, Murrie, Gonzalez, & Jobe, 2006). Due to the limited number of students per team, few students were able or interested in participating in competitive extracurricular activities whereas the inclusion of recreational, social and relaxing extracurricular activities saw female enrollment increase (Daley, 2002; Fairclough

& Stratton, 2005). Females perceive non-competitive, structured physical activities as providing health benefits such as staying in shape, losing weight, and increasing energy levels. These perceived benefits were influential in engaging in their structured non-competitive physical activities (Deflandre, Antonini, & Lorant, 2004; Tergerson & Kings, 2002). As the Ontario HPE curriculum promotes non-competitive activities, it is of interest to investigate the physical activity participation of females who are encouraged to participate in non-competitive activities; something, according to popular research, that they prefer.

Female physical activity influences were also social. Female's reported the single largest influence of joining physical activities was having a friend to participate with (Fairclough & Stratton, 2005; Kubik, Lytle, & Fulkerson, 2005; Tergerson & Kings, 2002). The social support provided by parents was also important, regardless of the parent's gender (Fairclough & Stratton). By creating and strengthening friendships, participants were encouraged to have fun and to feel good about themselves. This encouragement helped females feel comfortable about starting and re-joining activities (Daley, 2002).

In summary, the females presented in these studies highlight typical pre-adolescent physical activity habits. For females, the non-competitive atmosphere favored participation and socialization, whereas competitive activities did not (Daley, 2002; Vu et al., 2006). Again, as the Ontario HPE curriculum promotes non-competitive activities, it is of interest to observe such participation tendencies of females. Influences on physical activity were social and included friendship and enjoyment of the activity (Kubik et al., 2005; Tergerson & Kings, 2002; Vu et al.). The information collected through current research highlights some of the physical activity interests of pre-adolescent females. This information is beneficial when combined with external

environmental factors to target physical activity in schools, homes, and communities, consequently the same environment included in the CSH approach.

Male Physical Activity Habits

Research on males' physical activity participation generally noted three main influences. First, participation was based on the structure of the activity, whether competitive or non-competitive. Second, male physical activity participation was based on desired outcomes, where males associated their aesthetic appearance to be a result of their physical activity participation. Finally, the males' physical activity participation was also based on their personal experiences.

The structure of the physical activity influenced males' participation, since competitive and non-competitive atmospheres included and excluded participants (Davison, 2000). Some pre-adolescents commented on being scrutinized during competitive activities because they were not considered to be athletic or "in shape". This scrutiny caused males to avoid physical education classes at school due to the competition involved (Davison). Other males joined activities because they enjoyed the competitive atmosphere; feelings of achievement and competition were an integral part of their participation (Kubik et al., 2005; Tergerson & Kings 2002). This research is not based on the HPE curriculum, and as such does not place a focus on non-competitive activities in schools; therefore research on the HPE curriculum could yield results on male student's participation. Further, the DPA activities of students have the possibility of also being competitive or non-competitive in nature; which is another form of physical activity participation that has not been researched. Therefore, a CSH school promoting non-competitive activities and DPA may yield different results.

Further, the aesthetic image and personal experiences associated with physical activity were very outcome oriented. The male perceptions of physical activity were based on desired outcomes, as one participant stated, "let's just put it this way-girls appreciate a guy who has better conditioning more than a guy who has a pot belly"(Allison, Dwyer, Goldenberg, Fein, Yoshida, & Boutilier, 2005, p.161). Male physical activity participation was reinforced by the improvements they saw in their aesthetic appearance (Deflandre et al., 2004; Kubik et al., 2005; Tergerson & Kings, 2002). Participants stated that staying in shape, having "good" physical form, and developing and increasing strength were outcomes that they associated with their physical activity participation (Deflandre et al.; Kubik et al.; Tergerson & Kings). Again, this physical activity research was not conducted within the Ontario HPE curriculum, which presents questions about similar feelings when engaged in non-competitive activities.

Further research on the aesthetic images associated with physical activity participation acknowledged the positive outcomes associated with student weight management. Males realized that by participating in vigorous physical activities they were burning calories and decreasing the amount of excess fat on their bodies. This positive outcome encouraged males to participate in physical activities, and also resulted in positive feelings about their appearance (Kubik et al., 2005). In a similar study by Bramham (2003), the realization of the connection between participation in vigorous physical activities and burning calories provided the students with the positive outcome of being considered "big" by their peers. The students' definition of "big" related not only to their height and weight, it also took into consideration the amount of muscle, where large less defined muscles were still considered to be "big". This muscular athletic appearance was considered to be highly important to the participants (Allison et al., 2005; Bramham).

Male physical activity habits were derived from a variety of personal experiences. The feelings of membership created when the participant became part of a team, and the sense that they "fit in" with a group were important for social inclusion (Allison et al., 2005). Further, personal experiences the students associated with physical activities participation were with the enjoyment and socialization encountered when participating with peers, and the adrenaline rush, and energy of accomplishing a task (Deflandre et al., 2004; Kubik et al., 2005). Overall, males felt good about themselves when participating in physical activity, and as a result continued to participate (Allison et al.; Kubik et al.).

In summary, the competitive aspect involved with physical activity was both an incentive to participate and a drawback, which is of interest to consider with a curriculum like the Ontario HPE, which promotes non-competitive activities (Davison, 2000; Kubik et al., 2005). Male physical activity participation was positively reinforced by the outcome of their improved aesthetic appearance (Allison et al., 2005; Bramham, 2003). Finally the personal experiences that encouraged physical activity participation were the feelings of membership and accomplishment associated with the team atmosphere. It is therefore of interest to address the fact that within different curriculums these results may differ. The HPE curriculum promotes non-competitive activities for purpose of inclusion and participation, and as there are males who enjoy non-competitive activities, as well as others who enjoy a team atmosphere, it would be valuable to observe student participation in a non-competitive atmosphere.

Overall, female physical activity interests were non-competitive in nature, and were generally focused on relaxation, socialization, and recreational experiences, similar goals that the HPE curriculum promotes. Male physical activity interests were based on competitive and non-competitive activities, as well as muscular images. Male physical activity participation was also

based on the participants' personal experiences of team membership, social inclusion, and athletic development, which again are promoted in the HPE curriculum.

The home, school, and community settings have all been used as physical activity intervention settings for pre-adolescents. In the same way that these three settings are targeted for promoting a physically active lifestyle, they can also be used to promote a healthy lifestyle by focusing on body image, nutrition and healthy choices in the daily life of the community. The promotion of health in all three settings is the purpose of the CSH approach (World Health Organization, 1997). Further, it is of significance that this research investigates the perceptions of students, with regards to the healthy choices received in their school, home and community settings. Therefore, by providing pre-adolescents with the ability to make healthy choices at school, at home, and in their community, the CSH approach has the ability to impact their daily lives. It is this impact that shapes the students ability to make healthy choices, and forms the basis for their future lifestyle. This research is significant as it investigates the messages that shape the healthy choices in the students' school environment.

The activities that students engaged in offered them a chance to further develop an athletic and active image (Allison et al., 2005). It is this active image and the students' perception of that image, which will be addressed in the following section.

Student Body Image Perceptions

The study of body image encompasses body-related self-perceptions and self-attitudes which include thoughts, beliefs, feelings and behaviors (Cash & Pruzinsky, 2002). This research includes both the sociocultural and perceptual foundations of body image, as body images may be based on perceptions, which are constructed from multiple stimuli in the individual's

environment, and sociocultural influences, which are developed through the interaction with surrounding people (Cash & Pruzinsky). The following section will outline each of the frameworks.

The sociocultural foundations of body image are rooted in culture, family, and media influences (Cash & Pruzinsky, 2002). The sociocultural perspective on body image research acknowledges the "understanding of cultural values which influence individual values and behaviors" (Jackson, 2002, p.13). Different cultures hold certain features or sizes in higher regard than others. Therefore, it is the pressure and presence of this cultural representation that can influence the individual to strive to attain a body image that is close to the one upheld by their society (Tiggerman, 2002). Beauty is said to be defined by culture, and projected through the media (Tiggerman). Therefore, it is not only the cultural influence; there is also the media focus on body image. Additionally, the influence or interaction with close members of one's family and friends present yet another sociocultural influence. For students, this influence can include their school, home and community environments, and all of the individuals that are included in that environment.

Body image perceptions, the second body image framework used in this study focuses on the perception of, and attitude toward appearance and body size (Thompson & Gardner, 2002). The individual perceptions of a person's body image are derived from the way they construct their image from an infinite range of available stimuli (Cash & Pruzinsky, 2002). Stimulation can range from available images of other people to comparisons with friends and even previous representations or photographs of the individual. This perceptual body image can sometimes create a desire for the individual to alter their body, often desiring a thinner figure (Cash & Pruzinsky). The perceptual framework is often measured with the use of figural drawing scales,

which indicate differences between a person's perceived body image and an image that they may prefer or consider ideal (Thompson & Gardner). The difference between one's current and ideal images may be small or large; it may represent a desire to be thinner or fuller than their current shape (Thompson & Gardner).

In this research, two data collection methods were used to capture both perceptual and sociocultural influences on male and female students. The participants' perceptions were observed with the use of the Collins (1991) Body Image Scale. Participants were asked how they perceived their current image, their ideal image, and the image they believed to be perceived by their peers. Both the sociocultural and perceptual influences were investigated through the focus group discussions, as participants discussed their perceived images, as well as the images of people in their surroundings. It is this perception of body image, and the societal representations of image, that are the focus of the following sections.

As previously mentioned, Ontario schools educate students on body image issues with in the Health and Physical Education (HPE) curriculum. To the best of my knowledge, the following are the only two studies conducted on body image within the Ontario HPE curriculum. These two studies examine the sociocultural body image content in the curriculum, which are defined as the awareness and education of cultural and media influences (Larkin & Rice, 2005; McVey et al., 2007). Based on previously implemented comprehensive approaches to body image education, McVey et al. implemented the Healthy Schools-Healthy Kids intervention into four Toronto schools. The purpose of the intervention was to improve body satisfaction and size acceptance in both male and female grade six and seven students, and to sensitize parents and teachers to their influence on the body image perceptions of students (McVey et al.). The intervention was based on similar interventions in American schools, and included several

previously successful components. The intervention was intended to be comprehensive and to include the students, parents, and teachers of each school. The intervention included gathering preliminary data on student's, teacher's and parent's body image perceptions. Both students and teachers were included in the implementation and evaluation of the intervention. The intervention included workshops offered by the research team to parents, students and teachers, a teacher-led curriculum delivered to all students, and peer support groups led by public health nurses.

The peer led support groups were only administered to female participants who also participated in the "Girl Talk" sessions. During the "Girl Talk" sessions the participants discussed issues related to body image, self esteem, and body satisfaction, over a 12 week period. The origin of the "Girl Talk" session was not indicated, however it was indicated that all of the facilitators, in addition to being public health nurses, were trained on the content of the Empowering Adolescent Girls manual; a document created by body image researchers on the importance of messages sent to youth.

After the eight month intervention, the students, parents and teachers body image satisfaction was re-assessed. Both the female and male students reported increases in body image satisfaction, of particular interest was the fact that the students who were considered to be high risk during the pre-test, demonstrated significant reductions in body image dissatisfaction. This point is interesting, as the both males' and females' body image satisfaction increased yet the females had the additional opportunity to participate in "Girls Talk" sessions. Results of the study also indicated that the boys were interested in conducting a male version of the "Girls Talk" session, however no indication was given as to the reason why males were not initially included, nor was there an indication of follow up research on this subject.

There was no difference in the pre and post test results of the teachers. Several reasons were given for the lack of change; it was mainly attributed to the teachers' limited time to deliver additional classroom material, as well as the limited training that was provided for teachers on the intervention curriculum. The researchers also commented on their initial lack of contact and communication with the teachers, and how this may have affected the curriculum design. Parents were involved in the workshops, however they were not included in the evaluation of the intervention, therefore results from this group were lacking. The parents' limited involvement was considered an area to re-evaluate, as the input of this group was considered to later be valuable for evaluation purposes.

Overall, the results of the intervention by McVey et al. were positive, as the students demonstrated more satisfaction in the post-test. However, further preliminary research was needed on best implementation practices for teachers, and on inclusion of parents in evaluation procedures. The researchers recommended including many of the components in their interventions into the HPE curriculum, particularly the "Girls Talk" sessions.

A second study on the Ontario HPE curriculum examined the comprehensiveness of the body image components for grade seven and eight females (Larkin & Rice, 2005). The study by Larkin and Rice was based on previous research findings that indicated a limited amount of body image components in the health curricula of Canadian schools. The previous research on body image content did not include Ontario schools, and therefore added significance to their research. The participants of the study were grade seven and eight female students in two Ontarian middle schools, one of which was defined as rural, the other as urban. The methods for this research included educational workshops and focus groups with the female grade seven and eight students. The educational workshops introduced the students to the topics of body image, and

based on the discussion with the students, the questions for the focus groups were developed. Focus groups were held with the same participants at a later date. Results of the study demonstrated that the discourse of the students, based on the educational workshops, was not what the students were learning about in their HPE classes. Issues that arose were the fact that the curriculum sent contradictory messages to students. The students were educated on weight management and healthy eating, yet they were also told about accepting their body image and about healthy weights. The contradiction in this information was based on uncertainties on how much eating and weight maintenance was healthy, and what amount was too much or too little (Larkin & Rice).

The second concern was that the curriculum ignored the physical differences between females'. This lack of recognition of the differences in females was consistent with feelings of body dissatisfaction. Some physical differences were considered "flaws" by the participants, and they included such things as small breasts, large facial features and excess weight (Larkin & Rice, 2005). Participants even commented on the options available to correct such "flaws", these options included breast implants, nose jobs, liposuction, and tummy tucks (Larkin & Rice). Therefore, the researchers acknowledge the fact that the Ontario HPE curriculum was not adequate at educating students on the different types of body image concerns present to today's youth. The researchers did also note that this sample was of diverse cultural background, and that such diverse populations are difficult to program for.

Overall, the studies on body image content in the Ontario HPE curriculum found the need for a comprehensive approach to body image education so that sociocultural influences, such as media, culture and impressionism would be taken into consideration in future curriculum planning (Larkin & Rice, 2005; McVey et al., 2007). Larkin and Rice made an addition

comment that this comprehensive approach be implemented across the entire school curriculum, instead of just the HPE curriculum, as it would create a stronger program and send a stronger message to students, families and communities.

Research has also been conducted on the comparisons between urban and rural populations. Interestingly when studied, body image concerns were evident in all pre-adolescents (Smolak, 2002; Welch, Gross, Bronner, Dewberry-Moore, & Paige, 2007). Welch et al. found that urban participants consistently chose larger ideal images, and were more satisfied with their current image than their rural counterparts. Yet other researchers have shown that as students in both urban and rural areas enter into adolescence they begin to alter their social comparisons, sometimes resulting in more satisfaction with their body image (Gehrman, Hovell, Sallis, & Keating, 2006; McCabe & Ricciardelli, 2005).

Research into body images in males and females has demonstrated differences in perception, influence and preferences. The following sections outline the individuality of the different genders.

Female Body Image Perceptions

Research on female self-perceptions highlights the changes that occur in female body composition and the impact these changes have on how females perceived and feel about themselves. Changes in female body composition can produce more fat in the hip and thigh areas, which can make females feel less like the ideal societal body image, of large breasts, small thighs, hips, and buttocks (Daley, 2002; Duncan & Al- Nakeeb, 2004; Duncan, Woodfield, O'Neill, & Al-Nakeeb, 2002; Ingledew & Sullivan, 2002; McCabe & Vincent, 2002). Sociocultural research also presented evidence for the influence of mothers and the media on female's body image concerns (Packard & Krogstand, 2002, Gehrman et al., 2006).

Studies using pictorial scales have demonstrated that pre-adolescent females share the views of adult females as they both consider a thin figure to represent an ideal image (Packard & Krogstand, 2002; Jones, Fries, & Danish, 2007; Ingledew & Sullivan 2002). Research into pictorial scales with adolescents and pre-adolescents was conducted by Ingledew and Sullivan with the use of the Collins (1991) Body Image Scale. The Collins scale consists of seven female figures ranging from very thin (ectomorph) to obese (endomorph). Ingledew and Sullivan separated the female participants into age groups, those who were pre-adolescent (11 to 13) into one group, and adolescent (17 to 19) into another. Females indicated, from the images on the scale, their current body image, their ideal body image, and compared their current image to that of the other group of either pre-adolescent or adolescent females. Results showed that even though the height, weight and size of the pre-adolescent females were smaller, the adolescents perceived both groups to be equal. Results from the pre-adolescents demonstrated that they perceived the adolescent females as larger. The term "larger", used in this study refers to a more developed female who is taller, has broader hips, and more developed chest. Although there were differences in the comparisons of the two groups, both pre-adolescent and adolescent groups still desired to be thinner than their current size (Ingledew & Sullivan).

Recent studies have also shown that body image concerns in females are no longer simply about being thin or obese, there is a growing concern about developing a muscular image (McCabe & Ricciardelli, 2003; 2005). An example of concern over a muscular image among pre-adolescents is in the Holt and Ricciardelli (2002) study where, in a sample of 134 females aged 11-13, 30% desired a muscular image. The participants in the study responded to the Children's Version of the Eating Attitude Test (ChEAT), and additional questions developed by the researcher on muscle bulk and exercising. The additional questions were based on the

current literature on body image, and were not part of or based on any other scales. Therefore, there is limited ability to generalize with this study. However these results still demonstrate that there is a desire for muscular images. Further studies by McCabe and Ricciardelli (2003) showed that out of a sample of 270 females aged 8 to 12 approximately 20% desired a more muscular image. This study also used the Body Image and Body Change Questionnaire for Children; this questionnaire was actually developed for the study, and was based in part on the Body Image and Body Change Questionnaire, as well as the Children's Version of the Eating Attitude Test (ChEAT) scale. Again, this is a small population from which to generalize, therefore further research is required. As both studies used questionnaires, it would be of significance to discuss body images in a focus group, permitting students to express their desired changes, and reasons for those changes. Such an approach can offer more detailed information for the reasons for a muscular image.

Further influences to build muscles are also sociocultural, as the media often portray a toned muscular-female look (McCabe & Ricciardelli, 2005). The fact that muscular images are present in the literature demonstrates that this is a future area of research on body-image in females, not only children, but adolescents and adults (McCabe & Ricciardelli).

In summary, the body image literature on females demonstrates that there are females who desire thinner figures, yet there are also females who desire more muscular figures. Further research on this muscular image is required, so as to gain a deeper understanding of this tendency.

Male Body Image Perceptions

Recent studies have shown that 5 to 10% of eating disorders are found in men, a phenomenon which up until a few years ago was uncommon (Drummond, 2001). As a result, more studies are focusing on the prevalence of body image concerns in males.

Sociocultural influences on male body image are mixed, as mothers generally encourage their sons to increase muscle, yet the media and close friends influence males to have lean toned muscles (McCabe & Ricciardelli, 2005). Regardless of increase or decrease in muscles, the sociocultural influences on body shape are so important to pre-adolescents that approximately ¾ of them will change their image based on that influence (McCabe & Ricciardelli).

The literature on male body image demonstrates that as body composition changes, males tend to gain weight, bringing them closer to society's ideal image. The male ideal image is a "V" shape, which is characterized as muscular, having broad shoulders and a muscular chest and biceps, and defined abdominal muscles (Duncan & Al-Nakeeb, 2004; Furnham, Badmin, & Sneade, 2002; Ingledew & Sullivan, 2002).

For males, weight can be perceived as increases in muscle. Similarly, many pre-adolescents consider a slightly overweight figure to be the same as a large male figure with less defined muscles (Chia & Wang, 2003). Further research by McCabe and Vincent (2002), and McCabe and Ricciardelli (2005) have shown that between 30% and 80% of pre-adolescents studied reported a desire to increase muscle mass. Drummond's (2001; 2003) studies have shown that even in males as young as 13 and 14, the ideal male is considered to be someone who is muscular, someone who is considered to be big, have muscular legs, and a big neck. The potential force that can accompany strength and muscularity were also noted as benefits for the 13 and 14 year old participants. Pre-adolescents desired a more muscular image, defined by one

participant as "muscley like a wrestler" (Drummond, 2001, p.55). Although this muscular image is present in the literature, current research places little focus on the occurrence of pre-adolescents desiring a more muscular figure (McCabe & Ricciardelli, 2005).

Research has also shown that males have a strong connection between physical activity and the ideal "V" shape (Drummond, 2003). The connection between body image and physical activity deals with the strength, muscularity, and masculinity of the ideal male. Satisfying the body image concerns can mean an increase in physical activity to maintain a muscular appearance (Drummond, 2003; Jones et al. 2007; McCabe & Ricciardelli, 2005). Exercise was therefore seen as a means to increase weight, resulting in more muscle, or decrease weight, resulting in a toned figure (Drummond, 2003; Jones et al.). Exercise was favored over food reduction due to the fear that a reduction of food intake would cause a decrease in the upper body muscle mass of the participants, resulting in smaller muscles, making the participants less likely to attain the male ideal "V" shape (Duncan & Al-Nakeeb, 2004; Drummond, 2001; Ricciardelli & McCabe, 2004). This athletic physical development in males has become somewhat of a right of passage for pre-adolescent to become men, and to identify with the masculine ideals set forth by society (Drummond, 2003).

With value placed on a larger body size, males tend to have a negative view of being underweight. Males perceived the underweight body as negative, as it is not representative of the male ideal "V" shape (Drummond, 2003). Males are more likely to avoid losing weight, so that they are not perceived as underweight (Furnham et al., 2002).

In summary, the media, mothers, and close friends influence male body image ideals (McCabe & Ricciardelli, 2005). These are the same sociocultural influences that McVey et al. (2007), and Larkin and Rice (2005) noted were lacking in the current HPE curriculum. Male

body image perceptions are largely tied to physical activity, as many males have difficulty in separating the attainment of body ideals from physical activity (Drummond, 2003). With the Ontario HPE curriculum promoting alternate activities, would this connection still be present? Finally, a muscular body is socially desirable for males, whereas a small figure is not (Furnham et al., 2002). Further research on males, particularly in rural areas would increase the knowledge of male body images.

Conclusion of Research Context

This review of the current literature has addressed the Comprehensive School Health (CSH) approach, the Ontario Health and Physical Education (HPE) curriculum, and pre-adolescent body image perceptions and physical activity habits, as defined through Canadian literature.

Researchers have indicated that body image concerns and physical activity habits developed during pre-adolescence will impact adult lifestyles (Burrows & Copper, 2002; Welch et al., 2007). Hence, encouraging the development of healthy behaviors at an early age, will promote lifelong healthy habits (Kater, Rohwer, & Londre, 2002). Positive body images can lead to satisfaction with ones' image and self. Physical activity can lead to an active lifestyle and appearance, revealing different body sizes to which male and female pre-adolescents are exposed. Therefore as the education provided by CSH schools offers students the tools to make healthy choices; the ongoing benefits of these choices will extend into the students daily lives by including their families, schools, and communities (Lounsbery et al., 2005).

Education on healthy behaviors can be addressed through teachers, community members, parents, and students. All of these people are important in a CSH approach (Kater et al., 2002).

The importance of students is that they can educate one another on healthy behaviors through peer-learning and by working in a lateral relationship (Lounsbery et al., 2005; Nader, 2000; Toppings, 2005). Future research into body image and physical activity in schools can benefit from the input of students on such topics, and may help in the development and implementation of a school health curriculum.

Significance of the Study

Among many significant factors, this research contributes to the growing knowledge on the CSH approach. The CSH approach has been in Canada since the 1990's, yet very little is known about it's implementation, current practices, and future trends (Deschesnes et al., 2003; Leidl, 2005). This research observed the current practices, methods for development, and perspectives of the members involved; therefore, uncovering information on current CSH practices. Additionally, the HPE curriculum, which was implemented in 1998, is also relatively un-researched, as there are two studies to-date that have investigated the body image content in the curriculum (Larkin & Rice, 2005; McVey et al., 2007). This curriculum is not only bridging the gap between current education and the CSH approach, it can also be tailored to the individual needs to each school. Therefore, with such potential why not observe what schools have envisioned? By presenting the overall picture of one school we can gain knowledge on their CSH approach, as well as their HPE curriculum, and the student's physical activity habits and body image perceptions; things that have, to some extent been observed in the past, yet not in this unique school environment.

CHAPTER III

METHODOLOGY

Research Paradigm

A constructivist paradigm was used in this research. This research acknowledged the importance of social interaction in developing learning environments. The constructivist view taken by Pitman and Maxwell (1992) explained that "there is no reality except that created by people as they attempt to make sense of their surroundings" (Pitman & Maxwell, 1992, p.738). This point was expanded by Fosnot and Perry (2005) as they emphasized the importance between the learner and their environment; the interaction is such that they can not be separated, as knowledge is built through the learner's interaction with their surrounding environment.

Learning opportunities are the realities that are created through interactions between the learner and their surrounding environment. In a CSH environment, the interactions with surrounding Health Services, Health Education, and a Healthy Environment create a unique reality for the learner. Based on the interactions with the surrounding world, the learners develop their own ideas, which are usually similar to those of the people in the same environment (Fosnot & Perry, 2005). When the members within the learning community jointly develop their own reality, however big or small, they are then considered to have a "shared meaning" of their culture (Fosnot, 2005). Cultures can be considered small, such as a classroom, or large, such as a country. In this research, the culture represents the scope of the CSH school, with the members of the school having their own "shared meanings" of their culture.

By understanding the schools' construction of knowledge and their "shared meanings" through the interviews and focus groups, this research developed a better understanding of this

unique CSH school and the physical activity habits, and body image perceptions of the seventh grade students.

Research Design

Case Study

This research used a case study design as the CSH environment of one specific school was observed. The case study design allowed the researcher to take an in-depth look at a specific school by developing an understanding of their individual environment, resources, and populations (Deschesnes et al., 2003). This one school provided a unique view on the adoption and maintenance of the CSH approach, through the vice-principal and physical education teachers. The case study also allowed the physical activity habits and body image perceptions of the students to be understood, by collecting detailed information on their experiences and perceptions.

Data Collection

The CSH presents an approach to health education that encompasses the school environment, homes, and communities. The case of one school was presented by developing an understanding of their school environment and by gathering data from three sources within the school (Deschesnes et al., 2003).

School selection

Research conducted on CSH environments revealed that there were currently no schools that had incorporated a Healthy Environment, Health Services and a Health Curriculum, as it was

considered a difficult task to undertake (Lynagh et al., 1997). It was therefore a concern that this research would be overly selective in defining a CSH school as requiring all CSH principles. It was with this result that the selection of a CSH school was based on the adoption of one of the three previously mentioned areas.

The selection of an elementary school was in part based on a sample of the CSH schools in the Ottawa-Carleton District School Board (OCDSB), and on language, as the interviews and focus groups were held in English. Ethical approval was received from the University of Ottawa, and the Ottawa-Carleton District School Board to conduct research in this school (Appendix A)

The chosen school self-identified as a healthy school that implemented CSH principles. The school also identified as being located in a rural part of the City of Ottawa. The school housed 560 students from kindergarten to grade eight. The school had 34 teachers, a principal and vice-principal, and offered both regular and early French immersion programs. Background information on the school permits us to indicate that the majority of students were of Caucasian families, and that the school was not located in a low socioeconomic area, and was therefore not considered an underprivileged or beacon school. The surrounding community was semi rural, and composed of approximately 6000 residents; this area was also part of a larger township with a total population of 17000 inhabitants.

Participants

The members who engaged in a top-down relationship, and in a bottom-up relationship all took part in the study. Originally the top-down member was the principal of the school. However, at the request of the principal the top-down member was changed to the vice-principal

of the school, as she was responsible for the school's health initiatives. The vice-principal was new to the school, as it was her first year at that location. However, she was familiar with many of the school health initiatives, as she had worked with similar initiatives in her previous school. This was her first year as a vice-principal, yet she has an additional 17 years of teaching experience.

Second, the bottom-up members of the school were the two physical educations and grade seven students. Two physical education teachers taught the HPE curriculum to the seventh grade students, and both volunteered to participate in this research. For descriptive purposes the physical education teachers were both given pseudonyms. "Jeff", the male physical education teacher was a full time teacher who had been teaching at the school for 20 years, and had a total of 30 years teaching experience. He had a degree in physical education and French, and instructed both of those subjects to the intermediate (grades 6, 7 & 8) students. "Jane", the female physical education teacher was a part-time teacher in her second year of teaching at the school, and had a total of ten years experience as a teacher. She also had a degree in education with a specialization physical education, and taught HPE for the intermediate students (grades 6, 7 & 8).

The students, the other bottom-up members were all in grade seven. There were three classes of grade seven students at this school; one class was enrolled in the French- immersion program, whereas the other two were English program. There were a total of 54 students in the seventh grade classes, of those, 35 volunteered to participate in this research. There were a total of 16 females and 19 males ranging in age between 12 and 13.

Methods

Individual interviews

By first conducting individual interviews, the interviewee was able to provide an insight into the "shared meanings" that had developed within the school culture (Fosnot, 2005). These meanings allowed the interviewer to develop an understanding of their CSH approach. In agreeing to participate in the individual interviews, the participants were provided with an information and consent form describing the research project (Appendix A). The interviews were semi-structured in nature, which allowed the researcher to maximize the data collected, while having the ability to follow up on specific areas of interest (Breakwell, 2000). The interview guide used for the vice-principal is presented in Appendix B, followed by the interview guide for the physical education teachers, which is presented in Appendix C.

Focus groups

The focus groups were held after the individual interviews so that after having developed an understanding of the "shared meanings" and CSH culture, the researcher had a better understanding of what the student's environment included. The focus group method was chosen for the grade seven students so that they could express their physical activity habits and body image perceptions within a CSH environment. The focus group setting also allowed the students to voice their perceptions and opinions with their peers in a conversational manner. Therefore, this technique provided the researcher with the opportunity to ask specific questions regarding the body image perceptions and physical activity habits of the participants. Such a process may have influenced the students as they gained a "construction of knowledge" from the environment

created (Fosnot & Perry, 2005, p. 34). This development was also called sense-making, and was produced in collaboration with the other members of the group (Wilkinson, 2004). This sense-making was seen as an advantage of focus group research, where the individual was present, and observed this construction of knowledge through discussion, expression and in some instances debate (Wilkinson). Topics on health, physical activity and body image perceptions were presented through a series of questions (Appendix D).

The students received an information and consent form to be approved by their parent or guardian, upon which point they were eligible to participate in the study (Appendix A). The information sent to the parent or guardian explained that 1) the purpose of the research was to better understand the physical activity habits and body images perceptions of students in a school adopting a CSH approach, and 2) that their child could volunteer in a focus group session discussing their views on health, physical activity and body image perceptions. A total of 35 students volunteered to participate allowing for five focus groups with approximately seven to eight students per group. The focus group interviews were held during the regular class period, and lasted approximately forty-five minutes each. The small size permitted each participant to have enough time to adequately express himself or herself. The smaller group was a workable size for the facilitator, as pre-adolescent students required more individual attention (Greenbaum, 2000).

The male and female focus groups were held separately for several reasons. First, the same sex focus groups took into consideration the comfort factor when discussing body image perceptions with members of the opposite sex. The concern was that mixed gender groups would not be willing to speak and may not give accurate representations with members of the opposite sex present (Greenbaum, 2000). There was also the consideration for the attention span

of participants of this age, as switching between male and female perceptions may have been too time consuming, which could cause feelings of boredom and disinterest for participants who were not included (Greenbaum).

Collins Body Image Scale

The Collins (1991) Body Image Scale was distributed to the participants during the focus group session. This scale was chosen due to its wide use with pre-adolescent body image perceptions (Gardner, 2002). The scale consisted of seven figure drawings, representing the ectomorph ideal in females (Appendix E) and males (Appendix F), and became progressively larger until demonstrating the endomorph ideal for each gender. This scale was widely used for both genders as it represents a range of images from obese to thin; similar to the images represented in society (Paxlon, Valois, & Drane, 2004). The Collins scale was particularly useful to males, as it demonstrated a comparable male figure, whereas other scales, to the best of my knowledge, depicted an adult male figure, to which pre-adolescents could not compare, due to the difference in form and development (Cohane & Pope, 2001; Gardner). Many other scales reviewed represented a youthful adult look, which, although it was youthful, did not represent a pre-adolescent figure (Cohane & Pope). As such, the pre-adolescents were not able to identify with such models, and adequate representations were not given on the pre-adolescents ideal size. The body image scale developed by Collins (1991) asked participants to respond to five questions regarding their body image. However, for the purpose of this research, the last three questions were combined into one question. The reason for this change was due to the purpose of the study, which was not to collect the perception of the participants projected image as an adult. Therefore, the image that "their friends perceive them as" was more targeted to this

research, as it represented the sociocultural influence of peer perception (Cash & Pruzinsky, 2002). With that change in questions the presentation of the scale was as follows: First, the participant was instructed to choose the figure that closely resembled their current body image; secondly, they were asked to indicate their ideal body, and thirdly the image that they believe their friends think they look like.

Weekly Physical Activity Sheet

The weekly physical activity sheet was presented to participants during the focus group session; the sheet was developed by the researchers to allow students to indicate their weekly physical activity participation (Appendix G). Students were asked, by the researcher, to "think of a regular week of activity, perhaps a regular week was last week, and we will go through the days of the week and write all the physical activities you did". The sheet was completed by each participant allowing students to record and visually layout their weekly physical activities. The sheet consisted of columns for each day of the week, and was separated into rows for morning, lunch, afternoon, and outside of school / evening physical activities.

Data Analysis

All interviews and focus group sessions were audio recorded, allowing the researcher to review the session, to transcribe verbatim, and to input the data into Nvivo7 software. The Nvivo7 software was used to facilitate organizing and coding of interview and focus group data into various emerging themes. Nvivo was also used to design figures which enhanced the description of the school health initiatives as well as the female and male students' perceptions

on body image, physical activity, and health. These figures are included in the results section of this thesis.

Results from the Collins (1991) Body Image Scale were analyzed using the scoring system developed by the publisher, where the number associated with the desired image of each participant was subtracted from the number associated with their current image. Therefore, the remainder indicated their level of satisfaction with their current image. Similarly, the number associated with the current image of each participant can also be subtracted from the number associated with their peer-perceived image. The remainder indicating the discrepancy between how they believe their peers perceive them, and how they perceive themselves (Collins).

The weekly physical activity sheets were analyzed individually, allowing each participant's activities to be recorded. Activities were classified based on the descriptions given by the participant. For example, the participant who discussed their cross-country skiing activities said that they did it as a leisurely activity with their friends, therefore excluding the categories of individual, team or fitness. Each activity was classified with the same system. The majority of the participants elaborated on their physical activities, allowing such a classification system to be used. However, there were some participants who did not elaborate on their activities, which resulted in these activities being classified into similar categories as the other participants. An example of this was the weight lifting activities. Several participants indicated that they participated in weight lifting for fitness. However, there was one participant who did not elaborate on his / her reasons for weight lifting; therefore, this participant's weight lifting activity was classified into the fitness category, similar to his peers.

Methodological Issues

Trustworthiness

The trustworthiness of the study was increased through credibility, member checking, inter-rater reliability and triangulation of participants and methods. The credibility of this research was ensured by collecting data from knowledgeable participants. The members of the school were knowledgeable with regards to their unique CSH environment. The participants occupied three different roles within the CSH, and within the school, therefore providing different and overlapping perspectives of the CSH environment (Rubin & Rubin, 2005). Through member checking, the interviewees were given the opportunity to review the information they provided and were given the opportunity to comment on or clarify any statements (Miles & Huberman, 1994). There was also inter-rater reliability of the codes among the research team to verify the emergence of themes and concepts (Graziano & Raulin, 2004). Further credibility of this research was demonstrated through the triangulation of both the participants and methods. The triangulation of methods included individual interviews, focus groups, and the use of the Collins (1991) Body Image Scale and the Weekly Physical Activity sheet.

Advantages and Limitations

This research used a case study design, and as such described one school environment. The advantage of this richness of data collection was that in-depth information was gathered from the vice-principal, physical education teachers, and students in a CSH environment. However, this data was not transferable to any other study, as it was in fact a case study, and addressed specific concerns and topics relevant to one school.

As with any study there are limitations, such limitations include the experimenter effects, as the participants many have responded or acted differently as a result of the experimenter's presence, perhaps their clothing or the way the spoke (Breakwell, 2000). Further limitations include the Hawthorne effect, where the participants may have changed their behavior as a result of being studied, or perhaps to try and be helpful to the researcher (Marczyk, De Matteo, & Festinger, 2005). Further limits include the accuracy of the information collected, which can be minimized through member checking. A consideration with pre-adolescents was the acquiescence response bias, where pre-adolescents respond favorably regardless of the question (Breakwell, 2000). This was addressed at the beginning of the focus group session by stating that there were no right or wrong answers, and that all perceptions and opinions were of interest. Finally, the timing of the assessment, which maybe particularly important for the physical activity re-call, as the data was collected during the winter months, and my therefore be subject to seasonal variations (Marczyk, De Matteo, & Festinger). Despite the limitations indicated, the data collection method permitted the researcher to have an in-depth look at the school, so as to develop a better understanding of the case of one CSH school (Lindlof & Taylor, 2002).

CHAPTER IV

RESULTS

The results chapter is separated into two sections, the Portrait of School Health Initiatives, and the Students' Perspectives. The Portrait of School Health Initiatives section is outlined with a figure, which is explained through the four subsections of Ontario Ministry of Education, Ottawa Public Health, Ontario Ministry of Health Promotion, and Community Involvement. The Students' Perspectives section includes student health perceptions, their physical activity habits with the use of the Weekly Physical Activity sheet, and the body image perceptions of the male and female students, with the aid of the Collins (1991) Body Image Scale. There are figures in each of the male and female sections, these figures are derived from the focus group discussion with the male and females students.

Portrait of School Health Initiatives

The health initiatives implemented at the school were formed through four main partners: the Ontario Ministry of Education, Ottawa Public Health, the Ontario Ministry of Health Promotion, and Community Involvement. Each partner had a unique contribution to the school environment by providing specific resources and opportunities for the school community. The elaboration of each partner's initiatives is done in the subsequent sections. Figure 1 represents an overall view of the School health initiatives, as described by the vice-principle, physical education teachers and students.

Ontario Ministry of Education

The Ontario Ministry of Education (OME) is the governing body for education in Ontarian Schools. The OME provides the school with their curriculum, as well as professional development sessions for teachers. Of specific interest to this research are the new Health and Physical Education (HPE) curriculum, and the twenty minutes of Daily Physical Activity (DPA). In 1998, the OME reformed the Physical Education curriculum to include a health component, now calling it Health and Physical Education (HPE). The new curriculum includes HPE three times per week for forty minutes each session, and focuses on the strands of Healthy Living, Fundamental Movement Skills, and Active Participation. Each strand is composed of specific components and expectations. This research inquired about the Healthy Living strand, which focused on body image and self-esteem, as well as the Active Participation strand as it focused on physical activity and participation.

The intermediate teachers complemented their Healthy Living stand by adding a program called Girl's Circle and Boy's Square. The program was not part of the OME; it was brought in by the intermediate teachers, and facilitated by volunteers. The Girl's Circle program was a healthy choices and relationships program originally developed for females. After the success of the Girl's Circle program the teachers adapted it for use with males. The program was then re-titled Girl's Circle and Boy's Square. Facilitated by an adult volunteer, the program encouraged sharing and discussion among participants, while educating students on the similar components as the healthy living strand. The volunteers were part time teachers, members of the community, parents, and Ottawa Public Health staff. Each student was given the opportunity to participate in discussions with their peers. The group composition for the sessions was based on teacher selection, allowing students the opportunity to benefit from additional sessions on a specific

topic if necessary. The student reaction to this program was positive, as Jane, the female physical education teacher, commented on the fact that she believed it to be a "tremendous addition to the programming".

The Active Participation component was considered to be the "physical education" portion of the HPE curriculum. The specific expectations for grade 7 students were to participate vigorously in all aspects of the program. This included non-competitive activities such as Tai-chi and the more competitive activities such as basketball.

The second change in activity by the OME was the inclusion of a twenty-minute Daily Physical Activity (DPA) component. The DPA component was added in 2005, and has permitted school to engage in a variety of activities with the purpose of increasing the heart rate of students for at least twenty minutes a day. DPA was scheduled for days when the students did not have their regular HPE classes; which for this school was two days per week. The school did allow teachers some freedom with regards to DPA, students in one focus group noted that they engaged in DPA twice a week for 20 minutes each time, whereas students in another focus group indicated that it was once a week for 40 minutes. Activities the students engaged in ranged from chair aerobics, to classroom volleyball, to going outside.

Ottawa Public Health

Ottawa Public Health (OPH) is a division of the City of Ottawa that offers health information and services to Ottawa residents. Their connection with this school is through the School Aged Health Program, which allows teachers in the Ottawa-Carleton area to contact trained health professionals for a variety of support services. The school also became a part of the Healthy Schools Pilot Project, another initiative of the School Aged Health Program. The

School Aged Health Program offered pedagogical support for schools. Their support was on a need-only basis where teachers contacted health professionals at OPH to request information or curriculum support. Specific requests included hand washing information, sexuality information, and Planned Parenthood resources.

The Healthy Schools Pilot Project was a nutrition and physical activity initiative for schools. The school was one of five pilot schools in the Ottawa-Carleton area, and as such received the additional support of a public health nurse. The nurse guided the school personnel by advocating for the formation of a health committee and allowing the committee to layout their desired health initiatives. Based on committee initiatives the nurse was able to provide the proper resources and tools for teachers. Specific requests included playground stencils, hand washing information, and facilitation of certain sessions of the Girl's Circle and Boy's Square program.

Ontario Ministry of Health Promotion

The Ontario Ministry of Health Promotion (OMHP) is a part of the Ontario government that provides Ontarians with information and resources about health promotion, education and health services. Their connection to the school was through a project called Active 2010, which encourages Ontarians to increase their level of physical activity. The Active 2010 project has a Communities in Action fund which offers grants to communities and specific organizations, or in this case, schools to promote physical activity and healthy eating. The five pilot schools involved in the OPH Healthy Schools Program jointly applied for the grant and subsequently received funding. The program allowed the recipients the freedom to choose their specific health initiatives, with the guidelines of promoting physical activity and healthy eating for Ontarians.

The school had used grant money for outdoor sports equipment for recess, and lunch time yoga sessions for their students.

Community Involvement

The community involvement at the school served two main purposes; one was for volunteers to start new ideas and initiatives within the school. The second was to become a part of an ongoing activity, or to allow the school to expand upon the activities and initiatives they offered. Many of the volunteers were parents, community groups and local people who offered their time. Volunteers at the school introduced ultimate frisbee, curling and cross country skiing activities. Further support by volunteers made the lunchtime yoga sessions possible, as it was a parent who made the initial contact. Volunteers for ongoing activities joined the Girl's Circle program and allowed it to become the Girl's Circle and Boy's Square. The program was initially run for females and facilitated by volunteers. After the success of the female's program more volunteers made it possible to incorporate a male's program. The program was run as part of the HPE curriculum, and as such was administered to all students by volunteers. The facilitator had specific lesson plans covering health related topics, one of which was body image. Therefore the facilitation of the body image component of the HPE course was through the Girl's Circle and Boy's Square facilitators and not the regular HPE teacher.

School Personnel's Perspective

Each top-down and bottom-up relationship provided the school with a unique opportunity. This section outlines some of the unique work that members of the school engaged in, as well as ideas they include in their programming.

The vice-principal discussed her role in the health initiatives at the school by focusing on areas the school has excelled, yet noted areas for future endeavors. The vice-principal worked as a liaison between Ottawa Public Health (OPH) Healthy Schools Program and the teachers of the school. The vice-principal was also on the health committee that began with the OPH Healthy School Pilot Project. Distributing the Communities in Action grant money was also a responsibility of the vice-principal. There were numerous mentions of the support that the school received from the community. The vice-principal commented on how the school "is very much run by the community" and how there are lots of "people who drop by and offer their time".

When discussing initiatives at the school, the vice-principal explained "the balanced school day initiative" and how it allowed the school to "change to two 40 minute breaks, with 20 minutes of eating during each. This change would allow the school to "promote a healthy snack and a healthy lunch". The healthy eating initiatives were of specific importance as healthy eating is "something we are working on" at the school. This change to the balanced school day was seen as an opportunity to promote more healthy eating initiatives. The balanced school day was something that the vice-principal had experienced in another Ottawa-Carleton school, and it had worked well. Their balanced school day initiative was scheduled to begin in the 2007 – 2008 school year. With regards to current healthy eating practices, Jane spoke about the school providing alternatives to soft drinks by "offering 100% fruit juice at school dances", and not allowing the students to buy junk food on school trips. Other healthy eating practices were specific to each class, with the physical education teachers "walking around and talking to the students, seeing who has whole wheat bread. Just trying to pull it in".

A future healthy eating project discussed was the "Fresh Fruit Friday's". Jeff, the male physical education teacher, commented on how this would improve the healthy eating initiatives at the school. Similar to the balanced school day, the Fresh Fruit Friday's initiative was also scheduled to begin during the 2007 – 2008 school year.

The physical education teachers commented on the physical activities in the new HPE curriculum. Overall the HPE curriculum was considered easy to implement as Jeff noted that it was "designed not simply for competition, the students are participating for the sake of participating". As discussed by both physical education teachers, the inclusion of non-competitive activities allowed the students to have a different perspective on physical activity. For students who did not excel in physical activity, these non-competitive activities like tai-chi were "a hook to get them into other activities". Jeff also noted the importance of interest when choosing activities, as he stated "if you find one thing that they really enjoy, it really changes their attitude." The students who "usually don't like sports in general, they really like this. And because they have latched onto this, now I am seeing them participating in basketball, and volleyball", activities they had previously declined.

Daily Physical Activity (DPA) was a significant part of the school curriculum, as Jane explained that the schedule had been redone "for the intermediates so that we could get the kids having daily physical activity". DPA was praised by the teachers as they saw it as a way of "getting students motivated and out of the chair" and "getting their heart rate going". Although DPA wasn't necessarily a daily occurrence, teachers did have long term plans for the program. An example of this was the inclusion of a fifteen-minute peer-teaching session for DPA. The session was in the planning-stages for the 2007 – 2008 school year. Although there were improvements planned to the DPA initiative, Jane did note that there were times when DPA was

compromised "because sometimes you have to shift, I mean, if they didn't get enough science that week, you have to".

A concluding question for the physical education teachers inquired about any specific messages they wanted to pass on to the students. Important information for Jane was "keeping yourself involved in all kinds of things, like sports, music, and reading" so that the student could stay in tune with all kinds of learning and development. Jeff's message included having a positive attitude, because "all you have is now, that is all you will ever have, make the best of it now, don't waste your time". Finally both teachers commented on the significance of "being a model, it makes a difference. I think that it is important as teachers that we model what we are eating and doing".

Students' Perspective

The following sections will highlight the results from the focus group discussions with the male and female participants. Due to the differences in body image and health perceptions, as well as physical activity habits the results have been separated into sections based on gender. There are figures in each of the male and female sections, these figures are derived from the focus group discussion with the male and females students.

The general consensus of both focus groups was that eating healthy foods was an important contributor to a healthy state. As one female stated, "you have to eat well, you are not healthy if you are eating junk food all the time" (Group 1). Many females commented on small specific things that you can do to become healthy. Females in the first group talked about food by focusing on "having healthy snacks" and having a salad before a meal. Further discussions of the importance of food by the second group focused on food consumption, as one female stated that "you have to eat, you can not be anorexic or bulimic or anything, you have to be healthy" (Group 2).

Both groups of females expressed the importance of "staying healthy and fit" by means of physical activity (Group 1). There was also the fact that you can "live longer and be healthy" when you are physically active (Group 2). The second group also focused on small changes such as "twenty minutes of activity at least three times per week", because "by just exercising daily, you are maintaining good health". Several females, in both groups, mentioned the benefits of taking yoga classes, similar to the one offered during their lunch hour.

Comments on the self included "loving yourself" (Group 1) and "being positive" (Group 2). Having a positive outlook was also considered highly important for both groups of females to becoming healthy as on female stated that "you have to love yourself too" (Group 2). The first group elaborated on positive relationships with family members and friends, as they were said to be important to maintain health.

Female Physical Activity Patterns

The completion of a weekly physical activity sheet allowed the females to indicate their weekly physical activity habits. Based on the description provided by the participant, activities

were grouped into team sports, individual, outdoor, and fitness activities (see Table 1). Seasonal variations in physical activity levels must be taken into consideration when reviewing the weekly physical activity sheet results. This due to the fact that the data for this research was collected during the winter month of March, and therefore reflects the students winter activities. The females engaged in a total of 23 different activities; for a full list of activities please see Appendix H. In calculating the total number of times that females participated in each activity, the overall frequency of activities favored individual activities. The weekly frequency of individual activity attendance was 40 times per week. Second and third most frequent activities were outdoor and team sports with 32 and 14 weekly participations respectively. Finally fitness activities were the least frequent with only 13 weekly participations.

The daily distribution of activities for females demonstrated that 15 of the 16 participants were active on a weekly basis. Most participants engaged in a large amount of regular activities, with seven females participating between eight and 11 times per week. There were five females who participated between four and seven times per week, and there were a remaining four participants who participated three or less times per week.

During the week, the females' physical activity included in-school and out-of- school activities. Physical activities in-school were mainly during gym class, as the females had "gym Monday, Wednesday and Friday afternoons for forty minutes" (Group 1). The other form of in school physical activity that females noted was Daily Physical Activity (DPA). The DPA classes were different for each group, as the first group had DPA twice a week for 20 minutes, and the second group had it once a week for 40 minutes. Although they did not have the same DPA class, both groups commented on enjoying it and considering it to be an additional gym class. Concerns raised by both groups about DPA were that when students fell behind in a specific

subject, they often made up for it by compromising their DPA class. Although it was not on a regular schedule, DPA classes were enjoyed by the females, with most feeling "energized" (Group 1) or "looking forward to going outside" (Group 2). Females also participated in activities outside of school hours; dance, figure skating lessons, and going outdoors were among the activities listed.

Table 1

Frequency of Female Weekly Physical Activity Participation

	Activity				Individual Participant		
Participant	Team Sport	Individual Activity	Outdoor Activity	Fitness Activity	Total W	Total O	Total
1.1		O1, W2			W = 2	O = 1	3
1.2							
1.3		O4, W1		O1	W = 1	O = 5	6
1.4	O1, W4	O1	O1, W1		W = 5	O = 3	8
1.5	O3, W2				W = 2	O = 3	5
1.6		O1				O = 1	1
1.7	W1		O1, W2		W = 3	O = 1	4
1.8		O1	O1, W3		W = 3	O = 2	5
2.1		O3, W3	O3, W2		W = 5	O = 6	11
2.2	O1, W3	O5, W2	O1		W = 5	O = 5	10
2.3			W2	O5, W2	W = 4	O = 5	9
2.4			W1		W = 1		1
2.5			O2, W3	O3, W1	W = 4	O = 5	9
2.6		O6, W2	O1, W1		W = 3	O = 7	10
2.7		O5, W3		O1	W = 3	O = 6	9
2.8			O5,W2		W = 2	O = 5	7
Total W	W = 10	W = 13	W = 17	W = 3	W = 36	O = 55	91
Total 0	O = 4	O = 27	O = 15	O = 10			
Total	14	40	32	13			

O = Out-of School Activities; W = Weekend Activities.

Weekend activities were mainly individual or outdoor activities. The females participated in a series of activities with their parents and friends. Overall the females' discourse and weekly physical activity sheet results indicated that they participated in more activities during the weekday (Out-of School), than during the weekend. Out-of school activities and weekend activities were mainly individual, such as dance, skating, and swimming. Both weekend

and weekday activities were practiced with friends and family. Parents were often cited as being the reason that several females decided to try new activities, as one female noted that "I started squash because my mom was doing it" (Group 1). Another instance of parental influence was a female's father who coached soccer, and encouraged her to join (Group 2).

Female Body Image Perceptions

The female participants indicated their perceived body images both during their discussion and when they completed the Collins (1991) Body Image Scale. Females in both focus groups, noted a variety of general likes, which included looking healthy by having muscles, long legs, clean hair, and long fingernails. There were also comments about personal comfort, as one female stated that "it is just if you are comfortable with yourself", acknowledging the perception of self (Group 1). During the second focus group the females commented on body size, as two females noted that they would not like to be obese, with a third commenting on "not being like really, really, really, really skinny, but not obese like not too big". The general consensus was being "in the middle".

Females also voiced a variety of general dislikes, which included applying too much makeup (Group 1), and having big feet (Group 2). One participant commented on a recent television show documenting childhood obesity, which the students used to expand into a discussion on food consumption and parental responsibility (Group 1). The group then discussed this issue, with participants commenting on the fact that "some parents don't realize by being overweight you can really put yourself in danger" (Group 1). The general consensus was that parents have a responsibility to manage or moderate the diet of their child, as poor choices can lead children to develop unhealthy eating habits, and to become obese.

After discussing general likes and dislikes, the females in both groups commented on what, if anything they would like to change about themselves. Comments emerged from both groups on wanting to be taller, and having smaller or larger feet. Overall there very were few comments on wanting to change, as one participant even said that "I don't want to change" (Group 1).

When discussing other people in their surroundings who had changed their look, both groups of females talked about their mothers. Mothers changed their looks by exercising and in one case by dieting. First, mothers' exercises ranged from walking and jogging to marathon running. The second means of changing their look was by food consumption. One female noted that her mother "put the whole family on a diet" that did not include sugar" (Group 2). The females voiced their approval for their mothers' activities, one female commented on the activities as making her mom "feel refreshed" (Group 1).

Female Body Image Scale

The females responded to three questions on the Collins (1991) Body Image scale. The participants indicated their perceived self-image, their ideal image, and their peer-perceived image based on the pictorial scale provided. For a visual representation of the Collins (1991) Body image scale please refer to Appendix E.

Overall, the females had low body dissatisfaction. When indicating their current image, participant's average score was represented by image 3.2, and their ideal image was represented by image 3.1. Thus, only 0.1 images smaller than their current size. For a full list of individual responses please refer to Table 2. Further, when asked to indicate their peer-perceived image, the

average image was of 3.1, again, only 0.1 of an image smaller, and the same as their peer perceived image.

The range of responses for the current image was of two images, and for the ideal image it was of 1.5 images. Therefore, the females did represent a generally homogenous group, and, with the exception of one participant, desired changes that were not considered moderate. Additionally, the standard deviations for each question were close in number. For a full list of standard deviations please see Table 2.

Table 2

Female Body Image Scale Results

	Q # 1	Q # 2	Q#2 - Q#1		Q # 1	Q # 3	Q#3 - Q#1
Participant	Self	Ideal	Ideal – Self	Participant	Self	Peers	Peers - Self
1.1	2	3	1	1.1	2	1	-1
1.2	4	4	0	1.2	4	4	0
1.3	4	3	-1	1.3	4	3.5	-0.5
1.4	3.5	3.5	0	1.4	3.5	3.5	0
1.5	2	2.5	0.5	1.5	2	3	1
1.6	2	2.5	0.5	1.6	2	2	0
1.7	3.25	2.85	-0.4	1.7	3.25	3.7	0.5
1.8	3.5	3.75	0.25	1.8	3.5	3.5	0
2.1	3.5	3	-0.5	2.1	3.5	3	-0.5
2.2	4	3	-1	2.2	4	4	0
2.3	3.5	3.5	0	2.3	3.5	3.5	0
2.4	2.5	2.5	0	2.4	2.5	2	-0.5
2.5	3.5	3	-0.5	2.5	3.5	3.5	0
2.6	3.5	3.5	0	2.6	3.5	3	-0.5
2.7	3	3	0	2.7	3	2.5	-0.5
2.8	3.5	3	-0.5	2.8	3.5	4	0.5

Female Body Image Calculations			
	Self	Ideal	Peer-Perceived
Mean	3.2	3	3.1
Range	2.5 – 4.0	2.5 - 4.0	1.0 – 4.0
Std. dev.	0.7	0.4	0.8

As the scoring for the scale indicates that desired changes of more than one image are considered moderate changes, it is encouraging to indicate that only one participant desired a change of one image. The participant indicated a change of more than one image for both the self and peer-perception questions. Contrary to popular literature, the participant desired to be larger than her current image, and believed that her peers perceived her as quite small (McCabe, Ricciardelli, 2003, 2005). Overall, of the 16 females, six desired to remain unchanged, six desired to be smaller, and the remaining four desired to be larger. Although 10 of the 16 females desired to change, all but one of the participants desired changes that were so small in nature that they were not even considered moderate. Similarly, of the 16 females, seven believed that their peers perceived them as the same; six believe the peer perceived them to be smaller, and the remaining three believed the peer perceived them to be larger than their current image.

Males Perceptions

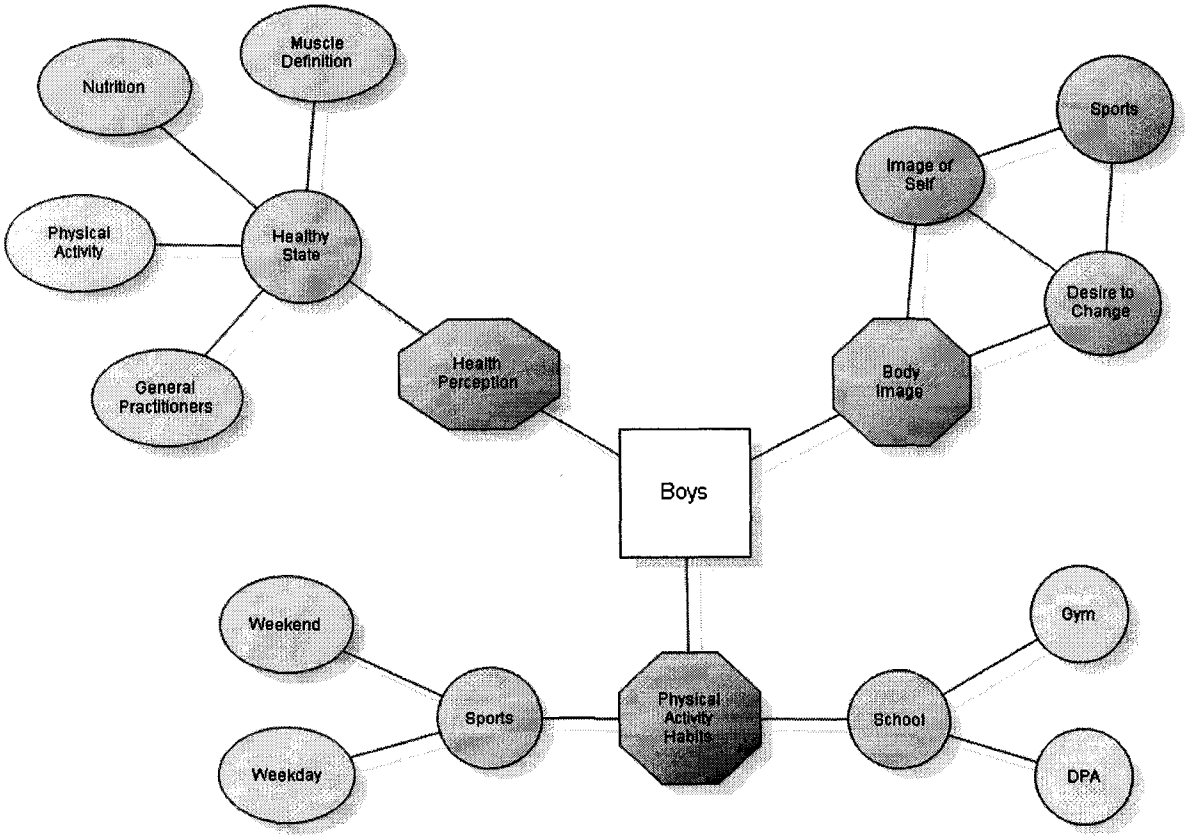

Figure 3. Male perceptions of body image, health, and physical activity habits

The male participants expressed the factors they felt important in their perceptions of health, their perceptions of their body image, and their physical activity habits. As Figure three is a representation of this overall perspective, the following sections will explain in detail how each factor contributed to their overall healthy state.

Male Health Perceptions

Males were asked their perception of health, specifically what it meant to be healthy, and what one could do to become or maintain a healthy state. When discussing health, all three

groups focused on physical activity and nutrition, with two groups making additional references to the importance of "being yourself", healthy organs, and muscles (Group 1, & 3).

All of the male students recognized the importance of food quality. Most males agreed that "eating the foods that are right for what your body needs" (Group 2), and "trying not to eat unhealthy food, like junk food and pop drinks" (Group 3). The males expressed the importance they placed on physical activity because "twenty minutes of vigorous physical activity at least three times per week," (Group 1) was considered to be a weekly minimum. The males recognized further benefits of "participating in daily physical activities" were "being fit and in shape" (Group 2).

All groups made healthy comments related to self-perceptions by not "always being conscious about your weight, like always trying to stay the exact same weight" (Group 1). Which included the fact that staying the same weight "doesn't really work because some people are more muscular, and muscle weighs more than fat" (Group 2). One participant in the third group gave a more specific comment about not being "overweight, and not being too skinny, because you don't want to be anorexic" (Group 3).

Muscles were also important to male students in each group; a flat abdomen, strong legs, and "defined arms, not like really big muscles, but like not fat saggy arms" (Group 3) were considered general areas of the body that could indicate a person's health. The males also noted that if someone had healthy muscles, they were more likely to have healthy organs such as heart and lungs (Group 3). General health practitioners were also valued as "going to the doctor every year, and dentist every six months" (Group 3) were key in maintaining a healthy lifestyle.

Male Physical Activity Patterns

Physical activities were a major part of the discussion, from team activities to in-school activities; the males participated on a daily basis and were quite enthusiastic about sharing their thoughts. The completion of a weekly physical activity sheet allowed each student to layout his activities over the period of a week. The overall perception of physical activity participation was varied, with some students stating that they were very active, while others thought that they could be more active. Seasonal variations in physical activity levels must be taken into consideration when reviewing the weekly physical activity sheet results. This due to the fact that the data for this research was collected during the winter month of March, and therefore reflects the students winter activities.

Males participated in a total of 25 different types of physical activities outside of school hours. Based on the description provided by the participant, activities were grouped into team sports, individual, outdoor, and fitness activities (see Table 3). For a full list of student activities please see Appendix I. In calculating the total number of times that males participated in each activity, the overall frequency of activities favored fitness activities. The weekly frequency of fitness activity participation was 38 times per week. Second and third most frequent activities were outdoor and team sports with 34 and 32 weekly participations respectively. Finally individual activities were the least frequent with only 17 weekly participations.

The daily distribution of activities for males demonstrated that all 19 participants were active on a weekly basis. Most participants engaged in a large amount of regular activities, with seven males participating between eight and fifteen times per week. There were six males who participated between four and seven times per week, and there were a remaining six participants who participated three or less times per week.

activities during the gym classes ranged from "basketball, and volleyball to sit-ups, push-ups, laps and tai-chi" (Group 3). The males considered these activities to contribute to "a good gym class that is actually helping us get fit" (Group 1).

Students were just as enthusiastic about DPA as they were about gym, however gym classes were regularly scheduled, the DPA class was not necessarily so structured. Students in all three groups explained how they began doing DPA for twenty minutes on Tuesdays and Thursdays at the beginning of the school year, yet said, "after Christmas we kind of haven't had it" (Group 3). The students noted that DPA was on a variable schedule, as sometimes it could be exchanged with their science class (Group 2).

Further physical activity periods at school were recess and tryouts. Recess was a common physical activity period at school, as the students had a total of ninety-five minutes of recess during the school day. Students spent the least amount of time in tryouts, as they only occurred a few times per year.

Male Body Image Perceptions

The males commented on their perceived body image during the discussion and as they completed the Collins (1991) Body Image Scale. The males also commented on the body images of the people in their surroundings.

When commenting on people in their surroundings, all three groups of males focused their interest on muscles, muscularity and size. Muscle definition was important for the presentation of body parts such as abdominal muscles, and shoulders. Muscularity and larger sizes demonstrated increased physical abilities, another characteristic that was considered important to these males. Comments on what the males did not like allowed them to expand

their opinions on muscularity and muscular definition, by stating that "I don't really like big muscles, they are kind of freaky" (Groups 1), further support for the lean muscular look was expressed by another participant who talked about arms, and not having "fat saggy arms, but not having to be really muscular" (Group 3). Comments from all three focus groups showed a general contentment with foot size and height. When discussing what they did not like about themselves, only a select few participants in Group's two and three commented on their height, and the fact that they would like to be taller.

The variety of general likes and dislikes lead to comments regarding their perceived image. Among the variety of individual responses, all males commented on their interest in the definition of their muscles. Muscular legs and abdominal muscles were important to the males, with all groups agreeing that increasing these muscles would be beneficial to their sport activities. Shoulders and arms were the second most popular area to increase muscle mass. Most males wanted defined shoulders, and with that came the muscular arms. The reasons for muscular definition in the arms and shoulders were mainly related to sports, with a select few for general abilities such as carrying wood (Group 3). The increased fitness comments were again for sport or group activity purposes. Hockey skills and endurance were important to many of the participants, as one male noted that "if my cardio was better I could probably play (hockey) at a higher level" (Group 3). Finally there individual responses given by members in each focus group that included increasing cardio, less freckles and lower cheekbones.

Participants shared stories on the many ways people close to them changed their image. As indicated, mothers were the most influential person in modeling body image changes, and the most popular means for mothers to change their image was by exercising. Exercises that

mothers' engaged in on a regular basis ranged from Pilates to kickboxing. There were also many friends who exercised regularly to change their look.

Students raised stories about other students in their school who did not eat, who over exercised, or who did a combination of the two. As the groups of males were all from the same class, and knew many of the same people, there were several participants commenting on the same stories. The importance of these stories and the impact they left on the students were expressed through the students' discourse, as well as through their portrayal of the people around them. One participant began a story about a male who "liked to exercise a lot but wouldn't eat that much.... And then he ended up in the hospital. You could see his ribs, it was really dangerous" (Group 3). Another story shared by group two was about someone who "stopped eating all this stuff, and just ate salads.... He lost like twenty five pounds, it was really scary". There was another story of a female who "wasn't eating anything, she was always complaining that she was hungry" (Group 1).

When asked their opinion on all the changes their parents, friends, and acquaintances attempted, the participants provided a variety of responses. Male participants in each group agreed that it was great that their mothers exercised, as one male stated, "my mom does it and it makes me want to get up and do it" (Group 2). Another male indicated that friends and parents engaging in activities "kind of inspire us" (Group 3). However, on the topic of not eating and over exercising, the males expressed comments of disapproval by saying that "eating is not a crime" (Group 3), and explaining that "there are a lot of people that try to starve themselves to look skinnier" (Group 1). Further comments on health risks were that "trying to stop eating is not going to help you, you are not going to be healthy" and "If you are at a healthy weight you should keep doing what you are doing it is obviously good for you" (Group 3).

Male Body Image Scale

The males responded to three questions on the Collins (1991) Body Image scale. The participants indicated their perceived self-image, their ideal image, and their peer-perceived image based on the pictorial scale provided. For a visual representation of the Collins (1991) Body image scale please refer to Appendix F.

Overall, the males had low body dissatisfaction. When indicating their current image, participant's average score was represented by image 3.6. And their ideal image was represented by image 3.7, only 0.1 images larger than their current size. Further, when asked to indicate their peer-perceived image, the average image was of 3.7, identical to the ideal image. For a full list of individual responses please refer to Table 4.

The range of responses for the current image was of 3 images, and for the ideal image it was of 1.5 images. Therefore, there were slight differences in the images of the male group, and there were some indications of desired changes within the male group that were moderate. Additionally, the standard deviations for each question were close in number. For a full list of standard deviations please see Table 4.

As the scoring for the scale indicates that desired changes of more than one image are considered moderate changes, it is encouraging to indicate that only five participants desired a change of one image.

Overall, of the 19 males, eight desired to be larger, six desired remain unchanged and five desired to smaller. It should be noted that for the peer perception question only 18 males responded, therefore there is no calculation for the peer perception of this participant. Overall the males were satisfied with the way they believe their peers perceived them, there were ten males

who indicated similar self and peer perceptions, with the remaining eight participants evenly distributed between a peer perception of slightly smaller and slightly larger image.

Table 4

Male Body Image Scale Results

	Q # 1	Q # 2	Q#2 - Q#1		Q # 1	Q # 3	Q#3 - Q#1
Participant	Self	Ideal	Ideal – Self	Participant	Self	Peers	Peers - Self
1.1	4.5	3.5	-1	1.1	4.5	4	-0.5
1.2	3	3.5	0.5	1.2	3	3	0
1.3	3.5	3.5	0	1.3	3.5	3.5	0
1.4	5.5	4	-1.5	1.4	5.5	6.5	1
1.5	3.5	3.5	0	1.5	3.5	3.5	0
1.6	3	4	1	1.6	3	3	0
1.7	4	4.5	0.5	1.7	4	5	1
2.1	3.3	3	-0.3	2.1	3.3	3.4	0.1
2.2	4	4.5	0.5	2.2	4	3	-1
2.3	3.5	4	0.5	2.3	3.5	3	-0.5
2.4	2.5	4	1.5	2.4	2.5	2.5	0
2.5	4.5	4.5	0	2.5	4.5	4	-0.5
2.6	3	3	0	2.6	3	3.5	0.5
2.7	2.5	3	0.5	2.7	n/a	No answer	n/a
3.1	4	4	0	3.1	4	4	0
3.2	3.5	3.5	0	3.2	3.5	3.5	0
3.3	3.5	4	0.5	3.3	3.5	3.5	0
3.4	3.5	3	-0.5	3.4	3.5	3.5	0
3.5	4.5	4	-0.5	3.5	4.5	4.5	0

Male Body Image Calculations			
	Self	Ideal	Peer-Perceived
Mean	3.6	3.7	3.7
Range	2.5 - 5.5	3.0 - 4.5	2.5 - 6.5
Std. dev.	0.8	0.5	0.9

CHAPTER IV

DISCUSSION

Comprehensive School Health Approach

World organizations, Canadian organizations, and researchers have agreed that school health has three components: a Health Curriculum, a Healthy Environment, and Health Services (Lynagh, et al., 1997; Safe Healthy Schools; World Health Organization 1997). The school in this study clearly has a Health Curriculum, and a Healthy Environment, and through their connection with Ottawa Public Health (OPH) the Health Services component has an avenue in which to begin. This schools' development of their health initiatives is more advanced than those presented in the current literature. Lynagh et al., and Deschesnes et al. (2003) both noted that schools find it challenging to implement one of the three components, and the WHO (1997) has acknowledged that the concept of the CSH approach is more advanced than the actual implementation. Therefore, when considering that this is a general consensus in the literature, the significance of this school's accomplishments are even more impressive.

Research on school health has begun to explore a range of opportunities from which schools can benefit. School health has included: public policies (St. Leger & Nutbeam, 2000), the integration of the school and the community (Lynagh et al., 1997), community volunteer programs (Deschesnes et al., 2003), nurses in the schools (Whitehead, 2006), school health committees (Safe Healthy Schools), the use of community recreation facilities (Australian Center for Health Promotion), and nutritious food (World Health Organization, 1997). These initiatives and programs represent some of the many school health initiatives that are found within CSH schools. The depth that this school's partnerships have made, and the way in which this schools' CSH approach was developed have yet to be found in the literature on CSH schools. This school

jointly developed the CSH approach with OPH, and included community members and volunteers in their planning and initiatives. There is an emphasis on this type of partnership in the current literature as its development is expected to demonstrate stronger connections with communities, parents, and schools (Spoth & Greenberg, 2005; Rose, Mansour, & Kohake, 2005). Researchers have also hypothesized that this joint partnership will foster a connection that will help in the maintenance of the programs and initiatives after initial funding has lapsed (Spoth & Greenberg). The fact that the current literature is describing expected outcomes provides evidence for the fact that these partnerships, like the one in this school, have yet to be built elsewhere.

This schools' uniqueness is a result of the joint development of their CSH approach. This school originally partnered with OPH to design and implement health initiatives into their school. The creation of a school health committee was a result of the support and knowledge of OPH. The school then engaged more volunteers to help in expanding their health initiatives. The Girl's Circle and Boy's Square exist because of this expanded community involvement. The next addition was the schools' funding from the Ontario Ministry of Health Promotion (OMHP). The lunchtime yoga sessions were funded through OMHP grant money. The OME's curriculum design allowed the school to tailor programs to address their specific needs, and benefit from community resources. By working with partners, this school has been able to incorporate health initiatives and programs into their unique CSH school. All of these school health partners have broadened the level of CSH implementation in this school. These results raise questions about further research into this school's unique joint development of their CSH approach. Would this school have had the ability to implement these initiatives without this joint development?

Students

The sociocultural and perceptual theoretical frameworks allowed this research to capture a new reality experienced by students regarding their body image and physical activity habits. The messages that influence these students are circulated through their sociocultural channels: their school, home, and community network. The students' experiences have demonstrated how the people in their surrounding impact their choices. As their discussions expanded, their stories referred increasingly to their parents and peers.

Sociocultural Influences on the Body Image Perceptions of Students

In this case study, students credited their parents with influencing their body images. Parental involvement in the students' body image education and perceptions spanned school and home environments (Di Lorenzo et al., 1998). Some parents were directly involved by providing support to school programs, like the Girl's Circle and Boy's Square. Parental influences were also present at home. Both males and females cited their parents desire to change as influencing the choices made by the students. As research on parental modeling and involvement has demonstrated a strong influence on pre-adolescent behaviors, it is not uncommon to see this with body image research (Fairlough & Stratton, 2005). Parents are a part of the CSH approach, their inclusion is one of the foundations of community involvement, and is included in the description of a CSH school (World Health Organization, 1999). As parents are both influential and interested in the development of their children, can schools find more ways to include them? The inclusion of parents in this school gave students an opportunity to experience sharing groups, could more inclusion create more initiatives and opportunities?

This study showed that peer sharing also provided a valuable source of health education for the seventh grade students. As a result of the peers in their surroundings, the students were exposed to several different body images and weight management challenges. These challenges reported by the students were the same topics the students later used to indicate unhealthy behaviors. By relating their experiences to real life situations, the students demonstrated how their network peers influenced the retention of their healthy messages. The real life experiences of peers struggling with their body image and weight, and sharing their stories with the other students created a peer-learning environment, where the students learned about body image through stories they could relate to. This peer learning relates back to lateral relationships within a CSH, which is defined as members working together on an initiative (Nader, 2000; Toppings, 2005). In this case, the sharing of thoughts and life experiences in the classroom, and during the Girl's Circle and Boy's Square, are two examples of healthy initiatives and programming. Peer learning raises questions about further development within the CSH approach. If peer learning can help students with real life experiences, such as dealing with body image issues, would it be beneficial to include peer-learning opportunities in all classes? As the Girl's Circle and Boy's Square programs in this school are only offered to the seventh grade students, could the school include peer learning opportunities in other health initiatives and programs?

Researchers have also evaluated the sociocultural content HPE curriculum for grade 7 students (Larkin & Rice, 2005; McVey et al., 2007). After establishing that there was a lack of sociocultural messages and education for grades six to eight, sociocultural programs were incorporated into a number of Ontarian schools. Studies conducted by Larkin and Rice, and McVey et al. found an increase in body image satisfaction and self-esteem after incorporating new sociocultural initiatives into the OME's HPE curriculum. These initiatives included the

integration of sharing and support sessions for students, media and posters placed around the school, awareness programs for parents, and an evaluation of the needs of the students (Larkin & Rice; McVey et al.). Similar to Larkin and Rice and McVey et al.'s research, this school has also incorporated sociocultural education into their HPE Curriculum through their Girl's Circle and Boy's Square programs, sharing and support sessions, and parental inclusion. Although the population of this study is small, and it does not evaluate the course content of the HPE curriculum, it is still interesting to acknowledge the similarities between Larkin and Rice, and McVey et al.'s findings and this research. All three studies had a sociocultural component added to the HPE curriculum; and even more interesting was that after such an addition, all participants in the three studies indicated low body dissatisfaction. This is of interest as the literature shows pre-adolescents normally have low-body image satisfaction (McCabe & Ricciardelli, 2003). These studies have acknowledged that in specific cases sociocultural additions may have benefited students' perceived images; therefore future research on such initiatives may unveil more information.

Students Perceptions of their Body Image

The body images of these seventh grade students were positive; there was very little evidence of body dissatisfaction in both males and females. Of the 19 males studied, eight (42%) participants desired to be larger than their current image, which is just under half, and less than what it indicated in the literature on male body image (McCabe & Ricciardelli, 2005; Drummond, 2003). Of the 16 females, six (38%) participants desired to remain unchanged, six (38%) other participants desired to be smaller in size, and the remaining four (25%) participants desired to be larger in size. These results are encouraging, however as this research is a case

study it is therefore not the intention, nor is it possible to generalize these findings. With that said, it is still possible to acknowledge the many positive contributions that these students benefited from. This is a CSH school with more successful implementation than any other schools in the literature, the members within this school have the opportunity to work with a public health nurse and other health professionals, and the students had the additional benefit of participating in the Girls Circle and Boys Square program. Therefore, the students enrolled in this school have the opportunity to benefit from a multitude of resources, have these resources made a difference in their body image perceptions?

The Girl's Circle program was designed for use with females, however the intermediate teachers later implemented the same program with male students. Although the body image results for both males and females represented low body image dissatisfaction, the males voiced more desired changes, and indicated more desired changes on the Collins (1991) scale of which 68% some change, than did their female counterparts, of which 62% some change. Although this discrepancy is not large, it does still raise questions about the Girl's Circle and later Boy's Square program. Could this discrepancy in body image reflect the duration of the program, since the Girl's Circle program was implemented before the Boy's Square program? Will the results even out over time if both programs continue? In addition, as the same body image information is being taught to all students, could males and females be effectively educated on body image issues by using the same topics? This research is a case study, and as such can not be generalized; however the findings do present encouraging results from which future research on the body images of Ontario pre-adolescents could pursued.

Half of the females and one quarter of the males were satisfied with their image. Their desire to remain unchanged was recorded by their responses to the Collins (1991) Body Image

Scale, as well as during the focus group discussions. The research by Gehrman et al., (2006) supports the students' desire to remain unchanged; it also strengthens the results on the students' perceived peer images. Over half of the males and half of the females in this study indicated similar self and peer-perceived images. Gehrman's et al. research showed that as pre-adolescents age, their self-satisfaction increases. This increase in satisfaction is usually a result of their social comparisons with peers. In conjunction with Gehrman's et al. research, many of the students in this study supported the satisfaction with self and the similar social comparisons. These results stem from two cases, and as such can not be generalized. However, they are worth further investigation.

The body image satisfaction of these students is not supported in the current literature. Have these students grasped something that others have not? Are the satisfaction and positive social comparisons of theses students built from their surrounding network of school, home, and community created through the CSH? Are the positive comparisons with peers a result of their sharing in the Girl's Circle and Boy's Square sessions? Is the education on body image in this rural school creating different social perceptions for theses students? Further research into the students' satisfaction with self could explain some of these questions.

The combined analysis of the Collins (1991) Body Figure Scale and the focus group discussions demonstrated the consistency of males discourse and of their indication of their preferred body images. Interestingly the females did not have similar responses. The females indicated few desired changes during the focus group discussion; however, their responses to the Collins Body Image scale reflected some desired changes. Could this discrepancy reflect the females' hesitation to convey their desired changes during the focus group discussion? Could the media's focus on the unacceptable thin image impede the students' choice to express such a

desired image? And as a result, could the females have hesitated to share this thin image with the researcher? Although there was a discrepancy in responses, it is important to consider that the females still demonstrated a low level of body dissatisfaction during the focus group discussion and in their responses to the Collins Body Image scale.

This research used a multi-method approach by collecting data with focus group discussions and the Collins Body Image Scale. The benefit of this multi-method was that it allowed the discrepancy between the discourse and the Collins scale data to be identified. Although the extent of this method has been realized, the purpose of this research was to identify the student's body image perceptions. Therefore the method has served its purpose, and has shown what was intended. Further research on the body images of Ontarian students could employ other methods and possibly expand the knowledge on body image issues in pre-adolescents.

Students Physical Activity Habits

The students' physical activity choices reflected what was prominent in their surroundings. Coming from an area that had organized soccer and hockey programs, many male and female students participated in these sports. Other team and group activities were also popular among the students, and though their rural location may originally seem to seclude them, this was not the case. During the winter months, these rural pre-adolescents participated in a combined 36 different kinds of activities on a regular basis. These students had access to a limited amount of public facilities, yet all but one of the thirty-five students participated in regular physical activities and of those thirty five, over half participated five or more days per week. Although the consideration of seasonal activities and the case study design do not permit

the comparison or generalization these research findings, it is still of interest to note that literature on rural adolescents indicates that they are generally not active (Constantinos et al. 2007). Additional differences between this research and the research of Constantinos et al. may be attributed to the fact that this research included community activities, whereas the research by Constantinos et al. made no mention of community activities.

The high level of student participation noted by Jeff, the male physical education teacher, was also accredited to the alternate physical activities that were promoted in his HPE classes. This increased participation in alternate physical activities is also supported by current literature on rural students (Biddle et al., 2004). Could the alternate physical activities promoted in class have influenced these students to engage in different activities? With more common physical activities in their community, would the students be more willing to try new activities?

Males consistently related physical activity to sport and the image that their body represented in sports. Similar findings were reported by Drummond (2003), who found that male pre-adolescents had a strong connection with the body and sport. Further support for the association between body and sport came from the males' desire to have a lean toned figure. The students' reasons for a toned figure were to enhance their physical abilities for their sport of choice. This connection was also supported by McCabe and Ricciardelli's (2005) research on pre-adolescent males, as they found that males placed importance on developing lean toned muscles.

Pre-adolescent females emphasized the importance of social interaction in joining activities. The females discussed their interaction with peers and parents as influencing factors in joining and continuing their activities. This social interaction was consistent with Tergerson and Kings (2002) research, as they also found that females placed importance on social

interaction for engaging in physical activities. There are similarities between Tergerson and Kings research on urban females and this research on rural females. Regardless of location both groups were influenced by the social aspect of the activity. Both groups also commented on the importance of peers in joining new activities. As 15 of the 16 female students participated in physical activities; could the increased amount of friends participating mean that there are more chances for female inclusion? These are two cases; however, further research into this could help future development of physical activities for CSH initiatives.

The students' physical activity participation was also encouraged by their parental role models. Research on physical activity participation in rural areas supports the importance of parental involvement (Constantinos et al., 2007; DiLorenzo et al., 1998). As coaches and participants, parents were cited as influential in all students' physical activities. From participating themselves to driving students to activities, the students in this study continuously noted their parents throughout the discussion on physical activity habits. Physical activity participation is also encouraged by the school through their curriculum and environment. Therefore, these students acknowledged the influence of parents and the school in supporting their physical activities (Constantinos, et al.). With this kind of support happening, how can schools create stronger links with parents? Can this same support be encouraged in other areas of education and health?

Overall, the links developed through this schools' CSH approach have reinforced the community partnerships by incorporating volunteers, parents, and public health. The advancements made in CSH implementation go beyond the current literature; this school is one example of what other schools can strive for in the future.

CHAPTER V

CONCLUSION

The purpose of this research was to develop a better understanding of the physical activity habits and body image perceptions of students in a rural school adopting the Comprehensive School Health (CSH) approach. This was done by first addressing what this school has done to adopt and maintain a CSH approach. More specifically, how the vice-principle promoted and facilitated the adoption and maintenance of the CSH approach, and how the physical education teachers promoted and taught physical activity and body image issues with in the Health and Physical Education (HPE) curriculum. Once a clear understanding of the CSH environment was established, the research among students began. Two questions formed the basis of that research: what were the students' perceptions of their body? And what were the students' physical activity habits? By answering these research questions, the vice-principal, physical education teachers, and students elaborated on the specific initiatives that comprise their CSH approach.

Summary

As educating institutions, schools are a logical place to implement health education initiatives and programs. Countries all over the world now implement health education into their schools. Although the title of these health initiatives and programs may differ, the purpose is to enhance the lives of students and their families through health education. The Canadian Consensus Statement on CSH solidified the purpose and definition of the CSH approach for several Canadian organizations (Safe Healthy Schools). Although the CSH approach is not yet part of the education system in all Canadian provinces, the 1990's education reform saw

Canadian provinces take a step closer to health education among the entire school curriculum. This reform focused on the need for health and education to meet the demands of society. As Canadian education is provincially based, each province has the opportunity to focus on specific needs. In Ontario, the school curriculum provides each school and school board with the ability to tailor programs to the needs and resources of their communities.

In this research, the school's focus was on incorporating health into their environment and curriculum. The school accomplished this with the help of the OME's curriculum design, with their OPH partnership, their community volunteers, and subsequent funding from the OMHP. The successful implementation of their Healthy Environment and Healthy Curriculum, and the opportunity for Health Services has incorporated a more encompassing health perspective than is documented in the current literature. How did these health initiatives and messages filter down to the students? The students demonstrated high levels of body image satisfaction and similar body image comparisons with their peers. The students were also very active with all but one of the students participating in regular physical activities, and half participating in activities at last five days per week.

Recommendations for Future Research

Based on the literature on Healthy Schools, and the questions raised in this study, there are several areas that are of specific importance to advance our understanding of the implementation of the CSH approach in Canadian schools, and it's potential impact on student's health. This recommendation section includes the Ontario HPE curriculum, as well as rural pre-adolescents body image, physical activity, and health education.

The Ontario HPE curriculum requires further revision. Research into the sociocultural components of the Ontario HPE curriculum has acknowledged the lack of sociocultural

education for grade seven students (Larkin & Rice, 2005; McVey et al., 2007). This information came from a bottom-up relationship, meaning researchers looking at the content of the curriculum, and then presenting the information back towards the hierarchical leaders, who represented the top-down approach. Which shows that anyone can benefit from the multi layered top-down and bottom –up relationship. The school in this research also used the bottom-up approach to bring decision making to the approach by integrating additional sociocultural programming into the HPE curriculum by introducing the Girl's Circle and Boy's Square; could these programs have made the difference in increasing body-image satisfaction in students? Further research on such curriculum additions is necessary.

Research on the body image perceptions of rural pre-adolescents shows some inconsistencies. The students in this study demonstrated high levels of body satisfaction, and many of them desired to remain unchanged. Current research on rural pre-adolescent body image demonstrates that students have moderate satisfaction with their bodies, with only a few outliers who are not satisfied with their image (Jones et al., 2007). The literature gives rise to these questions about further body image trends. Are we currently experiencing a change in the body image trends of rural pre-adolescents? Further investigation of the body image of Ontario pre-adolescents could observe if the current trends are changing.

The physical activity participation of these rural pre-adolescents was high. Regardless of a limited amount of public facilities, 97% of the students participated in physical activities, and 63 % participated five or more times per week. Without research on the physical activity habits of rural Ontario pre-adolescents we may not be aware of the trends in these areas. Future research on rural Ontarian physical activities can expand these findings and demonstrate the increased level of activities or the need to increase levels of physical activity.

Research on rural school health education in Canada is limited. As many as 6.4 million people live in rural parts of Canada, which adds up to one fifth of the Canadian population (Statistics Canada), yet very little research has been done on the CSH approach in these rural areas (Pong, 2000). School health initiatives are found in all Canadian provinces, school boards and schools (Safe Healthy Schools); yet published literature on current school practices is very limited (Beaudoin & Bertrand, 2007). The results of this study do not support current literature on rural body image and physical activity in Ontarian pre-adolescents. As this research was a case study, it does not generalize to other populations, however, the fact that there is very little research on rural school health signifies a need for further research.

Research is also needed on current CSH implementation practices. The current literature focuses on partnerships that would benefit CSH environments (Deschesnes et al., 2003; Lynagh et al., 1997; Safe Healthy Schools). Yet there is very little research to support this implementation of partnerships within Ontario schools (Ontario Public Health Association). Results on partnerships built from unions with Public Health Units and government funding is currently not available, yet it does not mean that it does not exist. This school's health initiatives and programs have shown how these partnerships work and how they begin. The ingenuity needed to create and build an actual partnership with the community, the public health unit, and how to utilize government funding require future research. By creating partnerships, this school has expanded their CSH approach further than other schools in the literature, justifying the fact that without this partnership, schools, communities, and organizations will not be able to expand the CSH approach to efficiently address student health (English, 1994). This type of partnership can provide schools with the lateral support that they need, as partners jointly developing the CSH approach is the future focus of CSH implementation (Deschesnes et al., 2003; Lynagh et

al., 1997; Safe Healthy Schools). The 1990's education reform was based on the premise that education needed to meet the demands of society. As society's current focus is on health promotion and education, schools need to accommodate (Safe Healthy Schools). Schools' need partnerships with other organizations, as "schools can be health promoting environments only to the extent that they are healthy organizations for students and staff alike" (World Health Organization, 1997, p.78).

Recommendations for Schools

In lieu of the fact that: the CSH approach is more advanced in it's research than implementation, that the three areas of Health Curriculum, Health Services and a Healthy Environment allow schools to be broad in implementation, and that school environment are all different, we can now acknowledge that recommendations for the CSH approach need to be broad.

The implementation of the CSH approach into any school requires an explicit plan for the school's health promoting guidelines. This plan can include the top down relationship of a principal guiding certain initiatives, the bottom-up relationship of teachers and students sharing ideas, and may also include members of the community (Australian Center for Health Promotion; CAHPERD; Deschesnes et al., 2003; Lynagh et al., 1997; Nader, 2000; Safe Healthy Schools, World Health Organization, 1997). The development of a health promotion plan ensures the overall objectives in each of the areas of Healthy Environment, Health Curriculum and Health Services are met (Australian Center for Health Promotion; CAHPERD; World Health Organization, 1997). This plan can also be developed in the form of a school health committee (Lynagh et al., 1997; Safe Healthy Schools). The committee can include any member of the

school or community who can encourage the development of the CSH approach, whereby also increasing the overall support for the approach (CAHPERD; Safe Healthy Schools).

Schools need to be proactive about linking with the local community, so that they can connect what is happening in the school and the community (Australian Center for Health Promotion; Safe Healthy Schools). Researchers have shown that schools who were more accommodating in scheduling volunteers were able to include more initiatives in their curriculum (Rose et al., 2005). Volunteers can come from various backgrounds and are not only used to educate students; they can also educate teachers and principals (Safe Healthy Schools).

Linking with the community also includes broadening the school's network to include private and public partnership opportunities (Public Education Network). Many schools have contacts with nurses; these contacts may also be used to connect with public health units. There are also a variety of government divisions that can provide support by means of resources or funding to public health and health promotion efforts (CAHPERD). These partnerships may also be used with the school health committee (CAHPERD).

School health committees or planning committees should also consider the bottom-up relationship presented by students. Student based and student focused initiatives can draw from many already formed student committees and sport teams (Australian Center for Health Promotion; CAHPERD; Ontario Public Health Association; Safe Healthy Schools). The bottom-up relationship of one school included forming a school health committee composed of 90% students. The success of that secondary school included new food in the cafeteria, a recycling program, and fundraising for outdoor sports equipment, all run by students (Ontario Public Health Association).

Bottom –up relationships have also been a valuable contributor to the development and implementation of physical activity initiatives. These student lead initiatives include local sport and recreation organizations who volunteer to teach new activities and programs for students. This benefits students who might not be involved with regular sport teams, as well as students who do not have monetary funds to join sports teams (Australian Center for Health Promotion; Lounsbury et al., 2005; Safe Healthy Schools).

As the CSH approach includes Health Services, some schools have considered the benefits of personal skills programs, as well as relaxation and stress relief activities for students (Australian Center for Health Promotion). Student focused initiatives such as; self esteem activities, team building, and peer support are all ways that students can work together at a lateral level (Australian Center for Health Promotion).

Several school health plans and initiatives should also include regular evaluation, through participants, parents, volunteers, public health staff, and members of the school. The evaluation phase is not as abundant in the current literature for several reasons; first, Canadian CSH approaches are still in their infancy (Deschesnes et al., 2003). Second, the implementation of each program is individual to the environment and the people involved, therefore requiring a specific evaluation design which is not transferable to other CSH approaches (Australian Center for Health Promotion; CAHPERD; Safe Healthy Schools).

Each of these recommendations represents a success story from a CSH approach. Even though the unique opportunities of each environment can dictate what possibilities are feasible with schools, families, and communities, the initiatives and programs in place can make a difference in developing and maintaining each CSH approach.

Personal Reflections

This personal reflection section contains both personal thoughts on my thesis and considerations of the methodology and general outcome of the study. In considering the overall inspiration for my thesis, I reflected on my previous experiences, and my future interests. The previous experiences I related to were my physical activities as a child. These activities were important, as I realized that the activities I was introduced to during my elementary education were the same activities I continued to participate in throughout adolescence and into adulthood. In addition, the rural school I studied had much the same geographical surroundings as my own elementary school. This created the additional interest of reflecting on the types of activities I participated in, which made me wonder what, if anything had changed in the last 15 years.

In reflecting on the methodology, the choice of interviews and focus groups was the most effective means of collecting the data for this research, as the amount of depth attained from the interviews and focus groups surpassed the requirements I felt necessary to answer the research questions. The semi-structured interviews were a valuable medium to use with the teachers and vice-principal, as I was able to deviate from the interview guide and follow the rhythm of the interviewee. By following the interviewee's rhythm I was able to understand what characteristics of the school were meaningful to him or her. In addition, by placing interviews at the beginning of the data collection process, I was able to understand the programs and initiatives that the students later commented on.

The focus group design facilitated group sharing and worked well with the previous experiences of these students. The focus groups had two specifications: that they were homogenous of gender, and that they consisted of seven to eight students. The choice to make the focus groups homogeneous of gender was made in consideration of the subject matter, the

age, and comfort level of the students. The students' sharing was something that I think the homogeneity encouraged. Their sharing was also likely encouraged by the Girl's Circle and Boy's Square as the students were in similar homogeneous groups, sharing their thoughts and feelings. In addition, the selection of seven to eight students made the 45-minute focus group effective, as each student was able to express the ideas that were important to him or her and then discuss this importance with his or her peers. The minimal specification for the focus groups allowed for random selection and for the students to share their thoughts and feelings with students they may not normally interact with.

In reflecting on the data collected and the extent of CSH initiatives and programs in this school, I considered an endeavor beyond the completion of this thesis. As a return to the school, I intend to present my research findings to the teachers and administration of the CSH school who graciously accepted to participate in my research. This return will allow the school to see how extensive their CSH implementation is, and may encourage them to share ideas, generate suggestions, and in essence to appreciate their accomplishments. As a researcher, this experience will provide a deeper understanding of the CSH approach by allowing the members who are engaged in the approach an opportunity to express their perspectives on my research.

A final note on my personal reflection is to consider the highlights of this research. The first highlight is the extent of this schools' CSH integration, as it is above and beyond other CSH schools in the literature (Deschesnes et al., 2003; Lynagh et al., 1997). This is still something that I reflect on as an outstanding part of this school experience. Even though it has been considered in every chapter of this thesis, I still consider it to be a true highlight. The second highlight is the Girl's Circle and Boy's Square, which would not have occurred without the determination and outgoingness of the teachers, administration, and volunteers. This program is

a unique opportunity that includes students, teachers, and volunteers in the development of healthy behaviors and practices. As quoted by Jane, the female physical education teacher, it is a "tremendous addition to the programming" and it allows the community to be involved in direct teaching and learning contact with the students. Without the outgoingness of the people involved, this opportunity would not be present. The final highlight of this research was the students of the seventh grade. As a result of their group sharing and their exposure to healthy messages and programs, they were able to express what they felt healthy and unhealthy practices were. Not only could they express them, but they were always able to expand their opinions and take real life experiences into consideration. I believe that these students made the difference in the way that the healthy messages of this school were conveyed. Their coordination of knowledge between their home, their school, and within the community, was a factor that they considered to be important. I think that it is a success of any program to have students who can convey the messages they learn in such a detailed perspective.

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uOttawa

Information and Consent for Physical Education Teacher

Title of research project: Building a Healthy School.

Université d'Ottawa
Faculté des sciences
de la santé

École des sciences de
l'activité physique

University of Ottawa
Faculty of Health Sciences

School of Human Kinetics

Dear Sir/ Madam,

You are invited to participate in the research project entitled "Building a Healthy School" conducted by Professor Charlotte Beaudoin and her two master's students Zeina Abou-Rizk and Tracy Moore, from the School of Human Kinetics at the University of Ottawa. This research project has been approved by the University of Ottawa Research Ethics Board, the City of Ottawa Research Ethics Board, as well as the Ottawa-Carleton Research Advisory Committee, and the principal of the school.

The main purpose of this research is to better understand how a school creates, implements, and maintains initiatives to become a Healthy School. A long term objective of this research would be to contribute to the health and active lifestyle of youth.

Your participation will consist of an ***audio-taped*** interview that will last up to one hour and conducted by one of the two master's students. You will be asked to provide information about the new curriculum, specifically the course of health and physical education as well as how it addresses health issues such as physical activity, nutritional habits, and body image. The date and time of this interview will be set according to your availability and convenience, during a regular school day. Please note that the interview will be recorded and transcribed. You will have access to the transcription text, and be able to add, modify or remove information.

Your participation is on a voluntary basis and you can withdraw from the study at any time for any reason. If you withdraw from the study, the data gathered will be discarded and not used in any documents or publications.
The information you provide will ***not*** be used to evaluate your teaching capabilities. You will not be asked to provide any personal information. You do not have to respond to any questions that you do not wish to answer.

Your participation in the study will primarily lead to a better understanding of the role of the course of health and physical education in addressing the health of youth, in particular their active lifestyle, nutritional habits, and body-esteem. Furthermore, we hope that this study can help schools integrate new initiatives related to health education and promotion.

The information that you share with us will remain strictly confidential. All data from individual participants will be coded so that their anonymity will be completely protected. By doing so, the information obtained cannot be associated with a specific individual. Anonymity will be respected by assuring that your name will not be mentioned during the interview, in the transcript and any reports or publications. Furthermore, the name of your school will not be published in any documents.

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École des sciences de
l'activité physique

University of Ottawa
Faculty of Health Sciences

School of Human Kinetics

Information and Consent for Parents

Title of research project: Building a Healthy School

Dear Parent/Guardian,

Your child is invited to participate in the research project entitled "Building a Healthy School" conducted by Professor Charlotte Beaudoin and her two master's students Zeina Abou-Rizk and Tracy Moore, from the School of Human Kinetics at the University of Ottawa. This research project has been approved by the University of Ottawa Research Ethics Board, the City of Ottawa Research Ethics Board, as well as the Ottawa-Carleton Research Advisory Committee, and the principal of the school.

The main purpose of this research is to better understand how one's school creates, implements, and maintains initiatives to become a Healthy School. A long term objective of this research would be to contribute to the health and active lifestyle of youth.

Your child's participation will consist of an audio-taped focus group session conducted by one of the two master's students during which your child will be asked to voluntarily discuss issues related to physical activity, nutritional habits, and body image. At the end of the group discussion, your child will be asked to complete the Collins Body Figure Scale (1991) and a shortened version of the Children Eating Attitude Test (ChEAT-26) questionnaire. The focus group session will be conducted during a regular school day, at the physical education teacher's convenience. The maximum duration of the session will be 45 minutes. Please note that the focus group session will be recorded and transcribed.

The participation of your child can generate light discomforts, as questions will relate to sensitive issues such as body image. However, you can be assured that your child will not be forced to answer questions that cause her or him discomfort. In addition, a sheet giving the name of a free consultation clinic specializing in body image and eating disorders will be distributed to every child taking part in the study. Also, a nurse will be present during the focus groups, in the event that sensitive issues arise.

The participation of your child in this study will primarily lead to the development of a better understanding of how different health education and promotion initiatives integrated into schools can contribute to better health and active lifestyle of youth. Furthermore, we hope that this study will be helpful to other schools that wish to integrate new initiatives related to health education and promotion.

The information that your child shares with us will remain strictly confidential. All data from individual participants will be coded so that their anonymity will be completely protected. Furthermore, the name of your child's school will not be published in any documents.

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Assent for Children

Title of research project: Building a Healthy School

You are invited to participate in the research project "Building a Healthy School" conducted at your school by Zeina Abou-Rizk and Tracy Moore. You will be asked to participate in a group discussion with your classmates to talk about health, body image, nutrition and physical activity.

Your participation in the group discussion is voluntary, and you can refuse to continue or to answer any question at anytime.

I, _____(name of participant) agree to participate in this audio taped focus group activity conducted by Zeina Abou-Rizk and Tracy Moore.

Signature of participant: Date:

Signature of researcher: Date:

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APPENDIX B

Interview Guide for Vice-Principal

Introduction

1) Could you tell me a little about yourself (how many years teaching experience, how many years at this school, training, etc.)?

2) What is the mandate or vision of the school?

Key questions

3) How do you address the health of children in your school?

4) Any particular health promotion programs, initiatives?

    a) Since when?
    b) How did it start?
    c) How was it implemented?
    d) How is it maintained?

5) Who is involved? Teachers…?

    a) Links with community and parents?
    b) Other health professionals?

6) What kind of health problems, concerns or needs do you expect these initiatives to solve or help addressing?

    a) Body image and physical activity habits?
    b) Was there an assessment of these specific needs?

7) How do the children react/ take part of these initiatives?

    a) Their reaction, participation…?

Closing questions

8) After doing all this work, what do you think are the next challenges/ needs to address in your school? For children?

9) Would you like to make any additional comments or clarify anything?

APPENDIX C

Interview Guide for Physical Education Teacher

Introduction

1. Could you tell me a little about yourself (how many years teaching experience, how many years at this school, training, etc.)?

School Curriculum

2. What is your opinion of the new Health and Physical Education curriculum?
    a. Did you receive any training to implement it?
    b. From the Ontario Ministry of Education?
    c. School Board? Other?

3. How have you implemened it in your daily classes?
    a. Objectives
    b. Content
    c. Organization
    d. Teaching strategies, etc.

4. How do you address the Healthy Living domains, specifically for body image in your class(es)?
    a. How do children react to these?

CSH Initiatives

5. Are you involved in the different health initiatives developed or implemented, in your school?
    a. How? In What?
    b. Did you / do you do anything in particular to integrate these programs or projects in your HPE courses?
    c. Extra-curricular activities?

Conclusion

6. To finish our interview, are there any messages that you would like to transmit to your students during the school year?

7. Would you like to make any additional comments or clarify anything?

APPENDIX D

Focus Group Guide

Warm-up questions

1. What does it mean for you to be "healthy"?

2. What do you do to become or stay "healthy"?

During our meeting today, we will be talking about physical activity and body image.

Body image questions

3. What is the body type that you like?
    a. How does it look?
    b. Body parts? Size?

Collins Body Image Scale

After discussing health, body size and looks, we would like to know what you think of the images on the sheet we will distribute.

Everyone get a pencil please**. Do not write your name on the paper.** I will read one question at the time. Please write the numbers of the figures you choose beside the end of the questions.

a) Identify the picture that closely resembles your current body.
b) Identify the picture that closely resembles your ideal body.
c) Identify the picture that closely resembles what your friends think you look like.

4. If you were able to change anything about your look, what would it be
    a. What would you do to change it?
    b. Do you know anyone who does anything in particular to change his or her look?
    c. What do you think about it?

Now linking all this to physical activity habits

Everybody get a pencil please. **Do not write your name on it.** I want you to think of a regular week of activity. Think of last week, and we will go through the days and write all the activities you did.

5. Do you do any physical activity in school?
    a. What type of physical activity?
    b. When?
    c. Where?

6. Do you do any physical activity at home?
    a. What type of physical activity?
    b. With whom? (Parent, sibling, etc.)
    c. When?
    d. Where?

7. Do you have access to some facilities do engage in physical activity in your neighbourhood?
    a. What type?
    b. Do you use them?
    c. When? (Spending time outside, coming back from school, during the weekend, drop in)
    d. Where?

We have finished our discussion.

Do you have any questions?

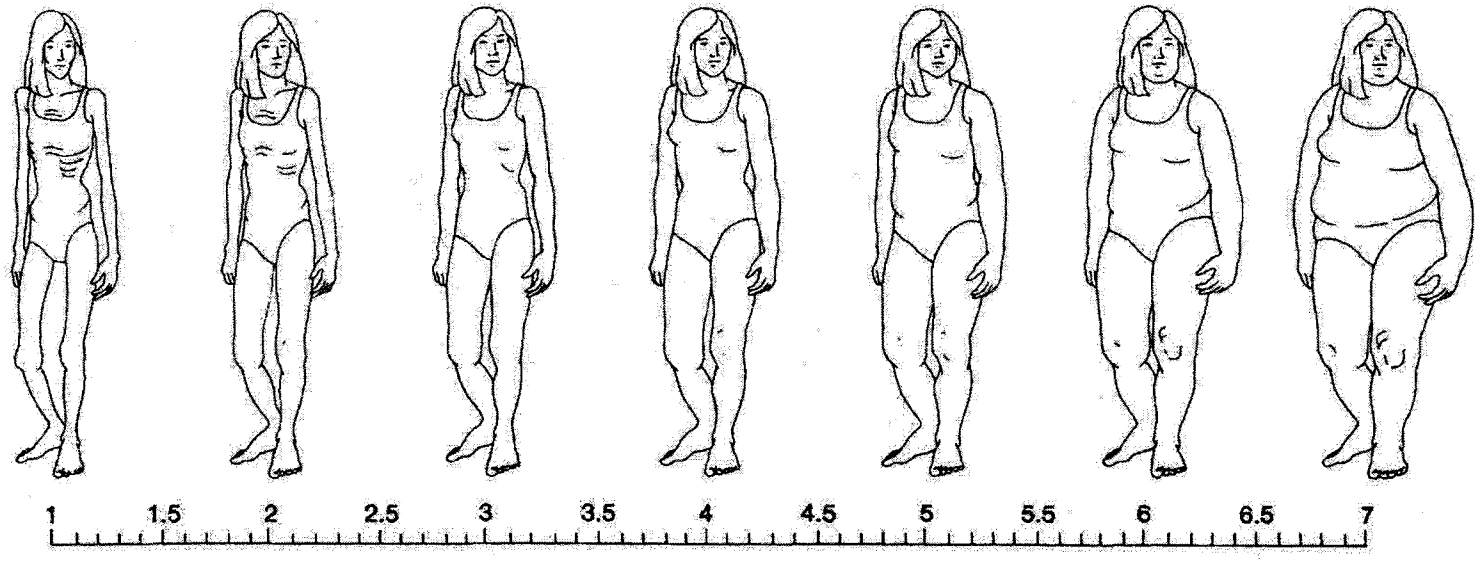
Would you like to add any comments?

Thank you for taking part of our group discussion today.

APPENDIX E

Collins (1991) Body Image Scale – Women

Please look carefully at the figures below, and answer questions 1., 2., and 3.

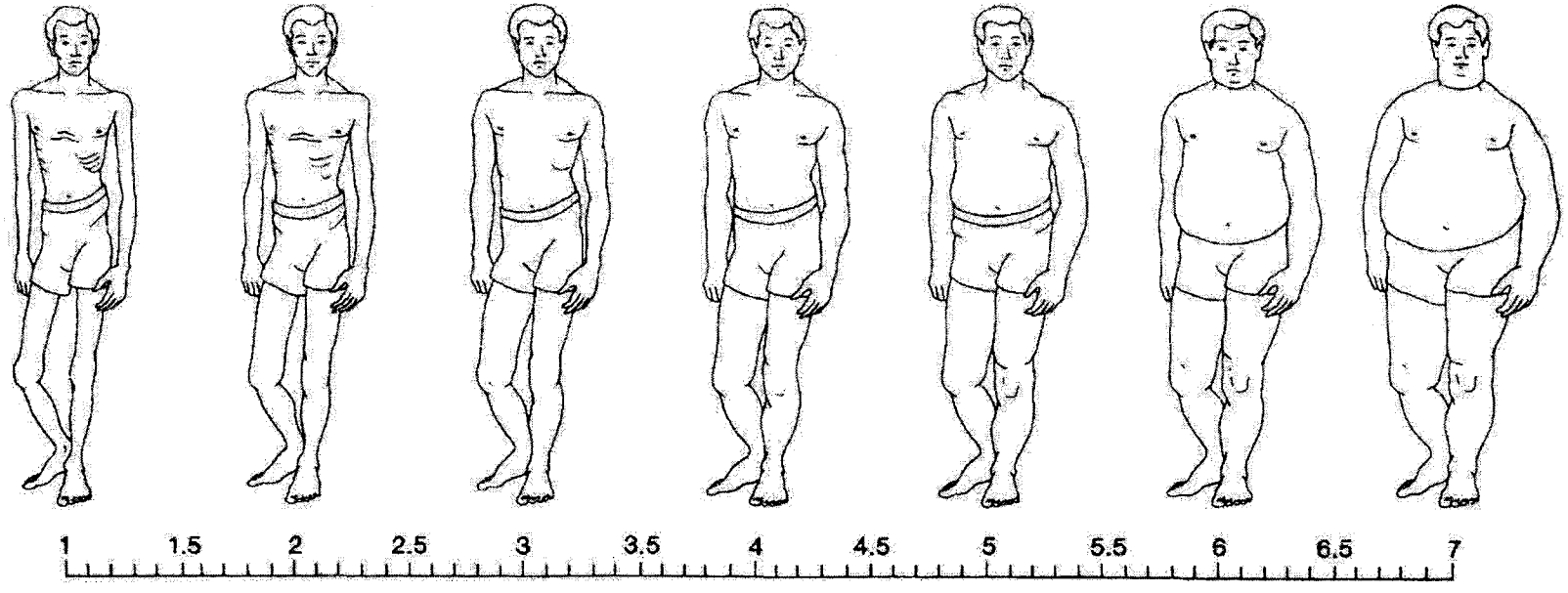


1. Indicate which picture closely resembles your current body image. Answer _____
2. Indicate which picture closely resembles your ideal body image. Answer _____
3. Indicate which picture closely resembles what your friends think you look like. Answer _____

APPENDIX F

Collins (1991) Body Image Scale – Men

Please look carefully at the figures below, and answer questions 1., 2., and 3.



1. Indicate which picture closely resembles your current body image. Answer _____
2. Indicate which picture closely resembles your ideal body image. Answer _____
3. Indicate which picture closely resembles what your friends think you look like. Answer _____

APPENDIX G

Typical Week of Physical Activity

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM							
Lunch							
PM							
After School or Evening							

APPENDIX H

Total Number of Male Physical Activities

Males' Activities	Team Sport	Individual	Outdoor	Fitness
Basketball	X			
Cadets			X	
Dance		X		
Exercise				X
Fencing		X		
Go outside			X	
Hiking			X	
Hockey	X			
Hunting			X	
Jog				X
Lift Weights				X
Powerskate	X			
Public Skating		X		
Rock Climbing			X	
Running				X
Scouts			X	
Skating		X		
Ski			X	
Skidooing			X	
Snowboard			X	
Soccer	X			
Tae Kwon Do		X		
Treadmill				X
Wii		X		
Workout				X
TOTAL 25	**4**	**6**	**9**	**6**