THE INFLUENCE OF PHYSICAL EDUCATION TEACHERS' BELIEFS ON SECONDARY SCHOOL-BASED PHYSICAL ACTIVITY OPPORTUNITIES: A CASE STUDY OF ONE ONTARIO PUBLIC SCHOOL

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ABSTRACT

The purpose of this inquiry was to investigate the relationship between the beliefs of physical education teachers from one public secondary school in Ontario concerning physical activity and school-based physical activity opportunities. More concisely, did physical education teachers' beliefs influence school-based physical activity opportunities and were there other social factors that influenced their engagement in these opportunities.

The method of inquiry was grounded in the academic literature that examined the characteristics of effective school cultures, and how culture was related to school-based physical activity opportunities. From this review, it showed that a post-positivism framework within a case study design and focused interview method would best fulfill study objectives.

To access participants' beliefs, a previously validated and reliable survey helped physical education teachers and an administrator reflect on their beliefs around the relationship between school policies and practices and school-based physical activity opportunities. In addition, study participants designed mind maps to illustrate their beliefs about the factors that encouraged and/or inhibited their involvement in school-based physical activity opportunities. The data was synthesized according to Edgar Schein's organizational culture model which gave credence to exploring the least tangible component of school culture, member beliefs.

Three central themes emerged: (i) the existing physical activity culture, (ii) the absence of a common definition of physical activity, and (iii) philosophical differences: strategies for promotion of school-based physical activity opportunities. The aforesaid

factors were found to have the most influence on school-based physical activity opportunities at this secondary school.

Data analysis provided an understanding of the relationship between secondary school physical education teacher beliefs and active school cultures. Results suggested that when secondary school physical education teachers do not believe in school physical activity values and goals, school-based physical activity opportunities are not maximized, student physical activity interests are marginalized and the importance of physical education, intramurals and interschool athletics is not transferred to non-physical education staff and the student body.

This inquiry concluded that the development, maintenance and/or sustainability of a physically active secondary school culture is largely dependent on the beliefs of its physical activity leaders.

KEYWORDS: physical education teachers, school culture, physical activity opportunities, teachers, administration, organizational culture, social factors, Edgar Schein

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CHAPTER ONE

INTRODUCTION

There are traceable moments and role models in a person's life that shape their beliefs and behavioural patterns. One's beliefs may originate from a strict religious upbringing, being reared in a single parent home or attending private schools. Regardless, people are usually a product of their environment and behave relative to their experiences within those environments.

My journey towards a career in Physical Education (PE) was sparked and nurtured through my personal experiences in public school. As I progressed through the Ontario school system, my beliefs around the importance of PE and physical activity were challenged and reaffirmed with each school-based physical activity opportunity I engaged in. Particularly, I recall one of my grade nine PE classroom experiences as the catalyst to my career in education. I distinctly remember my PE teacher setting up the gymnastics equipment on a Monday and informing the class of a two-minute, choreographed routine to be ready for that Friday. He said he did not care about gymnastics but it was part of the curriculum so *we had to do it*. Many of my classmates had never seen the equipment before, we were not shown how to use it safely and correctly, and the teacher disappeared into his office for the majority of the PE periods that week. So, the students driven by academic success, and those physically capable worked on their routines. Conversely, other students who were taking PE because it was mandatory did not develop a routine understanding they would receive a zero and, in turn, spent the week disrupting the rest of the class. As a student, I walked away from that unit with the same belief as my PE teacher; gymnastics was not important but

participation was required in order to achieve academic success in PE. In grade 10, I remember talking to some of the students from that class who decided not to take PE beyond grade nine. They said it was because of their fear of gymnastics and having to do it again in grade 10. To this day, I make efforts to educate myself on the benefits of gymnastics and recognize it promotes overall physical fitness to children and adolescents. However, my belief around the importance of gymnastics within the secondary PE curriculum remains weak because of my prior experience as a PE student, and my lack of desire to improve my skill set in this activity.

That same year, I met my life partner at this secondary school and we discussed her experience in grade nine girls' PE. She recalled the very day in which she told her PE teacher that she was unable to participate in two PE classes because of a medically-confirmed health ailment. The PE teacher disregarded her condition and forced her to participate. In collaboration with a year full of military-style teaching methods and unrealistic student expectations, this confrontation solidified my partner's decision to avoid PE classes for the duration of her high school career. She said it was not the activity that was daunting but the possibility of having that same teacher again was a risk not worth taking. Unaware of her influence at the time, the PE teacher's inability to accommodate the temporary health issue of a non-athletic, mildly active student sealed a lifetime of physical inactivity. Currently, my partner does not practice an active lifestyle and associates her negative feelings towards physical exertion to the *year of hell* she experienced in grade nine PE.

From another perspective, my experience as a father has also reinforced the significance of my research agenda. For example, I regularly ask my oldest daughter

(age nine – grade three) about her PE class and leisure time activities. She informs me that she runs around the school three times daily during nutrition breaks. She is impressed that her teacher runs with the class and sees her teacher running after school every day. Before this year, my daughter showed no interest in running; however, she now asks to run in local running competitions. Conversely, my daughter expresses frustration towards PE class, "We have been doing basketball forever and we sometimes miss PE to catch up on other work." Also, this same teacher never gets changed for PE and just *tells us what to do* in the gym. My daughter is confused by this approach as her teacher does not let any students without gym clothes and running shoes participate in PE. As shown in these examples, as early as grade three, students are modeling the physical activity behaviours of their teachers and forming a belief structure around PE. Considering these life experiences, I am intrigued to learn more about the relationship between teacher beliefs around physical activity and a student's decision to be physically active at school.

My personal expectation of daily physical activity for secondary students (14-19 years) is 60 minutes of moderate to vigorous physical activity. I believe this is attainable through a variety of school-based opportunities such as: (i) taking a PE class each semester (five, 60 minute classes per week); engaging in active transportation to and from school; participating in a sport or activity based intramural event (three, 30 minute sessions per week); becoming a team member on an interschool team (four, 60 minute practice or game sessions per week); taking part in school-wide fundraisers for charity (i.e. Terry Fox run/walk, Jump Rope for Heart, Walk or Bike to School week); take

membership in school running or yoga clubs; or simply be active during school leisure times (before and during school hours).

In order to better help adolescents be active and make healthy life choices, I became a secondary PE teacher. Over a period of 12 years, I have taught PE in two public secondary schools in Ontario, Canada and in Trinidad and Tobago in the West Indies. During this time, I have designed and implemented two senior level PE leadership and coaching courses and have coached several interschool sports' teams. As well, I have been the head of a secondary PE department and an active member on various committees that annually review PE curriculum standards at the provincial and local school levels. Furthermore, I have delivered several professional development workshops for secondary PE teachers on topics such as assessment and evaluation in PE, anxious PE environments and how to teach games for understanding. At the post-secondary level, I have taught PE teaching methods courses to elementary teachers and acted as a teacher mentor for secondary PE teacher candidates from Teacher Education programs across Canada, the United States and Europe for seven years. My teaching background has shown me that secondary students, in general, are more active if I am active with them; if I organize opportunities for physical activity outside of PE class; if I coach an interschool team; and, if I model healthy lifestyle choices. As demonstrated, teachers can have a significant influence on a student's daily physical activity levels potentially because of the time they spend together during school hours.

Across the spectrum of new teacher candidates from experienced elementary teachers (kindergarten – grade eight in Ontario) to university professors, the teaching formula: personal beliefs + school values = behaviour remains true. To elaborate, when

teachers value physical activity and believe it is important to the school culture they are working in, they will attempt to maximize opportunities for physical activity. For example, I work with PE and non-PE colleagues who strive to maximize physical activity opportunities for students despite the school's outdated facilities and lack of modern, physical activity equipment. On the other hand, I have taught in a modern school that contained the latest physical fitness equipment and extensive outdoor green areas and gymnasiums; however, these spaces were dormant during leisure times. Generally, staff in the modern school placed less value on physical activity and more on student achievement on standardized tests.

Gaps in the Literature

To widen my working knowledge of the relationship between teacher beliefs and school-based physical activity opportunities, I analyzed the literature in this area to determine if other researchers found evidence to support or contradict my teaching experiences. As a result of my review, I found several gaps in the research that aided my inquiry into this relationship.

One significant absence in the literature is the lack of knowledge concerning the factors that limit the success of school-based physical activity interventions (Bauer, Yang, & Austin, 2004; Haug, Torsheim, & Samdal, 2008; Naylor, Macdonald, Zebedee, Reed, & McKay, 2006; Sallis et al., 2003). The authors of these studies determined that school-wide acceptance of physical activity interventions was a major factor in the success of these interventions. More recently, Barnett et al. (2009) found that in physically active school cultures, promoting physical activity through school policies was

not sufficient; school leaders (i.e. administrators and teachers) believed it was more important to educate the school community (i.e. students, parents) about the value of physical activity. However, efficacious school-based strategies that promote the value of physical activity to school members are sparse in the present literature.

In the last decade, most studies investigating the relationship between student physical activity levels and/or physical activity opportunities and school environments have been conducted in middle schools (grades six to eight). Specifically, four studies were carried out in elementary schools (grades kindergarten-five) (Barnett et al., 2009; Dyment & Bell, 2007; Lanningham-Foster et al., 2008; Williden et al., 2006) and four studies recruited secondary school members (grades 9-12) (Durant et al., 2009; Fein, Plotnikoff, Wild, & Spence, 2004; Groft, Hagen, Miller, Cooper, & Brown, 2005; Pate et al., 2005). Thus, the need for additional research in elementary and secondary school settings is warranted.

Further investigation into the barriers and facilitators to boys' and girls' participation in school-based physical activity opportunities is also necessary across school contexts. Some studies show that girls are more active in coeducational PE classes that include individualized fitness activities like aerobics and non-competitive team sports (Bauer et al., 2004; Boyle, Jones, & Walters, 2008; McKenzie et al., 2006; McKenzie, Prochaska, Sallis, & LaMaster, 2004; Monge-Rojas, Gartia-Arce, Sanchez-Lopez, & Colon-Ramos, 2009). Additional findings indicated that middle school girls who participated in school-based physical activities (i.e. PE class, interschool sports, intramural activities) had positive perceptions of their school relative to physical activity (Barr-Anderson et al., 2007). In turn, if teachers supervised and organized leisure time

physical activities, girls were equally as active as boys throughout the school day (McKenzie, Marshall, Sallis, & Conway, 2000). However, Sallis et al. (2003) found that middle school girls' physical activity levels were not affected by changes made to the school's environment to enhance physical activity opportunities. Moreover, girls expressed little interest in increasing their physical activity levels during school hours (Haug, Torsheim, & Samdal, 2008). With this in mind, most of the intervention studies occurred in elementary and middle schools where the majority of the staff were female; alternatively, male teacher supervision may have produced alternative findings.

Boys, on the other hand, attained greater physical activity levels than girls regardless of the alterations made to the school environment to increase opportunities for physical activity. Overall, middle school boys were most active during PE classes that included competitive team sports (Hannon & Ratliffe, 2005) and in outdoor play areas where physical activity equipment was provided (Durant et al., 2009; Sallis et al., 2001). However, recent literature suggests that boys may be less active at the secondary school level because of the practices associated with PE classes and their changing bodies. Atkinson and Kehler (2010) believe there are three practices that decrease boys' participation in secondary PE classes: (i) the class is based around power and performance in team-based sports, (ii) the PE teacher is also an interschool coach, and (iii) assessment and evaluation is primarily performance-based. As well, the traditional, pedagogical approach of selecting the popular, muscular boys as team captains who pick their athletic friends first, leaves the least skilled and often less popular boys to last. Therefore, after mandatory grade nine PE, the lesser skilled boys typically avoid senior level PE classes because of their negative first impressions of PE. Another reason found

to influence boys' involvement in secondary PE classes is the unregulated, adult-free zone of the locker room (Atkinson & Kehler, 2010). For some boys, it is the locker room and not the activities or the environment in PE class that deters them from participating. For example:

> Boys view locker rooms as spaces where they will be ritually embarrassed or humiliated with little hope for protection. It is a social fishbowl with little opportunity to escape surveillance and be reminded of how one's male body does not make the grade. It is a forced space of physical interaction with dominant males who encourage physical rituals, teasing, verbal and physical abuse, and promotes critical judgment of each others bodies (Atkinson & Kehler, 2010, p. 78-81).

Thus, there is a call for additional research that investigates the barriers to boys' participation in secondary PE and how these barriers impact boys' decisions to get involved in other school-based physical activity opportunities (i.e. interschool sports, intramurals, open gym sessions).

Another gap in the literature surrounds the relationship between teacher and administrator values around school-based physical activity and physical activity opportunities. To date, most studies investigating this relationship have largely focused on the built environment (Cohen, Scott, Zhen Wang, McKenzie, & Porter, 2008; Haug, Torsheim, & Samdal, 2008) rather than a broader conceptualization that includes aspects of school culture (i.e. member beliefs). Recently, Leatherdale et al. (2010) confirmed the need for studies that reach beyond a school's physical environment to understand how the 'whole school' influenced student physical activity levels. Research is important in this area because student physical activity levels are associated with teacher and principal values, attitudes, and behaviors surrounding physical activity (Barnett, O'Loughlin, Gauvin, Paradis, & Hanley, 2006; Bauer, Patel, Prokop, & Austin, 2006; Bauer et al.,

2004; Dyment & Bell, 2007; Dyment & Bell, 2007; Groft et al., 2005; MacQuarrie, Murnaghan, & MacLellan, 2008). Therefore, if teachers model an interest and positive attitude towards physical activity, the student population may follow. However, more research is required to justify these initial findings, particularly at the secondary level.

In line with the handful of studies that have examined school-based physical activity opportunities in relation to teacher behaviours and beliefs, there is evidence of a strong relationship. For example, some studies indicated that when teachers were encouraged to facilitate physical activity opportunities during leisure times at elementary schools, daily physical activity levels of students were positively and significantly influenced (Allison & Adlaf, 2000; Loucaides, Jago, & Charalambous, 2009; Mahar et al., 2006; Stewart, Dennison, Kohl, & Doyle, 2004; Verstraete, Cardon, De Clercq, & DeBourdeaudhuij, 2006). Furthermore, middle school students believed they were more active if a teacher was present and supervising physical activity spaces on school grounds (Haug, Torsheim, Sallis, & Samdal, 2008; Sallis et al., 2001). Fewer studies have explored this relationship at the secondary school level but one study found that students who identified their PE teachers and coaches as their role models were more active throughout the school day (Thompson, Rehman, & Humbert, 2005, p. 432).

Compared to student benefits associated with teacher involvement in school-based physical activity, school leaders (i.e. teachers and administrators) recognize the correlation between their beliefs and physical activity opportunities at school. For example, one middle school teacher stated, “The whole school atmosphere, I think it really does promote kids to be involved in physical activity; for example, we usually do the Terry Fox run with the kids” (MacQuarrie et al., 2008, p. 267). Moreover, one

elementary school principal affirmed, “By providing crossing guards and walk to school days with teachers and other adult volunteers, children are walking to and from school more” (Eyler et al., 2008, p. 968). Other studies have found that in schools where active transportation was promoted, students were generally more active (Booth, et al., 2007; Cooper, Andersen, Wedderkopp, Page, & Froberg, 2005). It has been argued that by incorporating active transportation into a child or adolescent’s occupation as a student, walking or riding a bicycle to and from school may become part of their daily routine and, in turn, sustain adequate physical activity levels (Duncan, Duncan, & Schofield, 2008).

Cumulatively, the research indicated that social factors, together with the school’s physical environment, influenced student physical activity levels and school-based physical activity opportunities. Therefore, using a multi-level approach to investigate the influence school culture has on physical activity opportunities is warranted. Earlier school culture studies have shown that a school’s cultural system changes individuals more often than the individuals change the system (Fullan, 1993, 2001, 2005a). Then again, when schools produce enough individuals with collaborative characteristics, they will change the cultural system (Fullan, 2000).

Rationale and Goal

This research is an extension of an unpublished pilot study I undertook in early 2010. I used an online survey to gather quantitative data from secondary school teachers (n = 20) around their beliefs concerning access to and opportunities for physical activity in their school. Findings determined that in schools where teachers perceived their

school to be maximizing physical activity opportunities, there were many curricular and extracurricular physical activity options available to students. As well, teachers in these same schools felt that staff led by example in their own physical activity pursuits or through leadership on sport teams or clubs. Conversely, in schools where teachers perceived they could be doing more to promote school-based physical activity, there were very few opportunities for student physical activity. Interestingly, the low physical activity opportunity schools had similar physical environments and access to community-based recreational options as did the high physical activity opportunity schools. Nonetheless, absent from my pilot study was rich, thick descriptive participant feedback. Based on this earlier evidence, and on the relative dearth of research in this area, it seems prudent to access the deepest layers of school culture (i.e. member beliefs) to understand the multiple layers of influence on physical activity opportunities.

According to Geertz (1973), culture is the dynamic creation of beliefs and ways of acting among a group of people; people do not passively react to a cultural system, they actively construct their lives within it. In essence, culture is a construct of people's interpretation of their organizational experience. Thus, the purpose of this study is to conduct a detailed examination of the beliefs of physical activity leaders within one secondary school to fully investigate how access, and opportunities for school-based physical activity across Schein's (1985) three levels of school culture are affected by the beliefs of these leaders.

On the whole, results from this study will enrich the quantitative data I previously gathered and augment the breadth of literature in this area. It will also assist secondary

school leaders in their understanding of the connection between teacher beliefs and school-based physical activity opportunities.

Research Questions

Grounded in my experiences as a physical educator and researcher, the following four questions guided my study:

1. What are the beliefs of secondary teachers and administrators concerning physical activity within their school?
2. What are the beliefs of secondary teachers and administrators concerning access to, and opportunities for physical activity within their school?
3. What is the relationship between secondary school teacher and administrator beliefs about school-based physical activity and the physical activity opportunities available to students?
4. What are the factors that facilitate and/or inhibit teacher and administrator participation in school-based physical activity opportunities within secondary schools?

Method of Inquiry

To answer my research questions, the study focused on seven PE teachers and one vice-principal from an urban secondary school in southwestern Ontario. I directed my attention at the school's physical activity leaders: PE teachers and administration (i.e. principal, vice-principals). As the sole researcher, I interviewed teachers/administrators from a single secondary school due to the complexities associated with examining multiple teachers/administrators in various schools across the province.

My analysis focused on the school culture literature which highlighted the various factors that influenced student physical activity levels and the importance of physical activity towards one's psychosocial health, physical health and academic success. The literature review extended into the historical interpretations of organizational culture, the characteristics of effective business and school cultures and the association among school culture and school-based physical activity opportunities. The theoretical framework deemed most appropriate for use in this thesis was Schein's (1985) theory of organizational culture. He claimed that an organization's culture consisted of three distinct levels: (i) artifacts (i.e. tangible elements of a culture), (ii) policies and practices that support an organization's strategies, goals, philosophies and, (iii) member beliefs that provide structure for the organization's values and behaviours. Schein's theory was selected because of its holistic approach to studying culture; it offered a framework to access the deepest levels of school culture (i.e. member beliefs) relative to physical activity opportunities.

Furthermore, a post-positivist structure helped satisfy my study goals. This structure generated a rich understanding of the meanings the participants placed on their experiences at this school (Easterby-Smith, Thorpe, & Lowe, 1991). In accordance with the post-positivist approach, the case study design with focused interviews best suited my interpretative study (Merriam, 1988). In particular, participants were asked nine questions from a previously validated and reliable survey (Rickwood, Temple, & Meldrum, 2011) to explore their beliefs around the relationship between school policies and practices and school-based physical activity opportunities. In addition to their verbal

responses, participants were asked to create a belief mind map that visually represented the factors that inhibited and facilitated physical activity opportunities at their school.

Thesis Organization

This thesis is organized into five chapters. Chapter One situates my life experience around the study's goals, provides a summary of the gaps in the current literature, the rationale and goal for the study and the four research questions that guided my inquiry. Chapter Two reviews the benefits to children and adolescents associated with daily physical activity, the relationship between school culture and school-based physical activity opportunities, the meaning of school culture and studies related to effective cultures and various theoretical frameworks applicable to my research. Chapter Three outlines my primary method of inquiry along with the characteristics of the participants and the secondary school culture chosen for the study. In Chapter Four, central themes are identified and discussed according to the participants' feedback. Three major themes evolved from data analysis: (i) the existing physical activity culture, (ii) the meaning of physical activity and, (iii) philosophical differences: strategies for promoting physical activity. Chapter Five revisits my research questions and presents a reflective analysis of the knowledge gained from this study; what I learned and how it supported or contradicted other study findings in this research genre. I then discuss the limitations to data collection and outline areas for future study.

CHAPTER TWO

LITERATURE REVIEW

Many children and adolescents fall short of public health guidelines recommending at least 60 minutes of moderate-to-vigorous daily physical activity (Active Healthy Kids Canada, 2010; Janssen et al., 2005). A key strategy to counteract physical inactivity among this population has been to focus on the school context because it is where children spend a majority of their time (Fox, Cooper, & McKenna, 2004; Pate et al., 2005) and because this approach reaches the vast majority of children and youth, including high risk groups (Dobbins, DeCorby, Robeson, Husson, & Tirillis, 2009). Evidence confirms that school environments may lead to positive academic and behavioural outcomes for their members (Deal & Kennedy, 1983; DeWit, McKee, Fjeld, & Karioja, 2003; DeWit et al., 2000). Thus, it is plausible that school settings may also influence student physical activity levels. This literature review brings together the studies that examine both physical activity of children and adolescents and aspects of school culture.

Typically, schools present opportunities for physical activity through PE classes; access to playing fields, gymnasiums, and playgrounds during leisure times; connections with community recreation facilities and programs; intramural activities; and interschool sports (Belanger et al., 2009; Cooper, Page, Foster, & Qahwaji, 2003; Dale, Corbin, & Dale, 2000; Gavarry et al., 1998; Mallam, Metcalf, Kirkby, Voss, & Wilkin, 2003). School-based physical activity opportunities have shown to positively influence the physical activity behavioural patterns of non-active, children and adolescents (Barnett et al., 2006; Barnett et al., 2009). For example, schools that paint playground equipment

(Cradock, Melly, Allen, Morris, & Gortmaker, 2007; Ridgers & Stratton, 2005) and provide sports equipment to accompany organized physical activities during leisure times (Connolly & McKenzie, 1995; Haug, Torsheim, Sallis et al., 2008; Nichol, Pickett, & Janssen, 2009) are strategies significantly associated with daily increases in student physical activity levels. Also, students (ages 10-16) in schools with daily leisure periods (before school, lunch and recess periods) are more active during these times than any other time throughout the school day (Cooper et al., 2003; Gavarry et al., 1998). Some studies indicated that elementary students were moderately to vigorously active up to 50% of leisure periods (Kraft, 1989; McKenzie et al., 1997; Zask, van Beurden, Barnett, Brooks, & Dietrich, 2001). Surprisingly, this energy output was greater than that achieved in most PE classes (Coe, Pivarnik, Womack, Reeves, & Malina, 2006; Scruggs, Beveridge, & Watson, 2003). In turn, the primarily outdoor setting of leisure periods was also significantly associated with increased students' daily physical activity levels (Baranowski, Thompson, DuRant, Baranowski, & Puhl, 1993; Klesges, Eck, Hanson, Haddock, & Kleages, 1990).

Extracurricular opportunities also influence a student's decision to be active at school. For instance, elementary students who participated in extracurricular physical activity programs were more active at school and continued this behaviour into secondary school (Belanger et al., 2009). Moreover, leisure time physical activity opportunities that were teacher organized and supervised were positively linked to daily student physical activity levels (Dowda, Ainsworth, Addy, Saunders, & Riner, 2003; Ernst & Pangrazi, 1999).

Beyond school boundaries, school staff and students perceived that relationships with community recreational resources (i.e. local universities, sports clubs, parents) granted to them through school membership benefitted the entire school culture and increased student and teacher daily physical activity levels (Cale, 2000; Lanningham-Foster et al., 2008; Naylor et al., 2006). Particularly in secondary schools, school-community links increased students' enthusiasm and motivation around physical activity and encouraged student participation in physical activity outside of school hours (Cale, 2000). As an aside, some researchers surveyed elementary and secondary students to determine the influence a school's values around physical activity have on student physical activity levels (Barr-Anderson et al., 2007; Bauer et al., 2006; Fein et al., 2004). Collectively, findings indicated that students in both school contexts were more active at school if they perceived a positive school environment for physical activity.

However, not all schools are able to offer a diverse array of physical activity options. For example, school-based physical activity opportunities are restricted in some schools because of budgetary constraints, school policies that reduce the time dedicated to PE (Datar & Sturm, 2004) and limited physical activity equipment and time associated with leisure times (i.e. recess and lunch periods) (Koplan, Liverman, & Kraak, 2005; Rosenfeld, 2004; Trudeau & Shephard, 2005). Thus, when fewer options for physical activity are available for students at school (Bocarro, Kanters, Casper, & Forrester, 2008; Rentner, Scott, & Kober, 2006), the result is an overall decrease in daily physical activity (Koplan et al., 2005; Trudeau & Shephard, 2005).

The Importance of Physical Activity

Student participation in school-based physical activity is important for health, psychosocial, and academic reasons. From a physical health perspective, a recent literature review that focused on studies examining the relationship between physical activity and health found that the more active school-aged children and youth were, the greater the associated health benefits (Janssen & LeBlanc, 2010). For example, regular participation in moderate-to-vigorous physical activity was associated with enhanced bone health in later life, a reduced likelihood of developing Type 2 diabetes and hypertension and increased muscular strength and flexibility (Ekelund et al., 2009; Janssen & LeBlanc, 2010; Janssen, 2008; Strong et al., 2005). As well, engaging in moderate to vigorous physical activity has been correlated with reduced epinephrine levels, lower resting heart rates, lower blood pressure, lower cholesterol levels and decreased cardiovascular response to stressful situations (Holmes, Eisenmann, Ekkekakis, & Gentile, 2008; Nabkasorn et al., 2006).

Psychosocial benefits for children and adolescents who regularly engage in physical activity include improved mental health; more positive feelings towards school and school staff; improved social skills; and increased cooperation and collaboration with their peers (Barr-Anderson et al., 2007; Broh, 2002; Dyment & Bell, 2007; Fletcher, Nickerson, & Wright, 2003; Gilman, Meyers, & Perez, 2004). Moreover, children and adolescents who are physically active on a daily basis report fewer incidences of anxiety and depressive states; express higher self-esteem; enhanced self-efficacy; and demonstrate strong intra and inter-personal skills (Allison & Adlaf, 2000; Biddle, Sallis, & Cavill, 1998; Bonhauser et al., 2005; Datar & Sturm, 2006; Hausenblas & Symons-

Downs, 2001; Kantomaa, Tammelin, Ebeling, & Tannila, 2008; Mustillo et al., 2003; Tremblay, Inman, & Willms, 2000; Wang & Veugelers, 2008; Zoeller, 2007). Involvement in physical activity also helps students feel part of their school - connectedness is associated with mental and physical health and increased engagement with the school environment (Gilman et al., 2004; Juvonen, 2006; Resnick et al., 1997). School connectedness is defined as one's sense of belonging to a school, school involvement, or school attachment (Blum, 2005; Libbey, 2004). Essentially, it is a psychological need that is satisfied through positive relations with teachers, peers, and engagement in school activities (Osterman, 2000; Thompson, Iachan, Overpeck, Ross, & Gross, 2006). Students who are positively connected to their school have high self-esteem, participate in extracurricular programs, and have a better understanding of how they fit into their school's social fabric (Bonnny, Britto, Klostermann, Hornung, & Slap, 2000; Gilman et al., 2004; McHale et al., 2005; McNeely, Nonnemaker, & Blum, 2002).

Academically, children who are active during the school day are more eager to learn; have better information retention; longer attention spans; and exhibit positive classroom behavior (Field, Diego, & Sanders, 2001; Mahar et al., 2006; Sibley & Etnier, 2003; Strong et al., 2005). Active students also achieve higher grade point averages (Ahamed et al., 2006) than their non-active peers and score significantly higher on tests related to language arts and reading (Castelli, Hillman, Buck, & Erwin, 2007; Datar & Sturm, 2006; Lidner, 2002; Stevens, To, Stevenson, & Lochbaum, 2008; Tremarche, Robinson, & Graham, 2007).

The preceding paragraphs demonstrate that participation in school-based physical activity significantly influences a student's overall health and academic success. Yet, not

all schools offer multiple physical activity opportunities while some schools find ways to maximize physical activity opportunities despite external influences. In these schools, it may be that physical activity holds greater value in the culture.

Limitations Related to Studies on Schools and Physical Activity

In order to interpret the findings of studies that examined the relationship between school settings and physical activity and/or physical activity opportunities, it was important to understand how physical activity and the school context was measured. For example, in three quantitative studies, physical activity was measured by participant recall (three to seven days) (Barnett et al., 2009; Fein et al., 2004; Pate et al., 2005); two studies used direct researcher observation of student physical activity during leisure times (Sallis et al., 2001; Sallis et al., 2003); and two other studies measured physical activity by way of pedometer step counts over a 12 week period (Cohen et al., 2008; Lanningham-Foster et al., 2008). Outside the inconsistency of assessing physical activity, there were various meanings applied to physical activity. For instance, physical activity was defined as an individual's predominant physical activity behaviour (Pate et al., 2005); categorized as walking or very active (Sallis et al., 2003); bouts of 15 minutes of physical activity (Barnett et al., 2009); the frequency and duration of exercise bouts (Fein et al., 2004); accelerometer counts (meters per seconds squared) (Lanningham-Foster et al., 2008); and as daily, vigorous physical activity (Haug, Torsheim, & Samdal, 2008).

Furthermore, measurement of the school setting also differed across quantitative studies. For example, some school factors found to be linked to school-based physical

activity were days of PE/week (Durant et al., 2009); opportunities for physical activity at school (Barnett et al., 2009; Pate et al., 2005); number and quality of school facilities and sport courts/fields (Cohen et al., 2008; Haug, Torsheim, & Samdal, 2008); and physical school size and space (Sallis et al., 2001).

Additional limitations were evident in some of the qualitative studies reviewed. In three studies, students and teachers were interviewed during school hours, eliminating perspectives of other potential participants who were unable to attend due to scheduling constraints (Bauer et al., 2006; Bauer et al., 2004; MacQuarrie et al., 2008). Consistent with focus group limitations was participant familiarity. Specifically, in focus groups where teachers or students were interviewed together, the environment may have restricted some participants' ability to be candid with their responses. In turn, important variables could have been overlooked or understated (MacQuarrie et al., 2008; Naylor et al., 2006). Another limitation present in four separate studies was small sample sizes (Bauer et al., 2006; Bauer et al., 2004; MacQuarrie et al., 2008). For example, one study interviewed four primary school principals from three small communities in New Zealand to generalize perceived barriers for physical activity within elementary schools (Williden et al., 2006).

Upon review of previous studies in this area, there is a need to define the school context relative to the influence it has on student physical activity and school-based physical activity opportunities. As indicated, researchers have examined individual components of a school's environment but to date, there are no studies that have explored the multiple levels of influence (physical and social) a school has on physical activity opportunities.

Origins of Culture

The earliest reference to the term *culture* in a humanistic sense was rooted in anthropological science (Goodenough, 1957; Levi-Strauss, 1958). Historically, humans have left social artifacts behind (i.e. cave carvings, farming implements) that illustrate shared cognitive maps – how they understood and interpreted the environment around them. These artifacts provided the framework for member behaviours in a particular culture (Goodenough, 1957). In addition, Levi-Strauss (1958) found that culture was a reflection of the characteristics and limitations of human cognitive processes. Later on, Wallace (1970) saw culture as standardized cognitive processes that enabled mutual prediction and interlocked behaviour among individuals. In fact, behaviour occurred because cultural members decided to partially participate – they were aware of the costs associated with their behaviour. However, the interpretation of culture that may have contributed the most to the current understanding of the term was devised by an anthropologist named Clifford Geertz (Geertz, 1973). According the Geertz:

> Culture represents a historically transmitted pattern of meaning embodied in symbols including written (explicit) and hidden (implicit) messages encoded in a culture's language. Culture includes norms, values, beliefs, values and behaviours, rituals, ceremonies and myths translated by a particular group of people. If individuals buy into these beliefs, values, and behaviours, the culture and all its members will succeed (p. 13).

Rather than culture being a product of human capabilities, he viewed it as a *figment* of people's interpretation of their organizational experience. This was a new concept that stimulated future investigations into long-standing successful business cultures (i.e. McDonalds, IBM) to determine whether it was the people invited into the culture, or their cumulative experiences that sustained cultural success (Deal & Kennedy, 1983).

The Meaning of School Culture

The culture of an organization is essentially its individuality; it is something that one can often sense in the organization of which they are a part, but it can be difficult to clearly define to others. Interest in organizational culture is interdisciplinary and has garnered attention in academic, applied, and popular literature. Given the reach of this interest, it is not surprising that many terms have been associated within the area to reflect similar concepts.

In research on management, the terms culture, climate and environment have all been used to describe individual and group behaviors within organizations (Barth, 2002; Cullen, Baranowski, & Baranowski, 1999; Gittelsohn et al., 2003; Maehr & Midgley, 1996; Maslowski, 2001; Parcel et al., 2003; Prosser, 1999; Stoll, 1998; Wang, Haertel, & Walberg, 1993). The term climate was used in industrial and social psychology research to describe the outward expressions of an organization's members' shared beliefs and values (Hellriegel & Slocum, 1974). In other research, the term culture was a descriptor for the whole of an organization's practices, beliefs and more rooted values. Another similar term *corporate culture* emerged in American literature to exemplify the belief that culture can be created and manipulated for specific organizational outcomes (Dixon & Dougherty, 2009; Kucinskas & Paulauskaite, 2005). Nonetheless, culture and climate both described organizational environments, offered distinct views of life within an organization and were viewed as complementary to one another in the study of schools.

Collectively, the terms school culture, school climate and school environment were used interchangeably in the literature to describe similar concepts. Multiple definitions of school culture and climate, along with the absence of any formal definition

of the school environment, made it challenging to discern study variables and results. As examples, school culture was defined in the physical activity literature as:

> Sociocultural, organizational and environmental influences on students' physical activity behaviour (Cale, 2000).
>
> Attitudes and values toward physical activity that are portrayed by a school (MacQuarrie et al., 2008).

School climate was referred to as:

> The relatively enduring quality of the school environment that is experienced by school members, affects their behaviour, and is based upon their collective perceptions of behaviour in schools (Cullen et al., 1999).
>
> Captures the perceptions of the work environment which is influenced by the formal and informal structures of the school, as well as leadership style of the principal and teacher behaviours (Parcel et al., 2003).
>
> The characteristics that distinguish one school from another and that affect the behaviour of the people within the school (Gittelsohn et al., 2003).

I was not able to form a consensus from these interpretations and therefore, I examined additional literature surrounding school culture and climate for further clarification. Earlier school and organizational culture researchers simplified the relationship between culture and climate in the context of schools. For example, Yin-Cheong (1989) defined climate as overt and perceptible with visible behaviours; on the other hand, culture was multi-leveled with implicit assumptions and beliefs that influenced explicit behavioural norms. Thus, school climate was the visible representation of a school culture. Furthermore, Hoy (1990) stated that climate studies were grounded in industrial and social psychology and relied on survey research techniques. Alternatively, school culture studies were rooted in anthropology and sociology and used qualitative and ethnographic methodologies. In turn, school climate and school culture both described school environments but were viewed as separate and competing concepts in the study of

schools (Hoy, 1990). As this study examined school member beliefs relative to behaviour, Yin Cheong's (1989) interpretation of culture was best adapted for use in this thesis.

To further clarify the boundaries of secondary school culture relative to this study, I drew from a number of previous school culture researchers. For example, Maehr and Midgley (1996) determined that any school could be studied through two dimensions: social and physical. The social dimension included school beliefs, values and goals shared by school members. The physical dimension pertained to a school's organizational policies and practices, its size, student and teacher demographics, and physical appearance. In 2002, the social dimension was expanded to embrace the quality of relationships between teachers and students, relationships among students and the perceived teacher support of students (DeWit et al., 2002). As well, a student's sense of belonging to the school, inclusion in school activities, and self-esteem was now considered a necessary component of a school's social dimension. Moreover, Pritchard, Morrow and Marshall (2005) claimed that collegiality among teachers, custodians, students and other support personnel (i.e. social workers, child and youth workers) should be linked to the social components of school culture. As my research is directed at secondary teacher and administrator beliefs, my primary interest lies in, but is not restricted by, the social aspects of school culture.

Social Components of School Culture

As alluded to earlier, the concept of school culture stemmed from organizational culture (i.e. corporate business) (Deal & Kennedy, 1982). It was believed that the

principles learned from effectively managed businesses could be applied with advantage to the operation of schools (Deal & Kennedy, 1982). However, schools are not businesses and students are not adults; schools are far more complicated institutions socially and politically (Goodlad, 1984). The formal, public education system is a product of middle-class assumptions and traditions several of which include democracy, individualism and capitalism (Payne, 2001). Thus, it is probable that children and adolescents not reared in a middle-class home, with middle-class values, will experience social, physical and academic challenges in formal school cultures.

Relative to the physical activity participation literature, the social and cultural contexts of schools are not fully explored (Booth, 1997; Crouch, 2000; De Knop, 1998; Gilbert & Gilbert, 1998). Researchers have often overlooked the influence of student and school staff (i.e. teachers, administrators) life circumstances that may or may not motivate them to pursue school-based physical activity opportunities (Wright, Macdonald, & Groom, 2003). Traditionally, the cultural ideal around physical activity in public, secondary schools is grounded in the privileged, white male student (i.e. competitive team sports). Therefore, traditional co-educational schools often discourage non-white, female, poor and immigrant students' participation in a majority of school-based physical activity opportunities. In the following paragraphs, the various factors that influence student and staff participation in physical activity opportunities are discussed.

Socioeconomic Status.

The complexity of a school's cultural system is demonstrated through its many facets (i.e. sub-cultures) that affect how the culture operates as a whole. For example, Payne (2001) found that home cultures of the poor, middle class and wealthy students differed significantly in ways that affected literacy acquisition and attitudes toward schooling. Another study conducted with 212 middle schools in New York City determined that students from higher socioeconomic backgrounds achieved better academic scores than students from lower socioeconomic backgrounds (Chen & Weikart, 2008). Additionally, a random sample of 2400 grade nine students from 22 Ontario secondary schools concurred that socioeconomic status directly influenced academic achievement and feelings of belonging to one's school (DeWit et al., 2002); effectively, secondary students perceived that those from higher socioeconomic backgrounds achieved better grades and experienced greater engagement to their school community (i.e. extracurricular activities, relationships with teachers).

In terms of participation in school-based physical activities, students from wealthier backgrounds participated more often in interschool and intramural sports compared to students from less affluent backgrounds (Booth, 1997; Kirk, 1997). A possible explanation for these findings was offered by one group of researchers. Wright, et al. (2003) hypothesized a material advantage for students from affluent backgrounds; in this familial situation, opportunities for physical activity outside of school were often greater and the value placed on an active lifestyle was higher. Besides, these extraneous physical activity experiences around the context of family-encouraged decisions indicative of a healthy lifestyle. Also, it was important to the parents of these students

that their child be involved in school sport to ensure the family's link to a school's history and culture (Wright et al., 2003).

Evidence has also shown that socioeconomic status influences the type of physical activity students engage in. Ostensibly, wealthier students preferred competitive team activities (i.e. basketball, soccer, volleyball, rowing) whereas students from less affluent backgrounds gravitated to individualized, non-competitive activities (i.e. surfing, skateboarding, dancing) (Wright et al., 2003). A rationale for these differences is the social values linked to competitive, team sports; the wealthy perceived that organized team sports promoted values that developed social elites (Bourdieu, 1984). In contrast, less affluent families stressed participation in generalized physical activity with minimal cost and organization. To these families, societal status was not the objective behind sport participation. The main purpose of sport was family cohesion, not a means to an elitist end.

Ethnic Backgrounds.

At present, a strong case can be made that most Canadian, public secondary schools' student populations are ethnically diverse. Due to the increasing number of immigrant students in the Canadian educational system, it is important that schools adapt and modify their practices (i.e. curriculum, physical activity opportunities) to meet the diverse learning and physical needs of this student demographic.

Goodlad (1984) stated that students brought numerous ethnic cultures and languages to the classroom each of which was associated with a variety of child-rearing and educational traditions. As such, ethnic backgrounds influenced the way students

learned and what authority figures they responded to. According to Grossman (1995), very few students from African, Hispanic, and Native backgrounds graduated from Canadian high schools. In addition, students of ethnic minorities were usually not proficient enough in English to function in English-only classes and were less likely to enroll in academic courses like algebra, chemistry or biology. Also, these students were more likely to receive disciplinary infractions at school because the school culture was pushing them into aggressive or depressed states at school. Imposing school culture on these newcomers without regard for their individual cultures may exacerbate these feelings (Grossman, 1995).

With regard to school-based physical activities opportunities, ethnically-diverse students respond differently to traditional PE, intramural and interschool activities. One study found that for high school ethnic minorities (females), school was a conduit to community recreational opportunities (Wright et al., 2003). School was not a place for sport participation but a resource to connect them to physical activity opportunities in the local community. In turn, the Muslim culture does not permit women to actively participate in physical activity, particularly in front of males. In the school setting, providing safe physical activity opportunities for these young females can be challenging. Many of these girls do not possess the skill sets, fitness levels, or desire to effectively play a traditional Canadian sport (i.e. floor hockey, basketball).

Additionally, certain sports are linked to cultural heritage and students are taught the value of these activities at an early age. As examples, baseball, soccer and cricket have devoted followers and participants in various countries; young children are taught the skills (i.e. physical and social) associated with the game with the expectation of

lifelong participation (Wright et al., 2003). Thus, if relevant cultural activity options are not available at school, the likelihood of this student demographic participating in other recreational activities is minimal. In support of this marginally explored theory, one study found that if culturally-relevant games and activities were introduced into American Indian PE classes, physical activity levels of boys and girls were higher than students taking regular PE classes (Going et al., 2003).

Gender Diversity.

The place of school culture in constructing gender-neutral values regarding physical activity has not been overly explored (Kirk, 2002). Some researchers conclude that pedagogical practices in PE and school sport indirectly perpetuate gender inequality across the broader school culture (Cockburn & Clarke, 2002; Gard, 2001; Wright, 1998). In addition, the setting in which PE classes are typically held (i.e. large gymnasium) can stimulate comparisons of one's self to other same-sex, same-aged peers while performing athletic skills such as throwing a ball (Diller, Houston, Morgan, & Ayim, 1996). In particular, uncoordinated boys and coordinated girls are susceptible to these peer comparisons in same sex and coeducational PE classes (Diller et al., 1996). Therefore, it is important that PE teachers present gender and skill sensitive physical activities across all PE grades.

Further studies have shown that girls were more active in coeducational PE classes that included individualized fitness activities such as aerobics and minimized competition and team sports (Bauer et al., 2004; MacQuarrie et al., 2008; McKenzie et al., 2006; McKenzie et al., 2004; Monge-Rojas et al., 2009). In contrast, some boys were

most active in PE classes that involved competitive team sports (Hannon & Ratliffe, 2005; Kehler & Martino, 2007). Another difference among boys and girls is perception of body image (Kehler, 2010). For example, Martino and Beckett (2004) found that girls were very self-conscious about the way they looked, particularly when the boys were present. Conversely, when girls were around, boys acted out and defied those in power (i.e. PE teachers) to gain attention. Also, some boys verbally harass others in PE and so do some girls (Lenskyj & Van Daalen, 2006; Martino & Beckett, 2004; Martino & Pallotta-Chiarolli, 2003). In general, when school leaders recognize the physical activity tendencies of both genders, appropriate and gender specific, school-based physical activities can be organized and delivered throughout the school year.

Common Purpose Among School Leaders.

In the secondary school context, teachers work in subject specific departments in isolated parts of a school landscape. Based on my experience as a secondary teacher, a newcomer (i.e. teacher) will, in most situations, absorb the cultural beliefs of the teachers in his/her department. Therefore, if department beliefs are congruent with school values, then the presiding school culture usually prevails. If not, the *way things are done at the school* may prove resistant to change.

The literature in this area confirms my observations in Ontario public, secondary schools. For example, an on-going physical activity intervention (Action Schools) that aimed to maximize physical activity opportunities in British Columbia secondary schools achieved sustained success, post-intervention, in schools where teachers and administrators accepted and supported the proposed initiatives (Naylor et al., 2006). In

contrast, the main reason why several schools ceased intervention implementation was the lack of teacher belief in the importance of school-based physical activity. Moreover, other researchers who have examined the facilitators and barriers to student physical activity levels at school have found that in schools where teachers and principals value physical activity, and model behaviour indicative of an active lifestyle, student physical activity levels were higher (Barnett et al., 2006; Bauer et al., 2006; Dyment & Bell, 2007; Groft et al., 2005; MacQuarrie et al., 2008).

Aside from the influence teachers and administrators have on student physical activity levels at school, they influence the school culture in many other ways. DeWit et al. (2000) investigated the relationship between teacher beliefs and values concerning student discipline. Upon analysis of the 1000 questionnaires completed by grade nine students in southwestern Ontario, the data confirmed that in schools where teachers upheld disciplinary school policies and procedures, students were more likely to report positive feelings about their school and were generally better behaved. As well, students in these schools reported less frequent use of illegal substances, lower rates of truancy and greater academic success (DeWit et al., 2002). Another investigation that explored the effects of school leaders (i.e. teachers, principal) on student behaviour surveyed 4000 secondary students from 205 public schools in the State of Illinois. Results suggested that when students were told by their teachers what was expected of them in the classroom, and they respected the principal and what the school stood for, they were more motivated to learn and achievement scores were higher (Maehr & Fyans, 1990).

From a teacher's perspective, teamwork and collegiality amongst staff members is believed to be a key element of an effective school culture. Data obtained from 724

teachers across 20 public secondary schools in Israel showed one of the best predictors of student achievement was teacher teamwork across the curriculum (Gaziel, 1997). Furthermore, 400 teacher interview hours among 18 school districts in the United States, and 248 student essays from 35 middle schools stated that the social aspects of school culture (i.e. friendliness, belongingness, support from teachers and administrators) was the major influence on their perception of school culture. Teachers and students alike believed that in supportive school cultures, writing achievement scores were higher and more students engaged in extracurricular activities (Pritchard et al., 2005). In another study, students in Western Australia secondary schools whose principals empowered teachers to foster and sustain strong interpersonal relationships, and shared their power among teachers towards overall school development, felt their teachers cared more about them, and they valued education more than students in schools where the principal's values were imposed on the staff and students (Cavanagh, 2001). Hence, if school leaders worked collegially towards a common goal (i.e. maximizing physical activity opportunities), and students perceived their intentions as positive and purposeful, the results were school-wide participation in physical activity opportunities.

Early School Culture Studies

The recognition that each school had a distinct culture began with Willard Waller (Waller, 1932). He discovered that schools had a culture that was definitely their own; it consisted of complex personal relationships, a set of folkways, irrational sanctions and a moral code based upon them. Yet, it was not until the late 1970s that interest in school culture and its relationship to school effectiveness was formally studied (Rutter,

Maughen, Mortimore, Ouston, & Smith, 1979). As a result of this investigation around secondary schools, it was determined that academically successful students were present in school cultures that emphasized academics, provided clear expectations for students and allowed for several in-school learning opportunities. Shortly thereafter, a literature review of school effectiveness studies offered direction for future examinations of school culture (Purkey & Smith, 1983).

Due to this review, school culture became a major theme in organizational literature in the early 1980s and gained widespread acceptance as being an important part of effective schools (Deal, 1985; Deal & Kennedy, 1983). A plethora of school culture studies emerged to discover the similarities between the cultural dimensions in high performing organizations and high achieving schools (Deal, 1985; Deal & Kennedy, 1983; Finn, 1989; Holland & Andre, 1987; Kelly & Bredeson, 1989; Kottkamp, 1984; Saphier & King, 1985). As a group, these empirical studies were mostly qualitative and interpretative in nature and collected data from a small sample of schools. However, these studies found that effective school cultures were continually evolving to meet on-going internal and external demands. In contrast, less effective cultures did not adapt (or adapted poorly) to the changing environment and held on to values and policies that no longer related to the issues facing school members. Deal and Kennedy (1983) showed that effective school cultures contained internal and external components. Internally, school members knew what was expected of them and understood how their actions influenced school-wide efforts. From an external perspective, outsiders perceived the school staff to be working collaboratively towards school goals, favourable stories were told around the school community and artifacts were visible and representative of what

the school stood for. Essentially, a school can communicate its identity to outside groups and get them involved; neighbourhoods sometimes change rapidly, while school culture stays the same resulting in a mismatch among internal and external beliefs and values; a strong school culture invites the outside in to avoid a mismatch of cultural ideals (Deal & Kennedy, 1983).

In the later part of the 20th century, some resistance to the examination of school culture relative to school success arose. For example, Prosser (1999) argued that schools were not organizations – no objective product was produced. From my experience teaching in secondary schools, measurable outcomes including achievement scores and student physical activity levels supports the argument that schools are product oriented.

Effective School Cultures

The concept of culture has been identified in the professional literature as a significant factor in an organization's success (Deal & Kennedy, 1983; Peters & Waterman, 1982; Yin-Cheong, 1989). According to Schein (1999), organizations like McDonalds' and General Electric had effective cultures with shared values, heroes and heroines and supportive informal networks that acted as motivation for employees. Conversely, less effective organizations had no detectable culture and focused mainly on the bottom line. Generally, Schein determined that in order for an organization to survive, it needed to consider dynamic cultural systems; as such, maintaining a culture that was no longer effective produced negative consequences. Not surprisingly, this concept has been examined in relation to school successes and failures.

The difference between effective school cultures with respect to academic achievement and less effective school cultures was first explored by John Goodlad (Goodlad, 1984). He felt that the satisfaction of those who lived and worked in the culture (i.e. principals, teachers, students) was associated with school achievement: the higher the satisfaction of teachers and students, the greater the academic success. Moreover, he believed that school culture was a system of interacting parts each affecting the other. If a school was to be effective, people in the culture should be aware of how their decisions affected the entire cultural system.

Relative to school-based physical education, Goodlad determined that most secondary schools at this time in the United States focused on competitive team sports, and PE teachers were downplaying the education part of PE (i.e. how to use different body parts consciously to achieve a goal). In his opinion, this behaviour perpetuated a culture that rewarded the competitive and confident student and discouraged those with interests in individual, non-competitive activities like swimming and biking. Additionally, Goodlad called for studies to investigate the personal characteristics of the students who participated in extracurricular school activities. He felt the first step towards matching student interests with school activities was to understand the following:

> Part of the failure stems from a great irony: those who still live in the past confidently set the norms for educating those who will live in the future. The time has come for us to look more carefully into what we have wrought and the alternatives we might seriously endeavour to create (Goodlad, 1984).

On the other hand, he expressed the significance of interschool sports, not the regular academic program, and its role in fostering effective school culture. According to Goodlad (1984):

> Team sports provides the opportunity for students/staff to work towards shared goals, contribute to group solutions, achieve through a division of labour and experience success as a group member (p. 267).

Moving forward into the late 1990s, Peterson and Deal (1998) consulted with educators from hundreds of schools in the United States and Europe for 12 years and found that effective school cultures contained: (i) staff with a shared sense of purpose, (ii) traditions that celebrate student accomplishment and teacher innovation, (iii) an informal network of storytellers and heroes/heroines that provide a social web of information support and history and, (iv) underlying norms of collegiality, improvement and hard work. Around the same time, Sammons (1999) thought the most important elements of academically effective school cultures were order (behaviour policy and practice), task achievement (academic emphasis), and relationships (student-focused approach to learning). Then again, Hargreaves (2000) found school culture to be a direct result of human movement; successful school cultures had three dimensions of human movement: (i) lateral – one task or function to another, (ii) vertical – from one rank to another and, (iii) inclusionary – from outsider to insider. In addition, Hargreaves determined that cultural members learned the special meaning attached to certain words and the special rituals that defined membership. With this framework, he concluded that the power of culture came about through the fact that the assumptions were shared and therefore, mutually reinforced. Contrary to other school culture researchers, Hargreaves was the first to acknowledge the significance of sport in effective school cultures. He stated:

> Sport and other extracurricular activities must be included in a review of the school's culture. Sport offers exciting alternatives to antisocial behaviour and transcends different languages and cultures (p. 148).

He strongly believed that sport provided another avenue for students and teachers to understand and communicate with each other on a different level - it promoted teamwork and tolerance, respect and trust which minimized stereotypes.

Building upon Hargreaves' conclusions, Fullan (1998) determined that collaborative relationships and goals, reinforcing school norms and values and offering incentives for student and staff achievement were present in effective school cultures. He believed that an effective school culture was built upon positive member relationships; these relationships required strong emotional involvement from principals, teachers and students and ultimately, promoted support, elevated expectations and helped the culture persist when new initiatives were introduced. As a result of these collaborative relationships, pedagogy and assessment complemented each other through the interaction of teachers to produce better academic results for students. Moreover, Fullan (2000) showed that an effective school culture reached outside of school walls to establish relationships with local universities; in essence, schools need the outside to get the job done inside. As well, he outlined the importance of explicit criteria for hiring, specific rules for induction of new members and on-going professional development opportunities for teachers and support staff. These responsibilities fell mainly on the school principal who was considered the most essential ingredient of a highly successful school (Cotton, 2002). Principals in effective school cultures recognized that their behaviour was directly related to school culture and student achievement (Valentine, 2006) and endorsed cohesion among all staff, a sense of well-being, a common purpose among staff, and defended a vision of what the school should be like. Jones (1991) investigated three high performing academic schools in British Columbia and found that the principals in these

schools relied on a semi-naturalistic approach to school leadership. This approach allowed for discovery and description of school-wide organizational cultures.

In order to change an ineffective school culture relative to student performance, it requires three years in an elementary school and around six years in a secondary school (Fullan, 1993). Fullan commented that secondary culture reform was more complex and more difficult partly because it had not been attempted as often as it had in elementary schools.

Advantages of Effective School Culture.

Deal and Peterson (1999) in their study of school culture concluded:

> Effective school culture influences what members paid attention to, how they identify with the school district, how hard they work, and the degree to which they achieve their goals. Additionally, effective school cultures improve collegial and collaborative activities that foster efficient communication and problem solving practices (p. 4).

In one study, teachers were perceived by students to be enjoying their job and were less likely to be absent in effective school cultures (Bryk, Lee, & Holland, 1993). In this same study, students were better behaved, less likely to drop out and demonstrated higher gains in mathematic achievement. Also, students in effective school cultures had fewer symptoms of depression and anxiety and were more physically active at school (DeWit et al., 2003; Dyment & Bell, 2007; Fein et al., 2004; Sallis et al., 2001). Supplementary evidence indicated that effective school cultures enhanced elementary (Gruenert, 2005) and secondary student achievement (van der Westhuizen, Mosoge, Swanepoel, & Coetsee, 2005) in Language Arts, Science, Reading, and Writing (Fyans & Maehr, 1990; Pritchard et al., 2005).

According to Newmann and Associates (1996), school administrators in effective cultures inspired attention to student learning, established attainable expectations for staff and students and nurtured positive member relationships and teacher collegiality. Consequently, the culture influenced member behaviours in the following ways: (i) on-going teacher care and concern for students, (ii) positive teacher/student collaboration in the classroom, (iii) high teacher expectations of student behaviours and, (iv) above average student educational values (Cavanagh, 2001). The significance of positive relationships among school members was also supported in the work of Hargreaves (Hargreaves, 2001) and van der Westhuizen (van der Westhuizen et al., 2005). These researchers found that cohesive group networks and positive relationships equated to elevated levels of trust between school administration and staff. In addition, collaborative relationships among teachers and administrators helped students learn more (Fullan, 1993). In summation, Deal and Kennedy (1983) defined the benefits of effective school culture for all school members:

> Effective school culture provides internal cohesion that makes it easier for teachers to teach, students to learn, and for parents, administrators, and others to contribute to the instructional process (p. 14).

Links to Physical Activity.

As previously mentioned, effective school culture fosters teacher collegiality, positive relationships between the students and staff, and robust academic standards to name a few. On the other hand, an effective school culture can also produce physical benefits for school members; students tend to be more active in effective school cultures. Indirectly, two studies that aimed to link school culture to student academics found that

academically successful students were more active at school than their peers; similarly, these students were more prevalent in schools with effective cultures (Mahar et al., 2006; Rutter et al., 1979). Furthermore, students who perceived they attended schools with an effective culture were more active at school (Datar & Sturm, 2006; Fein et al., 2004) perceived their relationships with their teachers to be positive (Dyment & Bell, 2007; Fletcher et al., 2003), reported a higher attachment to learning (Bonny, Britto, Klostermann, Hornung, & Slap, 2000) and were better behaved than their non-active peers (Klem & Connell, 2004).

In further support, intervention studies that asked teachers to include classroom-based physical activity sessions into their daily practices returned positive dividends for student physical activity levels (Dzewaltowski et al., 2009; Mahar,et al., 2006; Pangrazi, Beighle, Vehige, & Vack, 2003; Scruggs et al., 2003). Particularly, Mahar et al. (2006) instructed elementary teachers to lead one, ten-minute physical activity session daily over a 12-week period. Results indicated that students were significantly more active on a daily basis when compared to pre-intervention pedometer counts. Comparatively, Pangrazi et al. (2003) requested elementary teachers to insert 15-minute physical activity breaks into their daily schedule for 12 weeks. As a result, girls were significantly more active on a daily basis post-intervention. In turn, these two studies concluded that teacher-led physical activities were the greatest facilitator of girls' physical activity levels in relation to any other school culture modification. These findings suggest the importance of reviewing a school's cultural practices around physical activity to make certain that boys and girls profit equally.

Along with the school culture literature reviewed, it was apparent that an effective school culture positively influenced member behaviours; yet, the relationship can be reciprocal. For example, DeWit et al. (2002) found that females, younger students, students from stable backgrounds, drug-free students and students who were motivated to succeed academically reported more favourable ratings of their school culture. Furthermore, Pritchard et al. (2005) determined that students who perceived school rules and policies to be important also felt they attended schools with effective cultures. Therefore, student characteristics and perceptions may impact school culture irrespective of the efforts by school leadership to create and sustain an effective school culture. Overall, there was a direct relationship among physically-active students, academic success, and effective school culture.

In summary, an effective school culture celebrates visible artifacts that influence what people pay attention to, how staff and students identify with school leaders, how hard they work, and the degree to which school staff and students achieve their goals (Deal & Peterson, 1999). However, no single type of school culture produces the aforementioned benefits for every school member in every school context. Thus, it is crucial that the members within each school find their own ideal culture to support what they wish to achieve within the context in which they operate. For this thesis, an effective school culture is one that maximizes opportunities for school-based physical activity opportunities.

Theoretical Framework

Organizational culture research has led to an array of theoretical frameworks that characterize culture. Historically, theories of culture are borrowed from anthropology by social scientists interested in complex organizations (Smircich, 1983). Organizational theorists have adapted the concept of culture from a singular anthropological tradition referred to as structural functionalism. This theoretical framework was rooted in the functionalist research tradition (Malinowski, 1944). The functionalist theory contends that culture is an apparatus that enables humankind to better deal with specific problems in their environment while satisfying their needs; ultimately, a means to an end. This approach was transferred to the context of schools in the early 1980s when it was believed that schools developed an *ideal culture* in response to their environment (Deal & Kennedy, 1983; Peters & Waterman, 1982). At this time, it was also recognized that there were cultural differences among schools because of the individualized norms and values of the members within each school. Basically, schools were *organisms* or *super-individuals* where culture was transferred from the individual actors who created and reproduced it to the school as a whole (Meek, 1988). Other researchers expanded this theory to corporations (Burrell & Morgan, 1979; Smircich, 1983). In this vein, organizations were perceived as effective only if they had a system of values amongst employees that would enhance the quality of products and services.

Structural functionalism was elaborated upon in the 1950s to include the idea that members of an organization acted in a purposeful manner to accomplish system wide goals (Parsons, 1951). In addition, the concept of social structure emerged in which cultural members were arranged according to defined relationships (i.e. subject-specific

departments). Therefore, culture extended beyond individuals; the values of the subordinate social system were accepted throughout the super-ordinate system (Radcliffe-Brown, 1952). Also, Homans (1950) found that behavioural norms formed within organizations were having a reciprocating effect on the overall physical and cultural environment. Due to this theoretical advancement, Merton (1968) decided to investigate the influence people had on organizational culture. He found that there were a larger number of personal values than motives, a larger number of attitudes than values and far greater numbers of observed behaviours. In summation, he affirmed the need for a deeper analysis of the relationship between the beliefs and values of individual members and organizational culture.

Organizational cultural theories reverted back to the influence of the external environment in the 1970s. For example, the ecological adaptationist theory (White & Dillingham, 1973) proposed that organizations were *designed for action* in particular environments; the internal culture was continually adapting to the changes in the external ecological setting. This gave rise to two of the most widely used and recognized ecological theories in educational literature: social ecological and social cognitive theories. In general, ecological theory posits that individuals adapt or vary their behaviours in response to differing resources in the environment which creates more favourable conditions for some cultural members and less desirable for others. Social ecological theory is based on the principle that the school environment controls the behaviours that occur within it (Green, Richard, & Potvin, 1996).

Similarly, social cognitive theory states that the school environment can influence member behaviours but behaviours, in turn, can change the environment (Bandura, 1986).

Social cognitive theory is also referred to as *reciprocal determinism* as behaviours and the school environment influence one another (Ewart, 1991). The social cognitive theory is best adapted to the study of schools because it allows for in-depth analysis of the relationship between school culture and member behaviours (Spence & Lee, 2003). Around the same time, symbolic theory (Geertz, 1973; Schneider, 1975) suggested it was not the physical environment that developed and sustained culture but the leadership within organizations. The premise was that past and present leaders passed on a system of symbols (i.e. ideologies, myths, values, stories) that gave meaning to the members' subjective experience and individual actions. Basically, it rationalized one's commitment to the organization and was the driving force behind member behaviours. Other organizational theorists defended this cultural approach stating that organizations should be seen as expressive forms and manifestations of human consciousness (Burrell & Morgan, 1979; Louis, 1983; Smircich, 1983). The culture of an organization was to be interpreted as an *individual actor* as opposed to an observer of the action (Burrell & Morgan, 1979).

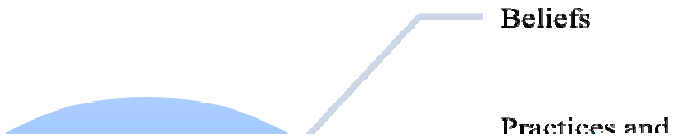
As outlined, many theoretical approaches have contributed to the understanding of culture in organizations. Yet, the root of organizational culture was not clear. Looking across theoretical interpretations, several factors were responsible for creating and sustaining culture. At the core, the beliefs and values of cultural members influence behaviours and organizational practices to achieve the goals of the organization. Also, past and present leaders are encouraged to protect an organization's cultural symbols (i.e. stories, myths) with the purpose of transference to future leaders. Lastly, internalizing the external environment (i.e. corporate interests, technology, new policies) seems

necessary for cultural survival. Thus, in order to effectively study culture, a holistic approach that encompasses the internal and external components of an organization is required.

Many organizational culture researchers have based their research on Edgar Schein's (1985) cultural systems theory (Homans, 1950; Merton, 1968; Parsons, 1951); a theory grounded in earlier theories of group behavior, social systems, and organizational functional analysis. Schein (1985a) found that as an organization evolved and became more resilient, its culture became embedded into members' sub-conscious. Once a cultural system was established, it became more visible to outsiders, newcomers conformed without debate, and member behaviors dictated how the environment was perceived. In 1999, Schein refined his theory to include the understanding that behaviors within an organization could only be interpreted in the specific context in which the cultural system existed (Schein, 1999). Schein's theory embraced a systems approach and offered a holistic definition of culture that defined the internal and external components of an organization. In doing so, his theory accounted for the elements of climate, environment and the broader concept of culture. Schein (1985) believed that an organization's cultural system existed at three distinct levels, some more visible than others, that influenced member behaviors (Figure 2:1). The outermost level of a school's cultural system was its artifacts; this included any tangible components of a school such as the physical layout, how people dressed, smells in the hallways, and even visuals hanging on school walls (i.e. posters, trophy cases) (Schein, 1990). To an outsider, these artifacts may be difficult to decipher, but they were external representations of school members' beliefs and values. The second more internal level contained the less tangible

components of a school's cultural system such as its policies and practices derived from school strategies, goals and philosophies. The innermost and least tangible level of a school's cultural system was its underlying member assumptions or taken for granted beliefs that provided the structure for school values and behaviors.

A number of organizational culture researchers have integrated Schein's theory into their studies. For example, van der Westhuizen et al. (2005) incorporated intangible and tangible factor categories as part of his methodology in examining the relationship between organizational culture and academic achievement in secondary schools. Findings indicated that a school's overall academic success on standardized tests resulted from both the school's beliefs and vision around academics (less tangible) and artifacts such as school uniforms, school rituals, and facilities (visual manifestations).



Additionally, Maes and Lievens (2003) explored the association between elementary school culture and student physical activity levels using a variety of visible and at times, invisible school characteristics. For instance, factors such as teacher job satisfaction and collaboration among teachers were examined in combination with the size of student population and the school timetable. Results from this health behaviour study showed that students were more active in schools where teachers worked together and job satisfaction was high. As well, McNeal (1999) examined the relationship among secondary school culture and student involvement in extracurricular activities. By survey, students were asked about their perceptions around the influence of the size of the student population, student-teacher ratio and overall feeling about school culture on their decision to get involved in extracurricular events. Results determined that 66% of the students that completed the survey believed that positive school culture was the strongest influence on their participation in school-based extracurricular activities. Likewise, a more recent study that investigated the influence of elementary school culture on school-based physical activity opportunities used a tiered approach to explore school culture (Barnett et al., 2006). In this case, teachers and principals were asked to complete a questionnaire segregated into three sections: (a) physical environment (i.e. sports equipment, facilities, space), (b) organizational environment (i.e. hours in a school day, number of students bussed to school and, (c) socio-cultural environment (i.e. teacher and principal role models, teacher interest in promoting physical activity). Findings indicated the most significant influence on the number of physical activity opportunities was the socio-cultural environment. More specifically, in elementary schools where teachers and

principals valued physical activity and led by example, there were more physical activity opportunities available to students.

For this research, Schein's three levels of culture served as the theoretical framework. The complex nature of school culture required an investigative strategy that was equally as intricate. Schein's multi-level systems approach was particularly appropriate because it imparted distinct lenses into the less tangible components of school culture. In turn, facilitating a deeper analysis of the factors associated with school-based physical activity.

CHAPTER THREE

METHODOLOGY AND METHOD

Methodology

Selecting an appropriate research methodology is dependent upon the research question(s) being asked (Morgan & Smirchich, 1980). In my investigation of the relationship between school culture and teacher/administrator beliefs, I evaluated two social science research constructs: positivism and post-positivism. Positivism refers to a situation where a researcher gathers facts about a particular social setting and based on his/her data, provides explanations for behaviours within that environment (Finch, 1986). This methodological tradition operates around factual data and is primarily associated with quantitative methods. On the contrary, post-positivism is about the meanings people place on their experience in their social world. This approach is guided by theory and the researcher's motivations; it emphasizes the creation of new knowledge towards social justice (Easterby-Smith et al., 1991). This approach offers a deeper understanding into the cause and effect among social contexts and is best supported by a qualitative approach. In turn, qualitative methods are especially suitable for interpretative research (Merriam, 1988). Given my research inquiries and the theoretical origins of this study, the post-positivism approach was best suited to accomplish my study objectives.

Within the post-positivism framework, there are a variety of descriptive research techniques that could assist my investigation. For example, the observational method requires the researcher to collect and analyze data concerning individuals' behaviour in a social context; several questions are posed such as what will be observed and where will the observations be conducted. One weakness of observational research is that findings

are unique to the individual and cannot be applied to the collective group (Thomas & Nelson, 2001). Another methodology is the written survey approach: it has been used extensively in education and physical activity to determine the practices and/or beliefs of certain populations (Warren & Karner, 2010). However, because my study examined school members' beliefs and behaviours, I deduced that personal interviews were most appropriate.

Also, findings from this study were to substantiate my earlier pilot study results that used a written survey to obtain quantitative data on school member beliefs around physical activity. Lastly, the third descriptive methodology considered was unobtrusive researcher actions (Warren & Karner, 2010). For instance, one could study school policy and success manuals, student handbooks, the school website or monthly newsletters to explore the relationship between school values and school-based physical activity opportunities. In this study, the aforementioned documents were examined to accentuate the qualitative data gathered from secondary teachers and administrators.

Upon consideration of the multiple methodologies conducive to the research questions presented in this study, the case study method was most favourable. Due to the small sample size, that is, seven teachers and one administrator from one urban secondary school, and Schein's (1985) theoretical interpretation of a school's cultural system, the case study methodology was the most efficient way to maximize learning around the study inquiries. In particular, case studies focus on how and why things happen and allow for the examination of cultural realities and differences between intentions and actual behavioural outcomes (Anderson, 1993). Moreover, case studies are useful when one needs to understand the breadth and width of particular relationships within an

organization (i.e. schools) (Noor, 2008; Patton, 1987). In turn, this methodology encouraged the use of multiple data collection strategies (i.e. data triangulation) and more robust results (Stake, 1995). In short, valid and reliable case studies analyze evidence in contrasting ways to expose conflicting events (Yin, 2003).

Case studies have been used in many educational areas such as student disciplinary issues, reading deficiencies and to some extent, in sport science and PE (Thomas & Nelson, 2001). One strength of an in-depth, single case study is that it gathers a large amount of information about a few participants; thus, a greater understanding of that specific case or relationship is achieved (Thomas & Nelson, 2001). Additional strengths include its abilities to present the researcher with a holistic vision of a phenomenon or event (Gummesson, 1991) and to provide an inward perspective into a dynamic organizational culture (Hartley, 1994). Feagin et al. (1991) believed that case studies helped researchers understand the system of actions in a culture rather than an individual or group of individuals. However, single case studies have been critiqued for lack of generalization to other populations (Johnson, 1994) but findings from a number of similar case studies may assist in the development of a theory (Thomas & Nelson, 2001) and lead to some form of duplication. Moreover, researchers that use single case study designs should attempt to correctly represent participants' views if true beliefs are to be accessed (Tellis, 1997).

Yin (1984) distinguished case studies into three typologies and researchers are encouraged to use the type relative to the social situation being investigated. The first case study is exploratory and is undertaken before defining the research questions. It is often used as a pilot to develop survey questions and refine future study protocols. Stake

(1995) stated that descriptive case studies should involve easy and willing subjects in order to maximize what can be learned in limited time periods. Secondly, the explanatory case study is useful for examining causation and processes in organizations. It attempts to evaluate the merit of a certain relationship that exists within a social context. This approach gathers data relative to a particular relationship and makes inferences (Guba & Lincoln, 1981). Overall, it provides a deeper analysis of the examined relationship compared to survey studies. The third type of case study is descriptive and is applied to formulate hypotheses in cause-effect relationships. Additionally, the researcher proposes a theoretical basis for investigation and collects data to better understand the phenomena. The main purpose of descriptive case studies is to provide precursory data for future research and to build theory (Merriam, 1988).

Since the purpose of my study was to describe the relationship among school culture variables through a detailed examination of secondary teacher and administrator beliefs, the descriptive case study methodology best suited my research. As discussed earlier, Schein's (1985) theory translates school culture into three distinct levels: school artifacts (outermost level), school practices and policies (middle level), and member beliefs (innermost level). Thus, employing the descriptive case study technique meant I would be focusing on a concentrated group of physical activity leaders in one secondary school to fully explore how access and opportunities for school-based physical activity across Schein's levels of school culture were affected by the beliefs of these participants.

It is important to note the ethical issue of privacy invasion when using unobtrusive measures (Thomas & Nelson, 2001). My research was unique in that I was not only the primary researcher, but also a PE teacher at the school. Consequently, I have

an intimate knowledge of this school's physical activity culture and been witness to some significant cultural transitions over my relatively brief tenure. In the last two years, three new full-time PE teachers have altered the cultural dynamic in the school's PE department. These teachers have brought new ideas and energy to a long-standing departmental culture consisting of members who have taught PE at this school for over 15 years. During the new teachers' probationary period (one year), I have noted resistance from the experienced PE teachers towards the alternative philosophical approaches of the new teachers to school-based physical activity opportunities. The tension within the department was palpable through verbal disagreements about what sports equipment to order or among conversations around why certain interschool teams are folding; an obvious divide exists between the *old and the new*. My position lies between these two sub-cultures. I am a relatively new member in the department; I worked for a year at the school and then took a two-year academic leave returning to teach again this past year. It is a unique professional situation because the new teachers are looking to me to provide leadership in PE pedagogy and coaching strategies while the seasoned departmental members expect me to honour the school's long-standing physical activity traditions.

Ethical Limitations

As a colleague of the participants, it was important that I maintained a professional distance while I interacted with the participants and gathered data; it allowed for a reflective and critical research perspective. Throughout data collection, I reminded

participants of the following study guidelines that aided my efforts to achieve appropriate ethical standards.

First, I would not discuss the study during lunch breaks and/or before or after school in the PE department office. At the outset, I individually informed participants of my commitment to confidentiality; whatever was discussed in the formal interviews remained between the participant and myself. As a result, no group discussions among participants occurred in my presence during the data collection period. Second, interviews were conducted in a private office, separate from the PE office, after school hours where access was researcher controlled; dates and times were known only by the participant and myself. Before each interview, I mentioned to the teachers that in order to reduce researcher bias, I had to remain neutral in my outward acknowledgements of their responses. I did not want to influence participants' comments through my body language. In addition, I left the room while the teachers developed their belief mind maps. However, I confirmed their mind maps with them to ensure my interpretation was correct. I found that when I cross-referenced participant belief mind map comments (individual exercise) with their verbal interview responses (researcher-led), there were distinct similarities. This correlation was a positive indicator that responses were not significantly influenced by our current relationship as co-workers. Upon further review of the interviews, I felt the participants effectively separated our mutual experiences as colleagues and were forthcoming with their responses.

Another obstacle I encountered while conducting research at my school was the pressure to reveal solutions to perceived barriers to school-based physical activity; the PE head consistently inquired about my findings. This was difficult because I wanted to

educate the PE department on some of the themes that were evolving during data collection. To uphold the integrity of the study, I told the PE head that a much deeper examination of participants' comments was required to arrive at a fair assessment of the facilitators and barriers to physical activity opportunities at this school. Thus, no findings would be revealed until the final paper was complete.

Although this was my *home school* and I worked in the culture for two years, I was a relatively new cultural member of the PE department. There were many facets of the school's physical activity school policies and practices that I was unfamiliar with because of a two year academic leave that fell between year one and year two of my tenure at this school. Many changes in staff occurred during my leave; three new PE teachers were hired which in turn, altered departmental values and pedagogical philosophies. Therefore, many of the teachers' beliefs around the physical activity culture of the school, I was learning for the first time. At various points during the study, it seemed like I was an *outsider* in my own department.

In terms of data analysis, I asked each participant to examine his or her interview transcripts before my analysis. At this juncture, the participants were able to modify or delete any statements that were incorrectly represented. This exercise enhanced my understanding of the data and eliminated any personal bias when I transferred the voice recordings and field notes to the final transcripts.

Method

Case study methodology influenced how I collected and analyzed the data. Case study data is typically derived from multiple sources like personal interviews,

observations or documents (Stake, 1995; Thomas & Nelson, 2001; Yin, 1994). In this study, school leaders were interviewed to gather personal beliefs along with analyzing student handbooks, staff meeting minutes, school success plans, school board success plans and the school's website. Together with my direct observations of the school and study participants, this process brought a deeper understanding of the origins of school member behaviours relative to the culture.

Data Collection

Personal Interviews Using the Modified Active PASS Survey.

Teacher and administrator beliefs were primarily obtained through researcher-participant interviews. The interviews occurred after school hours in the PE office on school grounds for participant convenience, and to reduce distractions that would normally occur before or during school hours. Also, participants felt they could dedicate more time to the process when their daily teaching responsibilities were past. The focus interview method was chosen because of its reliability to confirm data collected from a previous study, using pre-determined questions within a short time span (Tellis, 1997); furthermore, it allowed for flexibility when asking individual participants the same questions (Noor, 2008). A focused interview occurs between the researcher and a study participant (one to one) with the aim of gathering responses relative to a previously investigated situation (Merton & Kendall, 1946). The interview focuses on the study participant's subjective experiences in a pre-analyzed situation; in this study, the context is the secondary PE teacher's experiences within their school culture.

The interview items were selected from the Modified Active PASS (Physically Active School Settings) survey (MAPS) (Rickwood et al., 2011). This modified survey is a valid and reliable tool for examining factors associated with school settings that influence school-based physical activity opportunities (Rickwood et al., 2011). Comparatively, the original Active PASS survey (Bradley, 2008) is also a valid and reliable survey for collecting teacher beliefs around physical activity (Bradley & O'Connor, 2009); however, modifications to items pertinent only in Australian school contexts were necessary to assess school-based physical activity opportunities across Canadian school contexts. Thus, a multi-stage process was carried out to create a version appropriate for use in Canadian schools and, in turn, this study.

Initially, several ActivePASS items were deleted because of content duplication, improper language or lack of relevance to Canadian school contexts. For example, one original item read, "Are your school grounds well-maintained?" Potentially being unaware of the meaning of *well-maintained* and interpreting the item as presented, participants could reflexively agree with little thought given beyond the statement. Altering the item to read, "School grounds are well-maintained" and including specific examples related to school maintenance (i.e. free from graffiti, litter, rundown spaces), provokes a more educated and thoughtful response. Accordingly, these changes reduced the 58-item ActivePASS survey to 40 items while maintaining the original five sub-scales: (i) the school's natural and built environments, (ii) parent and community involvement in the school-based physical activity, (iii) active transportation policies, (iv) other school policies and informal practices linked to physical activity and, (v) extension ideas including opportunities for students with physical or cognitive disabilities.

Another modification was made to the response scale to ensure consistency across survey items: strongly disagree = 1, disagree = 2, undecided = 3, agree = 4, strongly agree = 5. According to DeVellis (1991), Likert scaling with five response options is preferred when measuring perceptions, beliefs, and attitudes; participants answer on a continuum from strong disagreement, a neutral midpoint, to strong agreement. Furthermore, MAPS' items were worded in a strong and descriptive manner to minimize excessive agreement in response choices (DeVellis, 1991). Lastly, a "don't know" response option was inserted to reduce the number of forced false perceptions and afford participants new to a school or those unaware of the situation presented in an item a more relevant choice.

The next stage was to establish MAPS' content validity; in effect, to assess the items relevant to Canadian school contexts and to determine if those completing the survey would understand what each item was asking. To accomplish this, a Delphi group including PE pedagogy academics (n = 5) and elementary parents, teachers, and administrators (n = 7) rated the relevance of each item to Canadian school contexts on a scale: not relevant = 1 to very relevant = 7, and item clarity on a scale: unclear = 1 to very clear = 7. On the whole, feedback called for more examples for participants to draw upon to answer the survey items, a reduction of total items to minimize required time for completion and additional questions were suggested based on the experts' personal experiences in schools. Thus, MAPS was modified to its current version of 30 items (Rickwood et al., 2011).

For this research, nine items from MAPS were chosen to collect school member beliefs around school-based physical activity opportunities (Table3:1). Consistent with

Warren & Karner (2010), up to 15 questions that address the topic of interest are recommended in ethnographical research to elicit narrative stories from respondents.

Table 3:1 *Focus Interview Questions*

1. This school's values concerning physical activity are explicit (i.e. policy documents, assembly announcements, school newsletters).
2. At this school, students have opportunities to learn how to organize games, sports, and other physical activity programs.
3. At this school, staff are encouraged to be physically active role models (i.e. walk/run with students during Terry Fox walks/runs).
4. This school provides opportunities for staff and students to be physically active together (i.e. intramurals, Terry Fox walks/runs, class activities).
5. This school provides organized physical activity opportunities for students before, during, and after school hours (i.e. running clubs, swim teams, environmental clubs).
6. At this school, staff members promote and facilitate student participation in physical activities during leisure times (i.e. organize intramural activity programs, supervise open gym sessions, etc.).
7. This school recognizes students through celebrations, certificates, and/or rewards for physical activity participation.
8. This school discourages the removal of time dedicated to PE or leisure time as punishment.
9. At this school, staff are encouraged to share their personal physical activity interests with students (i.e. running a marathon, yoga instructor).

These specific questions were selected to focus on school practices and policies around physical activity. Participants were given five response prompts: strongly disagree, disagree, undecided, agree, and strongly agree. At first, responses were brief but probing questions such as: (i) "Why do you feel this way?" (ii) "What experiences have solidified your beliefs on this issue?" and (iii) "Have your beliefs changed over your time spent in

this school? If so, what circumstances or experiences have altered your beliefs?" helped access the deepest layers of teacher beliefs. As well, if someone strongly disagreed with a statement, he/she was asked to think of school policies or practices that might alter their beliefs. In turn, when a teacher/administrator strongly agreed with a statement, they were asked to give reasons why they believed the school was achieving success in this area.

Drawing a Mind Map as part of the Interview Process.

Mind maps are perceived as visual representations (i.e. flow chart, brainstorming bubble) of one's main thoughts around a theme or issue (Warren & Karner, 2010). This approach to data collection is useful to structure ideas and organize information in order to solve a problem. Mind maps are part of a growing tradition of visual social science where subject-produced drawings offer deeper insight into a research query (Warren & Karner, 2010). Likewise, mind maps were chosen because of teacher and administrator familiarity. The Ministry of Education in Ontario has mandated the use of mind maps in secondary classrooms across the curriculum (Ontario Secondary Curriculum Documents, 2011). Accordingly, each teacher was responsible for meshing mind maps into their PE classes (i.e. drugs in sport, principles of fitness).

Immediately after the MAPS questions were answered, the participants were asked two additional questions. These questions read, "In your opinion, what are the factors that facilitate staff involvement in school-based physical activity opportunities at this school?" and "In your opinion, what are the factors that inhibit staff involvement in school-based physical activity opportunities at this school?" These items were included as part of the interview process to answer my third research query concerning the factors

that facilitated and/or inhibited teacher/administrator participation in school-based physical activity opportunities. Instead of responding verbally, participants were invited to develop a physical activity opportunities belief mind map that utilized Schein's three levels of a school's cultural system (Schein, 1985) (Figure 3:1).

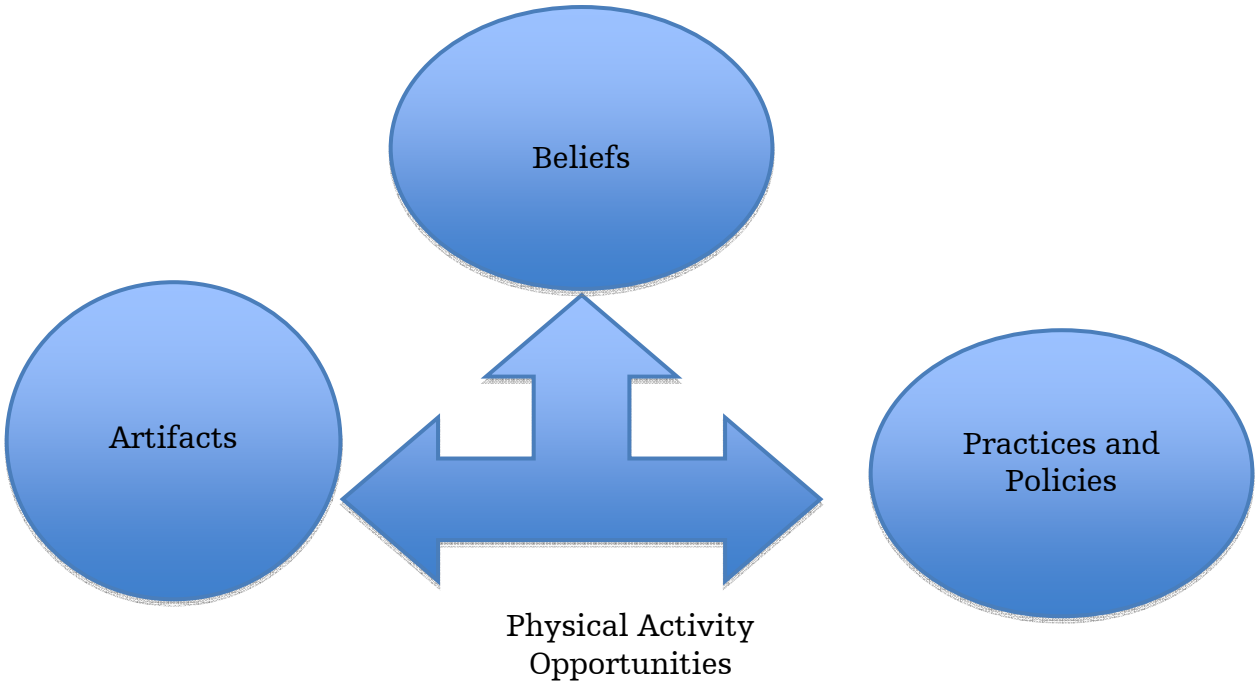


Figure 3:1 Belief Mind Map

Before they began, each participant was instructed that the top circle symbolized factors linked to teacher/administrator beliefs concerning school-based physical activity opportunities; the right circle represented factors associated with school policies and practices around physical activity; and the remaining circle signified factors linked to school artifacts (i.e. physical environment). After this brief overview, participants wrote their thoughts into the proper circle using a colour-coded system: facilitators (green) and barriers (red) to teacher/administrator involvement in school-based physical activity

opportunities. I removed myself from the interview room when I felt the participants understood my expectations to reduce any anxiety associated with mind map creation. Participants were given as much time as they needed to complete the mind map. When finished, they invited me back into the office to continue the interview. At this point, I reviewed the final product with each participant asking them to synthesize their written comments. This assisted in my interpretation of their written words and framed statements into a personal context.

After this step in the interview process, I asked participants to verbally respond to two final questions, "Is there anything else you would like to add to your earlier responses?" and "Are there any other comments or ideas you wish to discuss beyond what you have already stated on this topic?" The purpose of closing with these questions was to trigger any outstanding beliefs that may contribute to the understanding of the relationship under investigation. Typically, the entire interview process lasted between 45 to 60 minutes.

Field Notes and Voice Recording Device.

In addition to the abovementioned data collection methods, I scribed real-time, in-depth field notes during each interview. The purpose of keeping field notes was to gain a descriptive, written account of what had been heard and observed (Warren & Karner, 2010). Prior to the interview, I told participants that I would be summarizing their thoughts as they spoke. At the end of each answer, I read back my written account to confirm proper representation of their beliefs. For efficiency and to reduce the time spent looking at my notes, I used shorthand-writing techniques and anticipated response themes

to achieve consistency and organization throughout the note-taking process. The response themes mirrored Schein's (1985) three levels of a school's cultural system: school artifacts, school practices and policies, and member beliefs. Hammersley and Atkinson (1983) confirmed the use of pre-determined themes when collecting qualitative data; the anticipatory themes serve as key reference points for inscribing participant responses.

One week post-interview, participants reviewed and reflected upon their word-processed transcripts for clarity and belief representativeness. At this time, they could delete any information they were uncomfortable disclosing and/or add any new ideas. Warren and Karner (2010) substantiated the importance of verifying data collected from each participant and for corroboration of events. To support and enhance my field notes, an electronic recording device recorded participants' responses and assisted in data clarification. This device was invaluable because it provided cues for event sequencing and allowed for replays of direct quotes (Hammersley & Atkinson, 1983; Warren & Karner, 2010).

School Documents.

Understanding that multiple data sources strengthen the validity of case study research (Yin, 1994), a variety of school documents were examined. Certain documents and electronic media were selected based on the recommendations from the school principal and the PE head. Both of these school leaders believed that the school's website, the school's success plan, the school board's success plan and staff meeting agendas would best portray the school's policies and practices around physical activity.

The written documents were retrieved from the school's guidance department and principal. To ensure these documents were accurate and current (Tellis, 1997; Yin, 1994), it was necessary to substantiate the validity of each source with the school principal.

Collectively, the divergent methods chosen for this study increased the confidence of study results and the validity of my conclusions (Thomas & Nelson, 2001). In turn, I was cognizant of the fact that although triangulation created a more in-depth analysis of participant beliefs, the relationship between data sources could potentially influence bias and additional threats to validity (Thomas & Nelson, 2001) and exacerbate the probability of error when analyzing data from multiple sources (Hammersley & Atkinson, 1983).

Direct Observations.

Given my two years as a PE teacher at this school, I have acquired a general understanding and awareness of this school's artifacts and its policies and practices around physical activity. In the next two chapters, I will elaborate on my personal observations, where appropriate, regarding the physical environment (i.e. school grounds, hallways, classrooms, fitness facilities) and my experience with current policies and practices associated with the physical activity culture at this school. In turn, my insider perspective helped gain a deeper understanding of participant beliefs and encapsulated the cultural system of physical activity. However, no assumptions were made based upon my own experiences; as the researcher, it was important that I conducted the study with an open mind.

Study Location: The School and its Programs.

With reference back to this study's purpose of examining how access and opportunities for school-based physical activity across Schein's three levels of school culture were affected by the beliefs of physical activity leaders in the school, it was imperative that I provide a description of the research venue and the people who volunteered to participate.

The secondary school of interest in this study contained many similar characteristics to the secondary schools I investigated in my pilot study. That is, this school's physical activity facilities and opportunities for physical activity within the local community were comparable to the schools included in the pilot study. Another reason for selecting this school was my thorough knowledge of the physical activity culture. Combined with the cultural premise of my study, the trustworthy relationships previously established with my colleagues provoked more truthful and rich data. As well, the participants were aware that findings and conclusions from this research had the potential to directly influence the school's physical activity culture. Consequently, more detailed interview responses were recorded. On the other hand, there are drawbacks associated with *going native* (or already to be identified as a native) with one's research. In this situation, the researcher is challenged to separate study objectives from their membership as a cultural member (Warren & Karner, 2010). For example, Adler and Adler (1987) contended that being too closely aligned with study participants may bias a researcher's personal perspective, and unconsciously, they could adapt participant beliefs.

In this study, I struggled to avoid outward signs of agreement with participant comments during personal interviews. Visual cues from my body language may have

encouraged them to respond to my positive acknowledgement rather than expressing their own personal beliefs. Due to prior knowledge, participants knew I was or would be in disagreement with some of their beliefs. In one situation, a male participant asked me about my thoughts on a specific survey item after he responded. It appeared to be a defense mechanism; he did not want to go against what might be perceived as a *popular belief* in the PE department. To ease his concerns, I reminded him that the purpose of the interview was to elicit personal beliefs, not to match his statements with what others had said. I further stated how important comment diversity was to understanding the core factors that influenced physical activity opportunities at this school. This brief conversation relieved his tensions around *going against the grain* and he answered the remaining questions without hesitation.

Other researchers have highlighted the elevated stress levels placed on a researcher when fully immersed in the research setting (Peshkin, 1984; Robbins, Dick, & Curtis, 1973; Rochford, 1985). Establishing a membership role in the culture one is examining can be perceived as intrusive to cultural members. In an unfamiliar setting, the researcher must develop a rapport with his/her participants and convey the significance of the study to the organization. A strategy to counteract these stresses is to study a group which already shares one's own beliefs (Gordon, 1987); this strategy may inspire participants to attach a greater value to study findings. According to Warren and Karner (2010), the quality of data collected from cultural members evolves from the strength of the relationships between the researcher and the participants.

In this study, I bypassed many of the stresses linked with undertaking research in my 'home' school because of the working relationships I had with my colleagues. The

participants knew I respected their perceptions of meaningful physical activity but they also recognized that I did not share some of their beliefs. My belief is that students can achieve 60 minutes of daily physical activity at school regardless of their backgrounds through intramurals, interschool teams and other leisure time activities (i.e. open gym sessions). Also, physical activity opportunities in the local community and personal pursuits of activity in the home setting can complement what is available at school.

Considering my beliefs, some of the male participants felt more strongly about the importance of student participation on interschool teams whereas the female PE staff directed more of their energy at offering opportunities for special populations like girls and English Language Learners. Thus, the respondents acknowledged our philosophical differences and frequently started their interview responses with, "I know you are not with me on this" or "I know you are very passionate about this issue but…". By no means, however, did this bias their answers as our mutual respect for one another as educators surpassed this potential barrier. In addition, I reassured each participant before the interview that I wanted him/her to convey their true beliefs, not what they perceived I wanted them to say.

Data Organization

Possibly the most challenging element of case study research is analyzing qualitative data (Tellis, 1997). Unlike quantitative data that is summarized by numbers (i.e. means, modes), qualitative data is gathered mostly through written text or images (Warren & Karner, 2010). Thus, qualitative data analysis begins when a researcher types their field notes or transcribes participant interviews. However, researchers should be

wary of inferring causation from qualitative data (i.e. individual behaviour) because it is restricted to a particular moment in history; the *here and now* or the *then and there* (Gubrium & Holstein, 1997).

Due to the breadth of qualitative data collected in this study (i.e. meanings, concepts), it was necessary to properly organize the data prior to analysis. Several computer programs have shown to be advantageous for organizing qualitative data. The most widely used is NVivo but other programs such as Atlas.ti, Qualrus, QDA Miner and HyperResearch are valid tools (Weitzman, 2004) but are not able to interpret content (Warren & Karner, 2010).

Miles and Huberman (1994) have outlined specific criteria for selecting the appropriate computer program relative to the applied qualitative methodology. Applying their criteria in relation to the manageability of the data set due to sample size, I initially inputted participant quotes into the latest version of word-processing program *Microsoft Word* in search of thematic patterns, the preferred method of data organization in qualitative research (Warren & Karner, 2010). To ensure the data was representative and thorough, I reviewed the voice-recorded interview tapes, my personal field notes and participant mind maps to coordinate quotes to individual survey items. This process enhanced my familiarity with the data and sparked item-specific response patterns.

The next step involved clustering individual item responses according to the levels of school culture: school artifacts, school practices and policies, and school member beliefs (Schein, 1985). To accomplish this, each level was afforded a singular colour (i.e. school artifacts = orange, school practices/policies = green, school member beliefs = yellow) for consistent transfer of participant quotes into Schein's cultural system framework. The

responses were colour-coded using the following definitions: school artifacts (i.e. tangible components of school culture - what one sees, hears, smells or tastes), school policies and practices (i.e. PE/physical activity related) and; school members' beliefs (statements that included, but not limited by, phrases such as: "I think", "I believe", "I feel"). As a result of this process, the raw data was organized by survey number and colour-coded into the three levels of school culture. Overall, organizing the data in this manner aided my understanding of how participant comments fit with my theoretical construct, and made it easier for additional connections to be made within the data.

Data Analysis

After the data were organized by survey number and level of school culture, the next step was to search for thematic patterns. Miles and Huberman (1984) offered insight into methods previously shown to be efficacious for analyzing qualitative data. For example, placing data into categorical themes, devising thematic labels and/or calculating the frequency of similar statements have helped researchers in their interpretation of qualitative data. On the other hand, Yin (1994) suggested the most pragmatic method was to dissect the evidence according to the theoretical framework proposed at the outset of a study. Moreover, an in-depth analysis of qualitative data also required the researcher to use her/his prior expert knowledge surrounding the study's variables to extend the analysis (Yin, 1984). In line with these techniques, other researchers have found that open coding (Stake, 1995) and focusing on the researcher's direct interpretation of events rather than the actual data are also effective tools for qualitative data analysis (Eisner & Peshkin, 1990). Generally, the value of using

findings is highly dependent on how intimate the researcher becomes with his/her data (Thomas & Nelson, 2001); if the analysis is executed properly, a case study can provide a holistic overview of an intricate relationship or problem (Thomas & Nelson, 2001).

While respondents' statements fit into one (or more) of Schein's levels of school culture (i.e. artifacts, policies and practices, member beliefs), their beliefs were a reflection of the influence school artifacts and/or school practices were having on the physical activity culture of the school. Therefore, I used analytic ordering and open coding to reduce the data further into sub-themes (Warren & Karner, 2010). Open coding identified key words and phrases; as such, quotes with similar syntax were physically cut out of the word-processed document and segregated into new sub-thematic categories. Goertz and LeCompte (1984) confirm the importance of re-reading and dissecting qualitative data several times to determine analytical categories. Indirectly, this step also showed variance among sub-themes because of the number of quotes linked to each theme.

School Culture

As outlined in Chapter Two, an organization's culture can be categorized into a three level cultural model (Schein, 1985). As in this school culture study, the physical activity opportunities within the milieu of this secondary school's culture were examined and discussed in respect to these distinct levels.

General Characteristics and Beliefs.

This secondary school was an Integrated Arts magnet school that attracted students from across the local community and up to 60 kilometers outside its catchment area. The Integrated Arts program is a Ministry of Education initiative focused on introducing students to careers in lighting, sound, video production and set design. Within this program, teachers from Dance, Drama, Visual Arts, and Music synchronized their lessons to promote learning in other subject areas. To be accepted into the program, students must pass a verbal interview and a live audition.

The school community was made up of 100 teachers and support staff and approximately 1500 students. One unique feature of the student population was the 170 English Language Learners (ELL) who together spoke 60 different languages. Overall, thirty percent of students attending this school were born outside of Canada. Not surprisingly, multiculturalism was welcomed and highlighted on the school's website. For example, the Principal wrote in her address to parents, students, and staff that ELL students brought, "A richness of spirit to the school and contribute to the tolerance that new staff and students have noted time and time again." The Principal also stated, "We are a community that takes great pride in its diversity and its commitment to helping one another."

In addition to the Integrated Arts program, the school was home to an ELL program with qualified ELL teachers. ELL students had the opportunity to be integrated into regular classrooms but segregated ELL classes were available in Math, Geography, Science, Business, Family Studies, and PE. In grade nine and ten ELL PE courses, a

senior level ELL student acted as a peer tutor to translate verbal and written instructions to the ELL students.

The school also introduced a Specialist High Skills Major Sports Program (SHSM) in September 2011. The purpose of this new program was to expose students to the essential workplace skills in sport and recreation careers (i.e. personal trainer, sports agent, lifeguard, equipment manager). The principal sought out this program to "make sure the school diversifies its academic focus." As an active member on the SHSM committee, I have been a part of three lead-up meetings with administration. The meetings presented background information on the program and ensured that the PE department was supportive of it goals. The current mission of the SHSM program is posted on the school's website:

> Our mission in PE is to incorporate healthy active living into the high school student experience at this school. Our main goal is for each student to show growth in physical activity and personal fitness during their time at this school.

In short, the specialized diploma consisted of curricular choices within and outside of PE in which students could obtain sport certificates in coaching, boat licensing, first aid/CPR and others as they progressed into the senior grades. As well, students could customize their high school experience to suit their academic and athletic interests and talents. Presently, the only requirement to be accepted into this program is a short meeting with a school guidance counselor. In conjunction with SHSM, the PE department offered activity courses in Aikido, Outdoor Education, Fitness and Leadership and an Ice Hockey Academy.

Student Demographics.

The studied school contained three distinct student demographic groups: (i) ELL students (n = 170), Integrated Arts students (n = 300) and, non-ELL/non-Integrated Arts students (n = 1030) equaling a total student population of 1500. The ELL students arrived in Canada from countries including Afghanistan, Pakistan, Sri Lanka, Saudi Arabia and Africa. Essentially, the ELL students were the core of the interschool soccer and basketball teams and were also responsible for their family's monthly income. The teachers/coaches involved in this research found that team practices were poorly attended and game rosters varied each week because of their student/athletes' outside employment duties.

In contrast, the Integrated Arts students were 95% Canadian born and lived in and outside the school's catchment area. Students in this sub-group were new to one another the first day of school but because they spent most of their time together in the same classes and drama productions, they tended to congregate as a collective group during the school day.

The residual student demographic lived in the school's catchment area; most were white and Canadian born. Approximately 60% of these students came from single-parent/guardian homes whose annual income was under 30,000 dollars. Consequently, a majority of these students were unable to cover the financial costs associated with participation in school-based physical activities (i.e. running shoes, ice hockey skates, individual team participation fees).

Staff Demographics.

The teaching staff was made up of ten first year teachers, 15 teachers in their second year of teaching and 50 teachers with over ten years experience, most at this school. An experienced female principal, who had been at this school for six years, led the administration team. The three vice-principals (two female, one male) were new administrators.

A large teacher turnover had occurred at this school over the last two years reducing the average teacher age from 42 years to 32 years. Not surprisingly, this had a significant influence on school-based physical activity opportunities. Many of the new teachers were trying to manage a full course timetable for the first time, organize daycare providers for their young children and synchronize co-curricular activities with their partner's work schedule. Thus, fewer teachers possessed the time to commit to extracurricular activities which, ultimately, reduced the number of activity opportunities and teacher role models. However, as these teachers achieve comfort with their teaching load and their children get older, most of them indicated their desire to get involved in interschool sports and intramurals.

A majority of the teachers at this school were qualified to teach ELL and there were more recipients of the regional teacher excellence award at this school than any other in the school board. In addition, parents were also an important part of this school culture. Parents were encouraged through the school website or by phone messages to get involved in School Council or through the Integrated Arts Parents' Association. The underlying message from the school staff to parents was, "We need you in order to make a difference with our kids."

Influence on PE Courses.

The unique student and staff population significantly influenced the school's PE courses. Currently, the PE department is trying to accommodate the diverse learning needs of students by offering ELL PE courses. In talking with many of the PE teachers, they found that the language barrier isolated ELL students in regular PE classes leading them to drop out of senior level classes for fear of embarrassment and failure. As a result, the Guidance department has found a tangible increase in the number of ELL students taking grade 11 and 12 PE classes related directly to their positive experience in grade nine ELL PE. However, with the recent Ministry of Education goal of student inclusion (Ontario Curriculum Document: Secondary Physical Education, 2011) , it raised the question of whether school leaders should continue to segregate ELL students or attempt to promote their inclusion into regular PE classes.

Artifacts.

The school was in the downtown core of a mid-size urban center in southwestern Ontario. From the outside, it looked its 55 years (i.e. red brick, squared corners, flat roof) helping it fit unobtrusively into the established neighbourhood around it. A recent library addition and main office upgrade modernized the school's main front entrance. The green space encompassing the school included two sports' fields and a small seating area with picnic tables. There were two tennis courts on school grounds but the nets were broken and the playing surface was cracked and weathered. The football uprights and the soccer nets were brand new and both sports' fields were re-seeded last year. Also, there were less than five mature trees on school property and very few areas existed for

students to congregate safely outside the school walls on school property. At the back of the school, six portables expanded across what used to be a student parking lot. According to staff, this area was known as *cottage country* because it was so far from the main school building. The school was enclosed on its south and western sides by busy city streets. To access the smaller sports' field, students had to cross over one of these streets. The north and eastern sides of the school were defined by single-family homes.

Inside school walls, the front entrance greeted newcomers with expansive plants and glass display cases that housed student artwork and team accolades. In this area of the school, a large banner read, "Home of the Arts." Progressing further into the school, the walls were decorated with subject-specific murals, painted by present and past students that highlighted inspiring quotes from notable philosophers. Walking through the halls, students were seen singing, playing musical instruments, and dancing in groups. Venturing deeper into the school's interior, plaqued newspaper articles hung on most walls acknowledging past and present students and staff who have accomplished extraordinary life achievements. Down the Arts' wing (i.e. music, drama, visual arts), painted chairs cluttered the hallway and unfinished paintings and sculptures covered the floor. Also, there was a large dance classroom with a rubberized floor and wall-to-wall mirrors drawing in all who passed by. Throughout this wing, confident young men and women were seen and heard rehearsing Shakespeare and fine-tuning their dance routines; music students were sitting casually in the halls strumming their guitars and composing lyrics as they played.

Deeper into the basement of the school was the PE wing. Passing through this corridor, one saw intramural and interschool bulletin boards covered with team and

individual pictures, team announcements and local high school sport news articles. Pictures and profiles of the PE teachers sat in a glass display case on one wall and a sport mural covered the outside of 15 lockers on the other wall. Painted above and around the entrance to the gymnasiums was a giant-sized lion (school mascot). Hardwood floors lined all three gyms and small windows defined the two larger gyms on one side. However, these windows had been covered with grey paint to keep the morning sun out of the space. A balcony surrounded the two larger gyms and served as a fitness centre – it was lined with ProForm nautilus fitness machines. Another interesting aspect of the gym space was the championship banners and oversize Canadian flag that spread across gym walls. The red banners against the black and white wall paint were an effective contrast and helped foster a feeling of belonging and school pride. Sectioned off from the third, smaller gym was the school's weight room. New free weights mixed with old, a new rubber floor, and wall-to-wall mirrors were the distinguishing features of this space. It was not an overly large area but included the necessary equipment to meet the curricular objectives of physical education classes. Outside class and team facilities included two grass soccer/football fields, a 400-meter gravel track and two tennis courts. There was also a privately owned fitness centre directly across from the school.

School Practices.

A wide assortment of intramural and interschool sports' activities was available to students. For example, leisure time intramural tournaments consisted of soccer, floor hockey, basketball, and handball (boys and girls) that ran throughout the school year. Other daily fitness activities included open gym sessions and weight room access during

the lunch period (45 minutes), and teacher-led zumba and yoga sessions occurred every Monday. Furthermore, on most Sunday evenings, one PE teacher opened the gym to any students interested in playing recreational basketball.

Students had the option of participating in ten interschool sports over the school year. Individual sports such as alpine skiing, cross-country and track and field were popular with students. Also, the general student population held team sports including basketball, football, and soccer in high regard. Beyond the physically active extracurricular opportunities, there were several clubs that met regularly. Clubs such as classical guitar, dungeons/dragons, tech crew, fashion design, sign language, gay/straight alliance, and a knitting club were always welcoming new members. Posted on the school website was reference to the significance of extracurricular activities at this school:

> Co-curricular opportunities give students a sense of belonging to our school community. Involvement in these activities gives students a deeper appreciation for education and they learn to be productive members of society.

With these practices and programs in mind, I reviewed the school's success plan and staff meeting agendas to further examine the school's physical activity practices. In terms of staff meetings (n = 8) that included the entire staff, 23 professional learning activities took place over the 16 hours staff met as a group. Overall, 15 minutes (three activities) was dedicated to PE curricular strategies and/or PE or physical activity related topics (i.e. assessment and reading strategies). The remaining 15 hours and 45 minutes were dedicated to student success in the areas of non-fiction writing, making connections with text, reading comprehension and improving boys' achievement on standardized tests. The literacy focus was a function of the school's success goal developed by the administration team (principal and vice-principals): "All students will improve their

ability to communicate their thinking in writing as measured by an increase of 2% in the Ontario Secondary School Literacy Test." The school's success goal for 2010-2011 was to improve boys' ability to communicate thinking in writing by 3% (Level 3) on the Ontario Comprehension Assessment. In turn, the school success goals were a derivative of the board-wide success goals that outlined the policy that each secondary school was to focus on improving specified groups of students' ability to communicate their thinking in writing as measured by results on standardized provincial assessments (boys, ELL, Special Education, Applied Essential Math).

Participants

A purposive sample of secondary PE teachers (males = 5, females = 2) and one female administrator (vice-principal) agreed to participation in this study. The school's administrators (one principal, three vice-principals) principal were invited to take part in the study. The principal declined because she believed she had very little to offer on this issue and two vice-principals did not provide a rational for non-participation. Purposive sampling was chosen over random sampling because the purpose of a case study is to select participants who can best inform the researcher around study goals, in effect, to maximize learning (Chien, 1981; Goertz & LeCompte, 1984).

The main reason for selecting these particular school members was their inherent knowledge of school policies and practices relative to school-based physical activity opportunities. With a few exceptions, the participants were long-standing members of the school culture (≥ five years) and held well-established beliefs concerning access to, and opportunities for physical activity. Hargreaves (2000) found in order to know a

school culture, a member needed to be present and active in that culture for at least five years. As well, the total number and gender diversity of the participants (n = 8) supported my inquiry into the factors that influenced physical activity opportunities at this school. Both a male and female perspective allowed access to gender-specific factors that may not have surfaced if one gender was isolated. To protect the anonymity of each person, pseudonyms replaced actual names.

Participant Introductions.

Less Experienced Teachers.

One of the female participants (Beth) has been a teacher at this school for two years. She has taught grades 9-11 girls' PE (regular and ELL) and coached the girls' soccer and volleyball teams. Prior to her post at this school, Beth taught for a number of years internationally. Upon her return to Ontario, she was a supply teacher before receiving a full-time position at this school.

The second of three female participants (Lisa) has taught at this school for two years. She was currently teaching grade nine (girls), grade 12 (co-ed) PE and grade nine Geography. Lisa coached the cross-country team, the track and field team and the girls' soccer and girls' volleyball teams. She created the PE department's webpage and was responsible for maintaining the, "Current events in PE," bulletin board. Lisa was also an active member on the school's literacy and safe schools committee. Before securing a full-time position at this school, Lisa completed a long-term occasional position at another secondary school in this school board.

Peter was the least experienced of the male teachers interviewed. He has taught at this school for two years but previously held a long-term occasional position at another secondary school in this school board. Peter taught the grade 11 Outdoor Education course (coeducational), grade 10 boys' PE and grade nine Science. He coached track and field, junior boys' football, and junior boys' and girls' volleyball. As part of his Outdoor Education course, he led groups of senior students on camping trips to northern Ontario every year.

Vice-Principal.

Jane was the sole administrator involved in this research. Before taking her position as vice-principal at this school seven months ago, Jane was the vice-principal at another secondary school in this school board for three years. Jane has 20 years experience as a fitness instructor in the local community and has taught PE, Business and Science in elementary and secondary school contexts for eight years prior to her move to administration. She holds the prestigious post of *Head Convener* for the school board's interschool sport association.

Experienced Teachers.

Another male participant, Mike, has taught at this school for six years. Mike taught grade nine PE (ELL and regular), grade nine Science, grade 12 Kinesiology and was recently awarded the PE department headship. Mike's primary passion was coaching the interschool boys' and girls' basketball teams but he was also the head coach for the girls' and boys' rugby and boys' senior soccer teams.

A teacher who has spent his entire career (13 years) at this school was John. He taught grades 9-12 PE (boys and girls) and grade ten Aikido, Native Studies and History.

He was the staff sponsor for the student intramural organization team and supervised the after-school fitness/weight training club. John helped coach the track and field team, senior boys' basketball, the swimming team and junior boys' football. He also organized and planned the annual athletic banquet.

One of the most experienced teachers interviewed was Sean. Sean was close to retirement and has spent most of his career at this school. He has taught grade 12 PE (10 years), grade 9/10 boys' PE (23 years), grade ten History (20 years), and most recently, has been teaching Cooperative Education. Sean coached boys' ice hockey, senior badminton, senior tennis, girls' and boys' volleyball, and boys' rugby. Above these duties, Sean was the equipment manager for every interschool sports team.

The final male participant was Jason. He was the most seasoned member of the participant group being in his 27th year of teaching at this school. Jason taught grades 9-12 boys' PE and Cooperative Education; in the past, he was the school's PE head. Jason coached the boys' ice hockey and senior football teams, the senior badminton team, swimming, track and field and the girls' and boys' volleyball teams. Jason organized an indoor soccer game during lunch once a week that was open to all students. He was also the school's union representative and was very passionate about defending teacher rights.

Procedure

In January 2011, the University of Western Ontario, the local school board, and the principal of the school selected for study approved my research proposal. Immediately thereafter, participants were invited to participate through a written letter of invitation. Interested participants provided informed consent and were individually

briefed on study goals, benefits, and expectations. Interviews occurred after school hours on school grounds (i.e. PE office). Data collection was finalized at the end of March 2011.

CHAPTER FOUR

DISCUSSION

The purpose of this study was to examine how and to what extent PE teachers' beliefs about physical activity intersect with school culture and administrative policies and practices across Schein's (1985) three levels of school culture. Thus, study findings needed to answer the research questions posed in Chapter One: (i) What are the beliefs of secondary school teachers and administrators concerning physical activity within their school? (ii) What are the beliefs of secondary school teachers and administrators concerning access to, and opportunities for physical activity within their school? (iii) What is the relationship between secondary school teacher and administrator beliefs about school-based physical activity and the physical activity opportunities available to students? and (iv) What are the factors that facilitate and/or inhibit teacher and administrator participation in school-based physical activity opportunities within secondary schools?

In this chapter, I discuss and reflect upon participants' comments according to thematic trends. Each theme was communicated through Schein's three levels of organizational culture for a more complex analysis of the factors believed to be associated with physical activity opportunities at this secondary school. To review, school artifacts represent the outermost and most visible level of a school's cultural system. Artifacts are tangible characteristics a newcomer can sense (i.e. see, hear, feel, touch) as they traverse through the school building. The second, less tangible level of school culture is its practices and policies. To an outsider, these guidelines for member behaviour are not inherently visible. One must live and work in the culture to interpret

the meaning of its practices and policies surrounding physical activity. The deepest and least tangible level of a school's cultural system is its member beliefs. The beliefs of cultural members shape a school's policies and practices and indirectly, the visible artifacts of school values.

Overall, the data spoke to three major themes (factors) believed to be linked with school-based physical activity opportunities: (i) the existing physical activity culture, (ii) the absence of a common definition of physical activity and, (iii) philosophical differences: strategies for promotion of school-based physical activity opportunities.

Theme 1: Existing Physical Activity Culture

Physically-active secondary school cultures make it clear to outsiders that the school values physical activity (Sport and Recreation New Zealand, 2011). However, explicit characteristics that distinguish an active from an inactive culture are varied in the current literature. For example, some researchers have used the number of school-based intramural and interschool sports opportunities to establish the parameters of a physically active school culture; the more opportunities, the greater the value of physical activity, the more daily activity students receive (Barnett et al., 2009; Fuller, Sabiston, Karp, Barnett, & O'Loughlin, 2011). Comparatively, Allison and Adlaf (2000) distinguished a physically-active culture from an inactive culture by the frequency of PE classes (i.e. > 3/week), the number of students enrolled in PE, the minutes of vigorous physical activity students attained daily and the number of intramural and interschool sport opportunities offered throughout the school year.

For the purposes of this study, a physically-active secondary school culture is defined using the following characteristics: (i) physical activity is used throughout the curriculum, (ii) physical activity opportunities and resources are available to students during leisure times (i.e. before and after school, lunch), (iii) students are rewarded in ways that reflect a commitment to physical activity (i.e. good behaviour is rewarded with access to physical activity equipment), (iv) school staff are physically active role models, (v) students are encouraged to use active transportation (i.e. safe and secure storage for bicycles and scooters), (vi) intramurals and interschool teams are available to students throughout the school year, and promoted on school bulletin boards, websites, and in school newsletters and, (vii) students, staff, parents, and community partners (i.e. feeder schools) receive consistent messages about the importance of physical activity in the school (Sport and Recreation New Zealand, 2011). This model was selected for its specific references to characteristics prevalent in Ontario public secondary schools.

As discussed in Chapter Two, active school cultures encouraged students to be more active at school (Fein et al., 2004; Fuller et al., 2011; Mahar et al., 2006; Rutter et al., 1979). Moreover, students that were active at school were better behaved during classroom sessions, learned more efficiently and had positive relationships with their teachers (Bonny et al., 2000; Dyment & Bell, 2007; Klem & Connell, 2004). Similar to earlier evidence, the physical activity culture at the studied school was a significant influence on school-based physical activity opportunities. The teaching backgrounds of the participants and the time spent in the culture produced mixed beliefs about the status of the school's physical activity culture. However, the current school culture relative to physical activity was believed by all participants to be a major influence on school-based

physical activity opportunities. In the following paragraphs, the cultural factors perceived by PE teachers at this school to be influencing the physical activity culture are discussed.

School Location.

The school was located in a mid-sized southwestern city center, enclosed by a major highway on two sides. Surrounding the other two sides of the school was a busy four-lane street. It was not unusual to see physical activity equipment propelled on to these streets during outdoor PE classes because of the close proximity to the playing fields. In order to gain access to one of the fields, students had to cross over a side street. The school's location also limited school-wide physical activity initiatives; for example, the Terry Fox Charity Run was confined to the school's outdoor track to maximize student safety. From my experience with this event, students confessed they would rather walk/run in the local neighbourhood to advertise their cause to the community. Also, active commuting to the school was a challenge; there were few bike lanes that surrounded the school and if students lived outside of a two-kilometer radius from the school, they were forced to cross several busy streets without a crossing guard or crosswalks.

Specialized Academic Programs.

The latent factor underlying the physical activity culture of this school was the academic focus on the Arts (i.e. drama, dance, music) and ELL programs. This magnet school was atypical compared to other schools in the school board because it attracted a

unique set of student interests and learning needs. On one hand, the ELL students were new to the country and rarely associated with other non-ELL students. On the other hand, the Arts students evolved into a *distinct society* because they spent several hours daily in the same classes and on identical transportation routes. As outlined earlier, the PE department was attempting to accommodate these alternative physical activity interests and needs relative to the general student population by offering ELL-based PE courses. Overall, 33% of the students at this school (13% ELL; 20% Arts) were enrolled in one of these specialized streams; however, if not for these academic programs, the school board would have closed this school five years previous.

These specialized academic programs have influenced student participation rates in intramural programs and interschool teams. First, intramural team sport tournaments were offered at lunch; these events were typically lean on Arts students' participation because of the academic demands related to the Arts program. The Arts students were busy preparing for upcoming drama productions or completing course objectives (i.e. working on art sculptures or paintings). In contrast, the ELL senior male students were heavily involved in intramurals, particularly when the activities were soccer or basketball. If other non-competitive activities like dance or zumba were offered at lunch, the ELL female students dominated the participant group. Student representation from the non-ELL/non-Arts population was highest on interschool sports teams. These students formed the athlete base for sports such as badminton, volleyball, and rugby.

Sport Culture.

Historically, this school's interschool sports' teams have experienced sporadic success throughout its 56-year existence. This is visible to all who entered the school in the form of wall-mounted team plaques that outlined win-loss records. Recently, the following male and female sports' teams were cancelled due to lack of student interest: rugby, ice hockey (junior and senior), and golf. The school's history in sport was not only influencing the teachers who applied to teach at this school but the students who were considering participation in school sports. For example, teachers who were hoping to extend their high school coaching career or looking to develop a special interest PE course (i.e. ice hockey academy) understood that this was not the school to do it. Traditionally, coaches of interschool teams at this school were first year teachers with no sport coaching experience trying to make a positive impression with administration. In turn, a majority of the students that made up these teams were new to the sport themselves. As a result, team success was marginal and attracting elite athletes from feeder schools and experienced teacher/coaches became an annual challenge.

Less Experienced Teachers/ Vice-Principal.

As with any new job, employees often seek out people who work or have worked in the culture to gain insight into the dynamics of the organization. For example, Beth said before she started her first day at this school two years ago, she talked to some of her friends teaching in this school board. The feedback she received was, "Oh, that school – have fun there!" She felt these comments came from a prevailing attitude regarding the current administration and/or the high ELL student population. Beth was not surprised by

their impressions as she admitted this was not her first choice of schools to teach PE because of the negative perceptions of those that came before her. She was aware that sports, PE and physical activity were not priorities for the current administration. I asked Beth if her initial beliefs about the physical activity culture were correct or had her beliefs changed during her two years as a cultural member. She said if she was a student at this school, her first impressions of the physical activity culture would be, "The information that is up on the school walls with regards to intramurals looks dated, it is worn and old." Beth also remembered thinking, "The lack of overall cleanliness in the gym area and girls' change rooms is unacceptable – we are taking a back seat to the Arts in this regard." For clarification, I probed deeper into Beth's beliefs asking her to expand on why she felt Arts teachers and students would not work in unclean spaces. Her response was, "I coach after school and before I leave, I see the custodians always cleaning the Arts' classrooms, workshops and hallways; I do not see this same effort dedicated to the physical activity areas of the school." Beth said that the PE department and administration had weekly discussions with the custodial staff about this issue but the problem still remained. She elaborated:

> Knowing there is little support from the custodial staff and administration (the principal should demand that the physical activity areas be cleaned daily), it does have an impact on what I am willing to attempt and how much time I am willing to put into making improvements or volunteer my extra time to extracurricular physical activities.

Furthermore, Beth felt:

> There does not seem to be any long-term forethought in regards to upgrading our physical activity facilities; this has an impact on my attitude with regards to how much I want to really get involved; currently, it is a depressing environment to work in – I get discouraged and frustrated.

Beth also emphasized the distance many of the ELL and Arts students travel to and from school; some students are bussed in from as far away as 60 kilometers. She felt that expecting these students to miss their bus home for an interschool team practice or game was not going to happen. She said, "It is a reality we are faced with as physical educators and coaches in this school; a large group of our students are spending hours on the road to attend this school for the Arts' program." Bluntly, Beth followed up on her previous comment by saying:

> We are an Arts school – let's be honest – our top administrator pushes the Arts' program which marginalizes PE and physical activity. If the Arts was not in the school, would PE and options for physical activity be different – probably.

Beth also stated how the school's location presented challenges for staff and other students. For example:

> A nighttime physical activity event for teachers is difficult because of the proximity from their homes to school. To come back to school at 6 p.m. after you have been here all day, I do not think it is feasible. It depends, if you are working at a school where most of the students and staff walk or bike to school, you might get greater participation in after-school physical activity events.

In addition, Beth talked about her beliefs about the influence the general student population had on physical activity opportunities:

> The nature of our student population and the demographics of our catchment area are having a huge impact on PE and the physical activity culture – we cannot get away from that. We do not have the student population who can participate in interschool physical activities due to the lack of time or financial resources. A lot of our students have part-time jobs because they have to and these are the students who really need to be physically active.

With this in mind, she highlighted the trickle down effect to the school's intramural organization team:

> I think the teacher sponsoring the intramural organization team has to come to PE teachers to ask our opinions about who the future students should be on organizational team; however, there are not a lot of student leaders to choose from.

To conclude the interview, Beth put herself in the place of a grade eight student who is a good athlete and aspires to receive an athletic scholarship. She said:

> A kid who is an elite level athlete or at least a good athlete will want to go to a school that has traditionally been successful in interschool sports. Why would a good hockey player come to our school when our boys' hockey team folded this year and lost by at least ten goals every game. It takes a long time to change this perception.

Along with the aforementioned barriers to physical activity opportunities, Beth believed the Guidance department was significantly influencing the school's PE programs. "In my opinion, one of the major reasons why we have so few students taking grade nine PE is the lack of support from Guidance – they are not encouraging new students to get involved." Beth said that her colleague Lisa investigated why the PE numbers were below the school board average. Lisa presented her findings to the head of Guidance at the end of last year. Beth reviewed the results of this meeting, "Looking at the overall PE numbers this year, our numbers are down again for the third year in a row." To clarify the situation, the Guidance department, in association with administration at this school, had decided that students did not need to complete their compulsory PE credit by the end of grade nine or 10. Thus, many students chose to wait until their senior year (grade 12) to meet their PE credit expectations. As a consequence, the grade nine and 10 PE numbers were much lower than anticipated.

Lisa, another new PE teacher at this school (less than three years) realized one of the school's main priorities during her first week working at the school. She remembered thinking:

> The culture here is very different compared to the school I was previously at. When I first arrived at this school, I got a lot of negative opinions from other teachers, but it took me a while to realize what kind of school it was, what kind of kids we have. It is quite unique but very multicultural compared to other schools in the school board.

Lisa also observed that, "The gym floor was always dirty which led to safety hazards for my students; the gym is my classroom – I know the floors are cleaned in traditional classrooms, why not mine?" Teaching in the gym environment for five days, she understood why the students and staff were not using the weight room and gym facilities during leisure times. She said, "The condition and age of our fitness facilities and change rooms are big reasons, I think, why more students and staff do not use the weight room." I asked Lisa to compare her current beliefs with her first impressions of the school's physical activity culture. She stated her attitude and desire to promote school-based physical activities had weakened since she began teaching at this school.

Lisa's resolve to promote PE and physical activity was challenged when she tracked the number of students taking PE classes and found that very few grade nine students were enrolling in PE. Lisa commented, "I have gone to our principal and told her that at every other school in the board, every grade nine student takes PE. Why is this not happening in our building? If the principal wanted to change this, she could but she has decided not to." Lisa went further to say, " I have tried to promote the academic and physical benefits of taking PE to Guidance every year – it falls on deaf ears because the Guidance counselors refuse to promote PE." In efforts to change the physical activity

culture, Lisa had taken the initiative to promote PE and physical activity to the student population.

> I have created the PE and Athletics website so at least there is something for the kids to look at - this is important because this is where kids are – they are online. My belief is if PE courses and activity opportunities are more visible, kids are more likely to get involved.

She also expanded the breadth of her promotional strategies to the feeder school (grades 7/8):

> I try to stress when I talk to our feeder school – I highlight to the parents that every season, there is an opportunity for your child to be active during school (PE classes, intramurals) or after school (interschool sports. yoga club); I stress that most of the activities are free.

After discussing this topic in more detail with Lisa, she believed that the blame should not fall completely on administration for depleting student numbers in PE classes and leisure time intramurals. She deduced that:

> The physical activity culture of this school is largely influenced by the student demographics and the Arts program – it is an artsy school for sure – you feel it in the halls with the painted murals, the singing and the dancing. Are the Arts teachers going to choose to come to the gym and take part in a game of volleyball in the evening with staff or students or are they going to stay home and play their flute? These teachers are doing what they believe in – what they enjoy.

Lisa also referred to some of her recent experiences teaching grade nine girls' PE. She believed the cultural backgrounds of the girls prevented them from taking PE after grade nine. For example, Lisa recalled, "I did a dance unit in grade nine girls' PE and half of my class could not do it because they were not allowed to perform any physical movements in public; this is just one of my classes."

However, Lisa commended the strong financial support she had received from the school's student activities department. She said, "Since I have been here, the money given to my players and teams encourages me to keep coaching; I feel they (student

activities department) are supporting what I am trying to do." This department was responsible for allocating funds to the various interschool teams and intramural events. The vice-principal that led this department was an avid sports person and consistently participated in staff versus student athletic competitions. Prior to his administrative post, he was a business teacher for 17 years at this school. Also, he coached the boys' softball team, organized the school's floor hockey club, and was heavily involved in the local community as a volunteer coach. Nevertheless, this vice-principal had accepted an elementary vice-principal position and was leaving the school at the end of the academic year. A new female vice-principal with no sport or fitness background was replacing him.

A second year vice-principal at this school, Jane was also asked about her beliefs concerning the school's physical activity culture. Her first response was, "In terms of a sport-based culture, I do see physical activity being an important part of this school because I see it promoted on the school walls and hear team updates on morning announcements; however, individual lifestyle's activities, not so much." After a short delay, Jane elaborated, "At my last school, you would see staff running with students before school; it was a sport culture where students were actively engaged to train year round – I do not see anything like that at this school." Also, Jane referred to another example from her last school:

> At my last school, the guys (male students) had their 1000 pound club; there was a custom t-shirt for it and the guys died to get this – I was always outraged because there was no way a female could make the 1000 club because of the criteria; I do not see anything like that at this school.

Not understanding the parameters of the "1000 pound club", I inquired further. She stated that in order to be part of this club, students had to lift a total of 1000 pounds in ten

different exercises within a specific time frame (one month). For example, students needed to lift their own body weight (i.e. 150 pounds) a total of seven times to meet one of the categorical requirements. It did not have to be consecutively but a cumulative total. Beyond this inquiry, I asked Jane to clarify her beliefs because of her contradictory replies. She admitted that at her previous secondary school, it was expected that interschool teams made it to playoff rounds, and students and parents demanded that the school offer a variety of intramural physical activity options. Reflecting back on this experience, and comparing it to her brief time at this school, Jane said she does not feel the same pressure from the staff and students to succeed in interschool sports or to appease the parent group. In short, "It is just different here; priorities are different, and the students have different needs relative to other schools in the school board." Furthermore, she made the following assessment:

> Some of the kids at this school are brought up in homes with poor role models. If the family is unfit, the kids are unfit. If you look at how many students actually participate in sport at this school, some kids are three season athletes – what about the other 80% of the student population that are not active?

Another difference with the students at this school compared to her previous school is their lack of financial resources; Jane commented:

> Especially at this school, I feel the ever-increasing costs for kids to get involved in school sports is too much; I see more and more students come in to talk to our principal about the need for funding. However, the school practice here is if you do not pay, you do not play.

Interconnected with these unique student challenges, Jane believed the school's timetable restricted physical activity opportunities; "The structure of the school day at this school (timing, focus on academic curriculum) minimizes opportunities for kids to participate in school sports." Jane compared the current school day to when she started

her teaching career, “The school day now prohibits opportunities for students to be active during school hours.” Moreover, Jane said in comparison to her fitness experiences at the local gym, there was no way she was going to shower in the school’s *crappy locker rooms*. Cleaning up after an intense workout in a clean and modern change room was important to her; it was something she looked forward to as part of the process. Her overall sense was, “Some students may be fine with showering in our change rooms after PE class, but I think the majority of the girls are not fine with it.”

Together with these new cultural members, I also had conflicting impressions before I started my tenure at this school. I arrived at this school because I requested a voluntary school transfer four years ago. On my transfer request form, I ranked this school as my last choice out of 16 secondary schools in the school board. I based this decision on the information I received from my PE colleagues at the time. They frequently referred to this school as, “The Siberia of schools” and reiterated that no PE teacher voluntarily taught at this school. These impressions originated from interschool coaching experiences against this school and from dialogue with other teachers who had worked at this school. From a personal perspective, I visited this school on one occasion before my transfer. My first thoughts were that it was out-dated, the gymnasiums were small, dark and dirty and the murals on school walls signified the importance of the Arts and Drama programs. My interschool coaching experiences versus this school also shaped my beliefs. Most sport contests with this school resulted in lopsided victories; their teams were unorganized strategically and in outward appearance (i.e. team uniforms were old, too small and jerseys were mismatched). As well, a majority of their team members were new to the sport and did not possess the basic skills to play the game.

Reflecting on my two years working at this school, my teaching and coaching objectives and goals have changed. Coaching is a major reason why I entered the teaching profession but this past year, I only had three students try out for the boy's ice hockey team – an interschool team I have coached in two secondary schools for eight years. Moreover, I started a grade 10 Ice Hockey PE course two years ago and it was cancelled for next year due to low student enrolment. Ironically, the after-school ball hockey club this year had over 40 students that regularly attended. This informal club designated students onto four teams and they played for an hour, twice a week. There was a small trophy they competed for at the end of the winter season and attendance was not mandatory to retain membership.

What I have learned is that many of the students who are interested in PE and interschool sports are from Africa, Sri Lanka and Afghanistan. These students are not familiar with the sport of ice hockey and, even if they were, they could not afford to buy the equipment necessary to play it. The Canadian students attending this school were from low socioeconomic households and most did not have the time or the money to participate in interschool sports. As Jane outlined earlier, many of these students' parents did not value physical activity and therefore, why would their son or daughter?

In addition to interschool sports, some of the school's senior PE classes (i.e. Outdoor Education, grade 12 PE, LiveFit (girls), Powerfit (boys)) required students to cover additional course expenses (i.e. field trips). The general trend over the past two years has seen these courses depleted in student numbers. This situation has pushed my primary teaching load into academic courses outside of my area of specialty (i.e. Geography, Business, English). In turn, my perception is that my role as a PE teacher

and coach are in question at this school due to the reduced number of PE courses I am asked to teach in successive years. Ultimately, this situation influences the effort and time I dedicate to promoting school-based physical activity opportunities. As such, I have found myself contributing most of my extracurricular time to local community sport leagues. Presently, I perceive my value as a school member to be low but my sport and coaching background is highly valued at the community level. Human nature draws me to where I believe I am wanted or needed the most and/or where I can make the biggest difference in the lives of children and adolescents.

Another new PE teacher, Peter, provided an additional perspective on the existing physical activity culture at this school. Unlike the female participants, Peter did not have any prior knowledge about this school's physical activity culture. Contrary to earlier participants' comments, Peter focused on the school's downtown location as a major obstacle towards maximizing physical activity opportunities. He said:

> It is hard to come up with ideas for more activities at this school because of its urban location; even with the Terry Fox Charity Run, it can be very dangerous for students walking across busy roads without supervision.

Another drawback of this school's location was its inaccessibility to active commuters. According to Peter who rode his bike to and from school every day, navigating the busy roads, the numerous stop lights and the few bike lanes that led up to the school were daunting even for the experienced rider. From a teaching vein, he also found it difficult to plan safe walking and bicycle routes for his Outdoor Education classes because of where the school was situated. As well, Peter believed very few students actively commuted to school due to the lack of safe storage for bicycles and skateboards. He summarized his thoughts on this topic by saying, "Encouraging students to actively

commute to school promotes positive lifelong physical activity behaviours; the school, as it operates today, does not encourage active commuting to and from school for staff or students."

Furthermore, Peter made reference to the influence of the general socioeconomic status of the student population; "The physical activity opportunities we are currently offering are not suitable - we must recognize that the socioeconomic backgrounds of many of our students limits what we can do." He stated at his last school, "The culture was completely different because the school drew from a largely rural population and the kids came from more affluent backgrounds." Peter recalled organizing several off-campus intramural activities that included a facility user fee for each student; he said he had more students than he could handle. However, at this school, Peter attempted to offer similar opportunities for students with little or no interest from students and staff. In one instance, he approached the PE head about introducing an off-campus, ice hockey intramural league before school. The feedback he received was, "I do not think it would work; it is not a place we (PE department) should be putting our focus." Peter refuted the PE head's opinion by saying, "If we can give kids an opportunity to play intramural ice hockey before school, we should provide this experience because it may be the only time of the day they can do it." In the end, Peter's idea was not supported. He believed this perception to be prevalent across the school's administrators and teachers. For example, Peter discussed the staff's contribution to the blog section on the PE and Athletics' school webpage:

> Lisa and I tried to get a blog going where teachers could post their own physical activity interests and accomplishments. I think it only has a couple of entries over a six- month period it has been available to teachers. I feel this is very important but the teachers I have talked to say it is hard to find the time, energy, and initiative to sit down and do it.

Another difference between his last school and this one were some of the school's practices that reduced opportunities for physical activity. Peter commented:

> Within the last year, our principal has imposed 15 minutes of sustained silent reading into one of our classes, four days weekly. We already lose ten minutes of PE class time because the kids need to change for PE. Now, we are losing 25 minutes out of a 75-minute period.

In summary, the new PE teachers and administrator believed that the school's artifacts (i.e. weight room, change rooms, gymnasiums, school location) were directly influencing the culture of physical activity at this school. According to participants' beliefs, the school was not addressing the condition and age of the physical activity facilities that, in turn, was influencing their desire to maximize opportunities for physical activity. The underlying perception was that if the school was not going to provide the PE and non-PE staff with modern, clean physical activity facilities, then why should they (PE teachers) extend themselves to promote physical activity to students and staff. In addition, participants believed that some of the school's practices (i.e. structure of the school day, daily silent reading, lack of PE promotion by the Guidance department, focus on the Integrated Arts program) have contributed negatively to the existing physical activity culture. Thus, specific school practices were restricting the time the staff and students were able to dedicate to school-based physical activities.

Additionally, the varied cultural backgrounds and lower socioeconomic status of the general student population was also believed to be affecting the number and type of physical activities. As indicated previously, PE student numbers were declining, certain

interschool sports folded and intramural activities were confined to school hours when only a small percentage of students were able to participate. Therefore, the general student population was not responding to current options for physical activity and PE. To counteract this reality, investigating the physical activity interests of the student culture may promote greater student engagement in school-based physical activities.

Experienced PE Teachers.

The experienced PE teachers in this study were more familiar with the evolution of the physical activity culture at this school. Mike, John, Sean, and Jason had taught at least six years in this school culture undergoing several changes to school artifacts (inside and outside school walls) and school policies and practices. The changes, relative to experienced PE teachers' beliefs, had come as a result of the diminished value placed on physical activity and PE by administrators and teachers who have worked or are working in this school. Thus, as the researcher, their beliefs provided a conduit between the past culture (the way it used to be) and the present culture (the way it is now).

Mike was the current PE head and has taught at this school for six years. As a PE teacher and a department leader, he had a significant influence over the PE classes, intramural activities and the interschool teams offered at the school. A recurring issue following Mike throughout his tenure was the absence of a dedicated health classroom for PE classes. This was a problem because a five-day health unit could be delivered in five different classrooms; some rooms had the proper resources and space to conduct a Cardiopulmonary Resuscitation (CPR) module but many were not equipped. Mike said, "I brought up this concern at a department heads' meeting this year with the principal, an

Arts teacher and a cooperative education teacher; I cannot say whether one teacher agreed or disagreed, but the principal remained neutral in the conversation." He was frustrated with this non-decision because the PE department consistently donated the gym for school assemblies. Mike expanded his thoughts by saying:

> Because they (administration) do a lot of assemblies in the gym, we have to throw three classes into one gym – or on picture re-take day. Does it have to be in the gym – no – they could use another area of the school like the cafeteria; I have made this suggestion but it was rejected.

In addition to this school practice, Mike believed the Guidance department was hindering the promotion of PE. He commented that:

> The lack of support for PE from Guidance has had a major impact on our PE numbers. Our school has the lowest number of grade nine students taking PE in the school board; 65% of our grade nine students take PE whereas in most schools, it is 90% or more.

In another statement, Mike told me:

> We offer a grade 12 PE course – it is an options class where students select the activities they want to do over the semester. There are enough activity choices to select from so they do not have to pay a user fee for any activity. For next year, there is a major drop in student numbers for this course. Talking with some of the kids, I have found out that their Guidance counselors have been telling them that the course is expensive to take.

Mike was distraught by this circumstance because one of the biggest marketing tools for interschool sport player recruitment was the academic experience the students had in his PE classes. If he did not receive the opportunity to show kids who he was as a teacher and person, then they would be less apt to join his basketball team or participate in an intramural tournament where he was the official. Mike also expressed how this negative perception around PE had infiltrated into the community. For example, he stated:

> I have been to our feeder schools to promote PE to the grade eight students coming in next year; I have been to the school's basketball games and talked to their teachers and coaches, but I cannot seem to get our grade nine PE student numbers close to the board average.

In line with decreasing PE numbers, Mike noticed a significant drop in teacher/coaches which has influenced the total number of interschool sports teams accessible to students. According to Mike, the lack of teacher/coaches was associated with administrator and teacher values linked to school-based physical activity. To increase the number of teacher/coaches, Mike has tried to hire new PE teachers that address the coaching needs of the school. For example, he said:

> I had pre-selected a female PE teacher that was also going to coach the girls' basketball teams for the upcoming year. I told the principal that I wanted this specific candidate for the job before she entered into summer interviews for the position. Administration ended up hiring someone they wanted who does nothing extracurricular for our school and ignored the needs of our department.

Mike followed up this staffing decision with the principal. The principal justified her decision through confirmation that the new teacher was, "The most qualified person for the job." Recently, Mike had been trying to adjust to the changing values of new teacher hires. He mentioned that involvement in extracurricular activities was no longer a priority for many of the new staff. He reminded me of his coaching commitment to three-sport seasons and how he organized an open gym basketball session every Sunday. As the PE head, "I believe it is my responsibility to model this behaviour; it is self-satisfying – I get a workout in too." One of Mike's theories about new teachers was:

> The reason we lack teacher/coaches at this school is our teacher demographic. In my attempt to recruit new teachers to coach interschool teams, they say they do not have time because of family responsibilities. If staff do not have any kids of their own, they seem to be more involved in interschool sports.

A specific example supporting his theory is outlined in the following scenario:

> What we tried to do last year is on Wednesday nights - I set the gym aside for staff and their families to participate in an open gym session. Hardly anybody attended; only two staff came regularly and no PE teachers because they told me that they already spend their day in the gym. Two staff members took the lead to organize specific activities but still, no one came out.

I asked Mike about his promotional techniques for this staff activity night. He said it was posted on the school's email system, it was talked about daily on the morning announcements, a flyer was posted in the staff room and the night was promoted at monthly staff meetings. Also, Mike individually informed teachers on Wednesdays about this opportunity.

Ironically, I am one of those teachers Mike is referring to. I have two young children who are heavily involved in community sports and other leisure activities. I am part of a one-car family so in order to transport my children to their venues, I have to pick them up from school and then go immediately to the activity. Before we had children, my wife worked long hours and consequently, I committed more of my extracurricular time to interschool sports and intramurals. However, my current family situation dictates that my time be spent away from the school. It is a personal choice; there are other teachers in the school at the same family stage as myself but they have chosen to coach all three seasons and organize intramural activities.

My personal decision not to coach is also based on the poor commitment I have received from my interschool team athletes. After coaching for two years at this school, my experience informed me that the students needed their part-time jobs more than being part of an interschool team. For the most part, practice attendance was erratic and team success was minimal. As a volunteer, I want to have a positive experience beyond team

wins and losses. As I was the only team member to be present at every practice and game, it became difficult to sustain my motivation. As well, because of the academic focus of this school (i.e. Integrated Arts, ELL), the projected student demographic over the next five years suggests the next student generation will face the same financial and time challenges that the current students encounter.

A PE teacher near the top of the staff seniority pole was John. He had taught PE at this school for 13 years and was the teacher sponsor for the school's intramural organization team. John coached track and field and boys' basketball and football. Similar to the female respondents, John highlighted the importance of clean and modern physical activity areas. John mentioned, "The gym has not been a priority for our custodial staff all year. We have discussed this issue with administration but the problem still remains; the gym area is rarely cleaned." Above the cleanliness of physical activity areas, John stressed the condition of the school's weight room, "It is ironic that we have as many students as we do using the weight room at lunch and after school because it is the smallest and in the poorest condition compared to any other weight room in the school board." I followed up this statement by asking John to verify his knowledge of other school weight rooms. He responded, "I have taught the boys' Powerfit class for the past four years. I take my classes to compete in weight-lifting competitions at other schools – I have seen them all." As an extension, I probed deeper into John's beliefs to understand the reasons why the students used the weight room if it was inadequate. John exclaimed, "The students at this school take as many free opportunities to exercise as they can; they have nothing to compare the weight room to, so it is not an issue for them."

At the end of John's interview, I asked him how or if the school's physical activity culture had changed since he began teaching at this school. He said it had changed dramatically for the worse; the administrative turnover being the primary reason. Specifically, he commented:

> It is now, compared to my early years at this school, very depressing to see the lack of support from administration. The current Principal is focused on the Arts program because the school receives a lot of publicity; maybe if we had more successful interschool teams, we would get more publicity.

John also recalled, "During my first few years at this school, administration were hiring people that would give time to athletics; for years now, this has not been the norm." In the new culture, he has found that the administration have cancelled PE classes that were once pivotal to promoting school-based physical activity. For example, John said, "We need a leadership class again to help teach students how to run physical activity programs. We no longer offer this class because the past PE head taught this class; a diverse student population requires diverse PE courses." John stated the school's intramural organization team had assumed many of the responsibilities for physical activity promotion. However, there were too few students and very little time to effectively teach the principles of sport promotion and leadership. He firmly believed, "The school needs a PE class dedicated to sport and fitness leadership." In support of John's beliefs, Mike also recognized the need for such a class and has instituted a grade 12 recreation and fitness leadership course for next year; 45 students are enrolled. With this in mind, John emphasized the importance of the teacher sponsor on the student-run intramural organization team:

> The staff sponsor for the intramural organization team has to be comfortable in the gym environment. When something goes wrong, the student leaders are fairly young and their communication skills may not be that good so the teacher has to step in and be the counselor.

As the present teacher sponsor, John took the position because it needed to be filled. He said very few teachers wanted this role because of the drama that goes on between the student members. On many occasions, John said that some students would not attend meetings because they were in a personal dispute with another member. On other occasions, the students' personal opinions were so rooted that a consensus could not be reached on what activities were going to be offered, and who would take responsibility for organizing these activities. In general, he has enjoyed his experience but will not be continuing on in this leadership capacity for another year. Collectively, the PE department voiced the need for continuity of PE staff leadership on this student committee. However, the position sits vacant every year until a staff member is forced to play the part.

On another note, John outlined the changes to the school's intramural programs because of the current principal's decision to adjust the daily timetable. He explained:

> When I first came to teach at this school, intramurals were incredible; once the Ontario Academic Credit (grade 13) year was no longer, the administration changed the timetable to eliminate our common lunch. We lost lunch-time intramurals which killed the physical activity culture – I thought.

I asked John if intramurals have regained popularity since a common lunch was reinstituted last year. He said:

> Students are starting to come back, but we are a long way off; it may take five years for lunch-time intramurals to get back to where it used to be – it is a program and developing a successful program takes time.

I can relate to John's beliefs about the influence of the school's daily timetable. I was teaching and coaching at the school when there was no common lunch. Trying to meet with my athletes at lunch was not possible because their lunches were split between the first and second lunch period. The split lunch time frame was much shorter so running an intramural tournament was not plausible. Furthermore, fewer teachers were available to supervise and organize lunch-time activities as they were expected to teach one of the split periods. Based on my experience with both timetables, I believe the common lunch was more effective for promoting and delivering school-based physical activity opportunities.

John then re-directed his attention away from administration and began discussing the influence of the student population on the school's physical activity culture. He started his new train of thought by saying, "Our students today come from lower socioeconomic backgrounds – they are working at two part-time jobs sometimes through the night to support their family; they are sleep-deprived and anxious – physical activity is the last thing on their mind." Moreover, John's experience coaching the track and field team confirmed his beliefs:

> Our student culture is a big factor on how school events run or can run. Is the student who works all night going to attend a 7 a.m. track and field practice – most likely, no. The students that come from higher socioeconomic groups will be there because their parents are driving them to school.

Also, John found that because most of his track and field athletes were so happy to be involved in an activity other than school or work, they had difficulty focusing on their skill development. In John's words, "The students on my interschool teams love to socialize which reduces the investment they give to the coach and the team's success."

One of the most verbose participants in this study was Sean. He has taught PE at this school for 23 years. He has also coached multiple interschool teams and been involved in the organization of intramurals for 20 years. In accordance with John, Sean was struggling with the administrative turnover that, in his opinion, negatively influenced the school's physical activity culture. His initial statement was, "Many of our previous male principals were former PE teachers – they were diligent promoters of sport and physical activity and positively shaped staff and students' perceptions about the importance of physical activity." In addition, he explained:

> The various principals I have worked under at this school have contributed to the cultural shift; say what you want, they (administration) are a big influence on how sport or activity or fitness is translated through the school. Up until about five years ago, we (PE teachers) could open the gym and let kids play basketball before school and we did not have to be in the gym, only in the surrounding area. Now, administration has placed restrictions on us saying that a staff member must actually be present and supervising in the gym; we are already thin in terms of coaches, how do we recruit teachers to come out at 7 a.m.?

I asked Sean about the current practice the PE department followed for open gym in the mornings. He said, "Unfortunately, the gym is no longer available to the general student population before school." Based on the current climate in schools surrounding liability, administration is mandated by the school board to post teacher supervisors in areas where students are at risk of injury (Dickinson, 2006). Thus, if a teacher opened the gym for students and left the area unsupervised while knowing the potential for harm, he/she could be charged under civil law (Dickinson, 2006). Moreover, Sean expanded his beliefs around morning physical activity sessions for the *casual user* saying that in the past five years, it had been difficult to find teachers willing to take their turn in supervising this session:

> Many years ago, we did have a fair number of staff who were willing to volunteer their time to supervise the weight room before or after school; however, I do not see this anymore – people have busy lives and are choosing not to get involved. When I started out teaching at this school, I was coaching three sports a year for ten years. My wife wondered if she was ever going to see me before 9 p.m. each school night. Over my last couple of years, I have reduced my role with interschool sports because the PE department has not got the support from administration. Unfortunately, the new teachers are not making the effort to take over any athletic programs.

As the researcher and school culture member, I feel that before school open gym sessions are integral towards meeting the physical activity needs of the student population. For example, I arrive around 7 a.m. each day and am bombarded by students who want to play basketball or soccer in the gym. Even with the policy posted on the gym door, students continue to inquire about getting into the gym or weight room before school. The interested students are usually ELL students who do not play on any interschool teams but love playing informal games in their free time. Regularly, I encourage this group of students to get involved in lunch-time intramurals but they tell me, "We do not want to be on a team playing in front of the school – we just want to play."

Sean also talked about the recent trend of hiring teachers for their academic qualifications only. He believed it was impacting the number of teacher/coaches at the school:

> Unfortunately, I do not see the new hires bringing any more physical activity expertise to the school; when I got hired, I remember the first thing they asked me is what I was going to coach or what could I coach. New hires today, if they happen to teach Math and are willing to coach, that is a bonus. We, the teachers, have very little say on whether we get the person we want to sustain school traditions or revive the old traditions – it does not work.

Indirectly, the backgrounds of new teacher hires was contributing to the reduction in physically active teacher role models. Sean recalled a specific situation when he started teaching at this school:

> When I first came to this school, there was no weight room so I went out and got the equipment in. I figured if you want to get the kids into the weight room, teachers have to work out as well. We did draw the kids in because when the weight room was first opened, there were a lot of teachers coming down. However, with staff changes, I do not see those people who are doing regular routines.

In his opinion, this was detracting from the quality of student physical activity leaders:

> Our current intramural organization team has little desire to make intramural really, really good or make it better than the previous year. These kids attempt to run events but they do not do enough background research or preparation to organize a tournament. They have no real concept of planning activities.

Sean discussed another factor he felt contributed to the current physical activity culture at this school - the student demographic. First, he believed, "The sport culture of this school has changed – we have lost that German working-class student who loves to play the sports traditionally offered at this school – we have lost that tradition." Besides the diverse cultural backgrounds of the current students, he noticed a significant drop in student participation in extracurricular activities. For example:

> We have tried to run open gym nights but many of our students now have part-time jobs – the kids say they really need the job because they are supporting their family. At some point, you have to say enough is enough; the students at our school now have caused a definite shift in the sports we can offer. It seems like it is going to be basketball and soccer, that is it.

The influence of the general socioeconomic student backgrounds was evident in the decline of student card purchases. This card is $25 and allowed entrance into school dances and was a student's ticket to interschool sport participation. Last year, 75% of the student population purchased their student card; this year, less than 50% of students made

the investment. The 25% drop meant that 200 students were not eligible for organized sport participation. Many of these students wanted to get involved but were not able to afford the cost of participation. Sean said the students' philosophy now is, "They (students) do not value the student card – if they are only going to play one sport, is it worth it to them?" Additionally, Sean expressed his concern about the influence the Integrated Arts program was having on the school's physical activity culture:

> I think the Arts kids are great for the school but at the same time, it is not really great for the other portion of the student body. There are only 300 kids that are actually involved in the Arts package – the other 1200 students are not – why are they not coming out for our team sports? We are losing sports' teams that have been around for 20 years because our student base is being drawn away from sport into the Arts.

This statement seemed incomplete so I asked Sean to explain his thoughts further. I reminded him that the Arts students only made up 20% of the student population. In effect, "How are 300 students discouraging the other 1200 away from athletics?" His response was, "My feelings are partly based on the emphasis on student involvement with the Arts; these kids are always in some kind of a rehearsal when we try and get everyone on board to do the Terry Fox Run at lunch." I suggested that a possible solution to this conflict could be to discuss the run date in advance with the Arts teachers to accommodate all parties involved. He abruptly responded:

> If I went to the Arts teachers for support of athletics, intramurals or any other physical activity event - that would never happen. Really, to be blunt, I think athletics has taken a back seat when the push was on and the school received a lot of money to run an Integrated Arts program. The thought at the time from administration was to do as much as we can to get as much funding as we can.

The most experienced cultural member, Jason, taught PE at this school for 27 years. He was the school's previous PE head and during his leadership, he introduced the leisure time intramural programs. In addition to his involvement in PE, he had coached

several teams including boys' football and ice hockey, and girls' volleyball and badminton. Jason's beliefs about the physical activity culture mirrored Sean's in many aspects. They taught and coached together for over 20 years so it was not surprising they harboured similar beliefs. Jason strongly believed the current physical activity culture was a product of administrators' values. He said:

> When I first started at this school, we had great support from administration. We had an administrator that hired based on the teams you could coach. Since we went to a female administration, I have seen a significant drop in support for athletics. The backgrounds of the ladies in the front office (principal, vice-principals (excluding Jane)) speaks volumes about their lack of support. They do not understand the importance of physical activity. As a result, PE and physical activity take a back seat to the Arts program.

He went on to tell me that the current principal was an English teacher at this school before she entered administration. Jason recalled, "She did not get involved coaching or any extracurricular activities that involved physical activity when she was a teacher, why would she start now?"

The focus on gender continued into Jason's comments around some of the new teacher hires:

> The principal is hiring teachers based upon her own values and beliefs. I see some staff coming down to the gym; besides the female PE teachers, I see no other females participating. This has been a huge change here – there has been a recent push to hire females and their main concern is family and getting home.

Moreover, Jason expanded his beliefs to include all new teachers stating they were not willing to put the effort into making physical activity opportunities what they should be. He has found:

> We have not got back to the intramural prowess we had years ago because of the lack of effort from the new staff. I see it in our own PE department, so not only is it in the kids, it is in the staff; staff used to be very involved.

Jason used a specific example to outline what he meant by *effort*:

> In the good old days, it was not unusual to see 25% of the teaching staff at our school's basketball games. Staff and students were expected to be there to support our squad regardless of whether it was a home or away game.

He does not place the blame solely on teacher values. Jason recalled:

> Buy-outs to school sports' events used to be built right into the timetable to support the whole athletic idea. For example, on Thursday game days, it was a shortened timetable for everybody. This is no longer the case and I can understand why teacher support is down.

According to Jason, staff participation in school-based physical activity opportunities should extend beyond attendance at interschool sporting events. However, he believed the current staff lacked the leadership qualities to organize and deliver effective physical activity events for students. He said:

> I think there is a lack of staff leadership – years ago, we used to have an intramural organization team that was outstanding. In my opinion, the current PE staff are not taking a proactive role, they are taking a background role. I believe that valuable time is wasted during intramural activities.

He also expressed why his own involvement in physical activity promotion had decreased. The current PE head had created a policy concerning student use of the weight room that was contrary to his beliefs. For example:

> In the past, at lunch-time, I used to say if you (student) wanted to use the weight room, go get changed into PE clothes. Now, anybody can use the weight room – maybe I am wrong with my philosophy. I am old school but because of this change, I am no longer willing to supervise the weight room at lunch.

Comparative to other PE department members, Jason believed the student demographic was re-shaping the physical activity culture at this school. He stated:

> Almost a third of our students are ELL; this has hugely changed our school. Even though certain programs (sports/clubs) excel, others have died. Students today do not know the traditional sports we play and are very reluctant to try things they have not seen before. The focus on these ELL students is a big reason why physical activity opportunities have declined. We (staff) see a change in our

> student base after every international event that goes on in the world. About five years ago, we had a group of Serbian kids go through; now we see a group of Muslim kids coming into the school. Each group bring things to the school but each cultural group will choose to participate or choose not to participate in physical activities.

Also, Jason believed the Integrated Arts program was affecting PE student numbers and interschool teams:

> In a nutshell, I think that the increasing competition with the Arts program is having a negative impact on our PE numbers and teams. Students in this program have to maintain a 70% average to stay in the program; they think they cannot afford to dedicate any extra time to PE courses or team sports.

In addition to the Arts students, Jason admitted that many of the ELL students were not familiar with the traditional team sports played in Canada. He had witnessed this in his grade nine and 10 PE classes. Jason said in the past, he would briefly introduce team sport rules (i.e. rugby) and then have the students start playing the game. Today, he said, I have so many injuries in my PE classes because the students do not have the skills or the knowledge of sport rules to play the game. However, Jason stated it was not always this way. Over his tenure, he had witnessed an immigration pattern about every five years that seemed to change the fabric of the school. He said the school was currently in a Middle-Eastern flux because of the political trauma occurring in those regions of the world. Five years ago, the school was enrolling the most Serbian students it ever had. Referring back to those years, he said that the girls' and boys' volleyball and basketball interschool teams were the best in the school's history. Jason believed this was not a coincidence because these team sports were valued in those countries: "In our current school culture, we cannot front any volleyball teams because those students have graduated and not been replaced." In his experience, Jason found that interschool team success was cyclical and largely dependent on the cultural backgrounds of the students

attending the school. When evaluating the current student population, Jason felt the doubling cost of sport participation in the last five years made it impossible for most students to participate in interschool athletics.

On the whole, the experienced PE staff believed that teachers and administrators were the greatest influence on the school's physical activity culture. Aside from a few statements from John about the condition of the school's physical activity facilities, the experienced PE teachers believed the following factors to be most influential on school-based physical activities: (i) the current student population, (ii) the physical activity values and gender of the administration team (i.e. principal, vice-principal) and, (iii) the characteristics of new teacher hires. Instead of devising solutions to declining student enrolment in PE, intramurals, and interschool athletics, experienced PE teachers were fixated on their successful PE and sport experiences many years ago rather than reaching ahead. This approach was not acceptable to the new PE staff who had confronted Guidance about the reasons behind low enrolment in grade nine PE, and offered solutions to administration to reduce the strain on PE classes when school assemblies inhabited the gymnasiums. Thus, adapting to and accepting the school's present day physical activity culture appeared to be a major barrier for the experienced teachers in the PE department.

One of the research questions posed for this study was to explore the relationship between participants' beliefs and school-based physical activity opportunities. Drawing from comments in this theme, the perceived lack of support from administration for physical activity has influenced the physical activity culture in the following ways: (i) morning open gym sessions have been cancelled, (ii) three senior members of the PE department have significantly reduced their interschool coaching commitments and, (iii)

many new teacher hires are not engaging in sport coaching or intramurals reducing the number of opportunities for physical activity. To give breadth to the lack of new teacher awareness around the need for physical activity leaders, in September, I offered a coaching workshop for any teacher interested in learning the basics of coaching any sport. The workshop was to take place over two days during the second half of lunch and included a gymnasium session that would help them feel comfortable running a practice. After two weeks of promoting this opportunity at staff meetings and on the school email system, I received one teacher response.

Moreover, the PE departments' persistence in promoting competitive team sports has resulted in: (i) poor student engagement in leisure time intramurals, (ii) the folding of some long-standing interschool sports teams and, (iii) reduced student enrolment in senior PE classes (grade 11/12). Additionally, the prevailing belief in the PE department that the Arts program trumped every other school initiative restricted opportunities for physical activity. As a result, there was no communication or collaboration with the Arts teachers even though both PE and the Arts offered activities like dance. This was an opportunity for the PE and Arts' teachers to connect and support each other's curricular objectives. In turn, a mutual understanding and relationship can be achieved between departments to honour teacher and student needs.

Also, some of the new PE teachers believed that the Guidance department was misinterpreting the value of physical activity and sport in the school. However, the effort to accommodate ELL students in junior PE classes had proven to be beneficial as PE numbers were strong in those sections. On the other hand, the remaining contingent of PE classes had not adjusted to meet the learning and physical activity needs of the general

student population. Relative to my experience in the PE department, this predicament originated from those teachers who had traditionally taught senior level PE classes. These PE teachers have had success in the past and are reluctant to embrace new pedagogical teaching strategies or include students in their own learning by collaboratively selecting physical activities. Instructional approaches to PE that did not include students in major course initiatives (i.e. units of study) may be directing junior students (grade 9/10) away from senior PE courses. Thus, the *my way or the highway* method of PE class delivery (i.e. competitive team sports) could be masking students' perception of the value of PE and other school-based physical activity opportunities (i.e. intramurals, interschool teams).

Theme 2: The Meaning of Physical Activity

The second underlying theme emerging from data analysis was the expansive meanings of physical activity among participants. In Chapter One, I defined my ideal of student physical activity in relation to the secondary school setting as, "60 minutes of daily, moderate-vigorous physical activity." Divergent from my beliefs, some of the experienced male PE teachers believed that student involvement in interschool sport was meaningful physical activity. In contrast, the female participants believed that individualized, less competitive forms of physical activity (i.e. zumba, yoga) should be available to those students who are unable or prefer not to take part in traditional forms of competitive team sports. Interestingly, the PE teachers did not emphasize PE classes as a valued physical activity opportunity for students. By and large, participants were conflicted on whether this school should organize more team-oriented activities that

rewarded students for success or increase the number of individual, non-competitive physical activities offered to students. To compare and contrast the broad interpretations of meaningful physical activity, participants' beliefs were analyzed as distinct sub-groups (new and experienced PE teachers/administrator).

Less Experienced Teachers/ Vice-Principal.

Beth believed that, "Most of the intramural tournaments at our school are soccer and many of the students who participate are members on the interschool soccer team already." Her solution to expand the student demographic that engaged in intramurals was:

> Intramurals need to target more students and run longer tournaments so it does not seem so rushed – I think girls definitely at this school require an advertising campaign targeted to them especially because we have so many English Language Learners.

She expanded on her proposal by saying:

> We (PE teachers) cannot ignore the fact that we are an English Language Learners magnet school and an Arts school. This limits us as to what type of student we are going to get and influences what students are going to get involved in physical activity.

Also, Beth felt that in order to get students into the gym, some rule concessions had to be made. She said, "It may be hard to see kids working out in their jeans, but it is more important to see that they are in the gym or weight room being active." Certainly as part of the Muslim religion, girls' bodies are sacred and must be covered at all times. Beth believed if the PE department guideline of proper gym clothes (i.e. t-shirt, shorts, running shoes) was enforced for leisure time intramurals, the school would be excluding several students who wanted to be active but were unable to because of their religious beliefs.

From her experience teaching ELL girls, Beth was aware of how shy and unsure these girls were of their own physical abilities; "The ELL girls do not even know what to look for when seeking out physical activity opportunities." I asked Beth if she had initiated any extracurricular events specifically for ELL girls. She claimed she had plans to organize such activities but they had not come to fruition as of yet.

From a personal standpoint, I supervise lunch-time intramurals and have noticed that only a handful of females participate consistently. These girls are interschool team members that are skilled in sport. The first-time female user does not seem to be welcome or may be intimidated by the sport or predominantly male student participants. The highest intramural female participation rates experienced this year was during a girls-only indoor soccer tournament and when zumba and yoga workshops were available at lunch.

Lisa concurred with Beth's beliefs concerning the importance of encouraging all students to participate in intramurals. She believed:

> Maybe we should provide activities that are more tailored to non-competitive recreation. For example, the yoga club which encourages staff and students to participate together. There is nothing competitive about working out but how do we get the kids and staff to use this equipment?

Particularly, she referred to her experience teaching grade nine Geography this year, "In Geography, I ask my kids to explain the rock cycle and some kids perform an interpretive dance that illustrates the cycle - you are never going to get that at another school." Lisa found if more Arts-based physical activities were promoted then more students attended. As a new PE teacher, Lisa understood the importance of daily physical activity for all students. She told me about the lasting impression playing university ice hockey had on her philosophy of lifelong activity. She mentioned how she has incorporated her

knowledge gained through sport and physical activity into the student population. Unfortunately, only after three years at this school, Lisa's approach has changed:

> Today, I am less enthusiastic about trying to pump up our PE programs and pump up our numbers. We know that the more kids that take PE, the more kids that are active which means better school sport's teams. It is really hard when no one wants to back you.

The overall impression I received from Lisa was that she felt she had very few staff members on her team of physical activity enhancement. She stated many times that very few non-PE teachers wanted to improve the school sports teams or make intramurals better. As indicated in her statement above, the lack of school support was defeating her purpose and desire to maximize physical activity opportunities for students.

In support of Beth and Lisa, Jane believed the school did not advertise individual sports, fitness and lifestyle activities as much as team sports. She felt if individual fitness activities were promoted a little bit differently and were regularly available to students, the school would recruit students who did not want to exercise in a group setting. Additionally, Jane believed that, "If students are given the opportunities to participate in non-organized, non-competitive physical activities, they may not feel the pressure to be there week after week." To build upon her thoughts, I inquired whether she would be willing to organize some of these opportunities for students due to her extensive background as a fitness trainer. She responded:

> I would love to start up a fitness club after school but the reality is I am normally here until 7 or 7:30 p.m.. Administrators that coach, it is understood that they will be irregular. I am trying to find that balance.

Peter agreed with his female colleagues that non-competitive, lifestyle activities was the direction the school should be headed to recruit as many students as possible. His philosophy was:

> I think we should involve more lifelong physical activities such as biking or walking – and just more activities – something like a school-wide run where we are giving kids the opportunity to be involved even though they are not on a team. I find we are having more success with the individual sports like wrestling, tennis and track and field. We may not be having a lot of success but we are getting a lot of student participation. These individual sports are still team sports but are more individually focused.

More specifically, Peter recalled his conversation with the PE head (Mike) last October when the decision was made to cancel the school's volleyball teams (boys and girls). Mike's rationale was that the volleyball teams would pull students away from playing other sports (i.e. basketball). He believed it was more important to have one or two competitive interschool teams rather than five non-competitive teams. In contrast, Peter's belief was that the PE department needed to expand its sport opportunities available to students. In defense of his decision, Mike said his philosophy was to reduce interschool team sport opportunities to invest more resources into intramural sport options for students. In turn, "Instead of servicing 10 kids for one volleyball team, the school is servicing 50 kids on five volleyball intramural tournament teams." Rather than trying to revive the school's volleyball program, Peter proposed that the PE department should start and maintain an outdoor ice rink on school grounds for student and staff usage. However, his colleagues informed him that it was a *ridiculous* idea in this climate. They said it would take a *ridiculous amount of work* and the students would not appreciate it. Also, many questions arose from his proposal surrounding liability, supervision, and equipment needs. From this, Peter felt the support was not there and did not pursue it any further.

Generally, the new PE teachers sensed the need for diversion away from traditional, competitive teams sports to less competitive or non-competitive lifestyle

activities. These teachers believed they were effectively contributing to the physical activity programs at the school but were seeking more guidance from the experienced PE teachers. For example, Peter commented, "I learned the culture through attrition, not through any kind of explicit explanation from the head of PE." He further explained that, "If the culture and practices around physical activity were well-defined – for example, this is kind of our mission or our goals in terms of physical activity - I think that it would give us (PE department) more purpose." Beth concurred with Peter, "As a new teacher, it would have been helpful to be given information related to how the school is run, particularly on the role of the student athletic ministers." She said this would have helped her understand where her skills fit into the PE department's needs.

Experienced Teachers.

The experienced teacher participants believed that meaningful physical activity was associated with participation in competitive team or intramural sports. Mike synthesized his experiences with alternative physical activity opportunities:

> I think interschool sports are very important. I have tried to start alternative activities like yoga and other lifestyle activities, but we could not get the girls to come out at lunch-time. Two years ago, I offered a girls only, open gym sessions at lunch on Wednesdays; it was terrible, no girls would come, there was just no interest – I am not sure why.

With the goal of improving student participation in intramural programs, Mike had re-focused his attention this year to the Arts students. This year was the first time he had the intramural team run quidditch at lunch. A Harry Potter movie was due to come out around the same time so he figured the timing was right. He said, "I think one of the best things we ever did this year for intramurals is quidditch - it is the only time I've ever seen

an Arts kid in the gym outside of PE class." I asked Mike if he had tried other games like quidditch to attract more students to intramurals. Based on the success of this alternative physical activity, he said he was going to survey his PE students to learn about other activities in this genre. Furthermore, Mike pondered why the Arts students did not participate in most other non-soccer intramurals. His experience had been that, "Nobody comes to the gym if it isn't soccer." After a short delay, he recalled the times when he organized activities like floor hockey and handball, only a few new white male students attended. Mike furthered his thoughts by stating, "It is interesting because when I think about it, I feel our intramurals target non-white, senior male students." He believed that the senior students (grades 11-12) intimidated the younger students with their athletic abilities and autocratic control of teams and strategies. Due to his observations, Mike had decided to allocate certain open gym days next year to junior students (grades nine and 10) only. By this strategy, he hoped to increase overall student participation and indirectly, improve future student numbers in senior level PE classes.

Compared to the other experienced PE teachers at this school, John defined participation on interschool teams as meaningful physical activity. He told the story:

> I really did not want to drive 45 minutes to support the wrestling team this year at the city finals but I drove there because no one else is going to. I try to go to these events so when these kids see you in the hall, they appreciate you more, and know that you value their work ethic and commitment to the sport.

However, he discussed why he now focused his coaching energies on individualized sports (i.e. track and field):

> There is a lot of pressure to win and when you are dealing with kids that have never played organized sports and trying to teach them how to play basketball, it defeats you and pushes you down a bit.

He went on to say:

> If you (the teacher/coach) do not have students with the skills or the financial means, you are going to have a difficult time running good teams. For me, this is not a good feeling because I have competed at the highest levels of my sport and am used to being competitive – my passion is being pressed down.

In line with John, Sean strongly valued student participation on interschool teams. He expressed his beliefs on the changing student culture and how it was influencing student commitment to team sports:

> This is a reflection of the kids we are getting because they feel they cannot give up their time for a practice to play one or two games a week. The kids are fine with one practice if they really have to and if they can skip out of that practice, they will – they just want to play the game – but they don't have the skills to play the game.

However, he had made attempts to enhance school-based physical activity opportunities in other ways. Last year, Sean made a formal proposal to the school board to fund a new outdoor track. In his proposal, Sean outlined the advantages to the school (i.e. PE classes, track and field athletes, intramurals), the local community (i.e. track and field clubs) and the school board as a whole (i.e. potential venue for inter-city track meets). At the end of the process, Sean reflected on his efforts:

> I had the offer of a free outdoor track from a new entrepreneur – the company was looking for recreational areas to market their product. So, I presented this opportunity to the school board; they denied my request because they felt it was not a priority at this time – not the direction we (school board) are headed.

In addition to his outdoor track request, Sean said a couple of years ago he went through the same procedure to gain funding to build a climbing wall inside the school's gymnasium. He contacted a local consultant who would do the work for free leaving the school board to cover the materials only. His proposal was rejected and in his frustration, he said:

> It is almost like if the school board does not come up with the idea, it is not a good idea. My hope is this culture at the board office will change because there are past PE teachers now working at the board level.

These experiences with the school board have not stopped Sean from seeking out unique ways to increase physical activity opportunities for students. In his role as a Cooperative Education teacher, he had established relationships with many local businesses that, in turn, had rewarded the school with free or subsidized weight room equipment. Besides, these relationships had also benefitted PE classes; fitness instructors from a local fitness club led free fitness classes (i.e. aerobics, yoga, zumba) for all PE courses.

Moving on to Jason, his beliefs were grounded in the importance of student involvement in leisure-time intramurals. He said:

> You know what, kids do not want unorganized activity – they want organized activity. Staff at this school think they can just open the gym for kids to have fun is just not the way it should be; students will get frustrated if activities are not organized during open gym times. All you need to do is give kids direction and provide that leadership and set expectations and goals for kids. I think it is so easy because kids are dying for this stuff. All you need is somebody to say we are going to do this.

He steadfastly believed that the physical activities currently available to students were appropriate, just inefficiently organized. Jason told me that when he supervised open gym sessions on Wednesdays, he separated students into four soccer teams and ran five-minute shifts. He officiated the games calling fouls, out of bounds plays and managed the time so that each team had equal floor time. Jason did not think it was the activity being played but the lack of organization and unfamiliarity of the activity that made students *afraid* to get involved. I asked him to describe the students that took part in soccer tournament Wednesdays. He responded, "Mostly the male, senior black students – I might see one girl and a couple of white boys over a month of supervisions." I inquired

whether he organized any other sport activities on Wednesdays. He said his experience over the years has been that more kids come out for soccer. Jason also reminisced about the days when intramurals and the gym were the center of school activity. Today he said, teachers who supervise and organize intramurals just open the doors and expect it to happen. Jason attributed this mindset on the increasing demands of the profession, "Teachers today are more reluctant to give their personal time to the school because of the contractual demands around teacher on-calls, staff meetings and other supervisory duties."

Jane disagreed with Jason's perspective based on her observations of school halls during lunch-time intramurals; "If we are providing the right physical activity options during intramurals, then why are so many students choosing to sit in the halls and the library during lunch?" Her knowledge of school-based leisure time physical activity opportunities at this school led her to the following conclusion:

> This school provides students with a number of class-based and intramural opportunities but it is how to engage the kids in these opportunities. Are the current activities what the kids want to do in the first place? Are we marketing an obsolete animal? It really is about supply and demand.

Researcher Observations.

My observations as a cultural member and researcher revolve around the distinct sub-cultures that exist within the PE department. I hear from the new PE staff that students are asking for less competitive, individualized physical activities. It is apparent that other than the school's soccer, basketball and football teams, interschool sports are not popular with the general student population. In response to these verbal and visual cues, the new PE teachers were attempting to diversify opportunities for physical activity.

However, there is a cultural obstacle that these alternative ideas must overcome. Although Mike was somewhat supportive of less traditional forms of physical activity, he was torn between the new and the old. He was under pressure to sustain the school's tradition of competitive team sports valued by the experienced PE staff while, at the same time, absorbing the fact that the students and the new PE staff were telling him that the *old ways of doing things* were no longer applicable. Mike was a new PE head and a relatively young cultural member himself. He was trying to please both sub-cultures by supporting requests from each group of teachers. Mike needed to take a side and lead the department towards a common goal of physical activity. As it stands now, each sub-culture believed they were either making headway to change the physical activity culture (i.e. new PE teachers) or maintaining the tradition of competitive team sports (i.e. experienced PE teachers). Consequently, the PE department was avoiding the contentious issue of *the way we do things around here*.

In reply to one of this study's research questions concerning the barriers that inhibit school staff involvement in school-based physical activity opportunities, it appeared that the PE teachers were preventing each other from maximizing their commitment to PE, intramurals, and interschool athletics. It was evident from that data that the physical activity leaders at this school had the expertise and the knowledge to maximize physical activity opportunities but the absence of a shared physical activity goal, and the lack of collegial leadership were negatively influencing their efforts. The new PE teachers were organizing individual, non-competitive, intramural and open gym activities that matched the physical activity interests of the student majority. In contrast, most of the experienced PE teachers remained diligent in encouraging the value of

competitive team sports to students. To outline a common departmental goal around meaningful physical activity, the PE staff may want to survey the students about the physical activities they enjoy, the time of day when they are most willing to participate and some of the barriers that prevent them from participating. The data collected from this student survey may provide evidence that the new common goal is in the best interest of the students and, in turn, enhance student participation in school-based physical activity opportunities including PE.

Theme 3: Philosophical Differences: Strategies for Promoting Physical Activity

The final theme extracted from the data pertained to the effective promotional strategies for school-based physical activity opportunities. As a PE teacher at this school, I feel there are many efficacious examples of how the school is promoting physical activity. For instance, there are visual displays linked to school-based physical activities in the form of PE course assemblies, intramural sport bulletin boards, the school's PE and Athletics website and various posters around the school. Also, interschool game day barbecues and weekly fundraising sales of baked goods for school teams brought attention to the boy's soccer and football teams. Additionally, interschool athletes wear their team jerseys on game days to increase student/staff awareness. Furthermore, morning announcements inform the students daily about physical activity clubs (i.e. yoga), interschool team games and intramural events that are planned for the week. Less frequently, non-PE teachers have their students during class time support the boys' soccer team for home field games. However, study participants are divided on the best methods to promote school-based physical activity opportunities. In line with the previous two

themes, participants' beliefs were discussed according to new and experienced PE teachers.

Visual Cues.

Firstly, Beth believed that the information on school walls regarding intramurals was dated and worn. She felt it was more beneficial to address the students face to face about physical activity opportunities. Moreover, Peter believed that physical activity promotion was compartmentalized into one small physical area of the school outside of the PE office. He found that those involved in PE took it seriously because physical activity was a big part of their lives. Peter mentioned:

> I think we need more incentives for the new students who are just starting out – even something like professionally posting track and field records on school walls but we do not have that; it gives kids something to work towards.

Furthermore, Lisa believed that the school could do a much better job of campaigning for physical activity. One of her ideas involved the insertion of a slide show of each PE staff member engaged in their sport to be shown at the athletic banquet. She said, "It would be fun for kids to see their teacher/coach in the prime of their playing career in the same sport." Lisa also felt that, "The school does do a good job of promoting track and field and soccer but I think it (sport promotion) could be improved as we have done on our website."

A more recent promotional strategy was the use of the school's website to inform parents and students of the opportunities for physical activity throughout the school year. Lisa designed the PE and Athletics website three years ago and since then, Peter and Beth have helped her maintain the site. One of the reasons Lisa started the site was because

her house tenant (a student at the school) told her she wished she could find out more about the school's sports teams. Her tenant spent the majority of her time at home online. Lisa figured if the Internet was where the students were spending their free time, then it was important to exploit that media source for physical activity promotion. Although Beth believed the site was important, she did not feel it was going to increase PE student numbers or student participation on interschool teams. Additionally, Peter talked about the blog space on the website where teachers could comment on their personal physical activity or team successes. He discussed, "I think we have a long way to go with our website; it is great but I don't think the rest of the school is on board so much in terms of promoting physical activity." In general, the new PE teachers believed the website was a valuable tool for promoting school-based physical activity opportunities.

When I talked to the experienced PE teachers about physical activity promotion, they had mixed beliefs about the effectiveness of visual cues. For example, Mike said:

> At the beginning of each year, we (PE teachers) hold a course carousel and a fall assembly to make physical activity options visible to students. In my opinion, it is a waste of time – the students tell me it is a waste of time because they know who is going to try out for a team anyway. I do not know if these assemblies draw any extra kids or not.

On the other hand, Jason talked about the significance of the student handbook:

> Certainly with grade nine and ten, there is promotion of activities. The students see it in the student handbook – all the activities are outlined so parents know what is going on at the school. Of course, attempts are made to keep the local sports news board current outside our PE office.

Jason discussed ways in which the school could promote physical activity more effectively:

> Another thing I want to talk about is the Junior A hockey players we have attending this school. We have an exclusive group of students at this school that

> are underappreciated by the student body and very misunderstood. We (PE staff) have lost the potential these kids can bring to physical activity promotion at this school. It is too bad so many professional athletes have gone through this school and we have done a poor job of tapping into them.

However, Jason believed physical activity promotion had become an uphill battle. His sense was, "Some things have disappeared over the years including support from administration and the staff in general towards active promotion of interschool teams and intramurals."

In opposition to Mike's and Jason's beliefs, John had a more positive outlook on the importance of visual promotion. His impression was that current promotional strategies were attracting students to physical activities. For example, he thought, "The athletic ministers are pushing to have more things up and visible with regards to notifying the school community about physical activity clubs, sports, and intramurals." He also praised the new PE teachers for consistently posting pictures of teams and students participating in PE classes. Interestingly, John was the only participant who believed that the school's visual displays were current and attractive. He may be biased because of his role as staff sponsor on the student intramural organization team; this group of students were responsible for creating and maintaining the school's physical activity bulletin boards.

In terms of the school's PE and Athletics website, the experienced PE teachers made no reference to its effectiveness as a promotional technique. In today's secondary schools, social media including websites, Facebook, and Twitter are a large part of the student culture. Therefore, embracing this technological advancement to connect with students and endorse school-based physical activity opportunities should be a priority.

Rewards for Participation.

As indicated previously, study participants were not in agreement about the influence of visual cues on physical activity promotion. However, each PE teacher believed that the PE department was doing an effective job of rewarding students for interschool sport participation. Every PE teacher at this school supported the recognition given to student/athletes at the annual athletic banquet. At this banquet, award winners were celebrated in front of their peers, given a take-away plaque and their picture was placed in the school's yearbook for posterity. The PE teachers believed that students really valued this event and came away gratified for their time invested in school sports.

Lisa said, "I am pretty proud of our athletic banquet – the kids are getting more awards than most schools – we have several awards that recognize many team members." Mike stated, "We do a really good job with our athletic banquet in recognizing student success in sport." Moreover, Sean felt, "We really push the athletic banquet – the recognition is significant to the kids and the general school community." As well, Jason talked highly of this event but extended his comments further, "We have a pretty good athletic banquet – it has changed and evolved over time; what this school lacks is a way of displaying athletic awards." The unique feature of the athletic banquet was its fully student-centered approach. The students were the masters of ceremony, they created the PowerPoint presentation that accompanied each award winner and were responsible for securing the location and items required for the banquet (i.e. tables, decorations). In contrast to student run intramurals, students in charge of this event were graded on its outcome; a factor that may have contributed to its success.

On the other hand, an area of concern for the PE teachers was the reward structure associated with intramural sports. Feedback from the students who participated in intramurals suggested the need for prizes for all participants, not just tournament winners. In turn, the prizes were not related to the activity and distributed weeks after the event ended instead of when peer recognition was highest – after the championship game. Sean had a suggestion to improve the current intramural reward structure:

> I know a couple of years ago when the intramural organization team was operating well, winning tournament team members used to be awarded gift certificates from McDonald's and turkeys just before Christmas. I think we need to get back to doing stuff like this where kids know there is a prize.

Sean also believed:

> Our current intramural organization team has little desire to make intramurals really, really good or make it better than the previous year. I think, in many cases, the students like the idea of belonging to a group but they don't really do anything to earn their membership. Now, there are some kids who do try, but as part of the bigger group, these students are not vocal enough to say we want to do it this way.

He felt that the students running intramurals did not possess the skills to organize an intramural tournament. Sean remembered asking one particular student on the committee this year why an activity was planned the way it was. The student did not have an answer and seemed disoriented while running the event. Sean reflected back to his earlier years at the school when intramural programs *used to be the envy of all other schools in the school board*. He said in the past, leisure time intramurals were promoted as battle of the sexes and battle of teachers versus students. Also at this time, the school offered intramural tournaments that would coincide with what was going on outside of school. For example, the school would run a floor hockey tournament when the National Hockey League playoffs were on and indoor baseball when the professional baseball season began in the spring. However, Sean said he met with the intramural organization

committee at the start of every school year to offer his advice to improve intramurals but *nothing ever seemed to change*.

Lisa also felt the same way about intramurals:

> I do not think the intramural organization team is efficient in doing what it should be doing – it is difficult because it is just a program that is run at lunch time; it is a volunteer position and anytime the position is volunteer, kids are not being rewarded for it – you are not going to have committed kids. In defense of these students, their teacher sponsor does not monitor or grade the students in their roles.

She directed her concerns at the teacher sponsor of the school's intramural organization team:

> We definitely need more staff involvement with intramurals. I think the kids need more structure (i.e. take paperwork away, a binder, and a final report to hand in). As it is now, it may be that one student is told to run one badminton tournament as their sole responsibility all year – they are not going to take this role seriously.

Although it was a student-run team, Lisa believed the students had a greater respect for teacher input compared to their peers when organizing and planning activities for the school community. Unlike the students who organized the athletic banquet, the students on the intramural organization team did not receive any academic credit for their time. Thus, the PE staff may want to re-evaluate the school's intramural organization team and assign academic outcomes to each student's performance on this team. Potentially, students could place greater value on their role and strive to organize successful intramural events with relevant and timely reward structures.

The significance of strong adult leadership on the intramural organization team was important but students elected to this team needed to understand the integral roles they served in promoting school-based physical activity opportunities. The student candidates that applied for these positions did not always have backgrounds in sport or

leadership. While this was not a requirement, it was advantageous if they did because of the short time dedicated to fostering these skill sets. In support of this philosophy, Mike confirmed that student participation rates were highest in well-organized, effectively publicized physical activity events. Therefore, if the intramural organizational teams' goal was to offer physical activities that appealed to the entire student population, the activities should be planned by a knowledgeable and representative group of students who were led by a teacher who invested him/herself completely to the program.

Beyond interschool sports and intramurals, students were rewarded weekly for their involvement in physically active clubs (i.e. running, yoga, dance, fitness) and/or for their leadership in PE classes. To receive this award, any school staff member could submit a nomination to the principal. The principal selected a winner who then received a certificate of accomplishment and had their picture taken with her. In addition, the picture was posted on the school bulletin board for one week outside of the main office for further recognition.

On this issue, Lisa felt there needed to be a committee that collected nominations and made a collaborative decision on the weekly winner. As it stood now, the students were aware it was a first come-first serve award and had become embarrassed to receive it. Beth also viewed this system as flawed. Her main concern was that the teachers/coaches were nominating the same students for this award. Beth noticed that award winners were students who will be or have already received recognition for interschool sport participation. She believed that the school should recognize the first-time user like the girl who attended the after-school fitness club for the first time. In her opinion, recognition of these feats encouraged the inactive students rather than rewarding

the students who were already active. Conversely, Sean believed that any recognition was better than no recognition. He said, "Whether or not the kid is the real athlete of the week, other kids in the school see this student being recognized which could inspire them to join a team or club to gain the same recognition."

Teacher Role Models.

An additional promotional technique believed by most participants to influence physical activity opportunities at this school was the presence of active teacher role models. Peter, for example, rode his bike to school every day and encouraged his students to do the same. He said it helped him connect with his students if they saw him outside of school actively engaged in physical activity. As a high school student, Peter recalled seeing his high school Math teacher skiing at a local hill and remembered how it inspired him to be more active. He hoped his actions would produce the same results for his students. Another way that Peter led by example was during his PE classes:

> I participate in my PE classes in the games and activities with my students. I try to get involved whenever I can especially in my Outdoor Education class. I like to talk about my own experiences that I have had – being physically active with my family.

Lisa strongly supported Peter's approach but thought the non-PE teachers at the school could do more when it came to promoting healthy lifestyles. She stated:

> I've seen at other schools that the physical activity levels of administration and teachers are much higher which translates into students being much more active. You look at other schools – many or most of the PE teachers are in the gym or weight room before or after school doing their own personal workout. Kids see that and they are going to mimic that behaviour.

At this school, Lisa found:

> We have, to a certain extent, some non-PE teachers that are physically active and are visible to students in the weight room. I think it is huge for PE teachers to model what they teach. Students need to see that you are willing to do whatever it is you are teaching. Students are not going to be motivated to do it if you are not willing to do it.

As well, she felt it was important to inform students about teachers' personal physical activity accomplishments. She said, "I wish we (teachers) were encouraged to share our personal physical activity interests because we have staff that are doing great things – one staff member runs marathons." Beth, like Lisa, felt that, "Teachers who personally see the benefit of sharing this information with their students will do it on their own; certainly, there is not any encouragement throughout our school community to advertise our accomplishments." Jane was also a believer in the importance of physical activity role models for students. Her thoughts were:

> I am always amazed at the connections I gain by working out at the community gym. Kids that know other kids say they saw me working out – these are great conversation starters. As a newcomer to this school, it is one of the only things I can talk to the students about.

In reference back to Lisa, she drew heavily on the memories of her high school experience:

> I think the more students know about their teachers, the more they are going to respect their teacher/coaches. I remember when I was in high school and there were teachers that I looked up to – that is happening here and we have to be aware that is happening. We should give students all the good knowledge about us.

Lisa acted on her beliefs by developing a PE and Athletics school webpage. Lisa knew that students dedicated a great deal of their leisure time online; therefore, demonstrating to students that teachers were technologically current may encourage them to engage in intramural or interschool activities.

Furthermore, Lisa was involved in promoting PE and physical activity to parents of students in feeder schools at grade nine parent information sessions. At these sessions, she presented a ten-minute synopsis of what opportunities (PE, intramural, interschool) were available to incoming grade nine students. Through this undertaking, Lisa believed that parents learned about the PE teachers that their son/daughter was going to potentially work with for the next four years; consequently, it could persuade these parents to promote school-based physical activity opportunities to their child in advance of the school year.

Similar to the new PE teachers, John believed it was important that students knew about the physical activity interests of teachers outside of school. Alternatively, Sean and Jason were not open to the idea of sharing their own fitness accomplishments or their personal life with students. Even though Jason worked out in the school's weight room every day after school, and supervised the after-school fitness club, he said he was reluctant to share any of his fitness interests with his students or staff. Jason believed that the students did not care if he ran a marathon or played hockey every Friday. In his opinion, staff should be portrayed as equally important to the school culture. More specifically, he said:

> In the right way, this is important to do. It can be done well and show that teachers are involved and active. It has got to be done in a way that promotes one's accomplishments so that some staff are not perceived as more important than others – it is important we achieve this balance.

Deciphering Jason's comments, his actions and beliefs appeared contradictory so I probed deeper into his thoughts. He told me a story about his own son's perceptions of his grade four elementary teacher many years ago. Jason was amazed at how many times during that school year his son said, "My teacher told us to run around the track to warm-

up for PE – why does she not do it with us – she does not even change or play with us so why should I care." Remembering this story seemed to trigger the retraction of his initial belief that physically active teachers did not influence students.

Correspondingly, Sean was averse to revealing any details about his personal life but recognized that the PE department could do more to encourage teachers and students to be active together. For example, he stated:

> We could be doing a lot more in terms of physical activity options – I know other things other schools do is they will run ski days; staff and students all go skiing for the day and it works. What happens on these days is that students see that physical activity is a good thing and teachers end up being seen on a different level.

Additionally, Sean was unsure about other teacher's feelings on this school practice: "I do not know how comfortable some other teachers are with this – it is something I do on my own. In some cases, this may be a good thing, but how do you convince people to move toward this?"

Administrative Support.

As a rule, the PE teachers at this school believed they were learning from past and present promotional experiences around school-based physical activity opportunities. Each year, the PE department was trying new techniques to attract students to PE and physical activity. However, the underlying belief was that their attempts to improve the school's physical activity culture were not supported or rewarded by administration. Specifically, Beth exclaimed:

> Definitely coming from administration, there is no message of backing teachers who make the effort to encourage physical activity outside of school hours. Just something small like an announcement telling teachers there is organized staff

> activities taking place after school in the gym. There is little administrative support of those staff ventures to get people involved.

She felt there was progress being made with the new Specialist High Skills Major in Sport Diploma promoted by Guidance for next year. Yet, students could go through this Diploma without enrolling in any more PE classes than normally mandated by the Ministry of Education.

Lisa supported Beth's comments about the lack of administrative support for physical activity. She found that, "Any initiative that administration is promoting has nothing to do with PE and hasn't in the three years I have been here – even when it comes down to making sure every grade nine student is taking PE." Furthermore, Lisa said her experience with administration has changed her ideals for physical activity at this school:

> Administration is not going to tell Guidance to change anything. I went to the head of Guidance and showed her our percentage of students taking PE relative to other schools. Because of this fact, my philosophy has changed. I am still going to pump up PE because the kids at this school need it.

Likewise, the experienced PE teachers have minimized their involvement in physical activity promotion because they also perceived a lack of support from administration. For example, Sean said:

> Part of my frustration is the lack of importance (from administration) attached to physical activity at this school. The principal pays lip service and says that we need to get more physical activity happening but when it comes right down to it, she is not willing to back it up.

He backed his beliefs with another example:

> One thing the principal imposed this year is 15 minutes of silent reading that teachers are expected to have their classes do daily. This is a major problem with PE classes because we already lose 15 minutes of class time for changing and equipment set-up. Now, we are really cutting down on the actual physical activity kids achieve during class. Personally, I do not value reading especially when it is forced upon me in my classroom. I do not follow this practice and wonder why it was imposed on all classes.

Sean's main concern with the literacy block was the absence of follow-up from administration. In his opinion, the principal never asked any of the PE teachers how it was working for their PE classes and/or if any improvements could be made. Overall, Sean felt, "How would she (the principal) like it if we came into her office 15 minutes of every day and told her she had to run on the spot until the public announcer said she could stop?"

In terms of my perspective as a teacher at this school, I have also experienced negligible support for physical activity from administration. The most recent example occurred this year during the school-wide course promotion period in February. The PE department had just completed a mural of posters, pictures and written information that illustrated the various PE options students could choose from for next year. This display had been posted on the PE bulletin board for two days; however, when I entered the school after day two, I noticed that the entire display had been covered by promotional material for an upcoming drama production. Apparently, Arts students were given permission by administration to use this bulletin board for their purposes. After conversations with the Arts teachers and the principal, the students were instructed to remove their materials. It took them two days to re-do the display as they first found it. By the time the wall was visible and coherent, course promotion week had ended. This was a huge loss from a PE and physical activity promotion standpoint.

Nevertheless, I still believe this school is using its available resources to effectively promote PE, intramurals and interschool sports. Understandably, there are promotional strategies that need adjustment but on the whole, the students are aware of the various opportunities for school-based physical activity. In my assessment, student

participation rates in PE, intramurals and interschool sports are below average and decreasing because of the activities being promoted, not the promotional strategies used to motivate students to get involved.

Referring back to one of my research questions, "What are the factors that facilitate and/or inhibit teacher and administrator participation in school-based physical activity opportunities within secondary schools," the previous paragraphs indicate that administration (principals, vice-principals) and Guidance counselors were major influences on secondary PE and physical activity opportunities. Across the continuum from new to experienced teachers, the belief of positive administrative support for PE and physical activity guided this school's physical activity culture. Throughout participants' interviews, positive administrative support was believed to be: (i) development and sustainability of policies and practices that encouraged physical activity, (ii) hiring teachers with backgrounds in physical activity, (iii) consistent interest in physical activity through appearances at interschool and intramural activities and, (iv) allocation of resources to enhance the existing PE and physical activity programs and clubs. In addition, a factor that encouraged the new PE teachers to get involved in school-based physical activity opportunities were the active teachers who modeled healthy lifestyles. Thus, teachers who were actively engaged with their students in PE classes, or completed personal workouts in the school's weight room, motivated new teachers to create physical activity opportunities for students.

CHAPTER FIVE

CONCLUSIONS

The purpose of this study was to conduct a detailed examination of the beliefs of physical activity leaders within one secondary school to fully investigate how access and opportunities for school-based physical activity across Schein's (1985) three levels of school culture were affected by the beliefs of these participants. Precisely, what beliefs did PE teachers at one secondary school have about school-based physical activity opportunities? Further, did these beliefs influence school-based physical activity opportunities, and finally, were there other explicit factors that influenced their involvement in these opportunities?

It quickly became apparent during data collection that the relationship between school-based physical activities and a school's cultural system was complex. Prior research in this genre has focused singularly on school artifacts (i.e. condition, location, and size of physical activity spaces) when promoting physical activity to students (Haug, Torsheim, Sallis et al., 2008; Haug, Torsheim, & Samdal, 2008; Nichol et al., 2009; Sallis et al., 2001). This study supported these earlier findings but also indicated that social factors (i.e. underlying member beliefs) may be more important than the built environment when maximizing opportunities for school-based physical activity in secondary schools (Faulkner, Adlaf, Irving, Allison, & Dwyer, 2009; Lei, Phillips, Allen, & Julian, 2004; Ommundsen, Klasson-Heggebo, & Anderssen, 2006). In the subsequent paragraphs, I expand on the complex relationship between secondary PE teachers' beliefs and school-based physical activity opportunities.

The participants in this study emphasized three social factors that influenced their ability to maximize physical activity opportunities: (i) the existing physical activity culture, (ii) diverse interpretations of meaningful physical activity and, (iii) philosophical differences concerning effective physical activity promotional techniques. I combined the last two factors into a "Divergent Beliefs" category for discussion purposes.

Factor One: Existing Physical Activity Culture

Study participants identified the existing physical activity culture as a major influence on school-based physical activity opportunities. To assess this school's physical activity culture, it was appraised against the characteristics of an active school culture (Sport and Recreation New Zealand, 2011). Based on this recent review of physically active school cultures, the six characteristics of an active school culture were identified: (i) physical activity is promoted across the curriculum, (ii) physical activity opportunities and resources are available to students during leisure times, (iii) students are rewarded for participation in physical activity, (iv) encourages teachers and administrators to be physically active role models, (v) active transportation is the norm and, (vi) students, staff, parents, and community partners (i.e. feeder schools) receive consistent messages about the importance of physical activity in the school (Sport and Recreation New Zealand, 2011). I selected this particular active school culture model because it included many of the cultural benchmarks considered in earlier school culture and physical activity studies to be integral components of active secondary school cultures (Barnett et al., 2006; Barnett et al., 2009; Fuller et al., 2011; Storey et al., 2011).

School Artifacts.

Contrary to findings from other studies that have examined the relationship between school culture and school-based physical activity (Barnett et al., 2006; Cradock et al., 2007; Fein et al., 2004; Nichol et al., 2009), this secondary school's small, unclean and dated physical activity facilities and areas (i.e. gymnasiums, weight room, sport fields) did not influence student use of these facilities and spaces. Regardless of the age and condition of the physical activity facilities and areas, when activities were well organized, advertised, and teacher supervised, it enticed most students at this school to get involved. The PE teachers at this school commented on the regular student use of these activity areas during leisure periods, particularly for ELL students. However, these teachers also recognized the lack of white students engaged in open gym sessions, intramurals and/or weight room physical activity opportunities. Participants believed that many of this school's white students had the financial means and parental support to partake in community based, organized sports. Also, this group of PE teachers found that white students were instructed by their coaches/parents to avoid participation in competitive activities at school because of the time and financial commitment invested in community sports.

These findings align with other studies that found when teachers led school-based physical activities, students were more apt to participate irrespective of their individual backgrounds (Loucaides et al., 2009; Mahar et al., 2006; Pangrazi et al., 2003; Pate et al., 2005). However, further inquiry into student beliefs is needed to isolate the specific factors that influence their choice to use school-based physical activity facilities.

Generally, the experienced male PE teachers were willing to work with the school's existing facilities; in contrast, some of the new PE staff believed the unsafe and vintage feel of these physical activity areas limited physical activity diversity and discouraged student use. The female PE teachers adamantly believed that modernized, clean and safe physical activity equipment and areas would entice a greater percentage of the female student population to participate in physical activity opportunities. In addition, one new male PE teacher talked about the limited space and locked storage on school grounds for student and staff bicycles, skateboards, scooters and roller blades. This teacher believed that if space and storage were available, it would encourage students and staff to actively transport to and from school. Conversely, the experienced PE teachers felt that the school gym had always been the epicenter of the school during leisure times; upgrading to newer, larger and/or more modern facilities would not change this trend.

Mixed participant beliefs concerning the state of the school's physical activity facilities and equipment transferred into usage during PE classes. For example, the female PE teachers were reluctant to use the weight room and some of the physical activity equipment for PE classes due to student safety concerns. Also, the new PE staff avoided off-campus bicycle excursions for their PE classes because "there were very few places to safely store bicycles in the school". The lack of space and safe storage on the school grounds to house equipment associated with active transportation was not in line with an active school culture that promotes active transportation. As well, this predicament could be discouraging students and staff who want to bike to school. On the

other hand, the experienced PE teachers freely incorporated the entire inventory of the school's PE equipment and fitness areas into all of their PE classes.

Overall, the lack of data associated with school artifacts (i.e. gymnasium, outdoor track and green spaces, fitness rooms) on secondary school physical activity opportunities suggests that available, accessible physical activity facilities may be of less importance than the value placed on these artifacts by the physical activity leaders and students who use them. This finding deviates from earlier studies that determined a direct association between school artifacts and school-based physical activity (Sallis, Johnson, Clafas, Caparosa, & Nicols, 1997; Stratton & Mullan, 2005; Varpalotai & Thomas, 2007, 2009).

Student Backgrounds.

Inextricably linked to the physical activity culture of this secondary school was the diverse nature of its students. Due to this school's magnet programs (Integrated Arts, ELL), students were recruited from outside the catchment area and from countries worldwide. Thus, the student population had varied physical activity interests and backgrounds. In addition to the assortment of student physical activity interests, many students had limited financial resources, spoke very little English and worked at least 20 hours weekly beyond school hours. As such, this student demographic was unable to cover the costs or dedicate the time or effort associated with participation in interschool sports.

Noticeably absent from participant feedback was any reference to collaborative organization of PE programs; course of studies for PE, pedagogical strategies, and culturally appropriate activities for PE classes were the responsibilities of the individual

teacher. In turn, the content and delivery of PE courses across grade levels was dependent upon the instructional leader, not departmental values and goals. Thus, if students did not respond to a teacher's instructional methods or selection of physical activities, they usually eliminated PE from their timetable beyond grade nine.

On the whole, the female PE teachers were willing to explore alternative physical activity options and embraced the unique physical activity desires of the student demographic. Essentially, their pedagogical philosophy of PE accounted for the socioeconomic issues and the ethnic and/or religious backgrounds of their students. Additionally, the female participants anticipated a high immigrant female student base in PE and tailored their content and delivery with the knowledge that most female students at this school were not skilled or interested in western-based, competitive team sports.

Conversely, the experienced male PE teachers resisted the changing student culture and continued to teach mostly competitive, team PE activities. As a result of this practice, a culture of blame was directed at student cultures and socioeconomic backgrounds for the lack of student participation and enrolment in PE classes. On several occasions, the experienced PE teachers voiced their frustration about the lack of student involvement in historically popular PE, interschool and intramural physical activities. These teachers strongly believed the catalyst for the decline in interschool sports' teams and male enrolment in PE beyond grade nine was the fierce competition for students thought to originate from the curricular (75% academic average) and extra-curricular demands (i.e. dance and drama productions) placed on the Arts and ELL students. However, only 470 of a total 1500 students (31%) at this school were part of these specialty programs; the remaining 69% of students should have compensated for the lack

of sport, PE and intramural participation from the Arts and ELL students. Nevertheless, the current options for physical activity were not inspiring the other 69%.

A deeper investigation of students' sport and cultural interests may bridge the gap between what is happening now and what the students want. Previous studies have found that boys from middle class backgrounds are more interested in competitive team sports (Booth, 1997; Kirk, 1997; Wright et al., 2003). At this school, the majority of school-based activities were focused at white students from middle to high-income backgrounds. However, many of the students at this school were from low-income families and were unable to afford the cost of participation. According to Halas (2006), physical educators must reduce white male supremacy and its marginalization of certain racial groups. School-based physical activity experiences should be culturally diverse and consider race, class and gender of the general student population to maximize participation (Halas, 2006).

Resembling this study's findings, other researchers have found that girls in Canadian and American school Physical Education classes prefer non-competitive, non-team-oriented activities (Gibbons, Wharf Higgins, Gaul, & Van Gyn, 1999; Humbert, 2006; Lenskyj & Van Daalen, 2006). In keeping with Wright et al. (2003), this school's ethnically diverse student population may be more attracted to individualized, less competitive lifestyle activities. With this being said, eliminating team sport entirely is not recommended because it appealed to some students. In combination with team sport, alternative options for physical activity (i.e. quidditch, zumba) may increase overall student participation rates in school-based physical activity opportunities.

Inter-departmental Tensions.

Effectively, the PE staff believed that the principal, vice-principals, guidance counselors and Arts teachers were not supportive of their efforts to promote school-based physical activities. Frequently, participants outlined examples where the principal and/or the Guidance department discouraged student involvement in PE courses (i.e. grade 12 PE) and interschool sports. Furthermore, the PE teachers believed the Arts teachers intentionally managed the disposable time of their students by running rehearsals at lunch and before and after school – the same times when intramurals and interschool sports were offered. Also, when new ideas and initiatives related to physical activity required financial and/or school leadership support (i.e. new running track, indoor climbing wall, outdoor skating rink), the PE teachers felt abandoned and consequently, often declined chances to increase daily, student physical activity levels. Examples of this behaviour were evident in the number of PE teachers who were currently coaching interschool sports and in the small number of PE teachers who were supervising and/or organizing leisure time intramurals.

Additionally, the PE staff mentioned that one of the main reasons they lacked trust in administration was the restrictive daily timetable that limited student participation in leisure time intramurals and interschool sports. To summarize participants' beliefs, "If school practices supported school-based physical activity, it would encourage us (PE teachers) to organize a variety of interschool sports and intramural activities that meet the needs of the student population." As a solution, the PE teachers may look for avenues to counteract timetable restraints and promote PE and physical activity within the time

permitted. Essentially, do not succumb to the timetable, adjust and adapt opportunities for physical activity to fit within it.

The PE teachers' attitudes about the lack of administrative support influenced the number and quality of physical activity opportunities offered throughout the school year. For example in PE, the principal's policy of using the school's gymnasiums for school assemblies, graduation ceremonies and parent-teacher interviews reduced the number of days that PE classes could use the gym. Around these special events, the gym was unavailable for an average of two days and in the winter months, limited PE to the school cafeteria or a traditional classroom. As well, the inability to use the gym on these days forced cancellations of interschool volleyball, basketball and wrestling practices. Moreover, most of the technical equipment used for assemblies and graduation was stored in the PE equipment room up to a week after the event. Thus, PE teachers were unable to use most of their PE equipment because large audio speakers and steel overhangs blocked accessibility. While the PE equipment room and gymnasiums were in this state, it affected three PE classes a period over four periods per day.

The experienced PE teachers often chose to cancel their PE class on these special days. These teachers felt it was the principal's responsibility to find their classes other spaces on school grounds or provide funds to transport classes to off-campus recreational facilities. Consequently, students were losing 75 minutes of physical activity a day over this timeframe. In contrast, the new PE teachers searched out substitute spaces well in advance of school assemblies (i.e. computer labs, library, open classroom) and used this time to cover sport rules and strategies or expand on health topics through Internet or video.

Another belief of PE teachers was that they were promoting PE and physical activity in vain because the school's Guidance counselors were directing their students to non-PE courses. Recent student numbers in the grade 12 PE options course showed class size to be the lowest in the last five years and students were dropping this course early in the semester to pursue other academic interests. One PE teacher inquired with the Guidance department about the number of students leaving grade 12 PE. The response received was, "I have given these students a pass on PE – they will make it up another way – it has been approved by our principal." Thus, teachers at this school said they would not start any new PE programs (i.e. specialty PE courses) or extend the boundaries of existing PE courses until they felt they had support from the Guidance counselors.

Furthermore, school-based physical activity opportunities were influenced by teacher beliefs in the declining number of interschool sport teams. Over the past two years, five interschool teams folded because of lack of head coaches (i.e. boys' and girls' ice hockey, junior and senior boys' volleyball, and girls' rugby). Study participants commented that many of the new teacher hires had little or no background in sport and/or physical activity. Therefore, when teachers/coaches retired or moved on to other schools, there was no one to replace them. According to one of the experienced male PE teachers, in early 2010/11, nine new full-time teachers were hired and two have volunteered to promote physical activity through sports or clubs. In turn, the current PE staff is unable to coach every team so they coach the teams they enjoy. Unfortunately, the PE head confirmed that he would not seek out any additional non-teacher coaches to fill these coaching vacancies until administration showed greater support for school-based physical activity opportunities.

Similar to my findings, Storey et al. (2011) recently interviewed 45 elementary and secondary teachers from ten Canadian schools to inquire about the importance of administrative support when introducing school-based health and physical activity initiatives. The teachers stated that support from the principal and vice-principals was essential for any cultural change in the school environment. In turn, when administration promoted theses practices by incorporating it into the daily school agenda, teachers and students attached greater value to the initiative. Ostensibly, if cultural change is not supported among all stakeholders, than a move towards a more active school culture is impeded (Sport and Recreation New Zealand, 2011).

Being a cultural member myself, I can attest to participants' beliefs. For example, I developed and instructed a specialized PE credit (i.e. ice hockey) two years prior to this research. The principal was initially supportive of the course and allowed the credit to run with below average student numbers (i.e. ten students). I invested many curricular and non-curricular hours to the implementation of this course and it was a success based on student feedback. However, the principal cancelled this PE option the next year with the same number of students enrolled; she told me she could no longer offer a single PE section with low student numbers. I reminded her of the Native Studies courses that she approved to run with only seven or eight students per course section. Her response was based on government funding dedicated to Native Studies courses and not student enrolment.

Recalling the components of an active school culture, the presence of physically active teacher and administrator role models is important. In support of this cultural characteristic, previous studies have shown that students were more active in schools with

physically active adult role models (Barnett et al., 2006; Jennings-Aburto et al., 2009; Lounsbery, Bungum, & Smith, 2007; MacQuarrie et al., 2008). At this school, very few teachers modeled physical activity mainly because of their lack of knowledge around the significance of school-based physical activity. Nevertheless, conscious efforts were being made by the new PE staff to exercise in the weight room during lunch periods with students and entered staff teams in leisure time student intramural tournaments. In addition, some new PE teachers modeled physical activity outside of school by actively transporting (i.e. bike, run) to and from school and running 10-kilometer races with their PE classes. However, the participants mentioned that it was always the same seven or eight teachers (<1% of total school staff) that modeled the value of daily, physical activity to 1500 students and 92 colleagues. Therefore, the likelihood of physical activity becoming a cultural norm in this school culture within the next three to five years is in question.

The absence of teacher interest in school-based physical activity opportunities at this school is not surprising. In most cases, teachers are drawn to the teaching profession because of their positive experiences in school within certain subject areas (Lortie, 1975). Thus, when teachers are hired for their background in Arts or Drama, the percentage of these same teachers having equally positive experiences in PE classes and/or on interschool teams is low. Moreover, as other teachers in non-PE subject areas replace retiring cultural members, school values that once supported physical activity have shifted to focus on the Arts and ELL programs. This was marked in the decline of interschool sports teams due to inadequate numbers of teacher/coaches and fewer teachers willing to supervise leisure time physical activity opportunities. The new PE

teachers were attempting to maintain and increase physical activity options (i.e. before and after school intramurals, fitness clubs) but recognized their limits – they needed help from within and many new, non-PE teachers were not answering their call.

Furthermore, findings from this study identified the importance of a dedicated physical activity organization team of staff and students. For example, PE teachers at this school believed a major reason why many of the intramural activities were unsuccessful was because the members on the organizing committee did not research student interests. As well, the events were not well publicized and often self-destructed. School leaders (staff and students) on physical activity planning teams should value physical activity; they need to represent the student population and be willing to invest the time required to organize successful physical activity events.

Cumulatively, results from this study indicated that teacher and administrator beliefs regarding physical activity do influence secondary, school-based physical activity opportunities. Particularly, contradictory beliefs among PE teachers limited the school's ability to deliver consistent messages to students about the importance of physical activity; a characteristic of an active school culture. Prior school culture studies have shown that a school's cultural system changes individuals more often than individuals change the system (Fullan, 1993, 2001, 2005a). However, when schools produce enough individuals with collaborative characteristics, they will change the cultural system (Fullan, 2000).

Factor Two: Divergent Beliefs

Traditional versus Alternative Activities.

A subsequent factor that influenced school-based physical activity opportunities at this secondary school was the incongruence of PE teachers' beliefs around meaningful physical activity. Analogous to the previous section, the conclusions presented in this section are compared and contrasted to the characteristics of an active school culture (Sport and Recreation New Zealand, 2011).

Emerging from the data were definitive philosophical differences among PE teachers concerning relevant physical activity options in PE, intramurals and interschool athletics. On one side, the new PE staff felt that individual, less competitive PE, intramural and open gym physical activities (i.e. archery, dance, skating) were most important to the general student population. They strongly believed that if the school's focus was on alternative physical activities, more students would enroll in PE classes and participate in leisure time intramural programs. On the other side, the experienced PE teachers stated their preference for competitive team sport in PE, interschool and intramural programs. According to Sean, Jason and John, interschool sports was *where it was at*; *students learned the value of winning and losing, the value of being a teammate, the skills of a valued citizen*. This particular sub-group of PE teachers also believed that competition through team sport was necessary in PE classes; *team games teaches sportsmanship, the importance of individual skills, the ability to be a gracious winner and loser, and the importance of communication and game rules/strategies*. Specifically, Sean said, "Students are future company employees who will work in competitive team environments – at work, they will have to use the skills of the group to accomplish a goal;

if they do not perform efficiently, then they will not receive the reward (i.e. money)." Sean's perspective is in order with his work as a Cooperative Education teacher who places senior students in work placements for course credit.

Additionally, the experienced PE teachers held steadfast to their philosophy while supervising leisure time intramural programs. For example, Jason found that when he organized and officiated a team sport (i.e. soccer, basketball, floor hockey) in the gym at lunch, more students participated. He elaborated by saying, "Students just want organization – they do not care what the activity is – students want teachers to lead and they will follow."

Earlier studies have explored the relationship between activity type and student physical activity levels in PE classes. Usually, girls were more active in lifestyle and culturally-specific-based PE classes versus classes that consisted only of competitive, team sports (Going et al., 2003; Pate et al., 2005; Wilson et al., 2005). In contrast, some boys were more active in competitive, team sport oriented PE classes (Boyle et al., 2008; Hannon & Ratliffe, 2005; Kehler, 2010; Kehler & Martino, 2007; McCaughtry & Tischler, 2010). To maximize participation and student enrolment in PE and other opportunities for physical activity, teachers can be mindful of gender preferences.

Ironically, the PE head acknowledged requests from both sub-cultures (new beliefs vs. old traditions) exacerbating departmental tensions. For example, he encouraged participation in an after-school staff/student yoga club that attracted mostly Arts and female students but would not allow this club to run in the gym during lunch hour when it potentially could gain a larger student and staff following. He believed lunch hour gym sessions were for intramural activities like basketball, floor hockey and

soccer. In another circumstance, he allowed students to run a "one day, one-time only" game of quidditch at lunch in the gym to tie in with the opening of the new Harry Potter movie. However, he constrained the game to one half of the gym when the entire gym was needed for effective play. The other half of the gym was designated for basketball. Consequently, many students new to lunch-time intramurals did not have the time or space to play Quidditch and left the gym unsatisfied, many never to return.

As an internal observer, I was aware of the mounting pressure the PE head was under to sustain the school tradition of team-based, competitive intramural team sports and simultaneously, honour the requests of the new PE staff who promoted alternative physical activities. By his own admission, the PE head understood that lunch-time intramurals only targeted non-white, senior male students. He was also sensitive to the fact that girls were mostly interested in female only and lifestyle intramural activities (i.e. yoga). Nonetheless, it was clear that the foremost leader of PE and school-based physical activity at this school was conflicted by his own beliefs around physical activity, student physical activity preferences and the beliefs of other PE teachers in his department. Until a shared definition of meaningful physical activity is established within the PE department, selling the importance of PE and physical activity to students, parents and non-PE school staff will continue to be a challenge for the physical activity leaders at this school.

Physical Activity Promotion.

The PE teachers discussed their philosophical differences about effective strategies for physical activity promotion. The new PE teachers believed that promoting

physical activity on school bulletin boards, offering rewards for physical activity participation, maintaining a PE and Athletics website and being active role models encouraged students to be active at school. However, the experienced PE teachers were not convinced that these techniques would attract more students to PE, intramurals or interschool sports. The experienced PE staff favoured the face to face promotional method to students led by administration and PE teachers.

A very successful promotional event at this school was the annual athletic banquet; it was the pinnacle of award ceremonies for interschool sport athletes. Contrary to other school-based physical activity events, the PE teachers believed that attendance at this banquet motivated students to get involved in interschool athletics. The athletic banquet was organized and administered by students and the awards were considered by PE teachers and student/athletes to garner special meaning. Some of the awards dated back fifty years; thus, when a student's name was engraved on one of these awards, they became part of school history. In general, this banquet provided tangible memories that were passed on to future student generations. Reflecting on the lessons learned from the athletic banquet, the study participants believed that student-led activities with teacher guidance resulted in the highest student participation rates, a conclusion also supported by research (Fitzgerald, Bunde-Birouste, & Webster, 2009; Mahar et al., 2006; Pate et al., 2005; Scruggs et al., 2003). Still, these lessons were not carried over into intramural and PE programs.

When the PE teachers at this school were asked about incorporating student input into intramural and PE programs, their views differed significantly. The new PE teachers and the PE head felt that reorganizing intramural event planning to include input from the

school's student athletic ministers (n = 3) and the members of the intramural organization team (n = 4) would lead to greater student participation in leisure time physical activity opportunities. As well, the new teachers were already asking their PE students about their personal activity interests. For example, Beth said she had a hope chest that students could place their written sport/activity interests in at the beginning of every two-week unit. At the start of each unit, Beth asked her students to indicate their curiosities within the upcoming unit (i.e. volleyball, dance, healthy sexuality) which helped her target the areas of need (i.e. curriculum) and the areas of interest (i.e. student input). Overall, her experience with this strategy showed that girls were more interested in the lessons/units they help design.

Contrastingly, the experienced PE teachers did not believe that increased student input would improve student participation in physical activity opportunities. Sean stated, "The PE teachers have planned lunch-time intramurals for years without input from students or a segregated intramural organization team - there were years when we had to turn away teams because of the overwhelming interest in what we were doing." In addition, Jason believed that male students had very little to offer by way of instructional strategies or curricular content above what the PE teachers were already doing. In further support, John remembered asking his grade nine boys a few years ago about their individual interests in advance of a birth control and sexually transmitted infections health unit. He said out of 28 students, he received one serious suggestion and five unrelated suggestions; 22 students left their suggestion card blank. Based on this single experience, John has not allowed any future student input; he defended his choice by

stating, “No one has ever asked if they can have a say so I figured they (students) were happy.”

Considering the divergent beliefs of PE teachers around the importance of student input in school-based physical activity opportunities (i.e. PE, intramurals, interschool sports), the declining student numbers, particularly in boys’ PE courses, may be a consequence of these beliefs. One of the characteristics of an active school culture is student involvement in school-based physical activity opportunities. Therefore, this school’s physical activity leaders should contemplate the idea of including student input at the curricular (i.e. PE content) and non-curricular (i.e. intramurals, interschool athletics) levels of school-based physical activity opportunities.

Moreover, the lack of student input into school-based physical activity opportunities devalued the rewards received by students for physical activity participation. Most PE teachers at this school believed the primary reason for the athletic banquet’s success was that it held esteem among students because of their (students) role in planning and implementing it. At the banquet, student/athletes received accolades in front of their peers and teacher/coaches who understood the commitment they made to their interschool team over the past year. Also, the sense of ownership the students felt with banquet planning helped make it their night, done their way.

Relative to an active school culture, this school provided rewards for physical activity participation. However, the new PE teachers believed that the rewards for participation in PE and intramurals were not valued by the general student population because of the minor role they played in the organization of these activities. The entire PE staff believed the school should put more emphasis on rewarding intramural

participants and *first-time* users of physical activity areas. Recognition for the *inactive* student could be even more important to the longevity and success of PE and physical activity programs at this school considering its student and staff demographic. Consistent with every participant, rewarding students who were not members of an interschool sports' team or enrolled in a PE class was believed to be a necessary strategy to stimulate participation in other physical activity opportunities. On the whole, the PE teachers felt that awards for physical activity participation should be related to the activity and valued by the student population to effectively promote further involvement in physical activity.

Competing Beliefs.

It is apparent from the preceding analysis that the beliefs of the PE staff at this school are enabling this school's inactive culture. As well, the combination of ELL and Arts students and new non-PE teachers with limited physical activity backgrounds have also contributed to the current physical activity culture of this school. Opposing beliefs about the purpose and promotion of school-based physical activities and the absence of experienced leadership in the PE department are fostering unclear messages to students and non-PE teachers about the significance of physical activity. As discussed in Chapter Two, school leaders have the greatest opportunity to teach and encourage student behaviours associated with a healthy lifestyle (Fox et al., 2004; Pate et al., 2005). Therefore, it is important that a common vision regarding physical activity is seen and heard regularly by cultural members (i.e. staff, students, parents) and reinforced across the curriculum.

In response to my second research query, "What are the factors that facilitate and/or inhibit teacher and administrator participation in school-based physical activity opportunities?" one factor that resonated across study participants as an inhibitor to their participation in physical activity opportunities was the belief that administration, Arts teachers and students were not responsive to their attempts at PE and physical activity promotion. The PE teachers believed the school's waning physical activity culture was a product of administrative decisions that favoured the Integrated Arts and ELL programs. Rather than recognizing the changing student and staff demographic, and appreciating the benefits associated with these specialized academic programs (i.e. keeping the school open, opening new possibilities for physical activity such as dance, aerobics, yoga, and other movement experiences), the experienced PE teachers perceived the current culture as one they could not (or would not) adapt to.

As part of this perception of administrative non-support, the physical educators pointed to the revised daily timetable that called for the interjection of additional academic activities such as reading into what should be activity-oriented classes and a shorter lunch period. Participant concerns on this issue are supported by research that states that school practices are directly linked to physical activity (Dyment & Bell, 2007; Williden et al., 2006; Young et al., 2007) including active transportation practices (Eyler et al., 2008) and times dedicated to leisure (Hohepa, Schofield, & Kolt, 2006; Thompson et al., 2005). The experienced PE teachers felt that the new timetable did not allow ample time to achieve sustained student interest in intramurals or interschool sports. As well, the shortened lunch period was seen as a barrier because it reduced the teachers' and students' abilities to eat their lunch and participate in lunchtime intramural activities. In

line with some school culture researchers, school members must believe in school policies and practices in order to sustain school reform (i.e. new timetable) (Deal & Kennedy, 1983; Deal & Peterson, 1999; Hargreaves & Fullan, 1998; Peterson & Deal, 1998). At this school, the PE teachers were not included in the administrative decision to modify the daily timetable.

Nevertheless, one factor that encouraged the new PE staff to coach and/or lead opportunities for student physical activity was the presence of physically active teacher role models. Throughout the interviews, the new PE teachers reiterated how the teachers who worked out at school or coached multiple sport seasons and/or organized the athletic banquet mentored them to do the same. However, when their colleagues discontinued this modeling behaviour because of disagreements with administration and/or the PE head, it influenced their desire to follow in their colleagues' footsteps.

This finding is congruent with other researcher's conclusions that outline the significance of teacher role models in the socialization of new PE teachers. For example, Hopper and Sanford (2006) asked 16 pre-service teachers in British Columbia to describe their inspiration for pursuing the Physical Education teaching profession. As a general rule, these teachers stated the most important factor was the influence of their high school PE teachers. Teachers that led by example (i.e. ran with the PE class, played in team games during PE, coached interschool teams) and put in the extra effort to really know their students were considered effective teachers by the participants. Thinking back, many of these pre-service teachers attributed their career path to the PE teacher role models they met in secondary school.

A new factor that facilitated teacher involvement in school-based physical activities was related to the recent announcement that the school had been approved for a one hundred thousand dollar addition to one of the school gyms. The plans are to extend the size of this gym, create new PE offices and new student change rooms and add a health classroom. This information has inspired new ideas, hope and energy among PE staff who aim to use the additional square footage to increase physical activity time during PE classes, diversify physical activity opportunities for the general student population and improve interschool sport experiences.

In summary, this school's physical activity culture is best described as transitional – from an active school culture to a less active school culture and potentially, back to a more active culture. Its artifacts (i.e. physical activity facilities) are outdated and inconsistently maintained. However, teachers interviewed in this study declared that the school's artifacts were not contributing to the decline of the school's culture around physical activity. As previously indicated, many students voluntarily and consistently used the school's physical activity facilities.

Inhibitory Physical Activity Practices

Significant contributors to the decline of this school's physical activity culture was its daily timetable and daily literacy block which made it difficult for physical activity to be promoted across the curriculum. The PE staff believed that non-PE teachers were already stretched in terms of the curricular time available to them. Thus, when school-wide physical activity fundraisers such as the Terry Fox Run or the Walk for Breast Cancer required non-PE teachers to sacrifice instructional time for their

students to participate in these events, they would not register their classes. In addition to these obstacles, some of the school's Guidance counselors did not promote PE to the Integrated Arts students and/or ensure that all graduating students obtained their mandatory PE credit. In turn, the daily literacy block reduced PE class time from a 75-minute period to 60 minutes with ten minutes allocated for student changing into gym attire. By the time equipment was set-up and class goals were outlined to students, 40 minutes remained for physical activity.

Another school practice that inhibited student enrolment in PE and participation in leisure time intramurals was the PE department's commitment to competitive, team-based activities. The PE staff was conflicted on their philosophical approach to physical activity based on the misguided leadership of the PE head who struggled to understand his own beliefs about relevant PE and intramural physical activities. Within an active school culture, it is important that students and staff receive consistent messages about the importance of physical activity. Presently, both staff and students at this school are receiving mixed messages from the foremost physical activity school leaders (i.e. PE head, PE teachers, administration).

With respect to students and staff receiving consistent messages about the importance of physical activity, the PE departments' belief that other departments were not promoting physical activity and were unwilling to collaborate with them to educate the student population around the value of physical activity was unfounded. The Integrated Arts program includes a rigorous dance course load and the ELL academic program elicits ELL students' participation in leisure time intramurals and interschool sports teams. Regrettably, initiatives to enhance the physical activity culture of the

school by PE teachers are isolated from other school programs, disjointed and unsupported by any long-term planning or effective leadership. Ultimately, the PE teachers' beliefs are hindering their abilities to plan and promote meaningful physical activity programs for students and staff.

Efficacious Physical Activity Practices and Next Steps

Although departmental meetings were not the norm, the PE head held a coaches' meeting the first week of school where he outlined the goals of interschool sports and specific sport/rule considerations. At this meeting, he made a call for more coaches and encouraged current coaches to seek out and mentor new coaches. Also, the school's intramural organization team met once a week throughout the school year to plan school-wide physical activity events. However, feedback from the students and staff on this team indicated that more members were required to effectively run tournaments. The teacher sponsor was guiding the students' efforts but the team was restricted in activity offerings because of marginal student interest in intramural event planning.

Yet, unlike many of the other secondary schools in the school board, this school made three gymnasiums available for student physical activity every day at lunch throughout the school year. This school practice is of note because it fulfills one characteristic of an active school culture – offering physical activity opportunities and resources to students during leisure times. During the school's lunch period (60 minutes), the gym was supervised for 40 minutes by two teachers who made activity equipment (i.e. basketballs, soccer balls, etc.) and the weight room available to all students. On specific weeks, organized intramural tournaments were officiated and delivered by

students and teaching staff. Students were not required to change into a gym uniform or present a student card for entry; in addition, these opportunities motivated PE teachers to be active role models by entering staff teams into intramural tournaments – a characteristic of an active school culture.

The first step to increasing student and staff participation in intramural programs and enrolment in PE classes is to clarify a common goal(s) for meaningful physical activity that reaches across PE and other school-based physical activities. The next step should be to market the goal(s) to the non-PE staff, parents and students and gather feedback. If positively received, the school's physical activity leaders should develop PE and physical activity programs relative to these goals. One way the PE department could determine these goals is through monthly department meetings. Presently, the PE head casually announces some of the items discussed at the PE heads' monthly meeting to the other PE teachers over lunch. The impromptu and inconsistent nature of these informal meetings meant that most teachers were not present and the discussion was limited. Rarely were PE pedagogical strategies, content or future directions addressed in these sessions. Also at these meetings, teachers were interrupted by student requests, phone calls or supervision duties leaving many questions unanswered. Thus, it is important at the start of the year when many of these distractions are less likely to occur that yearly goals for PE, intramurals and interschool sports are created or reviewed.

Another recommendation to augment this school's physical activity culture is to expand collaborative decisions concerning PE and other school-based physical activity programs to Integrated Arts teachers. In a school where dance is a significant component of the Integrated Arts program and is also part of the Physical Education curriculum, it

presents a unique opportunity to marry the programs to fulfill mutually exclusive curricular goals. In reference to the characteristics of an active school culture, physical activity is promoted across the curriculum and teaching staff work together to deliver consistent messages about the importance of physical activity. The lack of participant data around this misguided inter-departmental connection signified that this secondary school was not working towards common physical activity goals.

Study Implications

One priority of this study was to expand the breadth of understanding around the influence of school member beliefs (i.e. PE teachers, administration) on school-based physical activity opportunities within an existing secondary school culture. Some studies have explored this relationship in elementary and middle schools (Barnett et al., 2006; Haug, Torsheim, Sallis et al., 2008; Manios, Moschandreas, Hatzis, & Kafatos, 1999; Naylor et al., 2006; Ommundsen et al., 2006; Sallis et al., 2001; Verstraete et al., 2006), but very few have done so within the secondary school context (Lei et al., 2004; MacQuarrie et al., 2008). Findings from this study support a multi-level approach to exploring the relationship between a secondary school culture as perceived by Physical Education teachers and opportunities for physical activity. In accordance with the results of this study, tangible cultural factors (i.e. weight room, gymnasium, outdoor track) and intangible factors (teacher beliefs and values) influenced teacher and student participation in the development and implementation of school-based physical activity opportunities. Therefore, discriminating between school culture and physical activity opportunities at a tangible level of culture (i.e. artifacts - what people sense), a less tangible level (i.e.

school practices/policies) and an intangible level of culture (i.e. underlying member beliefs and values) (Schein, 1985) is justified and recommended for future study of school culture variables.

School Artifacts.

Initially, this study confirmed prior findings that emphasized the value of secondary school artifacts (i.e. indoor and outdoor physical activity facilities and areas) proportionate to opportunities for young, adult physical activity (Fein et al., 2004; MacQuarrie et al., 2008). Nevertheless, this study is one of a handful of studies to search beyond the presence of school artifacts to examine the underlying factors associated with student and teacher use/misuse of school-based physical activity facilities and spaces. Generally, study participants believed that the condition of the school's physical activity facilities influenced their attitudes about school culture as well as their PE and intramural program planning and implementation. The new PE teachers felt that clean and modern physical activity spaces and equipment were necessary to maximize physical activity opportunities for students, particularly females. In contrast, the experienced male participants did not believe a new and clean gym and/or weight room would enhance student enrolment in PE, leisure time intramurals, and/or on interschool athletic teams. According to their beliefs, it was the responsibility of the school's physical activity leaders (i.e. PE teachers, PE head, administration) to promote the importance of physical activity to students in school assemblies, on school announcements or through coaching interschool teams.

Based on the PE teachers' perceptions of student participation rates at this school, financially-challenged male students from ethnic minorities were more apt to use the school's physical activity facilities/spaces when available regardless of its condition. This cohort of students took advantage of any physical activity opportunity that was organized and without charge. On the other hand, many ethnic minority female students avoided most physical activity opportunities despite the state of the facilities used to host these activities. Furthermore, the PE teachers at this school believed that white middle class students were less likely to use dirty, small and outdated physical activity equipment and spaces at school because of their access to clean, modern physical activity facilities in the local community. Thus, while the cultural origins of secondary students can influence the frequency with which indoor and outdoor physical activity spaces are used, it is important to understand that culturally-diverse students require culturally-endemic opportunities for physical activity. This knowledge will assist physical activity leaders when planning PE classes, leisure time intramurals and interschool sport activities. In addition, this study's results may be transferable to other secondary schools in Canada because of the predominantly multicultural nature of 21st century student populations.

School Practices.

At the less tangible levels of school culture, data analysis revealed how some of this school's practices affected the physical activity opportunities offered and teacher involvement in these activities. For example, the daily timetable included a 15-minute literacy block. Regardless of the subject area, if this block occurred during class time,

students were expected to spend 15 minutes reading. Derived from participant feedback, some PE teachers believed that little forethought was invested into the potential effects the literacy block would have on PE classes and the number of minutes students could be physically active at school. As a result, some PE teachers have refused to comply with the daily literacy block.

Secondly, the PE teachers at this school felt that the interschool athletic programs were not supported by the principal due to her denial of student buy-out options for student support of interschool sport competitions. Study participants believed that for some students, it was the only time they could experience the culture of physical activity at the school.

Thirdly, some PE teachers viewed the administrative trend of hiring non-PE teachers with no background in sport or coaching was a way of withdrawing support for school-based physical activity opportunities (i.e. intramurals, interschool sports). The PE teachers felt that maintaining this component of the school culture should be given more prominence when hiring. Consequently, some members of the Physical Education department had lost their motivation to promote physical activity that, in turn, contributed to the reduction in interschool teams offered due to lack of coaches.

Proportionate to alternative school practices, the PE head promoted certain PE courses, interschool and intramural programs (i.e. basketball); also, he was torn between offering competitive team sports and/or lifestyle-related physical activities to the students. In addition, the PE head did not value monthly PE department meetings and final decisions about PE courses and interschool sports' teams were made in conjunction with the school Principal. Much of this information was relayed to the PE staff by email

with little or no opportunity for individual teacher contributions. For example, as the coach of boys' and girls' ice hockey, I found out the school was not entering a team in either division this year by the PE head over lunch about a week before the season started. He figured because there was modest student interest in the team the previous year that he would cancel it in advance of this year's season. Also, the PE head had decided against a junior boys' volleyball team for the third year successively because it depletes the pool of potential basketball players. There were non-PE teacher/coaches interested in leading the volleyball program but the decision had already been made.

Although the mission of the Physical Education department at this school is to incorporate healthy active living into the student experience helping each student show growth in physical activity and personal fitness, the PE teachers were not clear on what physical activities should be valued and promoted to the student population. So, some teachers have started to reject roles in extracurricular physical activity opportunities leaving fewer physically-active role models for students and other staff members. Working towards a solution, if the PE head acknowledges that his personal values influence departmental values and goals, it will aid in the effectiveness of school-wide promotion of physical activity opportunities to students and staff members. In turn, common physical activity values supported amongst PE staff, administration and other subject area teachers could enhance the number and quality of school-based physical activity opportunities (i.e. interschool teams and clubs) providing a more fulfilling educational experience for students.

Finally, contrasting physical activity beliefs among PE teachers at this school has created an impervious barrier for consistent and relevant promotion of physical activity.

The outcome is a school culture that rejects many of the physical activity programs offered by current physical activity leaders. Throughout Chapter Two, the school culture and physical activity studies reviewed found that collegiality among school leaders and common beliefs were key characteristics in academically effective school cultures. Due to this study, it is evident that collegial relationships between secondary school physical activity leaders are also necessary for physically active school cultures.

Study Limitations

Throughout the research process, some limitations arose and are expanded upon in the following paragraphs. One limitation involved the method of purposively sampling participants from a single public secondary school in southwestern Ontario. This case study approach limited the generalization of results beyond this secondary school culture. Secondly, the school principal declined participation in the study. The opportunity to access her beliefs as a long-standing leader of this school's culture would have been invaluable towards understanding the evolution of the school's physical activity culture. Also, the participating vice-principal had less than a year's experience in the culture and was unable to provide an in-depth perspective into the school's cultural system.

Another study limitation was participant sample size. Potentially, if non-PE teachers were asked about the school's physical activity culture, other factors associated with school-based physical activity opportunities may have been identified. Additionally, the studied school was an ELL magnet school and prided itself on an Integrated Arts Specialty Program. Thus, the student demographic was not representative of many of the public secondary schools in the local school board or across Ontario. Moreover, three of

seven participants had taught at this school for more than ten years. Ideally, each participant should be experienced cultural members (≥ 10 years) in order to collect rich, thick descriptive data required of cultural studies. However, the PE department and administration had recently experienced a large staff turnover leaving these departments with several new members. Also, being a staff member at the studied school could be perceived as a limitation to gathering actual teacher beliefs due to participant-researcher familiarity.

Future Studies

In preparation for this study, a thorough literature review of the studies that examined the relationship between school culture and physical activity opportunities revealed gaps that require further investigation.

Overall, there are many factors of interest for future studies around school culture and physical activity opportunities. Specifically, the relationship between the social dimensions of school culture and: physical educators; teacher-student interpersonal relationships; student perceptions of the importance of physical activity; cultural acceptance of physical activity; and school ties to outside community physical activity facilities and resources. Several previous studies have found that physical manifestations on school property such as the number, quality and size of school facilities were associated with enhanced student physical activity levels; however, no studies have examined school member beliefs concerning this relationship. As outlined in Schein's organizational cultural model (Schein, 1985), underlying member beliefs direct an organization's practices and policies and help define its outward expressions (i.e.

artifacts) of internal values. By acquiring further knowledge around school staff and student beliefs concerning this relationship, indoor and outdoor physical activity spaces on school grounds may be used more effectively to promote physical activity (Cohen et al., 2008; Haug, Torsheim, & Samdal, 2008). Additionally, the feedback from teachers, administrators and students on this particular connection could better inform school districts' and Ministry of Education's policies linked to new school organization and design.

Research that stretches beyond the tangible (i.e. quality of sports' equipment used, PE teacher pedagogical practices, PE class context (single sex or coeducational)) to access the root of student physical activity behaviours in PE is needed. Most studies that have explored this relationship have done so at the artifacts' level of elementary and middle school contexts. Future studies that investigate culturally specific PE activities, and PE teacher support for modified curricular strategies and PE policies at the secondary level could offer a greater understanding of the factors that influence student participation in PE classes. These studies should occur in conjunction with the examination of time available for PE, which, at present, is showing mixed results.

There is also a lack of research into the relationship amid physically-active role models and school-based physical activity opportunities in all school contexts (elementary, middle school, secondary). To date, limited qualitative evidence gathered from secondary school students and teachers indicates that adult and student role models who value physical activity positively influence the number and quality of school-based physical activity opportunities. An approach that may add depth to understanding this issue is to initiate quantitative research on the links between active role models and

physical activity opportunities in school. Also, very few studies have considered the correlation between teachers' and administrators' physical activity levels and school culture. Research is important in this area because student physical activity levels at school are associated with teacher and principal values, attitudes and behaviours surrounding physical activity (Bauer et al., 2006; Dyment & Bell, 2007; Dyment & Bell, 2007; Groft et al., 2005).

Also, other researchers have commented on the need for strategies that overcome barriers to health interventions and new PE curriculum implementation (Bowins & Beaudoin, 2011; Mandigo, 2010; Naylor et al., 2006; Storey et al., 2011). In particular, there is a need to investigate the responsibility of the individual(s) who implement a physical activity intervention and/or how a new PE curriculum is introduced. More exploration into these areas of interest may be critical in interpreting sustained adherence to school-based physical activity interventions and new PE curricula.

Thus far, the majority of school culture studies have been descriptive. This is appropriate because school staff, parents and student beliefs in relation to the influence of school culture on physical activity opportunities have been less explored. Thus, there is a call for more descriptive studies that analyze the social characteristics (i.e. member relationships, collaborative curriculum, member beliefs) of high physical activity opportunity schools. Within this vein of research, combining objective physical activity measures with subjective tools will strengthen confidence in future study findings. Some researchers also suggest the need for validated measures that assess physical activity relative to a school's cultural system (Durant et al., 2009; Fein et al., 2004; Schoen & Teddlie, 2008). The advancement of validated, objective measurement tools may

encourage a mixed methodological approach for extracting cultural beliefs from school members that influence school-based physical activity opportunities.

In reference to the many school culture interventions that aimed to increase student engagement in school-based physical activity opportunities, most elementary and middle school boys showed significant improvement in their physical activity levels, regardless of the intervention techniques, throughout the study period (i.e. six weeks – six months) (Naylor et al., 2006; Sallis et al., 2003; Salmon, Salmon, Crawford, Hume, & Timperio, 2007; Scruggs et al., 2003; Stratton & Mullan, 2005). However, when examining intervention benefits for girls, very few expressed significant changes to their daily physical activity levels and were less likely than the boys to sustain the behaviours associated with their enhanced physical activity. Thus, a more thorough investigation into the barriers and facilitators of girls' participation in school-based physical activity opportunities in secondary schools will expand the literature in this area. Recent findings show that middle school girls who participate in greater than eight structured physical activities at school have positive perceptions of their school (Barr-Anderson et al., 2007). In contrast, some middle schools girls demonstrate no interest in physical activity opportunities during school hours (Gibbons, Humbert, & Temple, 2010; Gibbons & Humbert, 2008; Haug, Torsheim, & Samdal, 2008; Pfaeffli & Gibbons, 2010). Therefore, it is important to gain a greater understanding of the school culture factors across school contexts that influence girls' participation in school-based physical activity opportunities.

Furthermore, my recent work as a consultant for the Ontario Physical and Health Education Association (OPHEA) has brought attention to the correlation between

secondary teachers', administrators', social and child youth workers', and school nurses' beliefs and a school's physical activity values. Non-empirical feedback collected through a province wide (Ontario) pilot survey signified how the value placed on physical activity by school leaders was transferred to the student population. To effectively promote physical activity in secondary schools, many of these educational professionals and students stated the need for accessible, current physical activity resources, more mandated curricular time for PE and health, and increased involvement from outside professionals (i.e. fitness trainers, doctors, sexual health educators). By and large, there is a call for more school-based promotion of physical activity and PE and an elevated priority of physical activity in secondary schools. What is notable about OPHEA's current investigation is the inclusion of student beliefs. Students ranging from grade nine to grade 12 were asked about the characteristics of PE classes that motivated them to enroll in future PE classes and live an active lifestyle. Responses outlined that fun, peer interaction, diversity of physical activity options and a positive relationship with their PE teacher were staples of successful PE classes. In my opinion, the student voice needs to be heard and respected if physical activity opportunities in secondary schools are to engage the general student population. Earlier research regarding student input into Physical Education classes confirms that meshing student perceptions of meaningful physical activity into the pedagogical practices of Physical Education teachers enhances physical activity relevancy, inclusion and promotes a positive learning climate (Gagnon, Martel, Dumont, Grenier, & Pelletier, 2000; Pelletier, 2006).

Lastly, very few studies have examined school types (i.e. private schools) in regards to physical activity opportunities. Prior evidence has found that students in

private schools are more likely to perceive positive teacher interest in student success in academics and athletics (Jones, 1991; Purkey & Smith, 1983). An investigation into private and alternative (i.e. workplace oriented) schools may offer additional school culture variables not present in public schools that may influence physical activity opportunities. Future studies may want to consider the inclusion of these school typologies to identify common school culture characteristics that influence physical activity opportunities. Closely related to this issue is school context; a majority of studies reviewed for this study took place in elementary and middle schools; further investigation into secondary school cultures is warranted.

Concluding Remarks

As a result of this study, the knowledge around the cultural factors that influence student participation in Canadian, secondary school-based physical activity opportunities has been expanded. Also, a deeper understanding of the social and physical elements within a secondary school's physical activity culture was achieved. In particular, findings suggest that modernizing a school's physical activity environment (i.e. newer or bigger gymnasiums, outdoor spaces) and/or purchasing the latest sports' equipment does not guarantee an active school culture that inspires students and staff to meet or exceed the daily recommended levels of physical activity. As outlined in Chapter One, a large majority of school-aged girls and boys in Canada are not active enough to gain benefits associated with moderate to vigorous physical activity. Therefore, it is crucial that teachers, students and administrators increase their awareness of their school as an environment for physical activity.

In addition, this study found that in order to create, maintain or sustain an active school culture, cultural members (i.e. administration, teachers and students) must value physical activity and the opportunities available for physical activity within their unique school setting. This finding may be important towards the development of future Ministry of Education physical activity policies that aim to increase and/or sustain student daily physical activity levels. Nonetheless, interpreting the connection between a school's cultural system and school-based physical activity opportunities in any context remains a complex task and additional exploratory studies would bring greater clarity to this multifarious relationship.

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APPENDIX A

Letter of Information and Consent Form

The Perceived Influence of Teacher and Administrator Beliefs on Physical Activity Opportunities in an Ontario Secondary School

You are invited to participate in a study entitled: "**The perceived influence of teacher and administrator beliefs on physical activity opportunities in an Ontario secondary school."** The study is being conducted by Greg Rickwood, a PhD student in the Faculty of Education Department at The University of Western Ontario. As a graduate student, Greg is required to conduct research as part of the requirements for a PhD program. The study is being conducted under the supervision of Dr. Ellen Singleton. You may contact Greg or Dr. Singleton if you have any further questions at:

What is the purpose of this study?
The primary aim of this study is to further explore the beliefs of secondary teachers and administrators concerning access to and opportunities for physical activity at their school. A secondary aim is to better understand the relationship between the beliefs of teachers and administrators concerning the importance of physical activity and school-based physical activities available to secondary students. A tertiary aim is to examine the factors that may facilitate or inhibit staff participation in school-based physical activity opportunities within secondary schools.

Why is this study important?
Recent Canadian data suggest that many children and adolescents are not meeting recommended guidelines for physical activity (Public Health Agency of Canada, 2009, 2010). The findings from this study will help teachers and administrators interpret their school environment in relation to physical activity opportunities. Specifically, study results may help school staff identify the facilitators and barriers for physical activity at this school. Furthermore, it may direct school leaders to useful resources (i.e. local community, parents, physical activity policies) that may assist in the promotion of physical activity at this school.

Why you were chosen?
You are being asked to participate in this study because of your intimate knowledge of physical activity policies and practices at your school.

What is involved?
If you agree to voluntarily participate in this research, you will be asked to engage in a one hour interview with Greg Rickwood. You will also be asked to participate in a brief follow-up meeting (15 minutes) to ensure the researcher has correctly recorded your responses and they are representative of your beliefs. Both the interview and the follow-up meeting can take place on or off school grounds and at a time convenient to you.

What is in it for you?
By participating in this study, you are contributing to our knowledge of the facilitators and barriers in a school's culture that influence children and adolescents' physical activity levels. Furthermore, the results from this study may help teachers and administrators make more informed decisions when creating a physically active school culture.

Inconvenience
The only inconvenience this study will impose is 75 minutes of your time. There are no known or anticipated risks to you by participating in this research.

Keeping your name and identity safe
In order to protect your anonymity, you will be given a distinct number code and a master list of participant names and their assigned codes will be stored separately from the data collected. Participant consent forms will be collected by Greg Rickwood and he will be the only individual that will have access to the data. You will not be referred to by name in any study reports or research papers. However, confidentiality cannot be assured as participants are being recruited only from your school. With this in mind, every effort will be taken to reduce the possibility that any comments quoted in forthcoming journals or presentations will be identifiable to other study participants.

Study files, voice and videotapes will be kept in a secure locked office at the University of Western Ontario. The office will remain locked and only those directly involved in the study will have access to the records and results. All information will be kept for five years, after which it will be destroyed. Hard copies of data will be confidentially shredded, computer files will be deleted, and voice/video tapes will be confidentially discarded.

Sharing of the results
The researcher plans to share the results of this study in research journals and during conference presentations.

Your rights
Participation in this study in voluntary. Your may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on your employment status. If you do withdraw, all hard copies of your data, computer files, and video/voice tapes will be confidentially discarded. Please be assured that you may ask questions at any time.

Tear away

The Perceived Influence of Teacher and Administrator Beliefs on Physical Activity Opportunities in an Ontario Secondary School

I have read the Letter of Information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

Name of Participant: _____

Signature:_____
Date:_____

Name of person obtaining informed consent: _____
Signature of person obtaining informed consent: _____
Date: _____

VITA

Gregory D. Rickwood

Education

2012 PhD, Educational Studies, University of Western Ontario

1998 Bachelor of Education, Brock University

1996 Master of Arts, University of Western Ontario

1994 Bachelor of Arts (Honours), Wilfrid Laurier University

Publications: Refereed Journals

Rickwood, G., Temple, V. & Meldrum, J. (2011). School-based physical activity opportunities: perceptions of elementary parents, teachers, and administrators. *Physical and Health Education Academic Journal*, 3 (2).

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Conference Presentations: Refereed

Rickwood, G. D.. School culture and physical activity: A systematic review. Presented at the Physical and Health Educator's National Conference, Toronto, Ontario Canada, October 2010.

Rickwood, G. D., & Temple, V.. *The relationship between anxiety and physical education.* Poster presented at the Teachers Transforming Learning Conference, University of Victoria, British Columbia, Canada, February, 2009.

Rickwood, G. D.. *Athletic performance: Is it 90% mental?* Poster presented at the Coaching Association of Canada National Conference, Vancouver, British Columbia, November, 2009.