THE EXPERIENCE OF PEER MENTORING IN GRADES 4, 5, AND 6 STUDENTS
FROM THE HEART HEALTHY KIDS PROGRAM

by

Rebecca A. Spencer

Submitted in partial fulfilment of the requirements
for the degree of Master of Arts

at

Dalhousie University
Halifax, Nova Scotia
August 2012

DALHOUSIE UNIVERSITY

SCHOOL OF HEALTH AND HUMAN PERFORMANCE

The undersigned hereby certify that they have read and recommend to the Faculty of Graduate Studies for acceptance a thesis entitled "THE EXPERIENCE OF PEER MENTORING IN GRADES 4, 5, AND 6 STUDENTS FROM THE HEART HEALTHY KIDS PROGRAM" by Rebecca A. Spencer in partial fulfillment of the requirements for the degree of Master of Arts.

Dated:    August 7, 2012

Supervisor:        _____

Readers:           _____

                   _____

                   _____

DALHOUSIE UNIVERSITY

DATE:    August 7, 2012

AUTHOR:    Rebecca A. Spencer

TITLE:    THE EXPERIENCE OF PEER MENTORING IN GRADES 4, 5, AND 6
STUDENTS FROM THE HEART HEALTHY KIDS PROGRAM

DEPARTMENT OR SCHOOL:    School of Health and Human Performance

DEGREE:    MA        CONVOCATION:  October        YEAR:   2012

Permission is herewith granted to Dalhousie University to circulate and to have copied for non-commercial purposes, at its discretion, the above title upon the request of individuals or institutions. I understand that my thesis will be electronically available to the public.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

The author attests that permission has been obtained for the use of any copyrighted material appearing in the thesis (other than the brief excerpts requiring only proper acknowledgement in scholarly writing), and that all such use is clearly acknowledged.

_____
Signature of Author

**Table of Contents**

# Abstract

The Heart Healthy Kids (H2K) program examines peer mentoring and physical activity of grades 4, 5, and 6 students (n=808 children from 10 schools). This sub-study qualitatively explored the peer mentoring experience, using the social ecological model to examine the experience from multiple perspectives. A qualitative description design was used, with a phenomenological approach to data analysis. Three focus groups were conducted with 17 children (5 male, average age: 10.6 years) at 3 of the H2K intervention schools. Six additional individual interviews were conducted with 1 parents and 1 teacher from each focus group school (all female). Thematic analysis was conducted.

Emergent themes included that peer mentors were perceived as "encouragers of physical activity", "helpers and supporters", "organizers and administrators", and "expanders of social networks". Results suggest that reframing physical activity programs to promote physical activity in the context of fun, unstructured, social engagement, especially those that employ peer mentoring, may be more successful. This research contributes to development of future programs and research, and knowledge of the applicability of peer mentoring in influencing child physical activity levels.

**List of Tables**

**Chapter 1: Introduction**

Childhood physical inactivity is an issue requiring significant, novel, and creative

research to address. This introductory chapter will begin by describing the issue of

childhood physical inactivity and explaining the need for its investigation through this

thesis project. The chapter will then describe the Heart Healthy Kids program, a larger

research initiative for which this thesis is a sub-study. The chapter will then continue by

describing the purpose of the research project, giving a brief overview of the study, and

presenting the research questions. The chapter will then conclude by explaining my

interest in the topic, and indicating the significance and rationale for the project.

**The Issue: Childhood Physical Inactivity**

Childhood physical inactivity is a significant issue in all of North America. Less

than 7% of Canadian children and youth meet the daily activity guidelines suggested by

the Public Health Agency of Canada of 60 minutes of moderate to vigorous activity

(Colley et al., 2011). The percentage of children who are not meeting physical activity

recommendations is matched by the percentage of children exceeding the

recommendation of a maximum of 2 hours daily of "screen time" activities, such as

television, video games, and computer use (Active Healthy Kids Canada, 2011). As

children grow, their level of activity decreases, which indicates the requirement for early

intervention (Active Healthy Kids Canada, 2011; Canadian Fitness & Lifestyle Research

Institute, 2009; Thompson et al., 2005). In addition to contributing to overweight and

obesity, physical inactivity causes increased risk of hypertension, type II diabetes,

metabolic syndrome, and cardiovascular disease (Active Healthy Kids Canada, 2011).

Additionally, physical inactivity in childhood is associated with emotional and

behavioural problems and low self-esteem (Active Healthy Kids Canada, 2011). By contrast, being physically active in childhood is associated with improved cognitive function and academic performance, increased self-esteem, self-image, and self-confidence, improved attention span, reduced misconduct behaviours, and increased school connectedness (Active Healthy Kids Canada, 2011).

There has been a significant amount of research examining factors that influence motivation for childhood physical activity. These factors have been found to include, environment, availability, perceived skill, and perceived enjoyment, among other things (Allender, Cowburn, & Foster, 2006; Biddle, Wang, Chatzisarantis, & Spray, 2003; O'Dea, 2003; Salmon, Booth, Phongsavan, Murphy, & Timperio, 2007). Many of these factors are now thoroughly understood and have significant literature devoted to their exploration. Social influences from parents and peers have also been explored as potential mediating factors of motivation for physical activity. The influence of parents has been thoroughly explored and the literature indicates that parents control physical activity options of their children, and also influence their children through social mechanisms such as offering support (Allender, Cowburn, & Foster, 2006; Anderson, Hughes, & Fuemmeler, 2009; Bois, Sarrazin, Brustad, Trouilloud, & Cury, 2005; Rhodes, Naylor, & McKay, 2010; Welk, Wood, & Morss, 2003; Zecevic, Tremblay, Lovsin, & Michel, 2003). Parents, however, have been found to overestimate their children's physical activity (Corder et al., 2010), suggesting other social influences should be examined.

Peer influence on childhood physical activity is becoming better understood in the literature. As children develop, they become less dependent on their parents and undergo

significant socialization from their peers. In relation to physical activity, peers have been found to make physical activities enjoyable and encourage effort and teamwork (Keegan, Harwood, Spray, & Lavallee, 2009; O'Dea, 2003; Salvy et al., 2008). It has also been found that physical activity is encouraged by the development of social networks, and that children are more active in the presence of peers than when alone (Allender et al., 2006; Salmon et al., 2007; Salvy et al., 2008). Despite the known influence of peers on physical activity, there are very few intervention studies exploring how this impact can be controlled for health benefit, which suggests a role for peer mentoring. Peer mentoring has been frequently studied to improve psychosocial health of children (Anderson et al., 2009; King, Vidourek, Davis, & McClellan, 2002; Matthews, Fawcett, & Sheldon, 2009). There are very few studies, however, that employ peer mentoring as a means of improving physical activity in children, and almost no qualitative literature examining this phenomenon in the context of physical activity in a general population of children. The below explained Heart Healthy Kids program is exploring peer mentoring as a means of improving childhood physical activity levels.

**The Heart Healthy Kids Program**

My thesis was conducted in conjunction with a larger research initiative, the Heart Healthy Kids (H2K) program. The H2K program is a school-based physical activity intervention that employs the social ecological model and incorporates physical activity tracking, educational sessions, fitness testing, and nutritional assessment. The H2K program occurred in ten schools in the Halifax Regional School Board (HRSB), with five intervention schools and five control schools. The five control schools had all of the

3

aforementioned components, while the five intervention schools had all of these components in addition to a peer mentoring program.

The H2K intervention was centred on the endpoint of increasing physical activity, which was designed as a physical activity challenge. The challenge involved tracking of daily physical activity, using pedometers to track school-day activity, and self-report to track non-school activity. All activity was tracked by logging in to a secure website. Students were divided into teams who competed against one another in virtual 'distance travelled', which was visible on an electronic map of Canada on the website.

The peer mentoring program that occurred in the 5 intervention schools involved training a subgroup of participants to mentor those small teams of students. Students were asked to volunteer to be peer mentors if they were interested, and chosen to be peer mentors with the help of teachers. Teachers were provided with information about what the mentors would be required to do in order to help select students who would be best suited to the role of peer mentor. In most schools, existing leadership programs facilitated the selection of individuals to act as peer mentors. Once selected, peer mentors were trained at an in-school workshop that provided education in leadership, team dynamics, and conflict resolution. The training also included instruction of the protocol for "H2K Lunches", which were biweekly lunchtime activities that occurred at school and involved a team meeting and playing of active, team-based games. While peer mentors were instructed to act as a mentor every day, they were given specific opportunities to do so at the H2K Lunches.

Quantitative data were collected from the H2K participants to determine the impact of peer mentoring on physical activity levels, education, nutrition,

anthropometrics, and cardiovascular fitness. This thesis, as described below, will be a qualitative sub-study in conjunction with the H2K program.

**Purpose and Brief Overview**

The purpose of this study was to use qualitative research methods to explore the peer mentoring experience, and describe the impact of peer mentoring as experienced by the grades 4, 5, and 6 H2K participants, their teachers, and parents. Adding a qualitative component to the quantitative evaluation of the H2K program added context, depth, and meaning to the quantitative findings, and allowed the voices of the participants to be heard and understood. This study involved using a qualitative description design and employing the social ecological model to conduct focus groups with children at three of the five peer mentoring schools. Additionally, one-on-one interviews were conducted with parents and teachers to gain further understanding of the peer mentoring experience from the perspectives of the mentored participants (mentees), the peer mentors, teachers, and parents.

**Research Questions**

Each of the following questions were explored within the context of the H2K program, and its target population, which is grades 4, 5, and 6 students, their teachers, and parents, from specific schools within the Halifax Regional School Board.

1. What was the experience of peer mentoring?
2. How did peer mentoring impact motivation, if it did?
3. How did peer mentoring impact physical activity, if it did?
4. What else, if anything, did peer mentoring impact?

**Researcher's Interest in the Topic**

As a child and adolescent, I was physically active, and heavily involved in competitive cheerleading. Wanting to understand my body's ability to jump, tumble, and twist led me to an undergraduate degree in Kinesiology. Throughout my undergraduate degree, though I remained interested in understanding human movement and physical activity, I became more interested in how to encourage these behaviours, and in understanding why people do or do not engage in them. During the latter part of my undergraduate degree and after graduation, I worked with a company that sponsored the H2K program in its very early pilot program stages. Having the opportunity to encourage physical activity in populations of children showed me where my real interests were and led me to graduate studies in Health Promotion. Even still, I can reflect on my experiences in competitive cheerleading, a sport that is so team-based that practices were cancelled if one member was missing, and recognize the social influences that were present then, and are still present now. While my interests have moved more in the direction of population health, I believe that understanding social influences is critical in designing large scale public health programs intended to prevent disease. While this thesis study is only a small exploration of these influences in one context, I believe it is important to understanding the basic social influences at play, which can hopefully inform larger similar programs and research.

**Significance and Rationale**

This study was necessary because, despite the known influence of peers on childhood physical activity, and the known benefits of peer mentoring, using peer mentoring to improve physical activity is under researched, especially using qualitative

methods. This study resulted in a rich description of the peer mentoring experience from the perspective of mentees, mentors, teachers, and parents. The results are discussed in the context of the current peer mentoring literature and the social ecological model. The results therefore contribute to the current knowledge base on peer mentoring. The results will contribute to the ongoing growth and development of the H2K program, which can incorporate the results of this study in the potential future refinement of the peer mentoring component. Additionally, the results of this study may benefit programs similar to H2K, that is, programs that aim to use peer mentoring in the development of healthy habits in childhood, specifically those related to improving physical activity and the prevention of heart disease.

**Summary**

Novel programs and research are necessary in order to promote physical activity in children. This chapter has introduced my thesis project by describing the issue of childhood physical inactivity and presenting the larger research initiate, the H2K program, of which my thesis is a sub-study. The chapter then described the purpose of the thesis, gave a brief overview of the study, and indicated the research questions that guided this research, before concluding by explaining the researcher's interest in the topic, and the significance and rationale for the project.

**Chapter 2: Literature Review**

Childhood physical inactivity is a significant issue that warrants immediate intervention (Active Healthy Kids Canada, 2011; Colley et al., 2011). For the purposes of this thesis, physical activity will be defined as any form of bodily movement created by skeletal muscles that results in energy expenditure (Thompson, Buchner, Pina, et al., 2003). This may include but is not limited to engagement in sport, fitness activities, active play, or household chores. The term physical inactivity, or being physically inactive, is typically used to describe individuals who are being insufficiently active, or not meeting physical activity guidelines. Recently, the term 'physical inactivity' has been distinguished from the term 'sedentary behaviour'. Sedentary behaviour now refers to the engagement in activities that are sedentary, such as sitting, reading, using a computer, or playing video games, and not as simply the absence of physical activity. As this thesis is not specifically examining physical inactivity or sedentary behaviour as they are defined, but is rather exploring factors that support motivation for and against physical activity, the terms 'physical inactivity' and 'sedentary behaviour' will be used interchangeably throughout.

This review of the literature will examine the literature on motivation for childhood physical activity, including the specific social impact of parents and peers. The literature on peer mentoring will then be evaluated, beginning with the application in adults, followed by children, examining the psychosocial impact, and then the potential health impact.

**Motivation for Physical Activity in Childhood**

      **Defining motivation.** Motivation is a complicated phenomenon typically defined as the impetus or inspiration to act (Ryan & Deci, 2000). For the purposes of this thesis proposal, motivation will be defined as the inspiration to engage in physical activity. Motivation exists in the form of a spectrum, meaning someone can possess varying amounts of motivation to engage in a specific act, from complete lack of motivation to a large amount of it (Ryan & Deci, 2000). Additionally, motivation can be oriented intrinsically, or extrinsically. Intrinsic motivation is defined as engaging in a specific act because of its inherent benefit or fulfilment (Ryan & Deci, 2000). In contrast, extrinsic motivation is defined as the will to complete a specific act in order to obtain a specific benefit that is separate from completing the act itself. In the case of physical activity, intrinsic motivation would include the wish to be active as a result of the belief that physical activity is inherently fun and enjoyable. Extrinsic motivation to be physically active, however, would include wanting to improve fitness, prevent disease, or expand social networks. Most actions engaged in by human beings are not strictly intrinsically motivating, and are impacted by social demands, especially immediately after early childhood (Ryan & Deci, 2000). This literature review will therefore, focus on extrinsic motivation to be physically active, and more specifically on the social influences that impact motivation for physical activity.

      Motivation for physical activity in adults differs from that of children. As human beings age, it appears their motivation becomes more intrinsic, while, as will be explained below, children are motivated more extrinsically. A study examining the determinants of physical activity of nearly 1000 American adults found that the intrinsic

factors of self-regulation (the ability of an individual to think about, adapt and alter behaviour) and self-efficacy (an individual's perceived ability to be able to perform a task or behaviour) were the best predictors of physical activity (Anderson, Wojcik, Winett, & Williams, 2006). Similarly, a review of studies exploring adult employee workplace participation in physical activity found that self-efficacy was the best predictor of physical activity, followed by the perceived benefits of physical activity and perceived health status (Kaewthummanukul & Brown, 2006). Anderson et al. (2006) also noted the importance of social support, a construct that, as will be described below, seems important in the physical activity of children.

**Non-social influences on child physical activity.** There has been significant research examining the reasons why children are physically active or inactive. The literature on motivation for childhood physical activity broadly encompasses many factors that support or inhibit participation in physical activity. This literature review will specifically focus on social motivators of childhood physical activity, however, there any many influences beyond the scope of this paper. These include but are not limited to: the built environment, variety of available and accessible activities, and priorities such as perceived available time (Allender, Cowburn, & Foster, 2006; Brunton et al., 2005; Salmon, Booth, Phongsavan, Murphy, & Timperio, 2007). Additionally, personal characteristics such as age, gender, body composition, perceived individual skill or physical ability, and goal orientation patterns have been associated with child motivation for physical activity (Anderson, Hughes, & Fuemmeler, 2009; Biddle, Wang, Chatzisarantis, & Spray, 2003; Ingledew & Markland, 2008; Murtagh, Dixey, & Rudolf, 2006; Salmon et al., 2007; Salvy et al., 2008; Xiang, McBride, Bruene, & Liu, 2007).

Interestingly, Allender, Cowburn, and Foster (2006) conducted a review of qualitative literature examining the reasons children and adults have for participating in physical activity, and noted that health was often not the main reason children stated for participation (Allender, Cowburn, & Foster, 2006). Other reasons for participation in physical activity include the psychological and psychosocial benefits such as the fun and enjoyment of the activity, and enhancement of mood, discipline, coping and ability to manage stress (O'Dea, 2003). These predominately non-social motivators for activity, while important, are beyond the scope of this literature review, which will focus specifically on social motivation for physical activity.

**Parental influence on child physical activity.** The two main sources of social motivation for childhood physical activity are influences from parents and peers. Parental impact on childhood physical activity has been well researched in this existing literature. Parental influence on motivation for child physical activity occurs in three ways through: support, role modelling, and family environment. Firstly, parental support is a critical factor in their child's physical activity. This support can be from an authoritative perspective, since parents have a great deal of control of the actions of children and their access to financial resources or transportation, but can also be from an emotional perspective by providing approval, encouragement, positive feedback and behavioural reinforcement (Allender et al., 2006; Brunton et al., 2005; Brustad, 1996; Keegan, Harwood, Spray, & Lavallee, 2009; O'Dea, 2003; Whitehead & Biddle, 2008). These two methods of support are important in child involvement in physical activity, but are not the only ways in which parents impact motivation.

Parents also act as role models for their child's physical activity (Bois, Sarrazin, Brustad, Trouilloud, & Cury, 2005). It has been frequently found that parent involvement and enjoyment of physical activity is associated with, and a predictor of, childhood physical activity (Allender et al., 2006; Brustad, 1996; O'Dea, 2003; Welk, Wood, & Morss, 2003). A study including 691 parents and 433 children found that parent belief in the importance of vigorous activity had the strongest relationship with child activity (Anderson et al., 2009). Further, a qualitative investigation of the levers and barriers for weight loss in children indicated the main cue for action initiating weight loss was most often the mother of the child (Murtagh et al., 2006). Finally, the family environment, planning for physical activity, and de-emphasizing the individual have also been found to be influential in child physical activity and obesity management (Golan & Weizman, 2001; Rhodes, Naylor, & McKay, 2010). Despite the undeniable importance of parental impact on motivation for physical activity, other research has found that parents are often unaware of this potential influence (Norton, 2003). Further, it has been found that parents are unaware of the amount of activity achieved by their children, and frequently overestimate the amount of activity achieved (Corder et al., 2010). Given this, it is important to investigate other social influences on childhood motivation for physical activity, such as the influence of peers.

**Peer influence on child physical activity.** In addition to being impacted by parents, children's motivation for physical activity is also impacted by their peers. A survey of 548 youth indicated that participation in sport was heavily impacted by the social influence of peers (Keresztes, Piko, Pluhar, & Page, 2008). A study examining peer influence on physical activity and dietary patterns of children between the ages 9

and 13 (n=315) with a one-year follow-up concluded that peers influenced physical activity but not dietary intake, and that peer acceptance was associated with physical activity behaviours (Coppinger, Jeanes, Dabinett, Vogele, & Reeves, 2010; Finnerty, Reeves, Dabinett, Jeanes, & Vogele, 2009). Several studies have examined facilitators or perceived benefits of physical activity in children and youth. Social facilitators of motivation for physical activity in youth have been found to include the opportunity to spend time with friends, socialize, or develop new social networks (Allender et al., 2006; Brunton et al., 2005; O'Dea, 2003). Additionally, studies have indicated that children perceive engagement in teamwork and having peer support as benefits of participation in physical activity (Allender et al., 2006; O'Dea, 2003).

Several studies have also examined barriers for childhood participation in physical activity. Social barriers to childhood participation in physical activity have been found to include a lack of interest in exercise by friends, pressure to engage in sedentary activities, a lack of playmates to be active with, and criticism by peers of physical ability or skill level (Brunton et al., 2005; O'Dea, 2003; Salmon et al., 2007; Whitehead & Biddle, 2008). A study specifically examining the decline in female adolescent physical activity indicated changing priorities and the social requirement to engage in more sedentary activities such as watching movies or going shopping as barriers to being physically active (Whitehead & Biddle, 2008). Further, a qualitative study of overweight children indicated that bullying and a desire to "fit-in" were initiators for losing weight (Murtagh et al., 2006). These studies indicate not only the role of peers in enabling physical activity but also suggest that peers may contribute to physical inactivity as well,

making peer-focused programming aimed at controlling this influence an especially important target for intervention.

Other studies have looked more specifically at the context of peer influence on physical activity. An intensive study was conducted requiring participants to wear two-way pagers and notify researchers of their activity and presence of others every two hours (Salvy et al., 2008). The results of this research indicated that youth were more active in the presence of peers than when alone, and were more vigorously active in the presence of peers than when they were being active alone (Salvy et al., 2008). This same study further indicated that overweight youth were more vigorously active than their normal weight peers when in the presence of peers, indicating the significant influence of peers not only on amount of activity, but also on intensity (Salvy et al., 2008). A similar, more recent study using accelerometers also concluded that overweight and obese boys were more active in the presence of peers than when alone (Rittenhouse, Salvy, & Barkley, 2011). Additionally, a study examining the motivational influences of coaches, parents, and peers on sport participation noted that peers motivated each other by encouraging effort, skill-building, and friendly competition (Keegan et al., 2009). This same study indicated that peers offer their team members motivation for activity by highlighting possibilities, building confidence, and indicating avoidable outcomes (Keegan et al., 2009). A study that used accelerometers to examine physical activity and friend groups found that children cluster in groups of similar activity patterns, and that school-based friendship groups are related to physical activity levels (Macdonald-Wallis, Jago, Page, Brockman, & Thompson, 2011).

A recent systematic review study confirmed many of the above relationships between peers and physical activity (Fitzgerald, Fitzgerald, & Aherne, 2012). This study determined that peers impact physical activity through several mechanisms including: peer support, presence, crowds, and norms, friendship quality and acceptance, and peer victimization (Fitzgerald, Fitzgerald, & Aherne, 2012). It is clear from these studies that peers offer substantial influence on motivation for physical activity and warrant further investigation to explore how this peer influence can be used to promote physical activity, as is recommended by several of the above mentioned authors (Active Healthy Kids Canada, 2011; Brustad, 1996; Coppinger et al., 2010; Finnerty et al., 2009; Whitehead & Biddle, 2008).

Peer influence has been previously investigated as impacting health-related behaviours other than physical activity as well. One study compared peer influence (social or peer pressure to conform) and peer selection (choice of friend group based on shared interests, activities or habits) to adolescent smoking and found that both were occurring, but that peer influence was more prominent (Hoffman, Monge, Chou, & Valente, 2007). A study examining peer influence on disordered eating behaviours concluded that peers do influence disordered eating, especially through "likeability" (Meyer & Gast, 2008). A study of 100 adolescents examining peer influence on sexual behaviours concluded perception of peers was associated with sexual initiation and permissiveness, and use of contraception (Potard, Courtois, & Rusch, 2008). Finally, a study labelling adolescent boys as "high peer influence" or "low peer influence" found that those with high peer influence were more likely to engage in appearance management behaviours such as sun tanning, waxing, or spa treatments (Yoo, 2009). The

association of peer influence with health related behaviours other than physical activity supports the significant role peers play in health of children and youth.

**Critique of the literature on motivation for physical activity.** The previously summarized literature on motivation for childhood physical activity has several strengths and weaknesses. Strengths include that there have been a variety of studies conducted in several disciplines such as psychology, health sciences, nursing, and education. Other strengths of this literature include that many studies have been done, targeting different age groups, from young children through to adults. Additionally, both qualitative and quantitative methods have been used, resulting in an excellent well-rounded understanding of motivation for physical activity. A major weakness of the literature on children's motivation for physical activity is that most studies ask the specific opinions of individuals, who have all experienced motivational factors that influence physical activity differently. It would be beneficial to control for some of the aforementioned factors that influence activity, and measure others, to gain a better understanding of the extent to which each variable influences motivation to be active. It would also be beneficial to conduct intervention-based studies, as opposed to the current majority of cross sectional studies, in order to examine how motivation for physical activity could be impacted by specific variables, such as peer support, for example.

Given the literature on the importance of parents and peers in motivation for children to be physically active, several suggestions have been made for future research. Brustad (1996), who had examined the role of the parent in physical activity of children, suggested future research focus on peer influences on participation in physical activity (Brustad, 1996). Salvy et al. (2003) suggested that social skills training could help avoid

16

the negative stigmatization faced by overweight children and youth, and may improve levels of physical activity (Salvy et al., 2008). Similarly, O'Dea (2003) suggested that physical activity programs should focus on team involvement and allowing children to have active fun with their peers (O'Dea, 2003). Active Healthy Kids Canada (2011) recommends the development of youth-led, peer-focused physical activity programs, and Whitehead and Biddle (2008) suggested implementation of a peer mentoring program to encourage activity. The evidence indicating the importance of parent role modelling and the impact of peers on motivation for childhood physical activity suggests a place for peer mentoring.

**Peer Mentoring**

   **Application of peer mentoring in adults.** Peer mentoring has been well established to be an effective method of behaviour change in adults. Peer mentoring in adults has frequently been used in academic employment in health care professions. Research has indicated that peer mentoring undergraduate nursing students helped to develop their confidence and abilities (Dennison, 2010). Similarly, a study examining mentoring in graduate level nursing classes concluded that mentoring helped to decrease anxiety and create a sense of belonging (Hamrin, Weycer, Pachler, & Fournier, 2006). Another study employing experienced female physicians to mentor other women resulted in an increase in academic productivity (Files, Blair, Mayer, & Ko, 2008). Peer mentoring has also been used to successfully increase the staff retention of newly employed nurses and staff in long-term care facilities (Dunham-Taylor, Lynn, Moore, McDaniel, & Walker, 2008; Hegeman, Hoskinson, Munro, Maiden, & Pillemer, 2007).

Peer mentoring has also been used to positively affect health in adults. Sherman, DeVinney, and Sperling (2004) studied peer mentoring post-spinal cord injury and determined that it was associated with higher life satisfaction and complemented traditional sources of social support. Similarly, Veith, Sherman, and Pellino (2006) found that individuals matched with peer mentors following spinal cord injury had facilitated adjustment following their injury. This research noted that the mentoring relationship was unique in that mentors offered credibility, mutuality, acceptance, and normalization of the experience (Veith, Sherman, & Pellino, 2006). Further, peer mentoring has been applied in adults who have experienced traumatic brain injury (Struchen et al., 2011). Struchen and colleagues (2011) determined that these adults received social support and showed trends toward increased satisfaction with their social lives following a peer mentoring intervention. Finally, peer mentoring has been used successfully in the physical activity of older adults, who had more improved fitness in the presence of peer mentors when compared to a student fitness mentor (Dorgo, Robinson, & Bader, 2009). The literature on peer mentoring in adults suggests that peer mentoring provides a unique opportunity for skill building and education. This literature also suggests that peer mentoring is useful and applicable in the health field, and more specifically, in physical activity.

**Application of peer mentoring in children.**

*Peer mentoring in children: Psychosocial and mental health.* Peer mentoring has been applied in children, although, in contrast to the adult literature, where peer mentoring is used to enhance experience, productivity, and skills, peer mentoring in children is often used to address some sort of psychosocial or mental health issue or risk. Children who have been targeted with peer mentoring interventions are most often those

experiencing low social interaction, a history of maltreatment, low self-esteem, academic difficulty, depression or other mental health issues (Anderson et al., 2006; King, Vidourek, Davis, & McClellan, 2002; Matthews, Fawcett, & Sheldon, 2009). Peer mentoring interventions have also targeted children and youth labelled "at-risk", from low socioeconomic status, or those engaging in risky health behaviours (Hurd & Zimmerman, 2010; Keating, Tomishima, Foster, & Alessandri, 2002; King et al., 2002; Moody, Childs, & Sepples, 2003). Other interventions have targeted child and youth aggressiveness, violence, and bullying (Cheng et al., 2008; Hektner, August, & Realmuto, 2003).

As a result of the groups that child and youth peer mentoring interventions have targeted, the interventions used have varied. Interventions have involved the mentors and mentees playing together, building relationships with one another, and engaging in recreational activities (Anderson et al., 2006; Fair, Vandermaas-Peeler, Beaudry, & Dew, 2005; King et al., 2002; Matthews et al., 2009). Peer mentoring interventions with children have also focused on enhancement of self-esteem and goal setting skills (King et al., 2002). Further interventions involving mentoring of children and youth have focused on providing academic support and skills (Akrimi, Raynor, Johnson, & Wylie, 2008; King et al., 2002).  Finally, a cost analysis comparing the costs of risky behaviours of youth to the costs of a peer mentoring intervention targeting social involvement and engagement in recreational activities determined that peer mentoring is a sustainable option that offers excellent "value for money" (Moodie & Fisher, 2009). Given the heterogeneity of these mentoring interventions aimed at improving the psychosocial or mental health of children and youth, there have also been mixed results.

19

Interventions involving peer mentoring of youth to improve psychosocial or mental health have varying results. Many studies have concluded that mentoring was beneficial in improving social skills, peer bonding, and relationships (Akrimi et al., 2008; Anderson et al., 2006; Cheng et al., 2008; Fair et al., 2005; Matthews et al., 2009; Moody et al., 2003; Pini, 2009). Other studies have concluded that peer mentoring was beneficial in improving school and family connectedness (King et al., 2002; Moody et al., 2003). Studies have also indicated positive results related to self-esteem, self-efficacy, body image, ambition, and emotional and attitudinal development (Akrimi et al., 2008; Cheng et al., 2008; Moody et al., 2003). Two studies indicated that positive results were seen in depressive symptoms in association with peer mentoring (Hurd & Zimmerman, 2010; King et al., 2002). In terms of aggressiveness, studies have noted positive results associated with peer mentoring in the areas of bullying, aggressive behaviours, misdemeanour charges, and physical fighting or violence (Cheng et al., 2008; Hektner et al., 2003; King et al., 2002). One study indicated that peer mentoring was associated with academic improvement (King et al., 2002), and another used peer mentoring successfully in chronic disease management (Pini, 2009). A study pairing aggressive and non-aggressive children found that aggressive children become less aggressive, while non-aggressive children did not become more aggressive, indicating that unidirectional influence is possible (Hektner et al., 2003). These results show promise that peer mentoring can be used to benefit health.

***Peer mentoring in children: Health-related behaviours.*** Peer mentoring has been used to influence the health-related habits of children and youth. As mentioned above, studies have shown peer mentoring to positively impact the psychosocial constructs of

aggressiveness. One study specifically examined the efficacy of employing peer mentors to change violence-related behaviours (Sheehan, DiCara, LeBailly, & Christoffel, 1999). This article indicated that, when compared to a control group, mentored participants scored lower on a violence prevention scale (Sheehan et al., 1999). Additionally, teachers, who were blinded as to who was in the control or intervention group, reported worse behaviour in the control group participants than those who had been mentored (Sheehan et al., 1999). Two articles found indicated that mentoring programs have successfully been applied to improve dropout rates in elementary and high school students (Dennison, 2000; Schmidt, McVaugh, & Jacobi, 2007). Further, peer mentoring has been applied in teaching youth about sexual health. An American abstinence-based program employing peers as instructors showed mixed results, but parents, teachers, principals and students all agreed that mentoring was the best way to reach students (Yoo, Johnson, Rice, & Manuel, 2004). Similarly, an HIV prevention program targeting street youth in Uganda found that peer educators were well respected and regarded as knowledgeable (Mitchell, Nyakake, & Oling, 2007).

Very few studies were found that used peer mentoring to target weight management or obesity prevention behaviours such as physical activity and nutrition. Similar to other peer mentoring interventions for youth, one program targeted low-income, minority, youth from an urban area (Black et al., 2010). The program involved 12 monthly mentoring sessions and a delayed follow-up at 24 months (Black et al., 2010). The intervention resulted in the overweight or obese status in the intervention group declining by 5%, while increasing by 11% in the control group (Black et al., 2010). In addition, the intervention was associated with reduced body fat percentage in

overweight participants, and increased fat-free-mass, even at delayed follow-up (Black et al., 2010). The study noted that participants had increased physical activity levels following the intervention, but not at delayed follow-up (Black et al., 2010). Similarly, a pilot study examining peer education in a school-based health program found significant changes in knowledge and attitudes related to health and concluded that peer education showed promise for studying health (Stock et al., 2007). Further, an intervention examining the impact of college students mentoring high school students noted significant decrease in soda consumption and trends toward improved activity (Cawley et al., 2011). These studies indicate that there is potential for peer mentoring to impact physical activity levels of children, but that quality of intervention needs to be considered.

**Quality of the peer mentoring experience.** Quality of the peer mentoring intervention is something that is described very little in the existing literature. One study compared two mentoring programs, one community-based program with extensively trained mentors focused on child-based skills training and also consulted with parents, while the other was a school-based program involving lunch break visits and mentors that could vary (Cavell, Elledge, Malcolm, & Faith, 2009). Results of this study indicated that the community-based intensive program had more significant results, and that children in that program rated their mentors as more supportive than those from the other program (Cavell et al., 2009). A qualitative study exploring the mentoring experience of children in England noted the importance of developing a positive, consistent, available, trusting, and caring relationship (Dallos & Comley-Ross, 2005). Similarly, a study examining the impact of mentor attendance on mentee outcomes concluded that mentor attendance was

22

related to self-esteem, social skills and behaviour, and suggested that absent mentors may do more harm than good (Karcher, 2005). A study examining the experience of mentoring in first year education students determined that the mentors felt satisfaction by participating, and that mentees grew in confidence and enthusiasm, in addition to gaining practical skills (Heirdsfield, Walker, Walsh, & Wilss, 2008).

**Critique of the literature on peer mentoring.** The above-summarized literature indicates that peer mentoring has been applied to improve multiple aspects of health in children. This literature presents several strengths and limitations. Strengths of this literature include the established usefulness of peer mentoring in influencing the psychosocial wellbeing of children and youth, specifically those who are at some sort of disadvantage. The evidence supporting this usefulness of peer mentoring was presented in several studies, from different disciplines including health, medicine, nursing, and psychology. The literature also presents both quantitative and qualitative studies, of different types, and with various sample populations.  These studies provide evidence that peer mentoring is an effective method of producing behaviour change, which may be applied to other areas with potential similar success. Limitations of this literature include inconsistent training of mentors and inconsistent application of mentoring programs, that is, mentoring programs often vary in type, frequency, and duration, and are often not described in sufficient detail to be replicated. Further, those studies reporting positive results associated with mentoring do not address the quality of the mentoring experience. Finally, while peer mentoring has been successfully applied to a few health behaviours in children, it is often used in disadvantaged populations to address a specific health concern

or risk, and, to my knowledge, has never been applied to specifically improve physical activity levels of the general child population.

**Summary**

In summary the literature indicates that childhood motivation for physical activity is impacted by many factors, but social influences, specifically those from parents and peers seem particularly important. Given that parents are often generally unaware of their child's physical activity behaviour, and the well-researched impact of peer influence on motivation for physical activity, more specific and controlled study of peer impact on physical activity is warranted. The literature supports the use of peer mentoring in young people to improve psychosocial health, and impact health behaviours. As stated previously, the H2K program is researching the use of peer mentors as a means of improving physical activity levels of grade 4, 5, and 6. This research is predominately quantitative, comparing activity levels, anthropomorphic measurements, and fitness levels in children of schools with and without a peer mentoring component. For my thesis, I conducted a qualitative exploration of the peer mentoring experience.

There are a few reasons why I chose qualitative methods. I believe that the addition of a qualitative exploration of the peer mentoring component will allow a deeper investigation than quantitative data collection alone. Since influencing physical activity in a general population of children is a new application of peer mentoring, it would be beneficial to explore the phenomenon by any route possible. Conducting quantitative data collection with children presents several common barriers, including difficulties with self-report and literacy for survey instruments (Kennedy, Kools, & Krueger, 2001). In contrast, qualitative data collection allows these barriers to be overcome, as the child

participants are not expected to read or adhere to a specific protocol; they simply have to express their opinions. In the case of the H2K program, if the schools with the peer mentoring program exhibit a significant improvement in physical activity levels, the increase could potentially be attributed to cause outside of the peer mentoring program. Similarly, if there are difficulties with data collection or reporting, and a significant difference in physical activity is not seen with the peer mentoring program, qualitative data might indicate other impacts of peer mentoring not represented by the collected quantitative data. Further, even if there is evidence that that peer mentoring is related to an increase in school day activity, there is no evidence that the participants enjoyed this experience. Qualitative data collection allows the opportunity for participants to express their opinion of the H2K program and peer mentoring, which will allow future modification and improvement of the program. A qualitative investigation adds further strength to the H2K research initiative.

The qualitative exploration of the peer mentoring experience is grounded in constructivism and takes the form of qualitative description. My main research question was: What is the experience of peer mentoring? This question was chosen because, as previously mentioned, physical activity in children is a new application for peer mentoring, and it is important to understand this phenomenon in general: how it is perceived by participants and what, if anything, it impacts. Qualitative description was chosen as the method to explore this question, as it allows a general exploration of the phenomenon resulting in a thick description of the experience.

## Chapter 3: Methodology

This chapter details the methodology and methods for the study. The chapter will begin by describing the conceptual framework that was used to inform the study, including the paradigm (constructivism), strategy of inquiry (qualitative description), and theoretical perspective (the social ecological model). The chapter will go on to describe my sample population, including their age, inclusion criteria, other characteristics, location and recruitment. The procedures for data collection are then described, including a description of the focus groups and semi-structured interviews. The chapter then goes on to describe the analytic approach that was used, including techniques of data management and analysis. Approaches used to ensure quality and rigor are then presented, before ethical considerations, including procedures for achieving informed consent and confidentiality. The chapter concludes by indicating how the results of the project will be disseminated.

**Conceptual Framework**

### Paradigm: Constructivism.

I chose to situate myself within the paradigm of constructivism for this research. Constructivism encompasses relativist ontology, meaning that there is not one true reality, but that multiple holistic, local, and specific realities are socially and historically constructed (Creswell, 2007; Denzin & Lincoln, 2000; Guba & Lincoln, 1989b; Weaver & Olson, 2006). The epistemology of constructivism is subjective, meaning that research findings are created as a result of the interaction between the researcher and the subject being researched (Denzin & Lincoln, 2000; Guba & Lincoln, 1989b). The methodology adopted by constructivism is therefore hermeneutic (Guba & Lincoln, 1989b).

Hermeneutic methodology leads to better understanding of phenomena by making sense of the phenomena through an iterative process of data collection, analysis, critique, and reflection (Guba & Lincoln, 1989b).

I believe that constructivism was the best paradigm for this research about the peer mentoring experience because it allowed the focus to be on the perspective of the participants (Creswell, 2007). Because children have experienced the peer mentoring program differently, I was interested in hearing and understanding their perspectives. With constructivism, participants individually reconstruct experiences, and phenomena have meaning only in the context in which they are experienced (Denzin & Lincoln, 2000; Guba & Lincoln, 1989b). Constructivist inquiry allows all participant perspectives to be appreciated and articulated, to make individual voices and concerns visible (Weaver & Olson, 2006). Constructivism seeks to understand the shared and subjective meanings of experiences, which is what I intended to do in exploring the peer mentoring experience (Weaver & Olson, 2006).

**Strategy of inquiry: Qualitative description.**

Qualitative description was chosen as the strategy of inquiry for this research. While qualitative description is less recognized as a formal method of conducting qualitative research than some other methodologies, it can be very useful in certain circumstances (Sandelowski, 2000; Sandelowski, 2010). Originally, it was intended that the study of the peer mentoring experience would be conducted using interpretive phenomenology; however, as is demonstrated by the remainder of this chapter, qualitative description was a better fit. The purpose of qualitative description is to explore an understudied issue, gain knowledge of a participant's experience with a particular

topic or to provide a rich straight description of phenomena (Neergaard, Olesen, Anderson, & Sondergaard, 2009; Sandelowski, 2000). Qualitative description allows for a summary of events "in the everyday terms of those events" (Sandelowski, 2000).

In conducting qualitative research, selecting a methodology can be very challenging. Researchers are often forced to alter research design in order for it to fit within the boundaries of a specific qualitative methodology such as phenomenology, ethnography, or grounded theory. The result is often research that is "posturing" as a specific methodology, or researchers that feel obliged to designate work as a specific methodology when it is not (Neergaard et al., 2009; Sandelowski, 2000). Phenomenology has as its goal exploring the meaning or essence of a shared experience (Creswell, 2007). In planning my study of the peer mentoring experience, phenomenology seemed like a natural fit; however, after further research on the requirements of phenomenology I saw that this was not the case. As is explained in the following section on data collection procedures, I conducted focus groups with children. While I believe that conducting focus groups was the best method of data collection, it resulted in data of less 'depth' than would typically be used in interpretive analysis, especially considering the young age of the participants. With this in mind, I felt qualitative description, which involves less interpretation and stays "closer" to the data, was more appropriate, because it did not require same level of abstract or conceptual interpretation (Neergaard et al., 2009; Sandelowski, 2000). Additionally, focus groups are a well-accepted method of data collection in qualitative descriptive research because they allow for a broad, general understanding of the topic, from multiple perspectives (Neergaard et al., 2009; Sandelowski, 2000).

Qualitative description may also encompass hues, textures or overtones of other qualitative methodologies (Neergaard et al., 2009; Sandelowski, 2000). While qualitative description is descriptive, by nature, qualitative research cannot ever be completely free of interpretation: simply by studying and describing a topic, it is transformed by the perspective of the researcher (Sandelowski, 2000). Qualitative description therefore may involve light interpretation by the researcher; the results are presented in such a way that they remain closer to the words spoken by participants (Sandelowski, 2010). I have therefore conducted my study using qualitative description with overtones of phenomenology. I used the methodology of qualitative description to conduct my study; however, I opted to use the phenomenological data analysis method of thematic analysis, as opposed to the content analysis that is typically adopted by qualitative description (Sandelowski, 2000). This allowed me to best describe the peer mentoring experience.

**Theoretical perspective: The social ecological model.**

The social ecological model (SEM), originally described as Ecological Systems Theory by Urie Bronfenbrenner (1979), stated that environmental factors interacted with individual factors to produce behaviour. Bronfenbrenner described levels of factors that influence behaviour including the individual, the interpersonal, the organizational, the community and the intercultural, or the micro-, meso-, exo-, and macro- levels (Bronfenbrenner). The SEM states that health behaviours are the result of a complex interaction between and interdependence of factors at each of the levels described by Bronfenbrenner, sometimes referred to as the intrapersonal, interpersonal, institutional, community, and systems or policy (Cottrell, Girvan, & McKenzie, 2009). According to the SEM, behaviour can only be fully explained and understood in the context in which it

occurs (Davison & Birch, 2001). In the school setting, the intrapersonal level was represented by individual factors within a child, the interpersonal level included the interactions between the individual and other people, the institutional level was represented by the classroom or school, the community level was represented by the surrounding neighbourhood, and the systems or policy level was represented by the school board or governing body of the institution.

The SEM is relevant for school health because each level of the model impacts children daily. Two major reviews on physical activity interventions concluded that multi-component interventions (for instance, those that target more than just individual behaviour change) were most effective (Dobbins, DeCorby, Robeson, Husson, & Tirilis, 2009; van Sluijs, McMinn, & Griffin, 2008). Many interventions suggest the value of ecological models to impact child health, including those targeting physical activity (Davison & Birch, 2001; Kelly & Melnyk, 2008; Naylor & McKay, 2009). The H2K program employs the SEM by directly targeting the individual level through education and encouragement of tracking one's own physical activity level, the interpersonal level by employing peer mentors and adding elements of competition, and the institutional level by being adopted on a school-wide basis. My study of the peer mentoring experience therefore also applied the social ecological model by collecting data and comparing results from mentored participants and peer mentors (students, individual and intrapersonal levels), teachers (institutional level), and parents (community level).

**Population**

**Age.** Eligible participants for the focus group component of my research were already participants in the H2K program, which involved grades 4, 5, and 6 students

(ages 8 to 12 years) in 10 schools in the HRSB. These grades were chosen by the H2K research team as previous local literature indicated that the amount of physical activity achieved by children significantly decreases between grade 3 and grade 7, indicating the requirement for intervention between those grades (Thompson et al., 2005). Additionally, at these ages, children are beginning to develop abstract thought processes and are beginning to make more decisions for self, meaning they were better able to partake in the research process. Since participants for my study were already participants of the H2K program, their ages were the same. Ages of the additional parent and teacher interviews varied, but they were all adults.

**Inclusion criteria.** The H2K program allowed all members of the grades 4, 5, and 6 classes at the involved elementary schools to participate as long as they had a signed parental authorization form and assent to participate. My criteria were different from the regular H2K criteria in that I conducted purposeful intensity sampling (Patton, 2002a). Pilot data from the H2K program (unpublished) indicated that participants who attended more than half of the optional "H2K Lunches" (the primary opportunity for peer mentoring) achieved more physical activity than those who attended fewer lunches and that those who did not attend the "H2K Lunches" generally do so because of time conflicts and not because of disinterest. For those reasons, I recruited firstly from only the H2K intervention schools that had a peer mentoring component, and secondly from only those students who had attended more than half of the "H2K Lunches" because they likely had the most information-rich experience of peer mentoring. This strategy was used in order to accomplish the purpose of this thesis, which was to explore and describe the peer mentoring experience. Additionally, I selected focus group participants to ensure

that no mentee was in a focus group with their own mentor, so that they would not feel obligated to speak positively about the experience. Inclusion criteria for the parents and teachers who took part in the additional one-on-one interviews simply involved them being a parent (or legal guardian) of one of the focus group participants.

**Participants.** One focus group was conducted at each of 3 of the 5 H2K intervention schools. Each focus group included 4 to 7 child participants, for a total of 17 participants with an average age of 10.6 years. Participants included 10 mentees and 7 mentors. I had intended on visiting the other 2 intervention schools to collect additional data if necessary, but determined after the first 3 focus groups that I had collected a sufficient amount of data and that it was not necessary. This was determined by listening to, transcribing, and reading data, a process which indicated that, in the large amount of data had been already been collected, there were few differences between groups. At that point, it was decided that collecting more data would only make analysis overly lengthy. I conducted an additional 6 parent and teacher interviews which included 1 parent and 1 teacher from each school where focus groups were conducted. All of the adult participants were female.

**Location.** All child focus groups were conducted at the specific elementary schools that the children attended, during the school day. This ensured, firstly, that participants were able to attend without requiring transportation, and secondly that participants were comfortable in the environment (Gibson, 2007; Horner, 2000). Parents and teachers involved in the adult one-on-one interviews were given the option of conducting the interview at their involved elementary school, at the Maritime Heart Center, at Dalhousie University, or at any predetermined and agreed upon location that

they wish within the Halifax Regional Municipality. This flexibility helped to ensure that the participants were able to attend at their convenience, and also that they were comfortable in their environment (Patton, 2002b). All teacher interviews occurred at their schools. Two parent interviews occurred at the Maritime Heart Center and one occurred at the elementary school her child attended.

      **Recruitment.** Child focus group participants were recruited using a specific process. Firstly, announcements about the study were made at H2K Lunches and at individual involved classrooms. Immediately following classroom announcements, students were provided the opportunity to volunteer and given a consent package if they wished. Classroom announcements indicated that all students who volunteered might not be selected to take part in the study (so that participants could be selected based on mentor/mentee numbers and attendance at H2K Lunches). Information and consent packages were also left with teachers to provide to other students who may have volunteered later. Consent packages contained information and authorization forms for teachers and parents as well, so that snowball recruitment was used to recruit teachers and parents who volunteered to take part as a result of a specific child participant (Patton, 2002a). Consent packages were labelled with a 'return to school by' date, at which time all completed consent packages were collected. A list of students who met informed consent guidelines was then compiled for each school. Focus group participants were then selected in order to meet the selection criteria of having attended more than half of H2K Lunches. Participants were also selected so that there were both mentees and mentors in each focus group, and so that no mentee was in a focus group with their own mentor, as described above. Please view Appendix A for a letter to parents, teachers, and

students explaining involvement in the study, Appendix B for information and authorization forms, and Appendix C for information for students.

**Procedure for Data Collection**

    **Focus groups.** Focus groups were chosen as the procedure for data collection from the children because they may have been perceived as less intimidating than one-on-one interviewing of a child by an adult, may have allowed children to feel more comfortable in responding to questions, and may have allowed children to feel empowered to speak (Horner, 2000). I personally conducted each focus group, and had intended on bringing a member of the H2K research team to conduct peer review and debriefing, however, this was not possible due to time and resource constraints associated with data collection for the larger H2K research initiative. As I was frequently present at each of the elementary schools as part of H2K program deployment, it was presumed that the focus group participants were already relatively familiar with me, which may have also helped prevent the discomfort associated with interviewing. Additionally, conducting qualitative focus groups with children overcomes the common barriers and limitations of conducting quantitative survey research with children, such as literacy, and may have allowed for the obtainment of perspectives not normally considered in quantitative research (Kennedy, Kools, & Krueger, 2001). Further, this method of data collection was selected to maintain congruence with the methodology of qualitative description, which often uses focus group (Sandelowski, 2000).

    Focus groups were kept small, with no more than 7 individuals in each, which allowed the groups to be manageable and offered each participant the opportunity to speak freely (McLafferty, 2004). Since the focus group participants were all participants

in the H2K program, from the same school, in grades 4, 5, or 6, they were a fairly homogeneous group, which may have helped the discussion to flow more naturally (McLafferty, 2004). Additionally, I provided healthy snacks at each focus group as a way of showing appreciation for the participants' time, and began each focus group with a small 'icebreaker' activity to ensure participant comfort in speaking (Gibson, 2007). The icebreaker activity involved asking each participant to answer a general, non-invasive question: "If you were stranded on a deserted island, what is one thing you would want to bring and why?" This allowed participants to get used to expressing their own opinion in the presence of others, an audio recording device, and myself.

Each focus group was approximately one hour in duration. Focus groups followed a semi-structured focus group guide consisting of a pre-determined introduction, and five big questions or topics of interest, with several probes for each. Please refer to Appendix D for the semi-structured focus group guide. The questions focused on each child describing their role in the H2K program, their physical activity, their motivation to be physically active, their experience with their peer mentor (or as a peer mentor), and the impact they feel peer mentoring has had (if any). The focus groups were all audio-recorded. Participants were explained that they were not required to answer any question they did not wish to, and that they may have left the focus group at any point in time without question. I had intended on returning to schools following the focus groups, as necessary, to gather additional information, for the purposes of clarification, and for member checking as themes developed, however, this was not possible due to time constraints, and is discussed in the below section on limitations.

**Semi-structured interviews.** To maintain congruence with the SEM, parents and teachers of child focus group participants were interviewed to capture their perspectives and opinions of the peer mentoring experience as well. Parents and teachers experienced peer mentoring peripherally; that is, parents likely heard about the program from their child's involvement (and through completion of the informed consent process), and teachers experienced the program on a regular basis, but were not assigned peer mentors themselves. Adults were interviewed in order to compare and contrast their perspectives with that of the children.

I conducted six parent and teacher interviews. One interview occurred with one parent and one teacher at each of the three schools where focus groups were conducted. These interviews were kept fairly short (approximately 30 minutes) in order to be able to remain fully engaged in all of the data I collected. The interviews followed a semi-structured guide that was similar to that of the child focus groups, with the same topics of interest, only more focused on how the adults perceived the experience (interview guide available as Appendix E).

**Analytic Approach**

**Data management.** All focus groups and interviews were audio recorded and transcribed verbatim, by the author. All identifying data was removed from transcripts and names were replaced with codes. Transcripts were saved as Microsoft Word files and kept on a password-protected computer. Transcripts were also transferred into the qualitative analysis computer program ATLAS.ti for data management, organization, and thematic analysis.

**Data analysis techniques.** While qualitative description studies often use content analysis as their main method of data analysis, I conducted thematic analysis. I chose this method in order to provide a rich description of the peer mentoring experience and maintain congruence with the phenomenological overtones of this study (Sandelowski, 2000). While codes and themes remained close to the data and the actual words spoken by the participants, some low-level interpretation took place, in the attempt to better understand the peer mentoring experience.

Thematic analysis was guided by Miles and Huberman (1994), and Braun and Clarke (2006). Analysis began by becoming familiar with the data, which involved conducting all transcription of data and then reading and re-reading transcripts (Braun & Clarke, 2006). All field notes, reflections, and memos were transcribed, read and re-read. Once I was familiar with the data, coding began (Braun & Clarke, 2006). Open coding was conducted by reading and re-reading, and allowing codes to emerge from the data (Miles & Huberman, 1994). Coding was also conducted using the social ecological model as a guide. Examples of codes included "PM: Encourage PA", which was used to code any section of data that indicated peer mentoring encouraged physical activity, and "SEM: Inter", which was used to code any section of data that related to the interpersonal level of the social ecological mode.

Transcripts were then re-read and re-coded as necessary, while remaining flexible and open to changing, discarding, and adding codes as necessary (Miles & Huberman, 1994). Throughout this process, a great deal of refinement of codes used in describing the peer mentoring experience occurred. Many codes such as "PM: help", "PM: support", and "PM: respect" were used to code data that eventually contributed to themes presented

in the results chapter of this thesis. This iterative process was repeated several times. Throughout all coding, memos were written as reflective thoughts occurred. Memos were used to make a note when a particular quotation warranted further exploration or discussion. An example of this occurred while coding childhood motivators for physical activity. It was noted that the code "Mot for PA: Family" (used to code data that described family as a motivator for physical activity) appeared almost as frequently as the code "Mot for PA: Peers" (used to code data that described peers as a motivator for physical activity); however, these motivators were perceived very differently. A memo was used to make a note of this, and the concept is presented in the discussion chapter.

Once coding was completed, exploration for themes began (Braun & Clarke, 2006). Looking for themes involved a more broad exploration of codes, and examination of relationships between codes and how they combined to form themes that were characteristic of the majority of the data set (Braun & Clarke, 2006). Themes were then reviewed and re-organized by significance, to create major themes and related sub-themes for each (Braun & Clarke, 2006). Keeping congruent with qualitative description, the themes were descriptive and remained very close to the words spoken by the participants. Themes and sub-themes were then presented as a rich description of elements of the peer mentoring experience and its impact, using quotes to support each theme and sub-theme (Braun & Clarke, 2006; Miles & Huberman, 1994). Themes and sub-themes were also examined in light of existing knowledge of peer mentoring, motivation for physical activity, and the social ecological model (Miles & Huberman, 1994). Data analysis was determined to be complete when it seemed like changes in codes and themes were no longer occurring.

**Quality and Rigor**

Ensuring quality and rigor in qualitative research differs substantially from the well-known methods of determining quality in quantitative research. In qualitative research, the quantitative terms of validity, reliability, and objectivity are replaced with credibility, authenticity, transferability, dependability and confirmability (Creswell, 2007). Creswell (2007) recommends that qualitative researchers engage in at least two methods of establishing quality and rigor.

Credibility is one method of ensuring quality in qualitative research. Credibility focuses on internal consistency, or ensuring congruence between the constructed realities of the participants, and the way those realities are presented by the researcher (Guba & Lincoln, 1989a; Morrow, 2005). There are many techniques used to establish credibility, including prolonged engagement and persistent observation in the field, triangulation of data sources, peer review and debriefing, member checking, and clarifying or reflecting on researcher bias (Creswell, 2007; Guba & Lincoln, 1989a; Milne & Oberle, 2005; Morrow, 2005; Neergaard et al., 2009). For my study, I was often present in each of the peer mentoring schools for regular H2K program deployment, which allowed for significant and prolonged engagement and observation in the field. I conducted triangulation by collecting data from child participants, as well as parents and teachers. I conducted peer review by having members of the H2K research team and my supervisory committee review transcripts, themes, and thesis chapters as they developed. Finally, I reflected on my own biases and tried to remain reflexive throughout the research process to understand and remain aware of my biases impacting the research.

Transferability and authenticity are other methods of ensuring quality in qualitative research. Due to the nature of qualitative research, generalizability is not an expectation, however, transferability refers to the ability to understand the context within which the research was conducted, which can be beneficial to researchers conducting similar types of research (Guba & Lincoln, 1989a; Morrow, 2005). I encouraged transferability by describing the context in which the research was conducted, the processes used, and the participants involved (Creswell, 2007; Guba & Lincoln, 1989a; Morrow, 2005). Authenticity refers to the ability of the research to capture the information that was intended, and to accurately represent the perspectives of the participants (Milne & Oberle, 2005). According to Milne and Oberle (2005), focus groups are an excellent method of establishing authenticity in a qualitative descriptive study because it allows the role of the researcher to be lessened, and increases the voice of the participants. I promoted authenticity by encouraging participants to speak freely, and by probing for further information where necessary, which allowed participants to drive the data, and for their perspectives and opinions to accurately represented (Milne & Oberle, 2005; Neergaard et al., 2009). Authenticity was also accomplished by conducting purposeful sampling and transcribing interview and focus group data accurately (Milne & Oberle, 2005; Neergaard et al., 2009).

Dependability and confirmability are the two final methods of ensuring quality and rigor in qualitative research. Dependability refers to the necessity to remain consistent in research processes across time; while confirmability refers to ensuring presented results are an actual representation of participant perspectives (Guba & Lincoln, 1989a; Morrow, 2005). Dependability and confirmability are accomplished by

explicitly defining and recording research activities, that is, tracking the entire research process so that it can be examined by peers (Morrow, 2005). In the case of my study, I accomplished this by keeping a reflective journal, used to record thoughts before and after each focus group or interview, throughout the research process, and remaining reflexive throughout.

Additionally, as focus groups progressed, I learned to use techniques that I believe were able to better draw out dependable responses from participants. For example, when children were asked how they thought a specific factor impacted their physical activity, they would always respond by talking about that specific factor, and I felt as though they were being led to give those responses. I quickly learned that when asked more general questions, the students responded more meaningfully, and more specifically about the factors they felt impactful. For instance, when asked about the physical environment impacting motivation for physical activity, a child would talk about access to playgrounds or yard, and when asked about financial resources, a child would speak directly about such. When asked generally about 'resources, environment, and availability', however, the child participants were forced to choose which of those they felt most impacted by, and which they would choose to speak about. I continued to employ this technique to have more dependable data.

**Ethical Considerations**

The H2K program had already received ethical approval from the IWK Research Ethics Board, the protocol of which included an explanation of qualitative focus groups. I submitted an amendment to the IWK with all details of the focus groups and interviews following review of my official thesis proposal. Once approval had been received, I

notified the School of Health and Human Performance, Dalhousie University, and they have a copy of the ethics approval on file.

**Informed consent.** The child participants in my study, who are minors, are considered a vulnerable population and special attention was thus paid to achieving informed consent. Prior to being contacted by the H2K research team, a letter was sent to each child and their parents from each of the involved schools and their principals. After receipt of the letter, an assembly was held at each school to familiarize the children with the H2K program, and then Information and Authorization packages were sent home with all students. These packages included information about the program written at a grade eight and a grade three reading level, to ensure both parents and children were informed about H2K. These packages noted that the child might be asked to participate in focus groups later. The packages also included a consent form to obtain written consent from the parent or guardian of the child. Children were then asked to verbally assent to participation.

Since original consent was already obtained (September 2010) and a significant amount of time had passed prior to the focus group data collection (May and June 2011), a second consent form was used for the child participants involved in the focus groups. This additional short consent form was be sent to parents of H2K participants who volunteered to take part in the focus groups, when the focus group study was introduced in Spring of 2011. Again, parents or guardians provided written consent, and children volunteered to participate or provide verbal assent to participation. An additional consent form explaining the study was used to obtain informed consent from the parent and teacher participants.

**Confidentiality.** The H2K program followed all standard methods of ensuring confidentiality by assigning participant numbers, removing identifying information (and storing it separately from other data), and keeping data locked or password protected. There were more than 800 participants in the H2K program at the time this sub-study was conducted, making it virtually impossible for any one student to be identified in the data. Since there were a much smaller number of children participating in the focus group study, extra care was taken to ensure the confidentiality of these participants. All identifying information was removed from transcripts and labelled using a code. All audio material, transcripts and computer files were either locked or password protected in an office at the Maritime Heart Center and will be destroyed after five years. The same protocol and care applied to the adult one-on-one interview data.

**Potential harms and benefits.** There was no potential for serious direct harm from participating in my study focus groups or interviews. Participants may have experienced discomfort in being asked to speak about their experiences (especially if they did not have a positive experience), however, they were informed that they need not respond to anything they felt uncomfortable talking about and may have left the interview or focus group at any time without being asked why. Since the child participants were asked to participate in focus groups during class time, there is a risk that they may have suffered from missing educational instructional. To minimize this risk, focus groups were scheduled in conjunction with the involved schools and teachers to ensure that participants missed class at the best possible time. Adult interviews were scheduled at the convenience of the participant. The potential benefits of participating in my study include having the opportunity to express opinion of the H2K program and the peer mentoring

experience, which may contribute not only to the H2K program, but also to the existing knowledge of peer mentoring and its application to the development of healthy habits.

**Dissemination of Results**

Dissemination and knowledge translation for this study will involve multiple forms. Firstly, dissemination will occur through completion and defence of the thesis. I also intend to publish the results of this study in a health promotion journal, and to present at any available and relevant conferences. The results of this thesis have already been presented at the Dalhousie Crossroads Conference (Halifax, NS, March 2012), the IHRTP Graduate Student Research Day (Halifax, NS, May 2012), and the Canadian Public Health Association Conference (Edmonton, AB, June 2012). Additionally, the results of this research will be presented in conjunction with the H2K program, which routinely accesses any and all scientific and public presentations. The results of this sub-study are also being presented in conjunction with quantitative physical activity data, for example, at the Dalhousie Cardiac Research Day (Halifax, NS, May 2012).  Further, H2K routinely accesses local media outlets such as radio, television and newspaper. Finally, a summary of study results will be given to all participants (and their families) who have requested to have one.

**Summary**

This chapter described the methodology and methods that were used for the project. The chapter began by describing the constructivist paradigm, qualitative description methodology, and social ecological model as they were applied in the project. The chapter then described the main characteristics of the study participants, and how they were selected and recruited. Procedures for data collection, management, and

analysis were then described. To conclude, the chapter described the approaches employed for ensuring quality and rigor, ethical considerations, and plans for dissemination of findings.

## Chapter 4: Results

This chapter describes the results of conducting three focus groups with children, and six one-on-one interviews with adults. The focus groups were each about one hour in length, while the adult interviews were each between 20 and 30 minutes. The child participants included 17 children (7 from School 1, 4 from School 2, and 6 from School 3), ranging in age from 9 to 12, with an average age of 10.6. There were 5 male children, and 12 female children. The child participants included 7 mentors, and 10 non-mentors (called mentees throughout this chapter). The three schools varied in degrees of urbanity; however, it was determined through data analysis that there were no distinct differences found between schools as a result. Adult interviews included three parents, and three teachers (one parent and one teacher from each school where focus groups were conducted). All adults interviewed were female, and none were asked about their age.

The major topics of discussion, major themes, and other themes that are discussed in this chapter, are briefly presented in Table 1. This chapter begins by describing the child participants' involvement in the H2K program, from their own perspective, and from the perspective of the adult participants. It continues to present a section on physical activity, which was a dominant focus for both the child and adult participants. Continuing from physical activity, the chapter then presents sections on participant motivation for physical activity, and motivation for physical inactivity or sedentary behaviour, again, each from the perspective of both the child and adult participants. The sections on motivation for physical activity and inactivity present the influences of peers, family, resources, health, H2K, and other factors. In each section, participant quotations are used to demonstrate findings.

**Table 1: Presentation of major discussion topics, major themes from the peer mentoring experience, and other themes, as presented in the results chapter.**

| Major topic | Sub-topic |
|---|---|
| Involvement in H2K Program | N/A |
| Involvement in physical activity | N/A |
| Motivation for physical activity | Peers, family, resources, environment, availability, health, H2K, other |
| Motivation for inactivity | Screen-time, peers, other |
| *The peer mentoring experience:* | |
| **Major theme** | **Sub Theme** |
| Peer mentors are perceived as encouragers of physical activity | N/A |
| Peer mentors are perceived as helpers and supporters | - Peer mentors explain games at H2K Lunches<br>- Peer mentors provide clarification and assist with skill development<br>- Peer mentors provide encouragement & motivation<br>- Peer mentors perform other helpful tasks |
| Peer mentors are perceived as organizers and administrators | - Peer mentors take attendance at H2K Lunches<br>- Peer mentors perform specific tasks & responsibilities<br>- Peer mentors organize H2K Lunches & events<br>- Peer mentors perceive their role as a responsibility |
| **Other themes** | |
| Peer mentoring positively impacts social networks | |
| Being a peer mentor is perceived as positive | |
| Other themes identified only by adult participants | |

Following on from the above sections, the peer mentoring experience is described from the perspective of both the child and adult participants. Three major themes and associated sub-themes are presented (please refer to Table 1). The first theme is that peer mentors are perceived as encouragers of physical activity. The second major theme is that peer mentors are perceived as helpers and supporters. Sub-themes include peer mentors explaining games at H2K Lunches (the main time peer mentoring occurred), peer mentors providing clarification and assistance with skill development, peer mentors

providing encouragement and motivation, and peer mentors performing other helpful tasks. The third major theme presented is that peer mentors are perceived as organizers and administrators. Sub-themes include peer mentors taking attendance and performing other specific tasks, peer mentors organizing H2K Lunches, and peer mentors perceiving their role as a responsibility. Quotes from child and adult participants are used to illustrate each theme and sub-theme.

Following the presentation of results under the major heading of the peer mentoring experience, other themes are presented from both the child and adult perspective. These include that peer mentoring positively impacts social networks and that being a peer mentor is perceived as positive. Finally, a few themes are examined that were indicated only by adults, including, the necessity for healthy role models, parent unfamiliarity with details of the H2K program, and teachers being unaware of their students' physical activity. Quotations from participants are again used to demonstrate themes.

**Involvement in the H2K Program**

      **Perspective of the child participants.** All child participants discussed the H2K program, detailing program components and their own involvement or contribution to the program. Many participants discussed the intention of H2K as a program designed to motivate children to be more physically active with the overall goal of improving health. For example, one participant said, *"H2K is H2K because it's Heart Healthy Kids, it's for physical activities"* (school 1, mentee 5). Other participants discussed their involvement with a team, as homeroom classes were divided into teams that were competing against one another in virtual distance traveled using logged pedometer steps. One participant

said, for example, *"I'm on team [team name] and everybody in our class gets a pedometer and then they like track their steps and then we like put them on the computer"* (school 2, mentee 6).

Many child participants also described their enjoyment of the H2K program. Participants discussed general enjoyment of the program overall, and more specifically mentioned enjoyment of being part of a team, engaging in physical activity, enjoying the challenge, receiving a pedometer, using the web-based logging system, and occasionally being rewarded with prizes. One participant said *"H2K is something where kids can go [...] and have physical activity and play lots of games and it's fun"* (school 1, mentee 2). Most participants indicated that their enjoyment of the program was a result of the H2K Lunches, which is the main time during which mentoring would occur. Participants expressed enjoyment of having this opportunity to gather with their friends and teammates, and placed a special emphasis on enjoyment of the games played during these lunches. One participant said, *"H2K Lunches are really fun because you get to hang out with your friends and talk to people about your physical activity"* (school 1, mentee 1). Some participants indicated their enjoyment of the H2K Lunches was because it offered a fair and safe environment for physical activity. For example, one participant said *"everyone is always really nice at them; like no one is mean and we all just play together"* (school 1, mentee 4).

While the majority of feedback about the H2K program was positive, child participants did discuss some limitations of the program. Most frequently, the children indicated that the daily pedometer tracking was difficult to maintain, despite their enjoyment of, and interest in, having and wearing a pedometer. This was generally

described as a result of pedometers breaking, having dead batteries, or being lost, or due to difficulty associated with remembering to wear it every day. One student described this by saying, *"with the pedometers it's kind of hard sometimes because like, they break or die, and then you can't get your steps"* (school 1, mentee 5). Other students expressed difficulty associated with the peer mentoring program, or the H2K Lunches. One child, who typically would not stay at the school for lunch, said, *"we never really get reminded for the lunches, so like, a lot of people that go home for lunch missed a lot […] they tell us in the morning but it's too late to get a lunch then"* (school 3, mentee 10).

**Perspective of the adult participants.** Similar to the child participants, adult participants also described the H2K program from their perspectives. Parents and teachers described their children's enjoyment of the program by noting how enthusiastic their students and children were about the program, how excited they were to track their steps, and how much they enjoyed the H2K Lunches. A teacher said about her student, *"he was always very excited about getting steps, and about doing extra activities to get those steps"* (school 2, teacher). Adult participants also discussed their own enjoyment of the program. Teachers perceived the frequent engagement of H2K at the school as positive, with one saying *"I really liked that there was always something: assemblies and lessons, and the weekly lunches, it always kept the kids mindful"* (school 2, teacher). A parent indicated that her child would have liked feeling involved in the program by saying, *"I'm sure she just liked being involved and probably appreciated being part of a team"* (school 2, parent).

Finally, adults also discussed their perceptions of limitations of the H2K program. These limitations were discussed, however, only by teachers, and not by parents. Parents

did not discuss any direct limitations of the program, but did, however, indicate that they likely were not involved in the program sufficiently to determine limitations; this is discussed later in the results section. With regard to H2K program limitations, teachers discussed only issues with pedometers and duration of data collection. One teacher (school 3) summarized:

> *I think probably the pedometers 'cause it was frustrating sometimes. They'd be like 'Well I want to keep track of mine but mine doesn't work', or 'I forgot mine outside', or 'he took mine', you know?*

Other teachers acknowledged their own role in this limitation by discussing that they sometimes forgot to remind students to wear their pedometers and log their activity every day. One teacher said a difficulty she had with the program was *"the weekly tracking, and being consistent with that, and remembering to remind them every day"* (school 1).

**Involvement in Physical Activity**

**Perspective of the child participants.** All child participants discussed their own involvement in physical activities. These were divided into two categories: organized, and unorganized. Organized activities were defined as those that require registration or payment of fees to allow participation, or any clubs or teams. For the purpose of this research, H2K will be classified as organized activity. Unorganized physical activities were defined as all other activities: free play, or general running and playing, tag-type games played during lunch and recess at school, any semi-organized games played in neighbourhoods without the requirement to sign up (e.g. road hockey), and any active transportation (e.g. walking or biking to or from somewhere). Child participants discussed involvement in both types of activity, but placed a greater emphasis on, and spoke more often about, unorganized physical activity.

In speaking about organized physical activity, children predominately discussed clubs or teams in which they participated. These included involvement in school and community based sport teams, and community-based lessons or camps, such as swimming. For example, one student said, *"on Wednesdays I have running club at the end of the day"* (school 1, mentee 5). Another participant said, *"every summer I take swimming lessons and go to soccer camp"* (school 3, mentor 7).

Participants discussed unorganized physical activities occurring both at school, and at home. At school, participants described engagement in active games or sports, usually organized by groups of children and played during free time such as recess. One participant said *"we play games outside at recess, and at lunch we play like Foursquare… some people play basketball too"* (school 2, mentor 3). Outside of school, children described playing similar games and sports with other children in their neighbourhoods, and use of bicycles or other independent modes of physical activity. For example, one participant said, *"I usually go over to my friend's and we like get all kinds of people and we'll have like a big hockey game"* (school 1, mentee 3). Participants also discussed common games that were not organized physical activities, but that were commonly played by groups. This is evident in the above mention of "Foursquare" (school 2); other students mentioned games called "*Mantracker*" (school 1), and "*Trackdown*" (school 2), which are both 'tag' type games involving teams of children chasing one another, with the goal of catching opposing team's members.

**Perspective of the adult participants.** The adult participants also discussed examples of organized and unorganized physical activities. Adults talked about their own activity in addition to the activity of their children. With regard to organized physical

52

activities, the most frequent discussion was with parents, about their child's enrolment in various sport teams or other activities. One parent said, *"Scouts is her main thing, so it's a lot of walking, hiking, carrying backpacks"* (school 1, parent). Very few adults talked about their own involvement in physical activity, and those who did mostly discussed participation in group-fitness classes. One teacher said, *"I do play on the local basketball league once a week or so"* (school 1, teacher).

Teacher and parents also discussed their own involvement, as well as their children's in unorganized physical activities. Again, adults more frequently discussed the activity of their students or children, than their own. Parents more frequently discussed unorganized activities that they witnessed their children engaging in, while teachers more frequently discussed activities that their students told them about their participation in. One parent said, for example, about her child, *"he does a lot of playing outside, a lot, and he rides his bike a lot, just regular everyday kid's stuff"* (school 3, parent). A teacher said, about her student, *"I know he likes being outside, he's always talking about being outside and running around outside, and playing with friends outside"* (school 2, teacher). One teacher talked about her own unorganized physical activity, saying, *"I do try to go to the gym daily"* (school 1, teacher).

**Motivation for Physical Activity**

**Perspective of the child participants.** Participants discussed their motivation for physical activity and what factors they perceived as contributing to their motivation to be physically active (please refer to Table 1). All participants placed emphasis on social motivators for physical activity, discussing the positive impact of their peers and family. Most participants indicated that resources, environment, and availability also positively

impacted their motivation to be active. Some participants discussed the H2K program and health as motivators for physical activity. A few participants discussed other influences such as the media, and enjoyment of the outdoors. The following section demonstrates the discussion of these factors that were perceived as positive motivators for physical activity.

*Peers.* All child participants discussed their peers or friends as having a positive influence on their physical activity. A large part of this seemed to be due to having others with which to enjoy the activities. Participants frequently discussed engaging in both organized and unorganized activity with their peers, and often mentioned perceiving activity to be less fun, or even boring, without peers. For example, one child said, *"usually in the summer I'm like out playing with my friends"* (school 1, mentee 1), and another said, about physical activity, *"yeah, I usually, like, I think it's boring without other people"* (school 3, mentor 7). This type of quotation, where the participants indicated that they frequently engaged in physical activity with their peers, was common throughout all data.

Other children acknowledged that their friends impact their motivation for physical activity by asking them to play, or by providing ideas for activities. Participants discussed how they were more likely to engage in physical activity if they were invited or persuaded to do so by friends. For example, one child said, *"they just come and get me and say 'do you want to go for a walk', and then I do"* (school 2, mentor 3). Other children discussed how they may not have ideas about what to do, and that they frequently tire of repetitively playing the same games, but that their peers offer the

opportunity for other ideas for physically active games. For example, one child (school 3, mentor 7) said:

> *Cause like, I think sometimes we don't do physical activities because we don't have an idea of what to do, and sometimes if you don't have an idea of what to do, they might have an idea.*

Other children discussed how they might be more motivated to be physically active, or even jealous of their peers, if they see them being active. A child said, *"if your friends are doing something you can get jealous of them, like hey, they're having fun, I want to have fun too, and then you want to be active"* (school 2, mentee 9). Finally, one child indicated his own ability to impact the motivation of his peers to be physically active by saying, *"Yeah, because my other friend, the only reason he comes outside is because I ask him to [...] the only thing he likes to do is play video games"* (school 1, mentor 1).

*Family.* Participants also frequently discussed the positive impact of their families on physical activity. Similar to when they discussed the impact of their peers, the children indicated that they often engaged in physical activity with members of their family, and this acted as a motivator for them to be active. Participants described this perception by indicating that they often engage in active play with their siblings or cousins, and sometimes parents. For example, one participant said, *"I go to the park, with my sister, and I play basketball, and sometimes I play with my cousin, at the playground"* (school 2, mentor 5). Other participants described family gatherings and vacations as opportunity to engage in physical activity.

Some participants indicated that their family influenced their physical activity by telling them to be active or providing opportunity for activities. This discussion often centered on parents or grandparents instructing children to go outside to play, and

occasionally a participant would discuss having the responsibility of entertaining a younger sibling, which they perceived to encourage physical activity. One child said, *"my Nan does that, she says go outside and play with your brother, and then I do even if I don't want to"* (school 2, mentee 6). Participants also frequently discussed being active because they were enrolled in an organized physical activity by a parent or guardian. One participant said, for example, *"I am going to be playing baseball because my mom signed me up for it"* (school 1, mentee 1).

      ***Resources, environment, and availability.*** Many participants also perceived resources, environment and availability as motivators for physical activity. For the most part, this included discussion of the physical environment, including playgrounds and yards that are available to the participants. For example, one participant said, *"I live in a co-op, there's like a lot of play area, like a big, big, big, field, with a lot of running space"* (school 2, mentor 3). Other participants discussed programs that are available to them such as extra-curricular programs and those at local community centres. One participant described a local program available to low-income schools, *"it's a running and reading program, and like we run and do obstacle courses […] and we're training for the [local marathon]"* (school 2, mentor 5). Only one child mentioned financial resources, by saying *"I'm sure my parents pay for like our soccer camps and stuff"* (school 3, mentee 7).

      ***Health and H2K.*** Many participants also cited the H2K program and/or health as influencers of motivation for physical activity. They spoke frequently about the H2K program in general, for example, one participant said, *"H2K definitely motivates me to be more physically active"* (school 3, mentee 7). More specifically, children spoke about the

pedometers, daily tracking of activity, and competition elements of H2K as motivators for physical activity. One child said, for example, *"it's neat to see how much steps you get, and like, try to beat it, and log it in and try to get more and more"* (school 3, mentee 9). Other students placed more emphasis on health. The children frequently discussed a perception that engagement in H2K and physical activity could keep them healthy as they age. Children also frequently described unhealthy older adults in their lives, such as grandparents, and how they perceived physical activity as a way of avoiding illness. One said, for instance, *"we learn in H2K about what it does to your body when you like don't exercise and eat bad, so like, I want to be active so I don't end up like that"* (school 2, mentee 6).

The children very rarely mentioned weight status as a motivator for physical activity, except in the above-mentioned context of avoiding becoming like a known older adult. Most children in the focus groups were, however, of a healthy weight, the potential impact of which is noted in the limitations of this study. One child did say, in reference to her classmates, *"I want to be active because I wanna lose weight, I've always been teased about my weight. I wanna show them that I can do it"* (school 1, mentee 1). This quote exemplifies not only health as a motivator for physical activity, but incorporates the above-described theme of peers influencing physical activity as well.

***Other.*** A few participants discussed other factors that positively influence their motivation to be active. These included media-related factors, and the outdoors or being outside. Examples of media-related influences included children hearing about childhood inactivity through the news or radio, or being motivated to engage in activity by seeing sports on television. One child said, for example, *"the news kind of effects me too, like*

*sometimes you hear stuff to make you active too right, like how fat kids are and stuff"(*school 1, mentee 3). A few children discussed enjoyment of being outside as a motivator for physical activity, because of a love for nature, fresh air, and opportunity to engage in activities that could not be performed indoors. One child said, *"I hate being trapped inside, like, I can't ride my bike, I can't play baseball, can't do much inside"* (school 1, mentee 3).

**Perspective of the adult participants.**

***Peers and family.*** Similar to the perspective of the child participants, adult participants also perceived friends and family to have a significant positive impact on motivation for physical activity. This was evident in discussing both the activity of their children or students, and their own. In discussing the activity of their children, adults placed emphasis on the perception that their children and students were happier to engage in activity in a group than alone. One parent said the most important thing for her child to engage in active play is *"to do it in a group, she's social, she needs that group of people around her to feel like she can do it"* (school 1, parent). Parents also discussed engaging in activity as a family. One parent said, for example, *"in the summers we'll do a little bit of touch football and stuff like that, get out, go to the park as a family"* (school 2, parent).

In regard to their own activity, the adult participants also emphasized the importance of motivation from their peers and family. Similar to the child participants, adults acknowledged that they frequently engaged in activity with their peers, and may be less likely to do so without them. These types of motivation seemed to most frequently include encouragement and companionship. A teacher (school 2) said:

*I think it's so much more motivating when… for me to go out and go for a walk by myself, well, I may not, but if someone calls and says, 'would you like to for a walk?' then oh yeah, I'm right there. I need that motivation.*

Some adults also discussed how they might be more active if they did so as a family more frequently. A parent said, for example, *"I would probably be more active if my husband was"* (school 2, parent).

***Resources, environment, and availability.*** The adult participants also talked about how their environment and access to resources positively impacts their physical activity. Similar to the child participants, adults also often discussed the physical environment, however, they mentioned fitness facilities and walking trails, as opposed to playgrounds. A teacher said, *"well, access to a gym, if I didn't have that I probably would be much less physically active"* (school 1, teacher). Another participant described a recently installed walking trail near her home, saying, *"because of the walking trail, we never did a whole lot of walking before that, but that got put in by our house, and now we walk more"* (school 1, parent).

The adult participants placed more emphasis on financial resources than the children did. Parents and teachers talked about having to pay for both their own activities, and those of their children (in the cases of parents). For example, one said, *"I budget in, like, I make my own budget, and I budget for my sports"* (school 3, teacher). One parent perceived that being unable to afford a family car positively influenced her and her family's physical activity, saying, *"well we don't have a car, so we walk everywhere together, we do a lot of walking"* (school 3, parent).

***Health and H2K.*** The adult participant also noted health and H2K as potential motivators for physical activity. When discussing their own physical activity, adults

placed a great deal of emphasis on their weight status and health during aging. One participant, in response to a question of why she thinks it's important to be physically active said, *"for health reasons, I'm getting older and know it's important as I age"* (school 2, parent). Some adults indicated the perceived importance of the H2K program in reminding children to be active. One teacher (school 3) said about health and H2K:

> *There's kind of someone there raising awareness too, so I think they've kind of become more aware of what they're doing, like 'oh, at recess I just stood in one spot for a while, that's a problem' kind of thing, you know? When maybe they could have been playing with their mentor or their team.*

*Other.* Similar to the child participants, adults also discussed other motivators, including media, personal interests, and the outdoors. In regard to media-related influences, adults discussed being aware of health issues discussed in the news, and being influenced by popular culture. One said, *"you aspire to what you see, which is unrealistic, but yeah, in that sense, being influenced by popular culture, seeing something on TV and being like, 'oh, I'd like to try that'"* (school 1, teacher). Some participants discussed the importance of having intrinsic motivation, or finding an activity inherently interesting. One participant said, for example, *"for me, playing basketball, I guess access to things I find interesting"* (school 1, teacher). Some adults echoed the perceptions of the children by discussing the childhood enjoyment of being outside. One teacher said, *"I know he likes being outside – so that's a good thing"* (school 2, teacher).

**Motivation for Physical Inactivity**

**Perspective of the child participants.** Participants were also asked about the times they spent engaging in sedentary behaviours. Child participants discussed several factors that contributed to their motivation to be physically inactive, or sedentary. Most child participants discussed screen-time activities, such as watching television or playing

60

video games, as motivators to be physically inactive. Some participants discussed how peers, despite their previously described influence on motivation for physical activity, also had the potential to encourage sedentary behaviours. A few participants also cited resources, fear, fatigue, and the weather as motivators for physical inactivity.

   *Screen-time activities.* Nearly all child participants discussed screen time activities as a motivator for sedentary behaviours. These screen-time activities included watching television, for example, one participant said, *"if my favourite show is on, that would make me want to not be active"* (school 1, mentee 5). Another participant talked about video games, saying, *"I have my video games, and that just makes me want to stay in my room"* (school 1, mentor 2). Another participant (school 3, mentor 7) talked about frequent use of a computer, saying:

   > *Well I think the computer really gets me to be inactive, because I have a couple of websites that I really like to go on, that I play on, and like, they I can go on there and play with friends, and not actually go out and do anything.*

This last quote indicates how interactive and social screen-time activities can be, and indicates that peers may impact sedentary behaviour as well, as is indicated below.

   *Peers.* Some participants indicated that their peers sometimes acted as a motivator for physical inactivity. This is in contrast to the previously described positive impact the participants described their peers to have on their physical activity. This indicates the important role that peers play in childhood physical activity. One participant said, *"if I want to go outside and play but a bunch of my friends want to watch TV or a movie, I'll want to do that too"* (school 3, mentee 7). Another child said, *"the only time I actually stay inside is if I'm at a friend's house and they want to stay inside"* (school 1, mentee 3).

***Other.*** A few child participants discussed several other factors that they perceived as motivators for sedentary activity. One child spoke about her home environment, saying, *"I live in an apartment so we don't really have a backyard, and my landlord is really mean, and outside there is just stores so it's hard"* (school 1, mentor 2). A couple of participants perceived certain people in their neighbourhood as intimidating, and this caused physical inactivity by encouraging the children to stay inside. For example, two children had the following discussion:

> *School 1, mentee 2: [...] there are teenagers down the street, and I don't like them.*
> *School 1, mentee 3: Yeah I hate when the teenagers come around, we always hide.*

Other perceived motivators for physical inactivity included discussion around feeling tired or ill, or not being able to engage in physical activity outside due poor weather conditions.

**Perspective of the Adult Participants.**

***Screen-time activities.*** The adult participants also talked about the impact of screen-time on motivation to be physically inactive. This was specifically discussed most by parents, when discussing the physical activity of their children. One parent said, *"well the TV and radio bein' on, then we don't do nothing, you know? Like if the kids are watching TV, they aren't out being active"* (school 1, parent). Parents also often indicated the perception that their children would rather watch TV, use a computer, or play video games than be physically active, and that, as parents, they were responsible for instructing their children to be active.

***Peers.*** Adult participants also discussed the potential for peers having a negative impact on physical activity, and they discussed this both in talking about their child's or

student's activity, and their own. In terms of their child's or student's physical activity, some adults perceived that children would prefer to engage in social activities other than physical activity. One teacher, for example, perceived that some of her students tend to be more social than active on breaks, saying, *"like at recess and lunch times, she's not overly [active], it's more standing around and chatting with her friends"* (school 1, teacher). Other adults perceived that the competitive nature of some physical activities could be daunting to some children. A parent noted that her child may be intimidated by his peers in certain physical activities, saying, *"he doesn't want to not be as good as the other kids at something, to be honest"* (school 3, parent).

In terms of their own physical activity, the adult participants indicated that they were sometimes more likely to engage in sedentary behaviours than in physical activity with their peers. One said, for example, *"I guess, most often, our activities are sedentary […] to go to a movie, or go out for dinner"* (school 1, teacher). Other adults also mentioned that their peers occasionally persuaded them to engage in sedentary activities when they had intended on engaging in physical activity.

**Other.** The adult participants discussed several other motivators for physical inactivity as well, including time, fatigue, sedentary work, and resources. One participant said, for example, *"if I've got a paper to write, and tests to mark, it's like, priorities"* (school 3, teacher). Only one parent discussed the limiting impact of resources on physical activity. She said, *"it's like $15 to go swimming at the new pool, we're not gonna do that with 3 kids […] like we'd do things like go to the [local fitness facility] more if we had the money to, or a car, yeah, it's hard"* (school 3, parent).

**The Experience of Peer Mentoring**

**Major theme 1: Peer mentors are perceived as encouragers of physical activity.**

*Perspective of the child participants.* One of the major things that the child participants discussed during the focus groups was that they did perceive the peer mentors in the H2K program to have positively impacted the physical activity levels of H2K participants (please refer to Table 1). This was indicated by general discussion of how they perceive their peers to be more active than they were prior to the peer mentoring program. This was also indicated more specifically by discussion of the mentees on how their mentors encouraged them to become more physically active, and by the mentors on how they felt they encouraged their teams to be more physically active.

Most participants discussed a general perception that their classmates were more active after peer mentoring than they were before. When asked if they could think back and consider how active their classmates and teammates were prior to peer mentoring, and to consider if they believed peer mentoring had had any impact on motivation for physical activity, most participants in all 3 focus groups responded with enthusiastic agreement and nodding. One participant (school 1, mentee 3) said:

> *Yeah, like my team, I know that they just used to like sit around, or like, at recess or lunch they would just like stand around the playground […] but now they're always running around a lot outside, like always cause of H2K, especially me, I never used to run around as much as I do now.*

Another participant echoed that statement, saying: *"Me and my friend, we used to just sit around and talk, and now we like run around to get more steps, and we'll have races, and then the other kids will want to have races and everything"* (school 1, mentee 4).

Many participants discussed specific ways in which they perceived their mentors as encouragers of physical activity. This perception involved mentors having discussions with their teams about physical activity or logging steps, and mentors explaining games, and generally providing encouragement. One child said, about her mentor, *"she always tries to teach us the games and stuff, and motivate us to log our steps and win things"* (school 3, mentee 7). Similarly, another child said about her mentors, *"they tell us about the games, and like tell us to log our steps so we can get higher and higher […] and they encourage you"* (school 2, mentee6).

The mentors also described how they perceived themselves as encouragers of physical activity, and as engaging in more physical activity as a result of their involvement in H2K. One said, *"I try to encourage people, like I remember in this one relay race, where we had to do all these activities around the gym […] I just tried to encourage them to do something"* (school 3, mentor 7). Other peer mentors discussed the training they received to become a peer mentor, and how those skills positively impacted their own activity, and their abilities to encourage others in activity.

***Perspective of the adult participants***. The adult participants also perceived the peer mentoring program to have encouraged physical activity of their children and students. They discussed this through describing instances they witnessed on the playground or at home, and by a general perception that the mentors were encouraging activity. One teacher (school 2) said:

> *Having that aspect of peer mentoring, I think that was very motivating […] out on the playground I would notice that if [a peer mentor] saw others on the playground who weren't really playing, who were just sitting or standing around, he would approach them and say "would you like to play with us?" You know, to try to motivate them to be involved.*

Another teacher discussed her perception that it was important that the mentors were peers, and this may have been more beneficial than an adult in encouraging physical activity. She said, *"seeing another kid in charge [...] I think that would have been more encouraging than if an adult was trying"* (school 1, teacher).

Some adults spoke about specific incidents where they recalled a peer mentor encouraging physical activity. One teacher described an incident where a mentor was awarded for inviting sedentary children to join in activity. She said, *"I mean last week, [a peer mentor] received [a school award] for… there were children sitting by themselves, and he went over and asked them to join him"* (school 2, teacher). Finally, one parent (school 1) described an occurrence where her child's mentor helped motivate her to complete a specific athletic task. She said the following:

> *It's motivated her, you know, that she's able to do stuff now, and she knows she can, you know? Like the Bluenose, this year she ran most of it, while in previous years she's walked most of it… I think it might have been her peer mentor that she ran with this year, and they motivated each other to keep going.*

**Major theme 2: Peer mentors are perceived as helpers and supporters.**

***Perspective of the child participants.*** Most participants discussed several ways in which the peer mentors were perceived as 'helpers' and 'supporters' (please refer to Table 1). This included explaining the games at H2K Lunches, providing clarification on games and assisting with skill development, providing encouragement, motivation, and having a positive attitude, and performing other tasks that were perceived as helpful.

*Subtheme: Peer mentors explain games at H2K Lunches.* Many of the child participants discussed how the peer mentors would often explain the games to be played at the H2K Lunches to their teams. This role involved reading the game instructions out loud to team or the larger group as a whole, explaining details of the games to team

members, and helping team members to understand game details. Both mentors and mentees discussed this role of the mentors. One mentor said, *"I like to help the groups and teach stuff to the mentees [...] like the games at the lunches and how to play them"* (school 2, mentor 3). Similarly, a mentee said, *"she always tried to teach us the games and stuff"* (school 3, mentee 7).

     *Subtheme: Peer mentors provide clarification and assist with skill development.* Many participants also discussed how mentors often helped or supported their team by providing clarification or details about games, and by encouraging development of new skills. This was often discussed in more detail than the previous subtheme of simply explaining the games. This subtheme involved the perception by the child participants that the mentors would provide additional clarification about game details, or would provide further encouragement when their team struggled with a particular task. For example, one participant (school 1, mentee 3) said:

> *If we do something, and we can't do it any good, like yesterday, we had to put a hula-hoop around our ankles, like two of us, and then run across the gym [...] it kept on falling, like every time we went to go [...] and instead of just getting mad [he] would just say 'oh good try' and stuff.*

In regard to providing clarification, another participant said, *"they help us out, and usually [...] if we don't understand, they like got to read it before and if we don't get the game then our mentors will re-explain it"* (school 1, mentee 2). Similarly, a mentor acknowledged this role by saying, *"sometimes they don't understand the words, or they don't listen, and then we help them understand"* (school 3, mentor 6).

     *Subtheme: Peer mentors provide encouragement & motivation.* Participants also discussed how peer mentors were perceived as providing encouragement and motivation, or having a positive attitude. This theme was indicated by dialogue around how peer

mentors were perceived as kind to their teammates, listened well, and exhibited patience when necessary. One participant said, for example, that his mentors are *"nice to their people, and like, friendly, and like helpful"* (school 1, mentee3). Another child said, about the peer mentors, *"they listen to people, […] they stay in their groups, they keep their patience with their group"* (school 3, mentee 7). Finally, a mentor also conveyed this theme by saying, *"I try to get like the whole team to like encourage others […] to give them momentum and stuff and make them go faster"* (school 3, mentor 6).

*Subtheme: Peer mentors perform other helpful tasks.* The child participants also talked about the mentors taking on several other helpful and supportive roles. These included assisting team members if there was an injury, by attracting attention or getting an ice pack or bandage. A mentor described one of these situations by saying, *"someone fell once, and I like make sure they were ok, and took them to the office to get some ice and a Band-Aid"* (school 2, mentor 2). During many games at H2K Lunches, teams are required to complete tasks or engage in activities as pairs, and thus individuals need to find partners. A number of participants noted that the peer mentors were helpful by often acting as the 'partner' of participants who may not have easily obtained one. For example, one student said, *"if someone didn't have a partner she would go with them"* (school 1, mentee 4). Other students indicated that the mentors were helpful when it came to filling in H2K sheets that had puzzles: The mentors were often perceived as helping their teammates come to the correct answer.

**Perspective of the adult participants.** Discussion with the adult participants also indicated that the peer mentors were perceived as helpers and supporters. The adult participants, however, did not focus on explaining the games at H2K Lunches, and rather

placed more emphasis on the mentors providing encouragement and motivation, and being helpful in other ways.

Most adult participants mentioned the peer mentors as providing encouragement and motivation in some form. Much of this dialogue involved adults commenting on how the mentors were perceived as having a certain attitude or certain qualities that made them helpful and supportive to their teammates. This included the perception that mentors were often enthusiastic, up-lifting, positive, cheerful, encouraging, motivating, and patient. One teacher said about a mentor in her class, *"in any opportunity he had, he was just really enthusiastic and motivating"* (school 2, teacher). Another teacher described the role of a mentor as, *"to maybe cheer them on, or encourage them […] I think he would say that he could have a positive effect on someone's life"* (school 3, teacher). Finally, a participant talked about her child's peer mentor providing motivation by saying, *"Motivation! Getting her excited about tracking her activity"* (school 1, parent).

Adult participants also discussed other ways in which peer mentors were helpful. These ways included the perception that mentors would answer questions when necessary and help their teams with various activities. One teacher said, *"I think they would give instruction and answer questions"* (school 1, teacher). Another participant said, *"I think he enjoyed being able to help out"* (school 2, teacher). Similarly, another teacher said the mentor role was to *"run a game, or explain a game, or maybe cheer them on"* (school 3, teacher).

**Major theme 3: Peer mentors are perceived as organizers and administrators.**

*Perspective of the child participants.* Most child participants discussed several ways in which the peer mentors were perceived as 'organizers' and 'administrators' (please refer to Table 1). These included taking attendance at H2K lunches, performing other specific mentor tasks, organizing H2K Lunches, and being perceived as respected classmates.

*Subtheme: Peer mentors take attendance at H2K Lunches.* Nearly all children indicated that the peer mentors were seen as organizers and administrators because they were responsible for taking attendance at H2K Lunches. At the beginning of the regular H2K Lunches the peer mentors retrieve a folder for their team from H2K staff, which contains various program materials, including attendance sheets. This is a regular task that the peer mentors always complete with their teams, and was perceived as a responsibility by all participants. When simply asked to talk about what their mentors did, the mentees very frequently mentioned taking attendance. For example, one participant said, "*my mentors, like, one of them will check off the names*" (school 1, mentee 2). The mentors also discussed this role, with one describing her role in H2K Lunches by saying, *"first we have to do the attendance 'cause we're mentors"* (school 2, mentor 5). Another mentor indicated a possible reason for this role being perceived as important, by comparing himself to a teacher, saying, *"I like doing attendance [...] it's fun, I feel like a teacher"* (school 2, mentor 4).

*Subtheme: Peer mentors perform specific tasks and responsibilities.* The child participants also mentioned several other administrative tasks that the mentors were

perceived as responsible for completing. In addition to the above-mentioned attendance sheet, the folders that the peer mentors collect for their teams at the beginning of H2K Lunches include other worksheets that the peer mentors fill out on behalf of their teams.

These documents include a space for mentors to record new activities and foods tried by their teams, a place to set goals related to logging pedometer steps, a place to recognize one team member by giving them the team 'mascot' (a small stuffed animal) for the week, and explanations of the games that would be played at H2K Lunches. Throughout the focus groups, many participants mentioned this folder. For example, one participant said a role of the mentor included, *"well like, reading the folder to know the games"* (school 3, mentee 9). The following discussion with a mentor demonstrated this sub-theme well:

> *School 2, mentor 3: like the attendance, a little activity where ya gotta guess the activity, and foods ya tried or activities ya tried, and whoever you passed the mascot to, their name,*
> *Interviewer: Great, and who get the mascot?*
> *School 2, mentor 3: Like whoever's been participating and listening real good.*

This theme was quite common throughout the data from child participants.

*Subtheme: Peer mentors organize H2K Lunches & events.* Participants also discussed the role of the mentors in the H2K Lunches and other events, from more of an organizational or logistical perspective. This was often discussed in conjunction with indication that mentors were perceived as supporting H2K staff, for example, one participant said her mentor could frequently be found *"helping the H2K people and stuff"* (school 1, mentor 2). One student expanded on this by saying the mentors would help set up games at the H2K Lunches by *"maybe getting a ball if they need one, or the pylons or something"* (school 2, mentee 6). Participants also discussed the role of the mentors in

terms of organizing their teammates for games. This involved the perception that it was the responsibility of the peer mentors to assign, when necessary, partners or groups of teammates, the order in which individuals would play games such as relays, or where and how the team should congregate within the gymnasium. For example, one student said, *"they get us to sit together, and kind of control how the games work, the order we play in and stuff"* (school 3, mentee 10).

     *Subtheme: Peer mentors perceive their role as a responsibility.* As a final part of the peer mentors being perceived as organizers and administrators, the peer mentors frequently discussed their role in terms of having responsibility, or being in a position of respect. One said, *"I like that we kind of get to be in charge a little bit, like not totally, but like, of our teams"* (school 1, mentor 2), and another said *"it's kind of fun to have the responsibility"* (school 2, mentor 5). Another described the role of the peer mentors as a leadership role by saying, *"trying to act like leaders I guess, especially trying to act like a role model"* (school 3, mentor 6). Other mentors mentioned the responsibility of ensuring their teams had fun, or enjoyed themselves at the H2K Lunches. One said that he likes to read the folder of games at the beginning of the H2K Lunch gatherings, but to not tell his teammates what games they'll be playing. He said he tries to keep the games secret, so that *"if I know we're playing dodgeball, they'll get to be surprised and excited"* (school 3, mentor 7). One mentor acknowledged that the responsibility of being a mentor could be occasionally difficult, saying, *"sometimes they don't listen, but like, as long as everyone's having fun I usually just make sure of that"* (school 2, mentor 3).

     **Perspective of the adult participants.** Adult participants also discussed the peer mentors as organizers and administrators, however they focused less on the specific tasks

72

mentioned by the child participants (such as taking attendance or setting up games), and more on the general sense of responsibility and respect. A few participants did, however, discuss specific tasks they were aware the mentors completed. A teacher said, for example, that her student who was a mentor *"always reminded the other children about [H2K Lunches]"* (school 1, teacher). Similarly, a parent said, *"I think they helped lead the games and things"* (school 2, parent).

The adult participants more frequently discussed the mentors as being responsible, respected classmates. One participant said, *"he knows that he's responsible to get some of the children involved, and maybe teach them a new activity or whatever"* (school 2, teacher). Another said, *"I think having mentors who do those healthy things, shows the other kids that it's good, and right"* (school 2, parent). One teacher said she believed her student was an effective mentor, and when asked about why she thought so, responded, *"I think 'cause he's responsible"* (school 3, teacher). Finally, a teacher indicated the benefit of having another child in a position of responsibility, as opposed to an adult, by saying (about her student, a mentee), *"I think that she would listen to them and be respectful of them"* (school 1, teacher).

**Other Themes**

**Peer mentoring positively impacts social networks.**

*Perspective of the child participants.* The child participants indicated that they perceived peer mentoring to positively impact social networks within their schools. This seemed to happen through two methods, firstly by facilitating interaction between individual students and teams of students and, secondly, by giving children the confidence necessary to engage with new people.

Many students discussed the opportunity to meet and play with new people as a result of peer mentoring and the H2K program. Data found to be aligned with this theme included instances where the dialogue centered on mentors encouraging teamwork, and students making friends and meeting new people as a result of H2K Lunches.  One student described how his mentor encouraged he and his teammates to work as a team, saying, *"they mentored us to like get more together as a group, to like try to motivate us, to like not yell at each other, to like work as a group"* (school 3, mentee 7). A mentor indicated this theme by saying, *"sometimes, like, people might not know you or might not like you, but then they find out you're a peer mentor, and they think you're a cool leader and might want to be friends"* (school 2, mentor 2).

A few students discussed ways in which they felt more confident in making friends as a result of the peer mentoring program. This dialogue included having discussion around having improved confidence or decreased intimidation to approach previously unknown children at school. One student, for example, said, *"it helps me talk to my friends more […] I'll just go up and say 'hi' cause I know them from H2K, or they might be friends with my mentor"* (school 1, mentee 3). Another participant (school 1, mentee 4) said:

> *It helped me make more friends, and I used to be kinda scared to talk to people, and now I know that people will accept me for who I am anyway. So it probably helped other people like that too.*

Finally, one participant said *"it helped a lot here because I feel more like I belong here now"* (school 1, mentee 5).

***Perspective of the adult participants.*** The adult participants also frequently discussed the impact peer mentoring had on social networks. Similar to the child

participants, the adults discussed their perception that peer mentoring would encourage

teamwork and positive interaction with potentially previously unknown children. One

participant said, for example, *"they have the opportunity to interact with other students*

*and other teams, I think they kind of get to meet different people that they wouldn't*

*necessarily hang around with outside"* (school 3, teacher). A parent noted that this

actually provided her child with a safe environment, saying, *"she was having a problem*

*with a bully [...] so having H2K was good for her, because it gave her something that*

*they were all doing, that they could so together"* (school 1, parent).

A few of the adult participants spoke specifically about the peer mentors and how

their social networks were positively impacted as well. This discussion centered on the

perception that peer mentors may feel more confident in their abilities to encourage

physical activity and interaction between students. For example, one teacher said, *"I*

*think that being a peer mentor gave him that initiative to really be able to go over and*

*invite others to play"* (school 2, teacher). Similarly, a parent said, *"he loves to socialize,*

*and I think being a mentor he feels like he can, like, get the other kids to socialize and*

*play too"* (school 3, parent).

**Being a peer mentor is perceived as positive.**

***Perspective of the child participants.*** Some child participants perceived being a

peer mentoring to be a positive role. This was indicated by participants who said they

were more physically active as a result of being a peer mentor, or benefitted from peer

mentoring in other, unexpected ways. Demonstrating the perception that being a peer

mentor positively contributed to an increase in physical activity, a mentor said, *"I got to*

*be a peer mentor for H2K and now my activity went up because before I was kind of lazy*

75

*but now I'm not"* (school 2, mentor 5). Indicating other benefits of peer mentoring, a

mentee suggested that her mentor was actually perceived as a bully prior to becoming a

peer mentor; she said, *"my mentors, one of them used to be really mean, and sometimes*

*bully people, but ever since he's been in H2K and a mentor he's actually been really nice*

*and stuff"* (school 1, mentee 3). Finally, a mentor indicated his own benefit from being a

mentor by describing mentoring as a potential outlet for energy and area for

concentration; he said, *"I'm ADHD, and I think that like being a mentor is good cause it*

*like gives me something to like pay attention to [...] I get in trouble less and am more*

*relaxed and stuff"* (school 1, mentor 2).

Child participants also indicated that many mentees wanted to be mentors, or

were envious of the mentoring role. A mentor indicated this by saying, *"the people who*

*aren't mentors want to like take attendance and stuff"* (school 3, mentor 6). Envy of the

mentors was indicated by participants questioning how the mentors were selected; one

said, for example, *"I think that they shouldn't have just chose the mentors randomly, they*

*should have chose people who like wanted to be the mentor"* (school 3, mentee 8).

Finally, some participants indicated outright that they wanted to be peer mentors, with

one saying, *"if it is back next year, I hope they pick new mentors, I want to be a mentor"*

(school 3, mentee 7).

***Perspective of the adult participants.*** Similarly, the adult participants indicated

that peer mentoring positively impacted their children and students who were peer

mentors. One participant perceived that her student, a natural leader, was more confident

in a leadership role after having the peer mentoring training; she said, *"I think he's*

*always had the personality to be a good role model [...] but I think that maybe [...] being*

*trained as a peer mentor has helped him become more comfortable in that role"* (school

3, teacher). Another teacher (school 2) discussed how her student is now more aware of

inactive students by saying:

> *I think peer mentoring has made him even more involved, and given him more skills, and kind of made him more aware, and to be looking out for those sorts of things when he's on the playground.*

Finally, a parent said, *"I think any time you get to be a leader it gives you self-esteem and

makes you confident, and I think that's been the biggest thing for him"* (school 3, parent).

The adult participants also indicated that some of the mentees might have wanted

to be mentors. One participant said, *"I suspect that if I were to ask all of the H2K people

in my class, there are a number of them who would have liked to be peer mentors that

weren't"* (school 3, teacher). Another teacher said about her student, *"working in a group

can be something she struggles with, so I can see that having been a challenge for her

where she wasn't a mentor"* (school 1, teacher). That same child's parent, when asked if

she could identify any limitations of the program, said, *"Nothing, I don't think, well, she

might want to be a mentor"* (school 1, parent).

**Other themes identified only by adult participants.**

***Necessity for healthy role models.*** There were several things that came up

consistently in the adult interviews, which did not come up in the child focus groups. The

first of these was a necessity for healthy role models, and the associated benefit of the

H2K program in this respect. Parents and teachers frequently noted that they felt H2K

and peer mentoring was important because it provided another healthy role model for

children and echoed what adults often say, from a child perspective. One participant said,

*"I think just like, knowing that someone is talking to your child about activity, you know?*

77

*I'm not always the best role model so it's nice to know that he'll know the proper things"* (school 3, parent). Similarly, a teacher who was asked about the benefits of peer mentoring said, *"I guess, like, another voice telling them that being physically active is a good idea"* (school 3, teacher).

   ***Parent unfamiliarity with H2K program details.*** Parents, specifically, tended to indicate that they were not very familiar about the details of the H2K program. This often came up when asked about program details, to which parents often responded that their children did not often discuss the program at home. One parent said, *"I have to be honest, I don't really know a whole lot of the details […] I know what it's for, but I don't know a whole lot about how it actually happens here at school"* (school 3). Another parent said, *"I don't think she talked, too, too much about it at home"* (school 1). That same parent indicated that her child stayed at lunch for school, and as a result, she was unfamiliar with most of her lunchtime activities. She said, *"she's got something every day, and I confuse them"* (school 1).

   ***Teachers are unaware of the physical activity levels of their students.*** Teachers specifically indicated that they are generally unaware of what their students do for physical activity, or how much they engage in, outside of regular physical education classes. One teacher said, in regard to what she knew about her student's physical activity, *"no, he just doesn't really tend to come in and talk about it"* (school 3). Another teacher indicated this by saying, *"I know she's heavily involved in Scouts […] but other than that I don't remember her mentioning any other teams or anything that she's on"* (school 1).

**Summary**

The chapter presented the results of the project in several categories and with quotations to support each finding. It began by describing the perceived experiences in the H2K program, from the perspectives of both the child and adult participants. The chapter than described the physical activity habits that were discussed by participants, and their motivation for physical activity and sedentary behaviour, which included peers, family, resources, health, H2K, and other factors. The experience of peer mentoring was then presented under the three major themes of peer mentors being perceived as encouragers of physical activity, helpers and supporters, and organizers and administrators. Additional themes of peer mentoring positively impacting social networks and peer mentoring being perceived as positive were also presented. Finally, themes indicated only by adult participants were presented, including the necessity for healthy role models, parent unfamiliarity with details of the H2K program, and teachers being unaware of their students' physical activity.

**Chapter 5: Discussion**

This study explored the experience of peer mentoring and its impact on physical activity, and highlights the importance of peer influence on the study participants. This chapter begins by discussing the key themes identified, including motivation for physical activity, as perceived by the study participants, the significance of peer influence to participants and other influences on physical activity and inactivity. The chapter then discusses and explores the peer mentoring experience. The section on peer mentoring explores the significance of each of the previously presented 'organizer and administrator', 'helper and supporter', 'social networking' and 'peer mentoring perceived as positive' themes. Next, the chapter presents the study findings in the context of the social ecological model, by exploring the perspectives of the child and adult participants, and by exploring each level of the social ecological model, as perceived by the participants, using previous literature. The chapter concludes by exploring study limitations, indicating implications for health promotion and suggesting ideas for future research.

**Motivation for Physical Activity and Inactivity**

      **Significance of peer influence.** When discussing factors that positively influence motivation for physical activity, the influence of peers was evident, and was discussed and emphasized by all groups of participants. This influence seemed most strongly impactful for the child participants, and both mentees and mentors discussed the impact of peers on physical activity more than they discussed any other influence. For child participants, positive impact of peers on physical activity was frequently discussed by describing how they felt it was important to have others to enjoy the activities with, and

that their peers frequently provided ideas and opportunities for physical activity, especially in relation to unorganized physical activities such as playing tag games with neighbours, or semi-organized sport games during recess and lunch breaks at school. Similarly, adult participants discussed the positive impact of peers on the activity of their children or students, by conveying their perception that the children were happier to engage in physical activity with peers than alone. In regard to their own activity, adults also mentioned peers as a motivator, sometimes saying they would be unlikely to engage in physical activity if they had not committed to doing so with a friend, or group of friends.

This positive influence of peers on physical activity is in agreement with the literature. Studies have indicated, for example, that children are encouraged to participate in physical activity by their peers through several mechanisms, including development of social networks, peer support, peer norms, acceptance, confidence building, and encouragement of effort and competition (Allender, Cowburn, & Foster, 2006; Coppinger, Jeanes, Dabinett, Vogele, & Reeves, 2010; Finnerty, Reeves, Dabinett, Jeanes, & Vogele, 2009; Fitzgerald, Fitzgerald, & Aherne, 2012; Keegan, Harwood, Spray, & Lavallee, 2009; Macdonald-Wallis, Jago, Page, Brockman, & Thompson, 2011). Similarly, a qualitative review study examining reasons for and against participation in physical activity found that both adolescents and adults are encouraged to participate by their peers through development of social networks and social or peer support (Allender et al., 2006). In this current study, many of these mechanisms and phenomenon appear to be present, as is evidenced by the significant discussion around peers and physical activity.

In contrast to the idea that peers provide positive motivation for physical activity is the idea that peers may also provide motivation for sedentary behaviour. In the current study, child participants indicated that if a group of friends preferred to engage in a sedentary activity, such as watching a movie, they may be likely to engage in the sedentary behaviour as well. Adult participants also mentioned this, in regard to both the activity of their children or students and that of themselves. Adults also indicated that they were occasionally persuaded by their peers to engage in a sedentary activity during a time they had intended on being active, such as skipping the gym to go for dinner after work. Little literature has examined this influence specifically, however, focus groups that were conducted with adolescent females found that the developmental occurrence of changing priorities resulted in pressure to engage in sedentary behaviours with friends, instead of active pursuits (Whitehead & Biddle, 2008). This concept indicates that while it is commonly understood that peers can promote physical activity, they may also have the potential to inhibit it. As recent literature has indicated that a decrease in physical activity occurs between childhood and adolescence, especially in females, this is an important finding that begins to examine some of the potential reasons for this drop-off in activity (Colley et al., 2011). This further indicates the potential value of peer-led programs that offer training for children or adolescents to engage their peers in physical activity, especially at a time in development when priorities are changing.

There was an interesting finding from the child participants in regard to peer influence on physical activity. When asked open-ended questions about what they perceive as potential encouragers of physical activity, child participants, as discussed above, placed a meaningful emphasis on the impact of their peers. They did not, however,

82

cite peer mentoring as a direct positive influence of physical activity; however, when asked open-ended questions about the impact of peer mentoring, all child participants discussed how peer mentoring promoted physical activity. It seemed as though the child participants associate peer mentoring with physical activity, but do not directly associate physical activity with peer mentoring. This may be because the children perceived so many broad topic areas as influencing their physical activity that they did not consider speaking specifically about peer mentoring. This could also be because of the young age of the participants, and a potential inability to fully articulate what influences their physical activity.

**Other influences on physical activity and inactivity.** In addition to the influence of peers, participants also discussed the influence of family, resources, health, H2K, screen-time and other factors on motivation for physical activity and inactivity.

The influence of family on physical activity was discussed by all groups of participants. Child participants discussed family nearly as frequently as they discussed peers; however, they seemed to place a different emphasis on family than they did on peers in terms of promoting physical activity. As presented above, child participants spoke very positively about how peers influenced their physical activity. By contrast, when discussing the influence of family on physical activity, children did indicate that their families promoted their physical activity levels; however, they discussed this method of influence as more of an obligation.

Children, for example, discussed how their parents instructed them to be more physically active, told them to go play outside, enrolled them in organized activities, or gave them the responsibility of entertaining a younger sibling. Adult participants,

however, discussed the influence of their families in much the same way they discussed the influence of their peers. This has important implications for modelling behaviours, in that children are often instructed by their parents to be physically active, but rarely have the opportunity to model the behaviour in an environment that is socially influenced in a positive manner. This is important for future programs and policies targeting childhood physical activity. Peer led programs or programs that promote positive social influence and modelling by parents, for example, may be more beneficial than policies and programs that instruct parental education of health benefits related to physical activity, or those that encourage parents to enforce time spent in organized physical activities.

These findings are slightly different from the literature, which indicates that parents control access to physical activity, but also indicates that active parents are more likely to have active children, and that parents influence motivation for physical activity through support, feedback, and reinforcement (Brustad, 1996; Keegan et al., 2009; O'Dea, 2003; Welk, Wood, & Morss, 2003). This indicates that interventions to promote physical activity in children should be focused on the positive social aspects of physical activity, and that having parents enforce obligatory requirements may not be perceived as a positive motivator by children.

Discussion around health and involvement in the H2K program varied across groups. Children very infrequently noted health as a motivator for physical activity, while adult participants discussed health frequently. This difference in perspective is indicated in Table 2, which presents the motivating factors for physical activity that were described with the most emphasis by each participant group. The motivating factors are listed in the order of importance of which the participants seem to perceive them, for ease of

comparison. Table 2 also indicates the perceived order of importance for the peer

mentoring themes, which are described below.

**Table 2: Comparison of factors that influence motivation for physical activity and**

**the peer mentoring experience from all participant groups.** Factors that were

perceived as influencing physical activity are listed along with most prominent themes

from the peer mentoring experience for each participant group. Factors and themes are

listed in order of perceived importance or emphasis.

| | **Mentees** | **Mentors** | **Teachers & Parents** | |
|---|---|---|---|---|
| **Motivation for physical activity (PA)** | - Peers<br>- Family<br>- H2K | - Peers<br>- Family | - Peers<br>- Health<br>- Resources | Most emphasized |
| **The peer mentoring (PM) experience** | - PM Encourages PA<br>- PM perceived as organizers/ administrators<br>- PM perceived as helpers/ supporters<br>- PM encourages expansion of social networks | - PM perceived as organizers/ administrators<br>- PM perceived as helpers/ supporters<br>- PM Encourages PA<br>- PM encourages expansion of social networks | - PM Encourages PA<br>- PM encourages expansion of social networks<br>- PM perceived as helpers/ supporters<br>- PM perceived as organizers/ administrators | Least emphasized |

While the lack of health-related discussion may seem surprising and alarming, it

is also likely due to the young age of the participants. While it was clear the child

participants were aware that physical activity was necessary to be healthy, they are

evidently more motivated by peers than they are by health to be active, at this age.  This

has been previously indicated in the literature, which indicates that peers do impact

physical activity behaviours, and where youth have indicated health is not a main

motivator for physical activity (Allender et al., 2006 & Salvy et al., 2008). Adult participants, in contrast, placed emphasis on wanting to maintain a healthy body weight, prevent disease, and maintain a high quality of life. This finding has implications for future programs devoted to improving childhood physical activity, and how physical activity is framed. The findings seem to suggest that children are more positively influenced to be physically active by peers than they are by health. This may suggest that programs and policies start framing physical activity differently, that is, for it to be promoted as an opportunity to make friends and engage socially, instead of as an opportunity for organized competition or health benefit, as it is most frequently framed today.

The finding that health is not perceived as a major motivator for physical activity is in agreement with a qualitative review study that found health was not a major influence on physical activity in children, but was for adults (Allender et al., 2006). In comparison, child participants discussed the H2K program as a motivator for physical activity, while adult participants rarely mentioned the program, and when it was mentioned by adults, it was almost always by a teacher. This is likely due to how removed parents are from the program, since it is school-based. Interestingly, mentees placed more of an emphasis on H2K as a motivator for physical activity than mentors did. This may be because the mentees, due to their young age, are potentially unable to describe the reasons they are physically active, and do not differentiate between the 'H2K program' and 'peer mentoring'.

Despite the lack of focus on health, both child and adult participants acknowledged that behaviour change occurred as a result of the H2K program. One

teacher (school 3) said, for example "*I think they've kind of become more aware of what they're doing*" and a mentee (school 1) said, "*me and my friend, we used to just sit around and talk, and now we like run around*". These quotations indicate not only that the H2K program has been involved in physical activity behaviour change, but also that participants acknowledge that a change has occurred. H2K participants, even at their young ages, appear to have benefitted from awareness of physical activity levels and actually perceive themselves to be acting differently.

There were also differences between groups in discussion around the impact of resources on physical activity. Please refer to Table 2 for an overview of the varying participant perspectives. As might be expected, children did not place an emphasis on resources (time, money, availability, environment) as a motivator for physical activity, while adults did. Adults (both parents and teachers) described their ability to engage in physical activity because of physical proximity to fitness centres, having the time to participate, or having the financial means to purchase any necessary memberships. Adults noted these factors in regard to their own activity and that of their children or students. A similar trend was noted in discussion of factors influencing physical inactivity. Despite many of the child participants living in low socioeconomic, inner-city communities that lack common environmental motivators for activity, children did not often discuss resources as a factor inhibiting physical activity. Again, adult participants discussed factors such as time, fatigue, other responsibilities, and cost as factors that potentially inhibit engaging in physical activity. This difference between groups, again, is likely due to the young ages of the children, who have little control over their environment, and who are not yet financially aware or responsible for their own activities.

87

Similar to the above finding that health is not a major motivator for physical activity of these children, the finding that resources are also not perceived as a motivator for them may also suggest that the way in which physical activity is promoted be re-framed. In considering these results, it seems possible that devoting resources to scheduling (and often, overscheduling) organized physical activities for children may actually be detrimental as it potentially limits the amount of time they can engage in unorganized social play that is perceived more positively. Resources, programs, and policies may be better directed at promoting physical activity in the context of social engagement, using unorganized, free play.

A final meaningful factor mentioned during discussion of physical activity and inactivity was screen-time activities. All child participants discussed engagement in screen-time activities as a motivator for physical inactivity, and placed more emphasis on this factor than any other in relation to sedentary behaviour. Children noted that they were more likely to be inactive if their favourite television show or movie was available, or if a new video game had recently been acquired. Children also discussed screen-time activities in conjunction with peers, saying they would be more likely to be sedentary if peers wanted to watch a move or play video games instead of being active. Adult participants also discussed screen time as an inhibitor of physical activity. This is consistent with current literature that indicates children currently engage in too much screen-based activity, and that this may negatively impact physical activity habits (Active Healthy Kids Canada, 2011; Hands et al., 2011; Melkevik, Torsheim, Iannotti, & Wold, 2010; Ogunleye, Voss, & Sandercock, 2012).

Interestingly, there were no noticeable differences between male and female participants, in physical activity preferences, motivation for physical activity, or the experience of peer mentoring. Currently, the majority of elementary school programs include both sexes at the same time in physical education classes and intramural activities, but many recreation and team sport physical activities divide children into male and female groups. Additionally, males are generally more active than females. The reason for not noting any significant differences here may be due to the young ages of the participants, and may also be due to the primary focus being on the peer mentoring experience. Finally, all adult participants were female, as were the majority of child participants, which is noted below in the section on limitations.

**The Peer Mentoring Experience**

**Significance of the 'organizer/administrator' and 'helper/supporter' themes.** As indicated in the previous results section, the peer mentors were perceived as organizers and administrators. This was one of the major themes that emerged from the data in regard to the peer mentoring experience. This theme emerged through the child participants discussing coordination, planning, directing, and management tasks that they perceived to be responsibilities of the peer mentors. These tasks included taking attendance at H2K Lunches, completing H2K folders, assigning partners or sequences of play within teams, and generally being a leader or role model at H2K events. While there is very little literature examining the experience of peer mentoring in children (and none examining the experience qualitatively within the context of physical activity), elements of the 'organizer and administrator' theme have been indicated in adult peer mentoring literature. Peer mentors have been found, for example, to be beneficial (in a variety of

adult circumstances) in practical ways such as communication, scheduling, planning, and coordinating (Berrick, Young, Cohen, & Anthony, 2011; Heirdsfield, Walker, Walsh, & Wilss, 2008; Veith, Sherman, & Pellino, 2006). Within the child participants, both mentors and mentees placed emphasis on this role, however, the mentors placed more emphasis on this role, while mentees placed more emphasis on the theme of mentors encouraging physical activity. This difference in perspective will be further discussed below, and is presented in Table 2.

The child participants also focused on the theme of peer mentors being perceived as helpers and supporters. This theme emerged from discussion with the children about the peer mentors providing explanations at the H2K Lunches (even clarification beyond the regular instructions), having a positive attitude, providing encouragement, support, motivation, and generally offering help and support to their teams. Similar to the above theme of organization and administration by peer mentors, this theme is supported by adult literature on the peer mentoring experience, which indicates that peer mentoring promotes social support, decreases anxiety, and provides encouragement, trust, emotional support, and hope (Berrick et al., 2011; Hamrin, Weycer, Pachler, & Fournier, 2006; Sherman, Sperling, & DeVinney, 2004). Again, within the child participants, both mentees and mentors promoted emergence of this theme, however, the mentees still seemed to place more significance on the theme of encouragement of physical activity, discussed below.

The different participant groups perceived these two major themes differently, and spoke about them with varying importance. The order in which themes were emphasized for each participant group is presented in Table 2. As was already noted,

mentors placed more of an emphasis on these themes than the mentees, who focused on the 'encouragement of physical activity' theme, which is further explored below. Another difference noted was that the adult participants also placed less emphasis on these themes, and more emphasis on the 'encouragement of physical activity' and 'positive impact on social networks' themes (also discussed below). Adult participants still contributed to the emergence of the 'organizer/administrator' role and 'helper/supporter role', however. When discussing the helper or supporter role of mentoring, adults focused less on the specific helpful tasks or support provided at H2K events, and more generally on the mentors being motivational toward their teams. Adult participants spoke notably little about the administrative role of mentoring, however, when they did, they tended to focus less on the specific tasks completed by the mentors, and more on a general perceived sense of importance, leadership, responsibility, or respect.

These differences between adult and child participants are likely a result of a few factors. Firstly, the adults did not participate directly in the experience of peer mentoring, and are therefore less likely to speak about specific experiences and more likely to speak generally about the perceived experiences of their children or students. Also, the young age of the child participants means that they are likely to speak more concretely about specific events, occurrences or tasks performed by their mentors, while the adults are more able to speak in a more conceptual, abstract manner (Piaget, 1991). In regard to the lack of focus on the administrative role by the adult participants, it is possible that they see their own role in the lives of their children or students as being administrative, and are potentially therefore less likely to perceive that role as one of a child.

**Significance of the 'encouragement of physical activity' theme.** As noted in the previous results chapter, peer mentors were perceived as encouragers of physical activity. This theme emerged from both the child participants and the adult participants. For the child participants, this was the theme that was most emphasized by the mentees, but focused on less by the mentors. In discussion with the adult participants, this was the theme that was most emphasized, and seemed most important, to both the teachers and parents (please refer to Table 2).

The child participants contributed to the emergence of this theme by discussing the perception that physical activity had increased since the peer mentoring began, and specific ways in which peer mentors encouraged physical activity, such as encouraging active play and engagement in H2K activities. It was the mentees, however, who focused most on this theme. In fact, the mentors, while in agreement that peer mentoring had a positive impact on physical activity in the H2K program, only occasionally discussed this theme (please refer to Table 2). As discussed above, the mentors focused more on the 'helper/supporter' and 'organizer/administrator' themes. This difference may be because the mentors seem to perceive their responsibility as a peer mentor primarily as one of leadership, and not specifically (or most importantly) related to encouraging physical activity. This difference may also be because the peer mentors were potentially hesitant to take credit for the perceived increase in physical activity, or wanted to remain humble. Nonetheless, through their roles as 'helpers and supporters' and 'organizers and administrators', they do seem to have a perceived positive impact on the physical activity levels of mentees, and are able to acknowledge this role as well.

The finding that peer mentors encourage increased physical activity levels is supported, to a degree, by existing literature. While no studies were found examining the experience of peer mentoring qualitatively in the physical activity context in children, a few studies incorporated elements of peer mentoring in physical activity, nutrition, or obesity programs. These primarily quantitative studies often targeted low-income, or overweight/obese participants, and always involved an older mentor (for example, college students) mentoring younger students. These studies did, however, indicate some promising results, including improved knowledge, attitudes and behaviours related to health, decreased snack and soda consumption, trends toward increased physical activity, and decreased body fat percentage (Black et al., 2010; Cawley et al., 2011; Stock et al., 2007).

The adult participants (both teachers and parents) placed the most prominence on the encouragement of physical activity theme. They supported the development of this theme by discussing their general perception that peer mentoring was a positive motivator for physical activity, and by recounting specific occurrences when they had witnessed mentors engaging mentees in being physically active. As described above, the focus on this theme was in contrast to the perception of the children, especially the mentors, who focused most on the themes of peer mentors being perceived as 'helpers and supporters' and 'organizers and administrators' (please refer to Table 2). As previously discussed, this may be due to the difference in age and developmental capability between the participant groups. It may also be a result of the adult participants, instead of being directly involved in the mentoring process, being capable of objectively witnessing specific mentoring events and occurrences, such as a teacher recounting the time the peer

mentor in her class invited sedentary individuals to join a game. There is also a chance, however, that adult participants perceive the peer mentoring component to be motivational for physical activity because they are familiar enough with the H2K program to know that the intention of the peer mentoring is to increase physical activity, and may have responded as such based on desirability.

**Significance of the social networking theme.** Beyond the three major themes determined from the results, which are explored above, an additional theme developed that suggests peer mentoring positively impacts social networks. As previously noted, children placed more emphasis on the 'helper and supporter' and 'organizer and administrator' roles of peer mentoring; however, they also frequently discussed the positive impact of peer mentoring on social networks. This theme emerged through discussion of peer mentoring facilitating opportunity for social interaction between peers and by the perception that mentoring contributed to an increase in self-efficacy or confidence in approaching previously unknown peers.

Also as previously noted, adult participants stressed the importance of the encouragement of physical activity theme, however, they also placed significant emphasis on the perceived beneficial impact peer mentoring had on social networks. Both parents and teachers emphasized the perceived important benefits of facilitating interaction between students who may not have otherwise interacted. Adults also noted that this theme also applied specifically to the peer mentors, who were perceived as having gained the skill and confidence necessary to invite other children to play.

Peer mentoring has previously been found to have positive social benefits. This has been indicated in a variety of studies, in both the adult and child literature, and

through quantitative and qualitative work. Peer mentoring has previously been found to benefit relationship building and social support, promote less aggressive behaviours, improve school and family connectedness, and increase social engagement and sense of belonging (Fair, Vandermaas-Peeler, Beaudry, & Dew, 2005; Hamrin et al., 2006; Heirdsfield et al., 2008; Hektner, August, & Realmuto, 2003; King, Vidourek, Davis, & McClellan, 2002; Matthews, Fawcett, & Sheldon, 2009; Murphy, Cupples, Percy, Halliday, & Stewart, 2008; Struchen et al., 2011). The literature supporting this theme indicates that many of the previously found benefits of peer mentoring hold true and can be observed in the specific environment of a childhood physical activity and peer mentoring program.

**Significance of peer mentoring being perceived as positive**. As mentioned in the results section, the peer mentoring role was perceived as having a positive impact on the peer mentors, and child participants indicated that some mentees were jealous of the peer mentoring role. While it was an expectation of the H2K program that the mentors would likely gain leadership qualities as a result of the peer mentoring training and experience, the significance of this influence appears to go beyond basic leadership qualities and is a notable finding of this research. One student (previously mentioned in results) said, *"my mentors, one of them used to be really mean, and sometimes bully people, but ever since he's been in H2K and a mentor he's actually been really nice and stuff"*; while another said, *"I'm ADHD, and I think that like being a mentor is good cause it like gives me something to like pay attention to […] I get in trouble less and am more relaxed and stuff"*. These quotations indicate the profound impact that being a mentor has

potentially had directly on the peer mentors in the program, and indirectly on the mentees as well.

These powerful quotations from children have important implications even beyond the scope of this study. Given the current focus by schools, medical professionals, and parents on both bullying and attention-deficit disorders, the positive perceived impact of peer mentoring by children on both of these shows promise for future interventions incorporating peer mentoring. Findings such as this indicate that the impact of peer mentoring may extend beyond the intention of improving physical activity and have additional other benefits as well. At a time when budget cuts are being made that are negatively impacting school health promotion programs, findings such as this indicate the value of such programs for not only improved physical health, but also mental health and social or cultural shifts in behaviour as well. This finding is also congruent with this study's incorporation of the social ecological model, as it highlights the interaction between various factors at multiple levels and the resultant impact on health. The results of this study in the context of the social ecological model will be discussed below.

**Results in the Context of the Social Ecological Model**

The social ecological model was used to conduct this research. In the school setting and the H2K program, the intrapersonal level of the model is represented by individual students, and the interpersonal level is represented by their interactions with other individuals: their peers, teachers, and others. The school represents the institutional level of the model, families and neighbourhoods beyond the school represent the community level, and the school board and policies represent the systems level. For the purposes of this study, perspectives were collected and compared from the intrapersonal

and interpersonal levels (students, their peers, and mentors), the institutional level (teachers) and community level (parents).  The following section of this chapter explores the previously presented and discussed results in the context of the social ecological model.

**Table 3: Comparison of emphasis placed on various levels of the social ecological model from all participant groups.** Levels of the social ecological model are listed in the order they were emphasized for each participant group.

| Participant Group | | Mentees & Mentors | Teachers | Parents |
|---|---|---|---|---|
| **Level of the social ecological model** | Most emphasized ↓ Least emphasized | Interpersonal | Interpersonal | Interpersonal |
| | | Institutional | Intrapersonal | Intrapersonal |
| | | Community | Institutional | Community |
| | | Intrapersonal | Community | Institutional |
| | | | Systems | Systems |

Discussion with the child, teacher, and parent participants represented the levels of the social ecological model differently. Discussion with the child participants represented the intrapersonal, interpersonal, institutional, and community levels of the social ecological model. Interestingly, the majority of discussion centered on the interpersonal level of the model, however, each of the other discussed levels will be presented below as well, in the order in which they appear in the model. Notably, none of the focus group discussion with children reached the systems level of the social ecological model, likely because the children may be too young to understand the influence of school board and policy on themselves as individuals. The data collected from the adult participants can be placed differently across the levels of the social ecological model than that of the child participants. The adult participants also emphasized the interpersonal level; however, they highlighted each of the other levels of

the model as well, with more perceived importance than the child participants. Further, the adult participants discussed elements at the systems level, which the child participants did not. Table 3 offers a comparison of how each participant group emphasized specific levels of the social ecological model.

**The intrapersonal level.** The intrapersonal level of the social ecological model emerged in discussion with the child participants only occasionally. This discussion included the children stating their preferences for certain physical activities over others, or their enjoyment of certain things, without being able to articulate the reason for these preferences.  Some children also spoke specifically about achieving responsibilities or commitments, being active to achieve a healthy body weight, sufficient energy or relieve stress, and being inactive because of illness or fatigue. An example of this discussion is demonstrated in the quote, "*One thing that makes me physically active is that I hate being inside […] I just do*" (school 1, mentee 3). In these moments of discussion, it was clear that children are sometimes intrinsically motivated to engage in physical activity; however, as will be discussed below, intrinsic motivation was greatly outweighed by the extrinsic motivation of peers. These findings suggest that interventions to promote physical activity in this age group of children should potentially be focused on the extrinsic motivation of peers.

The adult participants, both teachers and parents, placed substantially more importance on the intrapersonal than the child participants (please refer to Table 3). In discussion of the intrapersonal level, parent and teachers often discussed how they perceived physical activity to be a solitary activity: They would run, go to the gym, or walk their dogs independently of friends and family, and considered it to be a typical part

98

of their day. Parents and teachers also discussed maintaining health and a healthy body weight far more frequently than the child participants did, and often indicated that this is something they are becoming more aware of as they get older. Adult participants further discussed fatigue, stress, and time as reasons for not participating in physical activity. One parent said, for example, *"I just enjoy being active, I'm kind of a physical person, and also for health reasons, I'm getting older and know it's important as I age"* (school 2, parent).

These points of discussion with adult participants are focused in a markedly different direction than discussion with the child participants (please refer to Table 3). It seems as though, while adults are physically active because they know it is beneficial for their health child participants do not perceive that responsibility and are most often active because of their friends or peers. Interestingly, though the influence of peers on child physical activity was quite evident in discussion with children, the parent and teacher participants also talked about the intrapersonal level in regard to their children or students. In such discussion, they mentioned their child's interests in things beyond physical activity, and occasionally their child's understanding of the importance of being active for health reasons. While child participants mentioned these factors as well, the adult participants seemed to perceive that the children would have placed similar emphasis on them, which was not the case. These findings again suggest the importance of focusing on the interpersonal level for childhood physical activity interventions and have important modelling implications for children. If adults perceive physical activity as a solitary activity, there is little chance their children are watching the activity and wanting to engage as a result. Similarly, if children perceive the social aspect of physical

activity to be so important, but do not see their parents modelling that behaviour, it is unlikely to be reinforced. This furthers the idea that physical activity programs may need to be re-framed to focus on social benefits, and suggests that these re-framed programs target not only children, but also adults and families.

**The interpersonal level.** As is evidenced by the overwhelming focus on peer influence on physical activity, this was the most emphasized level of the social ecological model from the child participants. Participants primarily discussed this level in terms of school, the H2K program and peer mentoring. In addition, they discussed being active with their peers and families in their communities and neighbourhoods. Further, they discussed generally the influence of peers on physical activity and the potential negative influences as a result of peers as well. Rarely, they discussed peer impact on feelings about body weight, and acknowledged their own ability to influence their peers.

The majority of the discussion at the interpersonal level of the social ecological model surrounded the H2K program and peer mentoring. Children, both mentees and mentors, discussed the H2K program, specifically the H2K Lunches, as an opportunity to be physically active and spend time with their peers, an opportunity which they perceived as novel and enjoyable. They also discussed, with meaningful emphasis, the interaction between mentors and mentees, which is described above in terms of the themes of being helpers and supporters, organizers and administrators, and expanders of social networks. These interactions were described often, and by all participants, and their substantial influence on the physical activity of participants was evident, and common among all participants. Through this discussion, it became evident that the participants found physical activity more enjoyable in the presence of peers than when alone, and that peers

often provided an opportunity in terms of ideas for physical activity. The peer mentoring seemed to provide an organized setting for this positive influence to occur. These topics made up the bulk of the discussion, indicating not only the significant influence of the interpersonal level on childhood physical activity, but also the impact more specifically of peers and peer mentoring in the context of the H2K program.

In addition to discussing peer influence in the context of H2K and peer mentoring, child participants also discussed the influence of peers in the community and family members. These interpersonal interactions were indicated by participants discussing how they often played with other similarly aged children in their neighbourhoods, through organized and unorganized physical activities. They also discussed the influence of their families, which sometimes involved active play with a sibling, but also involved the interaction of parents instructing children to be physically active or providing opportunities to be active. These interpersonal interactions can be described here at the interpersonal level of the social ecological model, but are also intertwined with the community context, which is described below.

Rarely, a few other interpersonal factors were described. These included a negative influence of peers on physical activity, or description of peer influence to be sedentary. This discussion involved the occasional occurrence where peer organized games involved some groups of friends 'ganging up' on other children, which created a negative atmosphere for being physically active. Additionally, children discussed that peers sometimes insisted on engaging in sedentary activities and this would influence the participants to be sedentary instead of active. One student spoke specifically about wanting to lose weight because she perceived that her peers often teased her; she said, "*I*

*want to show them I can do it"* (school 1, mentee 1). These interpersonal influences, while spoken about less than the more positive peer interaction, should be taken into consideration in designing programs involving peer influence.

The adult participants echoed the previously discussed perceptions of the child participants in that they placed substantial influence on how their children or students are motivated interpersonally to be physically active (please refer to Table 3). This conversation predominately centered on the H2K program and peer mentoring, with adults describing the social benefits of having the peer mentoring program, emphasizing how 'social' the child participants are, how they enjoyed being part of a team, and how they perceived this to have a positive impact on physical activity levels. Additionally, parents specifically discussed the interpersonal influences of family members and neighbourhood children on the physical activity levels of their children.

In addition to discussing the interpersonal influences at play in the lives of their children and students, the adult participants also acknowledged the impact of the interpersonal level on themselves. This included discussion about engaging in physical activity with their friends and families, and occasionally being influenced to be inactive by friends who suggested engaging in a sedentary activity. As previously mentioned, while the adult participants placed a significant emphasis on this level of the model when discussing their children and students, they placed less of an emphasis on this level when it came to discussing their own habits, and more equally distributed discussion among the other levels as well.

**The institutional level.** As discussed, the majority of the focus group discussion with the child participants occurred at the interpersonal level, however, there was some

focus on the institutional, or school level as well (please refer to Table 3). During this discussion, many participants mentioned various structured opportunities for physical activity offered through school or in conjunction with the school system, and unorganized physical activity that takes place during the school day at lunch and recess. One participant said, for example *"I have running club on Tuesdays and Thursdays"* (school 3, mentee 9). Participants also discussed the existence of the H2K program and its association with the school, for example, one said: *"when I first started here there like weren't many clubs, and now there's like everything, like H2K, and I think like more people want to like do more stuff now cause of it, and like be more active and stuff. It makes school more fun"* (school 1, mentee 3). These findings are not surprising since the study was school-based. Importantly, much of this discussion overlapped with the interpersonal level, as influences or instances that were described occurred in the school setting, but often involved interaction with peers. These findings suggest the important role the school setting has in motivation for childhood physical activity, and the potential influence school based physical activity programs, especially those with a peer element, have.

The adult participants focused less on the institutional, or school, level than the child participants (please refer to Table 3). The occasional discussion with adult participants about the institution primarily centered on activities that their children or students take part in during the school day. Not surprisingly, most of this discussion was by teachers, while parents rarely touched on the institutional level. Discussion with teachers about the institutional level occasionally touched on the H2K program and peer mentoring as well, presumably also because it occurs in the schools' environment. The

involvement of the institutional level in discussion through this study seems to indicate that the institution, or school, is an important place for physical activity to occur, however, this importance is perceived more by children than it is by adults.

**The community level.** In addition to discussing the intrapersonal, interpersonal, and institutional levels of the social ecological model, the children also occasionally discussed influences at the community level. When the students mentioned the community level, discussion predominately occurred around influences from their parents and families, or activities that occurred in their neighbourhood. Notably, most of this discussion also intricately overlapped with the interpersonal level, as all of the described occurrences and influences involved interaction with other people.  As an example, one student said, *"because your friends and family encourage you to do more, like in school or outside, like my brother on Saturdays plays basketball at the Dixon where they like teach him and stuff, and then sometimes he goes outside, and I play with him"* (school 2, mentor3). There was little emphasis placed on this level compared to the others were discussed (please refer to Table 3). The reason for this is likely that the discussion was centered on peer mentoring in the context of the school-based H2K program; however, this may also suggest the lack of impact on physical activity that children perceive as a result of their environment. This may again suggest the importance of the school environment and interpersonal level for physical activity interventions.

Similar to the child participants, the adult participants spoke about the community level in terms of physical activities that take place in their communities or neighbourhoods. The difference noted between child and adult participants here was that adult participants spoke more about access, availability and resources available in their

104

communities. This differing perspective is again likely due to the developmental capability of adults, who see their communities more broadly than children are able to.

**The systems level.** While the topics of discussion that were focused on by children did not reach the systems level of the social ecological model, this was not the case in speaking with adults (please refer to Table 3). Adults, however, still spoke only very rarely about the systems level. When the systems or policy level was discussed, it was typically in relation to policies surrounding physical education in schools, which was noted by both teachers and parents. One parent said, *"well, I think that having gym class only twice a week at school is NOT a good thing, I wish that they had it EVERY day, at least a half hour every day, I mean, I know they have recess and stuff like that but I mean, you can't guarantee that they're doing things physical"* (school 2, parent). Additionally, some adults mentioned the high cost of physical activity inhibiting their ability to involve their children in organized sport. One parent, in particular, noted that it was prohibitively expensive to take her children to a local recreation centre, and since she did not have a family vehicle, also noted that travelling to the recreation centre was difficult. She said, *"it's $15 to go swimming at the new pool, we're not gonna do that with 3 kids […] like we'd do things like go to [the recreation centre] more if we had the money to, or a car, or... yeah, its hard"* (school 3, parent). Since policy analysis was outside the scope of this study, it is not surprising that there was not a large focus on this level of the model, however, quotations such as this indicate the important influence and need for further study at this level.

**Summary of the social ecological context.** In summary, the child participants were profoundly impacted by and focused on the interpersonal level of the social

ecological model, sometimes discussed the institutional level, and rarely discussed the intrapersonal or community levels. The adult participants, in comparison spoke more broadly about each of the levels, even touching briefly and occasionally on the systems level, which the child participants did not discuss. Parent participants tended to focus more on the community level than teacher participants, who focused more on the institutional level. Interestingly, each 'level' of the social ecological model that was explored, tended to focus discussion on the level of the model that they represent. For example, discussion with the child participants, the direct receivers of the interpersonal peer mentoring intervention, resulted in emphasis on the interpersonal level; discussion with teachers, the representative of the institutional, or school, level, resulted in a comparatively larger focus on the institutional level; and discussion with parents, the representative of the community level, resulted in a comparatively greater emphasis on the community level. Also interestingly, peer mentoring was very infrequently discussed beyond the interpersonal level of the model. Occasionally participants alluded to intrapersonal changes as a result of peer mentoring, institutional occurrences associated with peer mentoring, and, rarely the impact of peer mentoring in community settings. This finding primarily, and importantly, suggests that peer mentoring has had a perceived profound impact on the interpersonal level of the social ecological model. It also suggests, however, that the intervention would need to have additional components added in order to create substantial impact at other levels of the model.

**Study Limitations**

This study has several limitations. Firstly, when this research was proposed, it was intended that the researcher would revisit the involved elementary schools and child

participants after the first focus groups, for clarification, and to conduct member checking as themes developed. Unfortunately, as a result of delays due to achieving ethical approval, gaining informed consent, selecting participants and scheduling focus groups, this was not possible. Once original focus groups were scheduled, it was too near the end of the school year for it to be possible to return to elementary schools. Fortunately, since it was known that this would not be possible prior to conducting the original focus groups, this was considered during the original focus groups. This allowed me to be thorough in my question asking, and to ask for clarification when necessary, knowing it would be my only chance to speak with the students. I hope that this mitigated or decreased the potential impact of this limitation.

Secondly, there are limitations due to my characteristics as a researcher. While I have some limited experience in conducting qualitative focus groups and interviews, I am not considered an experienced interviewer. I may therefore have lacked the skills necessary to obtain the optimal data from the focus groups and interviews. I tried to minimize this limitation by practicing my interview guides and techniques as part of a project for a course, and with the H2K research team. Additionally, my age and sex may impact the responses given by the participants because each participant has their individual preferences of who they feel most comfortable speaking with, and may not have felt most comfortable speaking freely with a Caucasian, 25 year old female student. Finally, I have my own biases, attitudes and expectations associated with H2K and peer mentoring, as I have been highly involved with the project since it was first piloted in 2006. In order to minimize the impact of this bias I tried to remain reflexive and keep an open mind about the impact of peer mentoring to ensure that I understood the participant

perspectives. I also conducted peer review to ensure that I was not alone in seeing themes emerge from the data.

Thirdly, the participants possess characteristics that may have limited the results of this study. The child focus group participants, for instance, were between the ages of 9 and 12. This young age may have limited their ability to recall experiences with peer mentoring over the course of the school year and they may have been more likely to report on their most recent experiences. To minimize the impact of this limitation, I tried to make the interview questions as child-friendly and simplistic as possible. The adult participants, while having heard about the peer mentoring experience and having been present peripherally, were not actually assigned peer mentors themselves, may therefore have lacked some details of the full peer mentoring experience, and may have been more likely to report specific events that were described to them by the children. Additionally, since participants were purposefully recruited, I most likely accessed a population of participants who were willing to talk about their experiences, and may have missed important peer mentoring experiences had by students who were unable to, or did not wish to, participate in focus groups. Children who are very sedentary, overweight, or obese, for example, may have been unlikely to volunteer to take part. There are also limitations associated with conducting focus groups, such as participants responding based on social desirability in the presence of their peers (Horner, 2000). Finally, focus group participants who had unusually positive or negative experiences may have been unlikely to express those experiences, or may have downplayed those experiences to make them seem more normative (Horner, 2000).

Another limitation of this research is the variability of the peer mentoring experience. Even though the peer mentors at each school were all trained using the same protocol, each peer mentor undoubtedly possesses various skills, abilities and characteristics, which may have impacted the peer mentoring experience differently for individuals. For instance, a female child who was assigned a female peer mentor that she would have considered herself friends with prior to being assigned the mentor may have had a different peer mentoring experience than a female child who is assigned a male peer mentor that may not have been considered a 'friend' prior to the program. Sampling from a variety of the peer mentoring schools, to capture varying experiences, hopefully minimized the impact of this limitation. Finally, although generalizability is not a goal of qualitative research, and lack of generalizability is therefore not a limitation, it should be noted that the results of this study described the peer mentoring experience only within the context of the H2K program, which is one program, in one city, in one school board, and may be different that the peer mentoring experience in other similar programs. Results should thus only be interpreted within that context.

**Implications for Health Promotion & Suggestions for Future Research**

This study adds to the current literature by qualitatively exploring the peer mentoring experience in the context of improving physical activity in a general population of children, from the perspectives of the mentees, mentors, teachers, and parents. An exploratory study such as this, using a qualitative description methodology, allows for the experience to be understood from the perspective of the participants. Specifically, this allows for the voices and perspectives of the child participants to be heard and understood, which is vastly overlooked in previous peer mentoring literature.

The results of this study indicate and describe the profound impact peers, and the interpersonal level of the social ecological model, have on childhood motivation for physical activity. More specifically, this study explored how mentoring has a positive impact on perceived levels of physical activity of children participating in a school-based peer mentoring physical activity program. It appears that physical activity is encouraged by several mechanisms, including peer mentors being perceived as 'organizers and administrators', 'helpers and supporters' and 'encouragers of social networks'. While elements of each of these themes have been observed in previous literature on peer mentoring, the previous studies have been predominately quantitative, conducted with adults, and rarely examine physical activity. This study also touched on the perceived impact that the peer mentoring training and program had on the peer mentors, which was perceived very positively, and sometimes with important changes observed in the mentors.

Using the social ecological model for the thematic framework for this study allowed examination of multiple levels of influences and their context. Overall, peer mentoring seemed to have the most impact at the interpersonal level. Future interventions could examine levels beyond those that I was able to explore in this study, such as the systems level, and could target levels beyond the interpersonal by adding additional components to the peer mentoring program, with the intention of expanding impact beyond the interpersonal level.

This research has several implications for health promotion. Firstly, peer mentoring was perceived positively and as having positive impact in this setting. This indicates that peer mentoring had a potential positive impact on the health-related habits

of participants, and could therefore be applied and explored in similar and differing contexts to potentially address issues of physical inactivity. Results suggest that children in this age group will likely perceive focusing on peer-led initiatives most positively, as they perceived peers to be the most impactful factor in motivation for physical activity. Because the roles of 'helper and supporter' and 'organizer and administrator' roles were emphasized so significantly, especially by the peer mentors, programs that focus on these roles for mentors may have the most success.

The findings of this study have been, and continue to be used in the future development of the H2K program. Upon completion of the H2K research, the Maritime Heart Center has continued running H2K as a program, and has incorporated this exploration of the peer mentoring experience in development. The results of this study indicate several roles of peer mentoring, which have allowed a better understanding of how peer mentoring might be used to promote physical activity. Changes have been made to the program, including now employing grade 6 students exclusively as mentors, which promotes the role of responsibility and leadership, and decreases the number of students who could be mentors, thereby helping to ameliorate the issue of jealousy of mentors by students not chosen for this role. The number of students on individual teams has also been decreased, which has opened up more spots for mentors, and strengthened the ability of mentors to develop individual relationships. Further, the name of the biweekly activities has been changed from "H2K Lunches" to "H2K Club" which promotes the fun, social element of the program, and H2K Clubs now include a "kids choice" activity, where mentors negotiate with their teams to select an activity to be played at the end of each club period, further reinforcing the social and fun elements of physical activity

participation. Finally, the mentors have been given more specific tasks to facilitate the "helper and supporter" and "organizer and administrator" roles, such as nominating individuals on their teams for awards related to team spirit.

The findings of this research also suggest re-framing how physical activity programs are currently thought about. While it is typical to plan physical activity programs that are structured, organized, and focused on health, this research has suggested that we may need to think about physical activity differently if we want to engage children. In this study, children rarely mentioned health as a motivator for physical activity, a finding that has been previously suggested in the literature (Allender, Cowburn, & Foster, 2006). Instead, this study indicated that children emphasize their time spent in unorganized physical activity most, are most focused on the social aspects and social benefits of physical activity and are most influenced to be physically active by their peers. Taking those findings into consideration, future programs should be less focused on promoting health, and designed to facilitate unorganized free play, with emphasis placed on social engagement. Further, future policies should be designed to foster and encourage these types of programs.

The finding that active, social, play should be encouraged is in agreement with the newly released 2012 Active Healthy Kids Canada Report Card on Physical Activity for Children and Youth (Active Healthy Kids Canada, 2012). The report card suggests that Canadian children and youth have a "C" grade on organized sport and physical activity participation, but an "F" grade on active play and leisure (Active Healthy Kids Canada, 2012). The report card also indicates children do not play as much as they used to and

that the majority of Canadian children would rather play with their friends than watch television (Active Healthy Kids Canada, 2012).

Further, the finding that programs promoting fun, active, social, play may be most successful indicates changes that could be made to currently policies and programs. Current physical education policies ensure only a very limited amount of physical activity is achieved by all children at school, which is very structured and is predominately skills-based. While these skill-based curriculum guidelines are necessary in promoting development of several motor control and coordination outcomes, they do not allow children the opportunity to experience physical activity as fun and socially engaging. Other Canadian provinces (such as Ontario) have mandated Daily Physical Activity (DPA), which allows all students to engage in a minimum of 20 minutes of sustained moderate to vigorous physical activity daily, during instructional time (Ontario Ministry of Education, 2005). In addition to a standard physical education policy, Nova Scotia schools should consider a policy for Daily Physical Activity.

The findings of this study can also be taken into account in the development of physical activity programs for children above the age of these participants, as they transition from elementary school into junior high and high school. We know that children get less and less active as they progress through junior high and high school and interventions that slow this decline in activity are warranted. Adolescents, similar to the children in this study, are also (if not even more) developmentally motivated in their actions by peer influence. Unfortunately, the types of activities that are discussed with the most emphasis and enjoyment by the elementary aged participants in this study (unstructured, tag-type games) are often regarded as "play". "Play", active or otherwise,

has the potential for carrying a negative connotation as children grow into adolescents and young adults, who stereotypically perceive that they are "too old" to play. Programs to promote physical activity in adolescents may be most successful if they can carry forth some of the important elements identified in this study, such as fun, unstructured activities that are focused on engagement, while not being perceived as "play". Programs that change the stereotype surrounding "play" into something positive as children age may also accomplish this.

As a follow-up to this study, there are several opportunities for further research. Firstly, as this is a very exploratory study in only one small program in one small setting, the experience of peer mentoring in relation to physical activity should be explored in other contexts. For example, peer mentoring in physical activity programs could be explored in other geographical areas, with other age groups, or with the intention of comparing urban and rural contexts or various socioeconomic statuses. Further, exploring potential differences between male and female participants, especially in early adolescence, would be warranted.

Another opportunity for further study could be examining, in further detail, one or more of the themes that were determined as a result of this research. This study determined, for example, that the roles of 'helper and supporter' and 'organizer and administrator' were important to the success of the peer mentoring program. Further study could explore these roles more specifically, potentially by using other, more interpretive qualitative methodologies. For example, use of grounded theory could determine the direction of the mechanisms at play, ethnography could examine the power

relations between mentor and mentee, or a phenomenological study could explore the meaning of specific experiences.

The results of this study also indicate the profound impact of peers and peer mentoring, both of which are perceived to significantly impact childhood physical activity. This finding warrants distinction between peer mentors and active friends. Peer mentors differ from active friends in that there is an assigned relationship involved, where the mentor is provided with training and the responsibility of engaging a team in physical activity; while active friends are simply classmates or peers who provide social benefits and are also physically active. Future research could examine whether having an active friend is as impactful as having a peer mentor.

Further, quantitative research, while already frequently used in the peer mentoring literature, can be added to qualitative studies to determine whether quantifiable change has occurred in the participants. This study is a qualitative sub-study of an existing, larger, quantitative research initiative, which will determine quantitatively if peer mentoring is associated with increases in physical activity. Future research could examine the potential benefits of using mixed methods to explore the impact of peer mentoring on various health-related outcomes. Mixed methods research could also be used to explore peer mentoring 'dose' and durability of perceived changes in participants after the conclusion of a peer mentoring program.

Finally, there is currently tension in schools and school boards between devoting resources, time, and capacity toward health, or toward traditional education. A strong focus on educational learning outcomes makes it difficult for teachers to incorporate health into their day; however, this study has demonstrated several non-health benefits of

115

a physical activity and peer mentoring program, such as leadership and expansion of social networks. These elements are crucial in achieving comprehensive school health, and future research could examine how these benefits of peer mentoring are related to learning outcomes.

**Summary & Conclusion**

In summary, this research suggests that the peer mentoring experience is perceived positively, with perceived profound impact on motivation for physical activity of participants, and on the individual peer mentors. This study qualitatively examines various influences on motivation for childhood physical activity, focusing on peer influence. The positive perceived impact of peer mentoring on motivation for physical activity appears to be a result of peer mentors being perceived as helpers, supporters, organizers, administrators, and expanders of social networks. This study indicates the importance of peer influence on health behaviours in children, and the opportunity for health promotion specialists and researchers to examine peer mentoring as a potential means of impacting health, specifically in the social ecological context.

# References

Active Healthy Kids Canada (2012). *Is Active Play Extinct?* The Active Healthy Kids Canada 2012 Report Card on Physical Activity for Children and Youth. Toronto: Active Healthy Kids Canada.

Active Healthy Kids Canada. (2011). *Don't let this be the most physical activity our kids get after school. The Active Healthy Kids Canada 2011 Report Card on Physical Activity for Children and Youth.* Toronto: Active Healthy Kids Canada.

Akrimi, S., Raynor, S., Johnson, R., & Wylie, A. (2008). Evaluation of SHINE - Make Every Child Count: A school-based community intervention programme. *Journal of Public Mental Health, 7*(2), 7-17.

Allender, S., Cowburn, G., & Foster, C. (2006). Understanding participation in sport and physical activity among children and adults: A review of qualitative studies. *Health Education Research, 21*(6), 826-835.

Anderson, C. B., Hughes, S. O., & Fuemmeler, B. F. (2009). Parent-child attitude congruence on type and intensity of physical activity: Testing multiple mediators of sedentary behaviour in older children. *Health Psychology, 28*(4), 428-438.

Anderson, E. S., Wojcik, J. R., Winett, R. A., & Williams, D. M. (2006). Social-cognitive determinants of physical activity: The influence of social support, self-efficacy, outcome expectations, and self-regulation among participants in a church-based health promotion study. *Health Psychology, 25*(4), 510-520.

Anderson, T., Lipman, E., Mills, B., Metz, H., Teram, E., Elbard, M. et al. (2006). The Recreation Mentoring Program: A community engagement initiative for children. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 15*(2), 59-63.

Berrick, J. D., Young, E. W., Cohen, E., & Anthony, E. (2011). 'I am the face of success':
  peer mentors in child welfare. *Child & Family Social Work, 16*(2), 179-191.

Biddle, S. J. H., Wang, C. K. J., Chatzisarantis, N. L. D., & Spray, C. M. (2003).
  Motivation for physical activity in young people: Entity and incremental beliefs
  about athletic ability. *Journal of Sports Sciences, 21*(12), 973-989.

Black, M. M., Hager, E. R., Le, K., Anliker, J., Arteaga, S. S., DiClemente, C. et al.
  (2010). Challenge! Health promotion/obesity prevention mentorship model
  among urban, black adolescents. *Pediatrics, 126*, 280-288.

Bois, J. E., Sarrazin, P. G., Brustad, R. J., Trouilloud, D. O., & Cury, F. (2005).
  Elementary schoolchildren's perceived competence and physical activity
  involvement: The influence of parents' role modelling behaviours and perceptions
  of their child's competence. *Psychology of Sport and Exercise, 6*, 381-397.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative
  Research in Psychology, 3*, 77-101.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature
  and design*. Cambridge: Harvard University Press.

Brunton, G., Thomas, J., Harden, A., Rees, R., Kavanagh, J., Oliver, S. et al. (2005).
  Promoting physical activity amongst children outside of physical education
  classes: A systematic review integrating intervention studies and qualitative
  studies. *Health Education Journal, 64*(4), 323-338.

Brustad, R. J. (1996). Attraction to physical activity in urban school children: Parental
  socialization and gender influences. *Res Q Exercise Sport, 67*(3), 316-323.

Canadian Fitness & Lifestyle Research Institute. (2009). *Bulletin 1: Activity levels of
  Canadian children and youth* Ottawa: Author.

Cavell, T. A., Elledge, L. C., Malcolm, K. T., & Faith, M. A. (2009). Relationship quality and the mentoring of aggressive, high-risk children. *J Clin Child Adol Psych, 38*(2), 185-198.

Cawley, J., Cisek-Gillman, L., Roberts, R., Cocotas, C., Smith-Cook, T., Bouchard, M. et al. (2011). Effect of HealthCorps, a High School Peer Mentoring Program, on Youth Diet and Physical Activity. *Childhood Obesity, 7*(5), 364-373.

Cheng, T. L., Haynie, D., Brenner, R., Wright, J. L., Chung, S., & Simons-Morton, B. (2008). Effectiveness of a mentor-implemented, violence prevention intervention for assault-injured youths presenting to the emergency department: Results of a randomized trial. *Pediatrics, 122*, 938-946.

Colley, R. C., Garriguet, D., Janssen, I., Craig, C. L., Clarke, J., & Tremblay, M. S. (2011). *Physical activity of Canadian children and youth: Accelerometer results from the 2007 to 2009 Canadian Health Measures Survey* (82-003-XPE). Ottawa: Statistics Canada.

Coppinger, T., Jeanes, Y. M., Dabinett, J., Vogele, C., & Reeves, S. (2010). Physical activity and dietary intake of children aged 9-11 years and the influence of peers on these behaviours: A 1-year follow-up. *European Journal of Clinical Nutrition, 64*, 776-781.

Corder, K., van Sluijs, E., McMinn, A. M., Ekelund, U., Cassidy, A., & Griffin, S. J. (2010). Perception versus reality: Awareness of physical activity levels of British children. *American Journal of Preventive Medicine, 38*(1), 1-8.

Cottrell, R. R., Girvan, J. T., & McKenzie, J. F. (2009). *Principles and Foundations of Health Promotion and Education Fourth Edition*. San Fransisco: Pearson Benjamin Cummings.

Creswell, J. W. (2007). *Qualitative inquiry and research design. Choosing among five approaches*. Thousand Oaks: Sage.

Dallos, R., & Comley-Ross, P. (2005). Young people's experience of mentoring: Building trust and attachments. *Clinical Child Psychology and Psychiatry, 10*(3), 369-383.

Davison, K. K., & Birch, L. L. (2001). Childhood overweight: A contextual model and recommendations for future research. *Obesity Reviews, 2*(3), 159-171.

Dennison, S. (2000). A win-win peer mentoring and tutoring program: A collaborative model. *The Journal of Primary Prevention, 20*(3), 161-174.

Dennison, S. (2010). Peer mentoring: Untapped potential. *Journal of Nursing Education, 49*(6), 340-342.

Denzin, N. Y., & Lincoln, Y. S. (2000). *Handbook of qualitative research*. Thousand Oaks: Sage.

Dobbins, M., DeCorby, K., Robeson, P., Husson, H., & Tirilis, D. (2009). School-based physical activity programs for promoting physical activity and fitness in children and adolescents aged 6-18. *Cochrane Database of Systematic Reviews,*(1).

Dorgo, S., Robinson, K. M., & Bader, J. (2009). The effectiveness of a peer-mentored older adult fitness program on perceived physical, mental, and social function. *Journal of the American Academy of Nurse Practitioners, 21*(2), 116-122.

Dunham-Taylor, J., Lynn, C. W., Moore, P., McDaniel, S., & Walker, J. K. (2008). What goes around comes around: Improving faculty retention through more effective mentoring. *J Prof Nurs, 24*, 337-346.

Fair, C., Vandermaas-Peeler, M., Beaudry, R., & Dew, J. (2005). 'I learned how little kids think': Third-graders' scaffolding of craft activities with preschoolers. *Early Child Development and Care, 175*(3), 229-241.

Files, J. A., Blair, J. E., Mayer, A. P., & Ko, M. G. (2008). Facilitated Peer Mentorship: A pilot program for academic advancement of female medical faculty. *Journal of Women's Health, 17*(6), 1009-1015.

Finnerty, T., Reeves, S., Dabinett, J., Jeanes, Y. M., & Vogele, C. (2009). Effects of peer influence on dietary intake and physical activity in schoolchildren. *Public Health Nutrition, 13*(3), 376-383.

Fitzgerald, A., Fitzgerald, N., & Aherne, C. (2012). Do peers matter? A review of peer and/or friends' influence on physical activity among American adolescents. *Journal of Adolescence, 1*(18), in press.

Gibson, F. (2007). Conducting focus groups with children and young people: Strategies for success. *Journal of Research in Nursing, 12*, 473-485.

Golan, M., & Weizman, A. (2001). Familial approach to the treatment of childhood obesity: Conceptual model. *Journal of Nutrition Education, 33*(2), 102-108.

Guba, E. G., & Lincoln, Y. S. (1989a). Judging the quality of fourth generation evaluation. In *Fourth Generation Evaluation* (pp. 228-251). Newbury Park: SAGE Publications, Inc.

Guba, E. G., & Lincoln, Y. S. (1989b). What is constructivism anyway? In *Fourth generation evaluation* (pp. 79-116). Newbury Park: SAGE Publications.

Hamrin, V., Weycer, A., Pachler, M., & Fournier, D. (2006). Evaluation of peer-led support groups for graduate nursing students. *Journal of Nursing Education, 45*(1), 39-43.

Hands, B. P., Chivers, P. T., Parker, H. E., Beilin, L., Kendall, G., & Larkin, D. (2011). The associations between physical activity, screen time and weight from 6 to 14 yrs: The Raine Study. *Journal of Science & Medicine in Sport, 14*(5), 397-403

Hegeman, C., Hoskinson, D., Munro, H., Maiden, P., & Pillemer, K. (2007). Peer mentoring in long-term care: rationale, design, and retention. *Gerontology & Geriatrics Education, 28*(2), 77-90.

Heirdsfield, A. M., Walker, S., Walsh, K., & Wilss, L. (2008). Peer mentoring for first-year teacher education students: The mentors' experience. *Mentoring & Tutoring: Partnership in Learning, 16*(2), 109-124.

Hektner, J. M., August, G. J., & Realmuto, G. M. (2003). Effects of pairing aggressive and nonaggressive children in strategic peer affiliation. *Journal of Abnormal Child Psychology, 31*(4), 399.

Hoffman, B. R., Monge, P. R., Chou, C., & Valente, T. W. (2007). Perceived peer influence and peer selection on adolescent smoking. *Addictive Behaviours, 32*, 1546-1554.

Horner, S. D. (2000). Using focus groups with middle school children. *Research in Nursing & Health, 23*, 510-517.

Hurd, N., & Zimmerman, M. (2010). Natural mentors, mental health, and risk behaviours: A longitudinal analysis of African American adolescents transitioning into adulthood. *American Journal of Community Psychology, 46*, 36-48.

Ingledew, D. K., & Markland, D. (2008). The role of motives in exercise participation. *Psychology & Health, 23*(7), 807-828.

Kaewthummanukul, T., & Brown, K. C. (2006). Determinants of employee participation in physical activity: Critical review of the literature. *AAOHN Journal, 54*(6), 249-261.

Karcher, M. J. (2005). The effects of developmental mentoring and high school mentors'

    attendance on their younger mentees' self-esteem, social skills, and

    connectedness. *Psychology in the Schools, 42*(1), 65-77.

Keating, L. M., Tomishima, M. A., Foster, S., & Alessandri, M. (2002). The effects of a

    mentoring program on at-risk youth. *Adolescence, 37*(148), 717-734.

Keegan, R. J., Harwood, C. G., Spray, C. M., & Lavallee, D. E. (2009). A qualitative

    investigation exploring the motivational climate in early career sports

    participants: Coach, parent, and peer influences on sport motivation. *Psychology*

    *of Sport and Exercise, 10*, 361-372.

Kelly, S., & Melnyk, B. M. (2008). Systematic review of multicomponent interventions

    with overweight middle adolescents: Implications for clinical practice and

    research. *Worldviews on Evidence-Based Nursing, 5*(3), 113-135.

Kennedy, C., Kools, S., & Krueger, R. (2001). Methodological Considerations in

    Children's Focus Groups. *Nursing Research, 50*(3), 184-187.

Keresztes, N., Piko, B. F., Pluhar, Z. F., & Page, R. M. (2008). Social influences in sports

    activity among adolescents. *The Journal of the Royal Society for the Promotion of*

    *Health, 128*(1), 21-26.

King, K. A., Vidourek, R. A., Davis, B., & McClellan, W. (2002). Increasing self-esteem

    and school connectedness through a multidimensional mentoring program.

    *Journal of School Health, 72*(7), 294-299.

Macdonald-Wallis, K., Jago, R., Page, A. S., Brockman, R., & Thompson, J. L. (2011).

    School-based friendship networks and children's physical activity: A spatial

    analytical approach. *Social Science & Medicine, 73*(1), 6-12.

Matthews, T. L., Fawcett, S. B., & Sheldon, J. B. (2009). Effects of a peer engagement program on socially withdrawn children with a history of maltreatment. *Child & Family Behaviour Therapy, 31*, 270-291.

McLafferty, I. (2004). Focus group interviews as a data collection strategy. *Journal of Advanced Nursing, 48*(2), 187-194.

Melkevik, O., Torsheim, T., Iannotti, R. J., & Wold, B. (2010). Is spending time in screen-based sedentary behaviours associated with less physical activity: A cross national investigation. *Int J Behav Nutr Phys Act, 21*(7), 46-56.

Meyer, T. A., & Gast, J. (2008). The effects of peer influence on disordered eating behaviour. *The Journal of School Nursing, 24*(1), 36-42.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An expanded sourcebook* (2 ed.). Thousand Oaks: Sage.

Milne, J., & Oberle, K. (2005). Enhancing rigor in qualitative description. *Journal of Wound, Ostomy, and Continence Nursing, 32*(6), 413-420.

Mitchell, K., Nyakake, M., & Oling, J. (2007). How effective are street youth peer educators? Lessons learned from an HIV/AIDS prevention programme in urban Uganda. *Health Education, 107*(4), 364-376.

Moodie, M. L., & Fisher, J. (2009). Are youth mentoring programs good value-for-money? An evaluation of the Big Brother Big Sisters Melbourne program. *Bio Med Central Public Health, 9*(41).

Moody, K. A., Childs, J. C., & Sepples, S. B. (2003). Intervening with at-risk youth: Evaluation of the youth empowerment and support program. *Pediatric Nursing, 29*(4), 263-270.

Morrow, S. L. (2005). Quality and trustworthiness in qualitative research in counselling psychology. *Journal of Counselling Psychology, 52*(2), 250-260.

Murphy, C. A., Cupples, M. E., Percy, A., Halliday, H. L., & Stewart, M. C. (2008). Peer-mentoring for first-time mothers from areas of socio-economic disadvantage: A qualitative study within a randomised controlled trial. *BMC Health Services Research, 8*, 1-11.

Murtagh, J., Dixey, R., & Rudolf, M. (2006). A qualitative investigation into the levers and barriers to weight loss in children: Opinions of obese children. *Archives of Disease in Childhood, 91*, 920-923.

Naylor, P., & McKay, H. A. (2009). Prevention in the first place - schools a setting for action on physical inactivity. *British Journal of Sports Medicine*. doi:10.1136/bjsm.2008.053447

Neergaard, M. A., Olesen, F., Anderson, R. S., & Sondergaard, J. (2009). Qualitative description: the poor cousin of health research? *BMC Medical Research Methodology, 9*, 52-58.

Norton, D. E. (2003). Parental influence on models of primary prevention of cardiovascular disease in children. *European Journal of Cardiovascular Nursing, 2*(4), 311-322.

O'Dea, J. A. (2003). Why do kids eat healthful food? Perceived benefits of and barriers to healthful eating and physical activity among children and adolescents. *Journal of the American Dietetic Association, 103*(4), 497-501.

Ogunleye, A. A., Voss, C., & Sandercock, G. R. (2012). Prevalence of high screen time in English youth: Association with deprivation and physical activity. *Journal of Public Health, 34*(1), 46-53.

Ontario Ministry of Education. (2005). Daily Physical Activity in Schools, Grades 4 to 6. Ontario Ministry of Education.

Patton, M. Q. (2002a). Purposeful Sampling. In *Qualitative research & evaluation methods* (3 ed., pp. 230-248). Thousand Oaks: Sage.

Patton, M. Q. (2002b). Qualitative Interviewing. In *Qualitative Research and Evaluation Methods* (3 ed., pp. 339-418). Thousand Oaks: SAGE.

Piaget, J. (1991). Advances in child and adolescent psychology. In P. Light, S. Sheldon, M. Woodhead, P. Light, S. Sheldon, & M. Woodhead (Eds.), *Learning to think* (pp. 5-15). Child development in social context; Vol. 2. Florence, KY US: Taylor & Frances/Routledge.

Pini, S. (2009). Education mentoring for teenagers and young adults with cancer. *British Journal of Nursing, 18*(21), 1316-1319.

Potard, C., Courtois, R., & Rusch, E. (2008). The influence of peers on risky sexual behaviour during adolescence. *The European Journal of Contraception and Reproductive Health Care, 13*(3), 264-270.

Rhodes, R. E., Naylor, P., & McKay, H. A. (2010). Pilot study of a family physical activity planning intervention among parents and their children. *Journal of Behavioural Medicine, 33*(2), 91-100.

Rittenhouse, M., Salvy, S., & Barkley, J.E. (2011). The effect of peer influence on the amount of physical activity performed in 8- to 12-year-old boys. *Ped Exercise Sci, 23,* 49-60.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*, 54-67.

Salmon, J., Booth, M. L., Phongsavan, P., Murphy, N., & Timperio, A. (2007).

    Promoting physical activity participation among children and adolescents.

    *Epidemiologic Reviews, 29*, 144-159. doi:10.1093/epirev/mxm010

Salvy, S., Bowker, J. W., Roemmich, J. N., Romero, N., Kieffer, E., Paluch, R. et al.

    (2008). Peer influence on children's physical activity: An experience sampling

    study. *Journal of Pediatric Psychology, 33*(1), 39-49.

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in*

    *Nursing & Health, 23*, 334-340.

Sandelowski, M. (2010). What's in a name? Qualitative Description Revisted. *Research*

    *in Nursing & Health, 33*, 77-84.

Schmidt, M. E., McVaugh, B., & Jacobi, J. (2007). Is mentoring throughout the fourth

    and fifth grades associated with improved psychosocial functioning in children?

    *Mentoring & Tutoring, 15*(3), 263-276.

Sheehan, K., DiCara, J. A., LeBailly, S., & Christoffel, K. K. (1999). Adapting the gang

    model: Peer mentoring for violence prevention. *Pediatrics, 104*, 50-54.

Sherman, J. E., Sperling, K. B., & DeVinney, D. J. (2004). Social support and adjustment

    after spinal cord injury: Influence of past peer-mentoring experiences and current

    live-in partner. *Rehabilitation Psychology, 49*(2), 140-149.

Stock, S., Miranda, C., Evans, S., Plessis, S., Ridley, J., Yeh, S. et al. (2007). Healthy

    Buddies: A novel, peer-led health promotion program for the prevention of

    obesity and eating disorders in children in elementary school. *Pediatrics, 120*(4),

    e1059-e1068.

Struchen, M., Davis, L., Bogaards, J., Hudler-Hull, T., Clark, A., Mazzei, D. et al.

    (2011). Making Connections After Brain Injury: Development and Evaluation of

    a Social Peer-Mentoring Program for Persons With Traumatic Brain Injury.

    *Journal of Head Trauma Rehabilitation, 26*(1), 4-19.

Thompson, P.D., Buchner, D., Pina, I.L., Balady, G.J., Williams, M.A., Marcus, B.H.,

    Berra, K., Blair, S.N., Costa, F., et al. (2003). Exercise and physical activity in the

    prevention and treatment of atherosclerotic cardiovascular disease.

    Arteriosclerosis, Thrombosis, and Vascular Biology. 23: 42-49.

Thompson, A. M., Campagna, P. D., Rehman, L. A., Murphy, R. J. L., Rasmussen, R. L.,

    & Ness, G. W. (2005). Physical activity and body mass index in grade 3, 7, and

    11 Nova Scotia students. *Medicine & Science in Sports & Exercise, 37*(11), 1902-

    1908.

van Sluijs, E. M. F., McMinn, A. M., & Griffin, S. J. (2008). Effectiveness of

    interventions to promote physical activity in children and adolescents: Systematic

    review of controlled trials. *British Journal of Sports Medicine, 42*, 653-657.

Veith, E. M., Sherman, J. E., & Pellino, T. A. (2006). Qualitative analysis of the peer-

    mentoring relationship among individuals with spinal cord injury. *Rehabilitation*

    *Psychology, 51*(4), 289-298.

Weaver, K., & Olson, J. K. (2006). Understanding paradigms used for nursing research.

    *Journal of Advanced Nursing, 53*(4), 459-469.

Welk, G. J., Wood, K., & Morss, G. (2003). Parental influences on physical activity in

    children: an exploration of potential mechanisms. *Pediatric Exercise Science,*

    *15*(1), 19-33.

Whitehead, S., & Biddle, S. (2008). Adolescent girls' perceptions of physical activity: A

    focus group study. *European Physical Education Review, 14*(2), 243-262.

Xiang, P., McBride, R. E., Bruene, A., & Liu, Y. (2007). Achievement goal orientation

    patterns and fifth graders' motivation in physical education running programs.

    *Pediatric Exercise Science, 19*(2), 179-191.

Yoo, J. (2009). Peer influence on adolescent boys' appearance management behaviours.

    *Adolescence, 44*(176), 1017-1031.

Yoo, S., Johnson, C. C., Rice, J., & Manuel, P. (2004). A qualitative evaluation of the

    Students of Service (SOS) Program for sexual abstinence in Louisiana. *Journal of

    School Health, 74*(8), 329-334.

Zecevic, C., Tremblay, L., Lovsin, T., & Michel, L. (2003). Parental influence on young

    children's physical activity. *International Journal of Pediatrics*.

    doi:10.1155/2010/468526

**Appendix A: Letter for Potential Participants**

April 15, 2011

Dear Parents, Teachers and Students in the Heart Healthy Kids program:

As you know, we asked children and teachers to take part in the Heart Healthy Kids (H2K) program. We would like to introduce a Dalhousie Graduate Student, Rebecca Spencer. Rebecca is doing a sub study on the peer mentoring part of H2K. H2K members either are, or have been given, a peer mentor. The purpose of this sub-study will be to gather information about the peer mentoring experience, from the perspective of students, parents, and teachers. We will use focus groups with the students and interviews with parents and teachers.

In this package you will find two "Information, Authorization and Informed Consent" forms. Please return one of the forms and keep the one labelled "Parent Copy" for yourself. This will give you details about the study and explain what is expected of you and/or your child or student. Please take the time now to read the enclosed information. After reading, if you or your child wants to take part, please read the appropriate section below.

**If you are a teacher:**
If you have a student in the H2K program and would like to take part in an interview to share your opinion of the program, please read the attached info and complete pages 5 and 8.

**If you are a parent:**
If you have a child in the H2K program and would like to take part in an interview to share your opinion of the program, review the attached information and complete pages 5 and 7. If you would like to give permission for your child to take part in a focus group, review the attached info and complete page 6. We would like if the adults who are interviewed have a child in a focus group, but one can join us without the other. Once you have given permission for your child, he or she can decide for himself or herself if he or she would like to take part.

**If you are a child (or parent/guardian of a child who wishes to participate):**
If your parent does not want to be interviewed themselves, you may still participate in the focus group. You do require your parent's permission to take part. Please read the enclosed info with your parent or guardian, and ask them to complete pages 5 and 6.

We understand that you may have questions, please don't hesitate to contact us at (902)446-3669. **Please return one copy of this package to your child/student's school by April 29, 2011.**

Sincerely,

Dr. Camille Hancock Friesen
Principal Investigator, The Heart Healthy Kids Program

**Appendix B: Information, Authorization & Informed Consent Form**

**Information, Authorization and Informed Consent Form**

**Research Title:** The experience of peer mentoring in grades 4, 5, and 6 students from the Heart Healthy Kids program

**Researcher:** Rebecca Spencer, MA HPRO (Candidate), Dalhousie University

**Supervisory Committee:**

Sara Kirk, PhD, School of Health Administration, Dalhousie University

Camille Hancock Friesen, MD, Cardiac Surgery, IWK Children's Heart Centre

Laurene Rehman, PhD, School of Health and Human Performance, Dalhousie University

**Introduction**

This is an invitation for you and/or your child or student to take part in a research study associated with the Heart Healthy Kids program. If you are a parent, your child is already enrolled in the Heart Healthy Kids program. This smaller study is being completed as part of a graduate student's thesis. It is important for you to read this information. It will help you to understand the study and what you and/or your child need to do. It will also help you understand any possible harms and benefits. You do not need to be involved. Taking part is your choice. Informed consent begins at the first point of contact of the study and continues until the end of the study. You and/or your child or student may already know about the program. This package should help you understand the details of taking part in the next phase of the study. A member of the research team will be available to answer any questions. You may decide not to take part, or your child may decide at any time to withdraw.

**Why are the researchers doing the study?**

You should already be familiar with the Heart Healthy Kids program. This research study is a small piece of that program. Rebecca Spencer is doing this research as part of her graduate thesis program. As part of the Heart Healthy Kids program, your child or student may be a peer mentor, or have a peer mentor. This research is being done to explore peer mentoring. This research will involve talking to your child or student in focus groups and may also involve an interview with you. Focus groups and interviews will allow the research team to better understand peer mentoring. Understanding peer mentoring will help the research team to know if mentoring has impacted physical activity, and how to apply it better.

**How will the researchers do the study?**

This research has two parts. The first part is focus groups with children. Focus groups will involve talking to children in small groups. Focus groups will talk about the Heart Healthy Kids program, motivation to be physically active or inactive, and peer mentoring. One focus group will be conducted at each school, with no more than 8 students. The focus group will be at the school, during the school day and will be one

hour long. After the focus group, we may contact the children at the school for a better understanding of their responses, if necessary.

There will also be interviews with parents and teachers. A total of up to 8 interviews will be done with parents or teachers. Interviews will focus on the H2K program, your child's or student's motivation to be active, and your thoughts on peer mentoring. These interviews will be one-on-one and take place at the involved school, or another agreed upon place. Interviews will be about one hour in length.

The researcher will record the focus groups and interviews using a digital audio recorder. All names and identifying information will be removed. Responses will remain confidential. The researcher will do a "qualitative thematic analysis", which means she will explore the data to find common themes and patterns. This will help the research team better understand peer mentoring.

**What will the children, parents, and teachers be asked to do?**
*Children who take part*

If you are the parent of a child who may wish to take part: Your child will be asked to take part in one focus group at his or her school, during the school day, for about one hour. In the focus group, the researcher will ask general, open ended questions to a group of 6-8 children. The questions will be about the H2K program, physical activity, and peer mentoring. Your child will be asked about the H2K program and his or her thoughts about exercise. Your child will then be asked about his or her experiences as a mentor or in having a mentor. Your child will be asked what impact he or she feels mentoring may or may not have had on physical activity or anything else. Your child will be asked to openly discuss these topics. The researcher will prompt as necessary for more information. After the focus groups, individuals who had taken part may be contacted for clarification. Your child's answers to these questions will help the researcher better understand peer mentoring. Your child may choose to not answer any question he or she wishes. Your child may leave the interview at any time without being questioned.

*Parents who take part*

If you are a parent of a child in the H2K program and wish to take part as well, you will be asked to take part in a one-hour interview. This may take place at the school of your child, or at another, agreed upon location. The interview will be one-on-one, with the researcher and yourself. You will be asked questions about your child's experience in the H2Kprogram, physical activity and peer mentoring. You will be asked open-ended questions and asked to freely discuss your thoughts. We are interested in how you feel about the peer mentoring program occurring at your child's school, and how you think it may or may not have impacted him or her. After the interview, you may be contacted for clarification as necessary. You can at any point choose to not answer any question, leave the interview, or withdraw from the study without being questioned.

*Teachers who take part*

If you are a teacher of a class in the H2K program and wish to take part as well, you will be asked to take part in a one-hour interview, once. This interview may take place at your school or at another, agreed upon location. The interview will be one-on-one, with only the researcher and yourself. You will be asked questions about your

class's participation in H2K, physical activity, and peer mentoring. You will be asked open-ended questions and asked to freely discuss your thoughts. We are interested in how you feel about peer mentoring and how you think it may or may not have impacted physical activity, or anything else. After the interview, you may be contacted for clarification as necessary. You can at any point choose to not answer any question, leave the interview, or withdraw from the study without being questioned.

**What are the burdens, harms, and potential harms?**

There is no potential for serious direct harm by taking part in this study. Children may not be comfortable discussing their experiences, especially if they have not had a positive experience. Participants need not discuss anything they wish not to. In the child focus groups, there will be other children present who will hear the responses of other speakers. Focus group children will be asked to not discuss the focus group afterward. Since the focus groups will occur during class time, there is a risk that children may miss educational material. To minimize this risk, focus groups will be scheduled with the help of teachers to ensure class is missed at the best possible time. All results will remain confidential. All names and identifying information will be removed from data immediately following interviews or focus groups. The recorded audio files will be kept on a password protected computer in the Maritime Heart Center for 5 years, after which they will be deleted. The name(s) of you and/or your child/student will not be used in any reports or publications.

**What are the possible benefits?**

Taking part in this study does not offer any significant direct benefit. Those who take part may, however, benefit from expressing their opinion about the H2K program and peer mentoring. The researcher hopes to learn about peer mentoring. The results of this study may benefit the Heart Healthy Kids program or other similar programs. The results of this study may also contribute to the existing knowledge of peer mentoring.

**What alternatives to participation do I have?**

You and your child taking part are not required; it is entirely of your own choice. You can choose to not have your child take part and this will not affect your child in any way.

**Can I or my child withdraw from the study?**

You and/or your child/student can withdraw from the study at any time. Your child can also choose to not answer any question they wish not to. Withdrawing or not responding will not affect your child in any way. If your child chooses to not answer a specific question, their data for other questions may still be used for research purposes. There is no risk involved with withdrawing from the study.

**Will the study cost me anything and, if so, how will I be reimbursed?**

The study will not cost you and/or your child/student anything other than the time and effort of taking part in the focus group or interview. There will be no money paid to you or your child for taking part.

**Are there any conflicts of interest?**
	The researcher has no conflicts of interest to state.

**How will I be informed of study results?**
	When the study is complete, a summary of the results will be put together. You may offer your mailing address at the end of this package and a copy of the summary will be mailed to you.

**How will the privacy of children, parents, and students be protected?**
	Since children will be taking part in focus groups at school, privacy of participation cannot be protected. Other students may know the child has taken part. Depending on the location of parent and teacher interviews, others may know you have taken part. All data collected will be kept completely confidential. Names and identifying information will be removed from all transcripts. Paper records will be stored in a locked cabinet in a locked office. Only researchers will have access to data. There are mandatory reporting duties under the law if data in this study was ever necessary.

**What if I have study questions or problems?**
	You or your child can ask questions about the study at any time. Please contact Becky Spencer at (902)446-3669.

**What are my Research Rights?**
	Your signature on the form below agrees that you understand the information about this research. Your signature means you understand what will be needed from you and/or your child/student. Parent signature allows their child to take part, should the child wish to do so. This does not waive your legal rights or release the researchers, sponsors, or involved associations from their legal and professional responsibilities. You and/or your child/student are free to withdraw from the study at any time with no questions or consequences.

**Future contact/future research/other use**
Would you mind being contacted for research on a similar topic in the future?

\_\_\_ Yes, this research team may contact me in the future.

\_\_\_ No, this research team may not contact me in the future.

If you chose "Yes", please provide us with your name, address and telephone numbers.

Name: _____

Address: _____

City: _____ Province: _____ Postal Code: _____

Telephone Number: (_____) _____ Alternate: (_____) _____


**Would you like to receive a summary of the study results?**

\_\_\_Yes, please send me a summary of the study results.

\_\_\_ No, please do not send me a summary of the study results.

If you chose "Yes", please provide us with your name, address and telephone numbers.

Name: _____

Address: _____

City: _____ Province: _____ Postal Code: _____

Telephone Number: (_____) _____ Alternate: (_____) _____

**Signature Page – <u>Children</u>**

Study title: The experience of peer mentoring in grades 4, 5, and 6 students from the Heart Healthy Kids program

Child's Name: _____

**Parental Authorization**
      I have read or had read to me this Information and Authorization Form. I have had the chance to ask questions and they have been answered to my approval before signing my name. I understand the nature of the study and I understand the possible risks. I understand that my child has the right to withdraw from the study at any time without affecting his or her care in any way. I have received a copy of the Information and Authorization Form for future reference. I freely agree to my child's participation in this research study.

Name of Teacher (Print): _____

Signature: _____

Date: _____

**Signature Page – <u>Parents</u>**

Study title: The experience of peer mentoring in grades 4, 5, and 6 students from the Heart Healthy Kids program

Name: _____

**Informed Consent**
      I have read or had read to me this Information and Authorization Form. I have had the chance to ask questions and they have been answered to my approval before signing my name. I understand the nature of the study and I understand the possible risks. I understand that I have the right to withdraw from the study at any time. I have received a copy of the Information and Authorization Form for future reference. I freely agree to my participation in this research study.

Name of Teacher (Print): _____

Signature: _____

Date: _____

**Signature Page – <u>Teachers</u>**

Study title: The experience of peer mentoring in grades 4, 5, and 6 students from the Heart Healthy Kids program

Name: _____

**Informed Consent**

       I have read or had read to me this Information and Authorization Form. I have had the chance to ask questions and they have been answered to my approval before signing my name. I understand the nature of the study and I understand the possible risks. I understand that I have the right to withdraw from the study at any time. I have received a copy of the Information and Authorization Form for future reference. I freely agree to my participation in this research study.

Name of Teacher (Print): _____

Signature: _____

Date: _____

**Appendix C: Information for Child Participants**

**Info for Students**

**Title of Study:** The experience of peer mentoring in grades 4, 5, and 6 students from the Heart Healthy Kids program
**Researcher:** Rebecca Spencer
**Supervisory Committee:** Sara Kirk, Camille Hancock Friesen, Laurene Rehman

**Why are we doing this study?**

You are already a part of H2K. We are doing this study because we want to know more about peer mentoring. We want to talk to you about your experiences with H2K and your physical activity. We also want to talk to you about peer mentoring.

**What will happen during this study?**

For this study, you will be asked to take part in a focus group. A focus group is when we get a group of people to talk about something specific. The researcher will lead the focus group, and the other members will be other kids from your school. The focus group will only happen once, and it will happen at your school, during the school day. The researcher will ask about H2K, what you liked, and what you did not like about it. The researcher will also ask you about your physical activity, and what makes you want to be (or not want to be) physically active. The researcher will then ask about being a peer mentor, or having a peer mentor, and how that might have affected you.  After the focus group, we might ask you some other questions another time to get more details. As part of the study, the researcher will also interview some parents and teachers.

**Are there any good or bad things about this study?**

There are no really bad things about this study. In the focus groups, the other kids will hear what you say, but will be asked to keep everything private. Your name will be removed from all study materials so no one else will ever know what you said.

We can't promise that the research will help you. You might enjoy telling us about your experience. We are trying to learn from it. We want to learn about peer mentoring. We want to use this in other schools later!

**Who will know about what I did in this study?**

Teachers and other kids may know that you participated. The other kid in the focus group will hear what you said. No one will get to see your results after that. Your results will only be seen by the researchers.

**Do I have to be in this study?**

You do not have to be in the study. No one will be mad at you if you don't want to take part. Even if you say yes now, you can change your mind. Even if you say yes, and don't want to answer a question, you don't have to. Being in this study is up to you.

**What if I have any questions?**

You can ask questions about the study any time. You can talk to your parents about the study if you don't understand. You can also ask Becky by calling (902)446-3669.

**Appendix D: Semi-structured Focus Group Guide**

Hello! My name is Becky; you might know me from H2K. Thank you for agreeing to help with this focus group! I'm really thankful for your time! Today we're going to talk about your experiences with H2K. We're especially going to talk about your experience with peer mentoring. I'm hoping to gain a better understanding of how peer mentoring has impacted you, what worked with peer mentoring, what didn't, and how or how not you think it may have impacted your physical activity or anything else.

During this focus group I'm going to ask you all a variety of questions. There are no "right" or "wrong" answers to these questions; I just want to know what you think! I want to know as much as possible about everything – so don't be afraid to talk! I'm not going to ask questions that you can just say "yes" or "no" to, and I'm not going to give you multiple choice answers to pick from - I want to hear as much as you have to say about all of the questions so feel free to talk openly, OK? We're also going to give everyone a chance to speak – if there's a question that you all want to answer, we might just go around the circle to give everyone a chance.

Also, it's completely alright if you have something negative to say about any of the things I ask you about. For every question, some of you might have something good to say, and some of you might have something bad to say, and that's okay. It's even okay if someone says something good but then you want to say something bad about the same thing. That's why nobody is sitting here with his or her own mentor today; we wanted you to be comfortable talking about anything at all. You telling me about things that need improvement will only help make H2K and other future programs better, and we really appreciate your honesty! We're going to be respectful of everyone's opinions, so if someone says something that you disagree with, that's okay, everyone can comfortably say their own thoughts here. When the focus group is over, it's important to leave everything that is said in this room. Please don't talk to anyone about what others have said.

If anyone needs a break from the questions – to go to the bathroom or anything, just let me know and we'll pause. If anyone doesn't understand a question, just tell me and I'll word it differently or explain it better! If anyone doesn't want to answer any of the questions, just say so, and we'll move on, you do not need to answer any question you do not want to. Finally, if you want to stop participating in the focus group and leave at any point in time, you can feel free to do so without being asked questions; your help is entirely voluntary.

I'm going to use a tape recorder to record the focus group so that I can listen to it again later. I need to record it so that I can remember everything that you say, but don't worry, nobody will ever know how you answered my questions, I'm going to type up everything that was said and look for themes that answer my questions, but nobody will know who gave which responses. Your names will be removed from everything.

Does anyone have any questions before we start? Is it okay if we start now?

1. Can you tell me how you were involved with H2K this year?
    Probes:
    a. Were you a mentor or a mentee on your team?

    b. Can you tell me a little bit about your team?
    c. Can you tell me about any activities or events that were part of H2K that you might have attended?
    d. Can you tell me a little bit about H2K lunches?
    e. Did you go to H2K lunches? Why or Why not?
    f. Can you tell me what you liked most about H2K?
    g. Can you tell me what you liked least about H2K?

2. Can you tell me about your physical activity?
    Probes:
    a. Can you tell me about what physical activities you might do during the school day: at lunches, on recess, before or after classes?
    b. Can you tell me about what physical activities you might do outside of school, in the evenings or on weekends?
    c. Can you tell me about organized sports or teams you are enrolled in?
    d. Can you tell me about unorganized sports?

3. Can you tell me about things that might impact how much you want to be physically active?
    Probes:
    a. What makes you want to be active:
        i. Friends, family
        ii. Availability, resources
        iii. Media
        iv. Why/how do these things make you want to be active?
    b. What makes you want to be inactive:
        i. Friends, family
        ii. Availability, resources
        iii. Media
        iv. Why/how do these things make you want to be sedentary?

4. Can you tell me about your experience with peer mentoring?
    Probes:
    a. If you had a mentor, what did your peer mentor usually do?
    b. If you were a mentor, what did you do to mentor other students?
    c. When did you usually interact with your peer mentor or mentees?
    d. Can you compare your physical activity before peer mentoring to now that you have a peer mentor, or are a peer mentor? Would you say you're more active now than before?
    e. If you had a mentor, what did your peer mentor do that was helpful? That you liked?

f.  If you were a mentor, what were your favourite parts? What do you think you did that was most helpful to your team?
g.  If you had a mentor, what did your peer mentor do that wasn't helpful or that you didn't like?
h.  If you were a mentor, what was your least favourite part of being a peer mentor? Were there things you disliked about being a mentor? What were some things you did that

    may not have been helpful to your team, or what would you do differently if you could do it over again?
i.  Can you tell me how peer mentoring might have impacted the way that you or other kids from your teams and classes eat?
j.  Can you describe a typical H2K Lunch with your mentor for me? How is it the same or different than a lunch without H2K activities?
k.  Can you tell me how peer mentoring might have impacted your friends or social networks? Have you made friends or lost friends because of H2K, H2K lunches, or peer mentoring? What about other kids on your team or in your class?
l.  Can you tell me about how peer mentoring might have influenced bullying at your school, in your class, at h2K lunches, or on your teams?
m.  Is there anything else that peer mentoring might have influenced?

5.  Is there anything else anyone has to say about peer mentoring or about H2K?

**Appendix E: Semi-structured Interview Guide**

Hello! My name is Becky Spencer. I am the Research Assistant at the Maritime Heart Center, the organization that runs the Heart Healthy Kids, or H2K, program that your child's school is a part of. I am also a graduate student at Dalhousie University, working on my Master of Arts in Health Promotion. Thank you for agreeing to help with my thesis study by participating in this interview, I really appreciate your time! Today we're going to talk about your and your child's/student's experiences with H2K. We're specifically going to focus on peer mentoring because I'm hoping to gain a better understanding of how peer mentoring has impacted your child/student.

During this interview I'm going to ask you a variety of questions. There are no "right" or "wrong" answers to these questions, I'm not trying to get any specific response, I just want to know what you think, in as much detail as you're comfortable providing! The questions I ask won't be closed ended, that is, they will not simply require a "yes" or "no" answer. The questions I will ask will be open-ended, that is, you are expected to speak freely about how you feel about the question, and any details you are able to provide would be very beneficial.

It's also completely okay and understandable if you have something negative to say about any of the things I ask you. If your child/student has had a negative experience associated with any of the questions I ask you, I encourage you to speak freely about that. Any feedback will only help to benefit the program in the future. Additionally, if there are any supremely positive experiences had by your child/student that you are aware of, of course feel free to speak to those as well.

If you need a moment to pause and consider any of the questions, please feel free to do so, we are not in any rush. The interview will likely take about 45 minutes, so if you need a break to be excused momentarily at any point in the interview, please feel free to say so and we'll pause. If there are any questions that you do not understand fully, or wish to have clarified, simply let me know, and I'll try to rephrase it. Finally, if there are any questions you feel uncomfortable answering, or if at any point you wish to stop taking part in this interview, please let me know. You can leave at any point without being questioned; your help today is entirely voluntary.

I'm going to use a tape recorder to record the interview so that I can listen to it again later. I need to record it so that I can remember everything that was said, but don't worry, nobody will ever know how you specifically answered my questions. I'm going to type up everything that was said by you, the other parent and teacher interviews, and from focus groups with children, and look for themes to answer my research questions, but nobody will ever know who said what. All identifying information, that is, names, places, or anything else that may cause you to be identified will be removed from everything.

Do you have any questions before we get started? Is it okay if we start now?

1. Can you tell me about your child's/student's involvement in H2K at school this year?
    Probes:
    a. Was he or she a mentor or a mentee on his or her team?

b. Can you tell me a little bit about how your child would describe his or her team?
c. Can you tell me a little bit about how you would describe your child's team?

d. Can you tell me about any activities or events that you heard of that were part of H2K that your child/student might have attended?
e. What can you tell me about the H2K lunches your child/student may have taken part in?
f. Can you tell me if your child/student went to H2K lunches? Do you know how frequently? Why did/didn't he or she attend these lunches?
g. Can you tell me what you liked most about H2K?
h. Can you tell me what you liked least about H2K?
i. Can you tell me what your child/student liked most about H2K?
j. Can you tell me what your child/student like least about H2K?

2. Can you tell me about your physical activity?
   Probes:
   a. Can you tell me about your child's/student's physical activity?
   b. Why do you think your child/student thinks physical activity is important?
   c. Can you tell me what activity your child/student might participate in outside of school, on the evenings or weekends?
   d. Can you tell me about the physical activity you and your child or student might engage in together, if you do?
   e. Can you tell me about the organized sports team(s) your child/student may be enrolled in?
   f. Who are you usually active with? Friends? Family? Alone?
   g. Who do you think your child is usually active with? Friends? Classmates? Teammates? Family? Alone?

3. Can you tell me about the things that may impact how much YOU want to be physically active?
   Probes:
   a. What makes you want to be active?
      i. Friends, family
      ii. Resources, environment, availability
      iii. Media
      iv. Why/how do these things make you want to be more active?
   b. What makes you want to be sedentary?
      a. Friends, family
      i. Resources, environment, availability
      ii. Media
      iii. Why/how do these things make you want to be more active?
   c. Can you tell me about the things that may impact how much your child/student may want to be physically active?

4. Can you tell me a little bit about your child's/student's experience with peer mentoring?
    Probes:
    1. Was he or she a peer mentor, or a mentee?


    a. If he or she was a mentee, can you tell me about what he or she said his or her mentor usually did?
    b. If he or she was a mentor, can you tell me about what he or she did to mentor the other students?
    c. If he or she was a mentee, when did he or she most frequently interact with his or her mentor? If he or she was a mentor, when did he or she most frequently interact with his or her team?
    d. Can you tell me what you think the benefits of peer mentoring were/are for your child/student?
    e. Can you tell me some things that your child/student would say were good things about having a peer mentor or being a peer mentor?
    f. If your child/student was a mentee, can you tell me about what he or she thought his or her mentor did that wasn't helpful, or that he or she didn't like? If your child/student was a mentor, can you tell me about what he or she didn't like about having that role?
    g. Can you tell me about how peer mentoring may have impacted the physical activity or your child/student or other students on his or her team?
    h. Can you tell me how peer mentoring may have impacted the way your child/student or others behaved?
    i. Can you tell me how peer mentoring may have impacted the social networks, friends, and socialization of your child/student?
    j. Can you tell me how peer mentoring may have impacted bullying or violence at your child's/student's school?
    k. Can you tell me about some strengths and weaknesses you would associate with the peer mentoring program?

5. Is there anything else you would like to talk about in regard to peer mentoring or the H2K program?