Youth’s Experiences of Motivation in School Physical Education and Sport

Amy Patrick, BPHED

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Supervisor: James Mandigo, PhD

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

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Abstract

This study’s objective was to examine how thirteen year-old females perceive and describe their lived experiences of being physically active in school PE (physical education) and organized youth sport settings through a self-determination theory (Deci & Ryan, 1985) lens. Motivational factors and links between both settings were discussed with five participants using in-depth interviews. Participants discussed factors that facilitated and disrupted their motivation to be active in PE and sport settings. The self-determination theory was used as a framework in this qualitative study and results are based on participants’ own words and perspectives. Results indicate that participants’ positive experiences in school PE and organized sport have the potential to meet their needs of autonomy, competence and relatedness. The autonomy supportive behaviours of social agents, feeling challenged and successful at activities and the strong relationships formed in both settings are all things that motivated young people in this study to continue being physically active throughout high-school and into adulthood.
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“It’s times like these you learn to live again
It’s times like these you give and give again
It’s times like these you learn to love again
It’s times like these time and time again” – Dave Grohl
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Chapter 1: Introduction

A major problem today is the increase of inactivity and obesity among young people. The Canadian Fitness and Lifestyle Research Institutes (CFLRI) recently found that physical inactivity in Canada is a large health concern as most children and youth are far below the recommended activity levels (Boyd, 2007). Specifically, 91% of Canadian children and youth are not meeting Canada’s physical activity guidelines of doing moderate to vigorous physical activity for ninety minutes per day (Boyd, 2007). This is leading to numerous health problems and will negatively affect future lives since people who are physically inactive at a young age will likely continue this trend at an older age (Sallis, Prochaska & Taylor, 2000).

It is unfortunate that so many young people are not receiving the numerous positive benefits that result from being physically active. Among young people, physical activity contributes to healthy bones, efficient heart and lung function, improved motor skills, and cognitive function (Sallis et al., 2000). Active participation in sport and exercise also has beneficial social and psychological effects, such as increased social acceptance, elevated self-esteem and feelings of well-being (Sallis & McKenzie, 1991). There is an increasing popularity with activities such as playing video games, computer games, browsing the internet and watching television or movies. These are just some of the many factors related to the issue of inactivity among young people and the public is beginning to see the dangers of this firsthand in their everyday lives. The negative results and health risks (such as diabetes, cardiovascular disease and obesity) from inactivity have become a common reality for many young people and the impact that this type of lifestyle has on people has gained media attention.
Participation in physical education (PE) classes at school is decreasing and a recent study found that less than half of Ontario’s high-school students take part in PE classes after grade nine and only a fraction are involved in school sports programs (Dwyer et al., 2006). During the transition between grades nine and ten, the steepest decline occurs and many students stop engaging in physical activities at school (Dwyer et al., 2006). The current study sample examines thirteen year-old students in relation to their physical activity due to the fact that at this younger age they are required to participate in PE classes at school, which means they have experiences in this setting. Hopefully, learning about their motivation and the connections between organized youth sport and school PE will help to develop an understanding of how social networks (schools, communities, sport policy officials) encourage young people of this age group to continue to engage in physical activity throughout and after their high-school years.

The school PE curriculum and organized youth sport programs have recognized the importance of encouraging young people to increase their physical activity levels and lead healthier lives. However in Canada, a strong link has not been made between the two situations of school PE and youth sport. This particular study focuses on the relationship between PE at school, organized youth sport in Canada and the goal of lifelong participation in physical activity. Initiatives such as the LTAD (Long Term Athlete Development plan) are being created in attempt to connect these areas and incorporate an effective plan for today’s young people (Canadian Sport Centres, 2006).

Concerned researchers, coaches, parents, educators and health officials are searching for ways to increase the levels of daily physical activity, whether it is in school or in organized youth sports during their leisure-time. In order to understand the best
ways to motivate young people to be active, or to learn what environments and methods may be successful in doing this, people must realize that one's level of motivation is decided by many factors. The self-determination theory states that three primary psychology needs are involved in motivating human behaviour and these needs are autonomy, competence, and relatedness to others (Deci & Ryan, 1985). All three needs are crucial in human life as they are seen as being necessary to facilitate the growth and actualization of human potentiality (Vallerand & Losier, 1994). This consideration of different needs and the realization that certain things or events can either facilitate or disrupt one's motivation (whether it is a social influence such as a parent or one's own level of confidence in a certain activity) is why the self-determination theory is relevant in numerous studies involving motivation of sport, exercise and education. It is a relevant theory to use in the current study while finding out about real experiences of young people today and the relationship between their motivation with PE (in a school environment) and their motivation during youth sport in their leisure-time.

**Purpose**

The LTAD establishes a link between physical activity during school PE and organized youth sport. The purpose of the current research study is to examine how thirteen year-old females perceive and describe their lived experiences of being physically active in school PE and organized youth sport settings through a self-determination theory lens. In addition, this study seeks to investigate the relationships and motivational factors related to being physically active in both settings by describing the meanings of these experiences based on the participants' own words or perspectives. A model-driven qualitative study was conducted using a series of in-depth interviews with
young females to discuss their experiences in both school PE and organized youth sport settings. The experiences discussed during the in-depth interviews were organized using the self-determination theory as a framework and analyzed to make links between both situations and explore unique differences. Learning about the meaning of young females' experiences in these two situations could assist Canadian researchers and sport administrators when examining the usefulness of specific plans, such as the LTAD model and philosophy, to achieve the goal of having young people be physically active in the future.

Significance of Study

An examination of motivation in young people to be physically active both in and out of school is critical when trying to create positive environments for youth to develop and be more active. For example, if a coach or parent is helping a child feel intrinsically motivated by doing or saying certain things during sports after school, this information should be shared with teachers so they can try using similar tactics in PE class as well. It is important to talk to young people directly and analyze their personal experiences when trying to understand their motivation as well as the factors that influence them when involved in physical activities. The current study is from the perspective of the students in an effort to gain a real-life sense of these youth participants at this particular age and time and what they are going through. This study is described as exploratory as it will research the experiential relationships between PE and youth sport for the five females. Although results of this study cannot be generalized to all young people, the positive methods of facilitating intrinsic motivation that will be identified in this study could be used in different PE or sport settings. They could assist in the attempt to increase other
students' levels of physical activity and intrinsic motivation to be active during school, after school and into adulthood. Conducting further studies in this area of research could eventually help certain parents, coaches and teachers be better motivators to young people. Also, schools and youth sport programs across Canada may realize benefits to working together and paying attention to significant links in both situations, rather than having separate agendas.
Chapter 2: Literature Review

The following chapter will examine past literature that has been published in the topic area of the current study, as well as review definitions, theories and issues relevant to this thesis study.

**Physical Activity**

Physical activity is defined as “all physical movement, including sport, exercise, and play” (Auweele, Bakker, Biddle, Durand & Seiler, 1999, p. 6). Sport is a rule-bound and competitive physical activity associated with a sport (Auweele et al., 1999). Exercise is structured physical activity that is usually done for fitness reasons (Auweele et al., 1999). Play can involve recreational activities such as sports and games at lunchtime, recess or after school (Auweele et al., 1999). Young people might be physically active by participating on sport teams for the school or the community, they can register for activities such as karate or dance classes and they can also be active by walking and cycling to school each day. Encouraging a physically active lifestyle can involve promoting any of the areas that were mentioned since the specific types of physical activities that young people are engaging in is not important. As long as they are engaged in some sort of physical activity, that is the critical issue.

Attention on issues regarding physical inactivity and youth today has generated many questions about how certain individuals can best motivate young people to participate in physical activities and prevent or deal with the negative results. Knowing that physical activity levels during childhood can partially predict physical activity levels in adulthood (Sallis et al., 2000), it is important for young people to maintain acceptable levels of physical activity as they shift from teen-agers into adulthood. Motivating people
to be active at an early age will help increase their chances of living healthy and happy lives in the future. This focus on trying to get more young people involved in sports and other physical activities has also generated interest regarding the roles and influence that individuals in a young person’s social support network can have on them whether it is a parent, coach, sibling, friend or teacher.

Côté (1999) created the Developmental Model of Sport Participation (DMSP) and according to this model, there are sampling years, specializing years and investment years. Children who are six to twelve years old are placed in a category called the sampling years. These years are considered to be the building blocks because the parents’ roles include introducing their children to sports, enrolling their children in diverse activities and providing their children with necessary resources and equipment. Basically, parents are responsible for initially getting children interested in sport and allowing them to sample a wide range of enjoyable activities (Côté, 1999). In the sampling years coaches are to be kind, supportive and encouraging because the focus should be to have children experience fun and excitement through sport (Côté, 1999).

The specializing years are for children ages thirteen to fifteen and this is a transitional stage to the investment years (ages sixteen plus). During the specializing years, a stronger coach-athlete relationship develops and youth commit to only one activity. Generally, parents progress from a leadership role in the sampling years to a supporting role in the specializing and investment years (Côté, 1999). Overall, youth should be encouraged to participate in diverse sports and extracurricular activities that focus on fun, play, excitement, recreation, personal involvement, games, friendships, variety, and choice (Crocker, 2007). The activities that are done in the sampling years
play an important role in a young person's involvement or participation in future physical activities. Therefore, the experiences and activities done by thirteen year olds in past and present experiences will be studied in the current study. Being thirteen years old, these participants have experienced the sampling years and are just beginning to experience the specializing years.

Factors That Influence Physical Activity

Research shows that there are many factors that influence the physical activity of young people. A review by the Surgeon General's Report (U. S. Department of Health and Human Services, 1996) on physical activity, found that self-efficacy, physical or sports competence, perceived benefits, perceived barriers, intention, enjoyment, physical education attitudes, parental encouragement, direct help from parents, peer and sibling support, access to play spaces and equipment, and time spent outdoors are all critical factors. More recently, Sallis et al. (2000) found similar variables to be consistently associated with the physical activity of children aged three to twelve. These variables are sex (males are more active), parental overweight status, physical activity preferences, intention to be active, perceived barriers, previous physical activity, healthy diet, program/facility access, and time spent outdoors. The levels of physical activity that children are involved in is a complex behaviour determined by many factors. A study by Sallis et al. (2000) supports models that consider behavioural influences from personal (biological, psychological, behavioural), social, and also physical environmental factors. They found a lack of consistency involving the social variables they examined regarding this issue, even though past research generally concludes that social (especially parental) influences on children's physical activity are very strong. Through analysis of numerous
studies, they found that parental physical activity was the most frequently studied variable relating to parent influences and twenty-nine studies showed a positive association with children’s physical activity (Sallis et al., 2000). Regarding behavioural variables that were studied, time in sedentary pursuits (such as television viewing) was the most frequently studied behavior, and its relation to physical activity was indeterminate. However, having only a healthy diet and previous physical activity had consistent positive associations with physical activity (Sallis et al., 2000).

Children are more likely to be physically active if they perceive it to be enjoyable, and the chances of continued participation will be increased by enhancing their intrinsic motivation (Carroll & Loumidis, 2001). The experience of participating in physical activity differs according to the context in which it takes place, therefore, enjoyment in PE and enjoyment in physical activity outside school are not synonymous (Goudas & Biddle, 1993). This could be related to the fact that PE and sport are viewed as separate entities. However, the judgements children make about their abilities and their general enjoyment of an activity in a particular context such as school PE are also reflected in another context such as outside of school (Carroll & Loumidis, 2001). The links and relationship between these two contexts need to be investigated further, but according to Carroll and Loumidis (2001) enjoyment in PE definitely affects the motivation to participate in physical activity and it is a factor contributing to the quality of activity participated in outside of school. There is a link between PE and intensity of physical activity for health as children who enjoy PE and feel competent will likely participate at a level which demands a certain amount of exertion and effort. This level of participation
continues outside of the school environment and includes physical activities that are beneficial for health.

**Gender**

In the literature, gender is a factor relating to physical activity levels of young people. Sallis et al. (2000) concluded that additional efforts to increase the physical activity levels of girls is necessary because boys are consistently more active than girls. They found that the groups at risk for being inactive are girls, older adolescents, and those in minority ethnic groups (Sallis et al., 2000). A study conducted by Carroll and Loumidis (2001) confirmed that girls are significantly less physically active outside school than boys. The girls in their study perceived themselves to be less competent than boys perceived themselves and they derived less enjoyment from physical education than boys. Interventions should be developed to address the variables that were mentioned and this can be achieved through education, family programs, or environmental and policy change (Sallis et al., 2000). By identifying the variables related to physical activity among children and striving to improve them, officials will be more knowledgeable about what affects an individual’s motivation to be physically active whether it is in or out of the school environment. Since gender is a factor relating to levels of physical activity in young people, further research should examine gender issues and the recent trends relating to motivation of males and females to be physically active. Females are specifically in danger of becoming unhealthy and obese in the future since they are more inactive than boys are, thus the current study will examine only females.

The female experience in PE and sport settings is unique as they have traditionally faced numerous challenges regarding being physically active. Recent studies
found that females are moving into sports that were once defined as 'masculine' and issues about 'ideal' femininity are being presented in PE settings (Flintoff & Scraton, 2007). In a study by Cockburn and Clarke (2002) females playing masculine sports saw themselves as either being physically active or feminine, they felt they could not be both. Therefore, it is important to promote a culture in which females can do sport and be regarded as feminine and create a better environment to bypass old stereotypes. It has also been reported that females found it difficult to say a clear rationale and purpose for doing school PE and that it lacked physical challenge (Flintoff & Scraton, 2007). Finding links between PE and sport settings could help establish a purpose for being active that is more clear and meaningful to females. PE teachers and coaches need to understand the politics of gender and sexuality and how these impact their teaching or coaching styles.

**Motivation and The Self-Determination Theory**

The self-determination theory is one of the most influential theories regarding literature on motivation and physical activity. It has contributed significantly in predicting sport and exercise participation while considering issues of autonomy, relatedness and competence (Frederick-Recascino, 2002). Past research has also provided support for application of the self-determination theory framework to be used in the context of school PE (Standage, Duda & Ntoumanis, 2005). A young person's motivation is a factor that plays a major role in determining their physical activities. Motivation is a dynamic internal process that energizes and directs actions and action tendencies (Ferguson, 2000). It is essential to research the differences in motivation and personal growth among young people and to further understand why some people are more self-motivated in certain situations compared to others. This research on the conditions that
foster versus undermine positive human potentials has both theoretical importance and practical significance as it contributes to the formal knowledge of the causes of human behaviour and also to the design of social environments that optimize people’s development, performance and well-being (Ryan & Deci, 2000).

Being highly motivated is a valued characteristic by many people in society because its consequences may produce effective workers whether they are teachers, coaches, parents or leaders in various work environments. This issue is important when examining applied questions related to the effectiveness of numerous human endeavours, specifically teachers’ roles in the school environment surrounded by young potential workers and athletes. A person might be motivated because they value an activity, or there is a strong external coercion, or they are urged into action by bribes or maybe they have a sense of commitment to excel or possibly a fear of failing (Ryan & Deci, 2000).

To explore the reasons for one’s motivation or to learn what factors actually enhance versus undermine intrinsic motivation, self-regulation and well-being, researchers often use the self-determination theory developed by Deci and Ryan (1985). This approach to human motivation and personality details that, Social environments can either facilitate and enable the growth and integration propensities with which the human psyche is endowed, or they can disrupt, forestall, and fragment these processes resulting in behaviours and inner experiences that represent the darker side of humanity (Ryan & Deci, 2002, p. 7).

The premise of the self-determination theory is that there are three primary psychology needs that motivate human behaviour across domains: autonomy, competence, and relatedness to others. Autonomy is the belief that one is the origin and regulator of his or
continued management

Continuing with the management of the organization, the board of directors needs to ensure that the company's objectives are aligned with the stakeholders' interests. This involves setting clear goals and strategies, monitoring performance, and making necessary adjustments. The board should also encourage open communication and participation from all stakeholders, including employees, customers, suppliers, and the community.

In terms of governance, the board should establish a robust system of internal controls to safeguard the company's assets and ensure compliance with laws and regulations. This includes setting up a rigorous system of checks and balances to prevent fraud and misuse of funds. The board should also ensure that the company's financial reports are accurate and transparent, providing stakeholders with a clear understanding of the company's financial health.

Strategic planning is another critical area for the board to focus on. It should identify key growth opportunities, assess the competitive landscape, and develop strategies to capitalize on these opportunities. The board should also be proactive in responding to changes in the market, technology, and regulatory environment.

In conclusion, the board's role in managing the organization is multifaceted, requiring a combination of strategic vision, regulatory compliance, and stakeholder management. By fulfilling these responsibilities effectively, the board can help ensure the long-term success and viability of the organization.
her actions, competence is the belief that one can efficaciously interact with the
environment and relatedness is the seeking and development of secure and connected
relationships with others in one’s social context (Deci & Ryan, 1985). These needs are
considered to be universal and are expected to be evident in all developmental periods
and cultures, however, they may be satisfied in different ways. According to the self-
determination theory, there are necessary conditions for the growth and well-being of
people’s personalities and cognitive structures, as there are for their physical
development and functioning (Ryan & Deci, 2000). The three universal needs are the
nutriments that need to be fulfilled and humans strive for them and tend to gravitate
toward situations that provide them. As individuals, we seek support for these three needs
in order to have a healthy psychological environment within which to exist (Frederick-
Recascino, 2002). Previous research has tended to focus on the needs of autonomy and
competence more than on relatedness, however, all three needs should be considered
when researching the motivation of young people to be physically active.

Cognitive Evaluation Theory

A sub-theory of the self-determination theory is the cognitive evaluation theory
(CET) which explains the effects of social contexts on a person’s intrinsic motivation.
Many researchers have focussed on what motives and psychological needs (autonomy,
competence, or relatedness) prompt participation. Another important aspect of the self-
determination theory addresses the factors that influence a person’s level of intrinsic
motivation versus extrinsic control for an activity. When examining this part of
motivation and how certain factors enhance or undermine intrinsic motivation, the CET is
often used. This subtheory was developed to describe the effects of social contexts on
people’s intrinsic motivation and it describes contextual elements as autonomy supportive, controlling, and amotivating (Ryan & Deci, 2002). Mandigo and Holt (2000) state that the CET can help us better understand how to create environments that intrinsically motivate children to be physically active both during and outside of their classes.

There are four major propositions to the CET. The first is that intrinsically motivating activities are autonomous or self-determined (Mandigo & Holt, 2000). This means that one’s intrinsic motivation increases when they are participating in an activity that they feel they have some control over how they achieve their personal goals (Mandigo & Holt, 2000). This idea has been around for many years as Zuckerman et al.’s study dealt with this proposition in 1978 and concluded that peoples’ motivation is greater when they have more than less control over their environment. Some of the participants in their study were told to solve specific puzzle problems with certain pieces (already determined) in a given amount of time. Participants in another group were given the task of solving the puzzles as well, but they were able to choose any three puzzles out of six that they wanted to complete and they also chose the amount of time they wanted to allot for each puzzle (out of thirty minutes). As expected, the group that was in control of their activity, with the choice of puzzles and time allotment showed significantly greater intrinsic motivation for the activity than those subjects who were assigned the puzzles and time allotments (Zuckerman et al., 1978).

The second proposition of the CET states that feelings of competence and optimal challenge enhance intrinsic motivation (Mandigo & Holt, 2000). When children are optimally challenged, or the activity is balanced to their abilities, they are more likely to
Enjoy it and take part in the activities since they’re challenged in a positive way (Mandigo & Holt, 2000). Being challenged in a positive way is when the activity being done is not too easy and it’s not too hard, it is balanced appropriately with the person’s skill level. Optimal challenge contributes to feeling self-determined and could increase intrinsic motivation.

The third proposition discusses rewards and feedback, and it explains that when these two things are informative to a young person their intrinsic motivation will be enhanced (Mandigo & Holt, 2000). Teachers and other individuals who are social influences should keep in mind that rewards or feedback that are controlling or amotivating will likely undermine intrinsic motivation. Ryan and Deci (2000) confirm that all expected tangible rewards made contingent on task performance do reliably undermine intrinsic motivation. Research has shown that providing feedback and evaluating students on effort and improvement rather than on ability will help enhance a students’ level of motivation (Koka & Hein, 2003). For example, the type of feedback teachers give students can also have a significant impact on students’ perceptions of competence and this leads to an increase in intrinsic motivation.

The final proposition states that those who are task-involved will likely be more intrinsically motivated because they take part in an activity for the sake of enjoyment rather than those who are ego-involved or feel controlled by certain pressures who are less likely to be intrinsically motivated (Mandigo & Holt, 2000). Ryan and Deci (1989) define ego involvement as the process of having one’s self-esteem hinged to some outcome and they suggest that this kind of internal control or pressure is applied by people to themselves, which yields motivational consequences similar to those of being
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压了由外部约束。鼓励参与者参与任务将更可能激发内在动机（Mandigo & Holt, 2000）。所有提到的四条命题有助于解释和预测一个人的内在动机水平，根据CET。使用CET有助于理解社会环境对一个人的内在动机的影响，尽管这是极其重要的，但同样重要的是要根据他们的日常行为来检查个人的动机水平。

**Levels of Motivation**

将个人置于与他们动机水平相关的尺度或连续体上，允许研究人员识别相似性或差异性在动机需要。例如，如果年轻人在连续体上处于不同水平（或具有不同动机），他们可能有不同的社会需求或需求与另一个相比。自我决定理论认为一个人可以是内在动机，外在动机或无动机。用于衡量参与动机的一个模型是基于感知的因果概念（Ryan & Connell, 1989）并提出行为可以由一个个体视为位于某个点上的内在-外在连续体。内在动机行为可以发生在没有外部奖励的情况下，它们是适挑战的，并且是由活动本身而不是成果驱动的。一个内在动机的人是在连续体的高自我决定端，他们参与活动是为了乐趣、愉悦和满足（Ryan & Deci, 2000）。

外在动机是专注于和依赖于可分的外部结果。存在四种类型的外在动机，位于21
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the continuum that goes from low to high levels of self-determination. The most autonomous or self-determined form of extrinsic motivation on the continuum is integrated regulation. This form shares many qualities with intrinsic motivation but is considered extrinsic because actions are done to attain personally important outcomes rather than for their inherent enjoyment (Ryan & Deci, 2000). With extrinsic motivation people perceive the locus of initiation and regulation of their behaviour to be external to themselves, whereas with intrinsic motivation, they perceive the locus to be within themselves (Ryan & Deci, 2002). The next most autonomous or self-determined type of extrinsic motivation is identified regulation. This involves a conscious valuing of a behavioural goal or regulation and an acceptance of the behaviour as being personally important. Identified regulation tends to have a relatively internal perceived locus of causality and although they still perform the activity for extrinsic reasons (to achieve personal goals), it is internally regulated and self-determined (Pelletier et al., 1995). For example, a student may participate in PE class to maintain their health and this is identified regulation. Another type of extrinsic motivation is introjected regulation, which refers to behaviours that are performed to avoid guilt or anxiety or to attain ego enhancements such as pride. In external regulation, one “must” partake in the activity and in introjected regulation, one “should” participate as they feel a sense of obligation to participate (Standage, Duda, & Ntoumanis, 2003). Athletes who participate in sports because they feel pressure to be in good shape for aesthetic reasons, and feel embarrassed or ashamed when they are not in best form, represent an example of introjected regulation (Pelletier et al., 1995). External regulation is the least autonomous form of extrinsic motivation since the person is governed by externally controlled means (such as
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obtaining rewards or avoiding punishments). Athletes who participate in sport in order to receive praise from their coach or because they feel urged to do so by their parents are motivated by external regulation (Pelletier et al., 1995).

Amotivation is the final regulation in the self-determination framework and it is similar to learned helplessness since individuals do not perceive contingencies between their behaviours and subsequent outcomes. Amotivated individuals do not value the activity, they may feel incompetent and they lack the intention to act, basically, these people are neither intrinsically nor extrinsically motivated (Standage et al., 2003). Overall, this continuum shows that these different types of regulation lie along a continuum of relative autonomy and it provides researchers with a guideline to assist them in understanding or categorizing the motivation of individuals.

Motivational Styles as a Predictor

Intrinsic, extrinsic and amotivational styles can predict future consequences and can be related to important outcomes such as one’s behaviour. Vallerand and Bissonnette (1992) examined how intrinsic, extrinsic, and amotivational styles can predict behaviour in an academic setting. The motivation that young people had towards school in general and doing homework was assessed by looking at where they were on the continuum, based on their levels of self-determination. It was found that self-determined types of extrinsic motivation (integration and identification) were found to be positively related to behavioural persistence (Vallerand & Bissonnette, 1992). These results compliment Deci and Ryan’s (1985) self-determination theory research that predicts that self-determined forms of extrinsic motivation will have positive effects on behaviour. Some gender differences were noted in this study such as females were reported to be more
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Experiences of Motivation

intrinsically motivated, integrated, and identified as well as less externally regulated and amotivated than males. However, past research has found females to display higher levels of learned helplessness than males in educational settings (Dweck, 1986). The research on male and female differences should be studied further but it is interesting to recognize such differences or gender patterns. Overall, Vallerand and Bissonnette's (1992) study showed that not only intrinsic motivation, but also self-determined forms of extrinsic motivation (mostly integration and identification) can influence persistent behaviour in an educational or field setting. In a similar study done by Vallerand (1989), the Academic Motivation Scale was used to assess the concepts of amotivation, external, introjected, and identified regulation, and intrinsic motivation toward school with college students. It was found that intrinsic motivation was positively associated with educational outcomes and that amotivation was strongly negatively correlated with educational outcomes (Vallerand, 1989).

Physical Education in Schools

Schools provide an environment for young people to be physically active and it is a setting that can teach them useful skills to lead healthy lives in the future. Daily physical education in schools is meant to provide young people with the knowledge, attitudes and skills to be physically active (CAHPERD, 2006). It is an essential part of development and all children in the school system in Canada are given the opportunity to participate. Health and physical education has an important place in the Ontario curriculum and officials hope that it will provide learning experiences to help students be active in the future. The curriculum states that their primary focus is to help students develop a positive attitude and commitment to lifelong healthy active living and the
The main focus of the study is to investigate the role of technology in education. The researchers conducted a comprehensive analysis of the current state of technology integration in schools across various regions. The findings indicate a significant increase in the use of digital tools and platforms for teaching and learning. However, there is a need for more effective strategies to ensure equal access and equitable outcomes for all students.

In the competitive global landscape, education systems must adapt and innovate to stay relevant. The study highlights the importance of embracing technology to enhance learning experiences and improve educational outcomes. It recommends the development of policies and initiatives that support the integration of technology in classrooms.

The role of educators in this transition is crucial. Teachers must be equipped with the necessary skills and resources to effectively incorporate technology into their teaching practices. Professional development programs and ongoing support are essential to ensure that educators are well-prepared.

Policy makers also have a significant role to play. They must create an enabling environment that encourages innovation and experimentation. This includes providing adequate funding and support for technology implementation and continuous improvement.

In conclusion, the study underscores the potential of technology in transforming education. It calls for a collaborative effort involving educators, students, parents, and policymakers to harness the full benefits of technology in the educational sector. The future of education lies in embracing digital tools and platforms, and this requires a concerted and sustained commitment.
capacity to live satisfying, productive lives (Ontario Ministry of Education, 2000). PE classes in the schools are meant to give students an understanding of the importance of physical fitness, health, and well-being. It is hoped that this will lead to personal commitment to daily vigorous physical activity and positive health behaviours throughout their lives (Ontario Ministry of Education, 2000). The health and physical education curriculum was designed to help students move successfully beyond secondary school as it strives to refine and advance skills progressing with the grades. The goals of the grade eleven and twelve curriculum address the needs and challenges that confront adolescents as they move towards adulthood, and this goal of lifelong participation is shared by a non-profit organization called OPHEA (Ontario Physical and Health Education Association). OPHEA is dedicated to supporting school communities and their vision is that young people will value, participate in, and make a commitment to active, healthy living (2006). Along with believing that physical activity is an essential and necessary aspect of overall healthy development, they see school communities as the catalysts in building the commitment of all youth to lead active lives (Ontario Physical and Health Education Association, 2006). At some point, young people will finish school and hopefully, they will continue being physically active in their leisure-time through some sort of community team or sports outlet. Schools want to give the basics needed in order to get young people interested in being active after school and during their leisure-time. As a result, it seems that if the teachers, curriculum and school systems as a whole are able to motivate young people to maintain physically active lives, than they might be more active or participate in organized sport teams during their leisure-time.
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Organized Youth Sport

Organized sport is another way that young people can be physically active. They can register to play on community sport teams during their leisure-time after school or over the summer holidays and receive the many benefits that physical activity offers. The Sport Canada organization developed ‘The Canadian Sport Policy’ which is a policy that seeks to improve the sport experience of all Canadians (Sport Canada, 2002). They hope to accomplish the following vision by the year 2012.

To create a dynamic and leading-edge sport environment that enables all Canadians to experience and enjoy involvement in sport to the extent of their abilities and interests and, for increasing numbers, to perform consistently and successfully at the highest competitive levels (Sport Canada, 2002).

Sport Canada realizes the importance of sport participation on individuals, communities and Canada’s economy and society as a whole. Sport touches many aspects of Canadians’ lives including their health and well-being, their social networks and sense of social connection, their skills, social cohesion in communities and it impacts the economy (Sport Canada, 2002). Participation in active sports has declined in recent years and significantly dropped between the years 1992 and 2004, so the Canadian government issued this sport policy in 2002 to help current such trends. Studies and survey results compiled by Sport Canada reiterate the numerous physical, social and psychological benefits of being physically active. Almost 90% of active participants believe that sport has some positive impact on their personal skills (Sport Canada, 2002). These skills are transferable and will help young people play a positive role in their future communities and family lives.
Experiences of Motivation

Linking School PE and Organized Sport

Traditionally, PE in schools, recreation sports, and elite sports have each been developed separately. According to Sport Canada, this approach is ineffective and expensive as it fails to ensure that all children are given a solid foundation and knowledge base (physical, technical, tactical, and mental) to build their athletic abilities (Canadian Sport Centres, 2006). Canada has tried emulating sports models that are used in other countries and that attempt resulted in the realization of the need to develop a Canadian system based on our own culture, traditions, needs and geography. The Long Term Athlete Development (LTAD) plan has been created (Canadian Sport Centres, 2006) and it is now considered to be the 'vehicle for change' by Sport Canada. Change is indeed needed in Canada since youth participation in physical activity and school PE programs is decreasing.

The LTAD model differs from other athlete development models because it acknowledges that PE, school sports, competitive sports, and recreational activities are mutually interdependent. This model recognizes that both organized sport and school PE/sports can be linked with lifelong participation in physical activity. With the LTAD, children learn fundamental movement skills at the optimum point in their physical development, prior to age eleven for females and age twelve for males (Canadian Sport Centres, 2006). This is important since physical activity levels during childhood could partially predict physical activity levels in adulthood (Sallis et al, 2000). The LTAD is based on physical, mental, emotional and cognitive development of children and adolescents. It consists of seven stages, the first three focus on encouraging physical literacy and sport for all, the next three focus on excellence and the final stage encourages
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life-long physical activity (Canadian Sport Centres, 2006). Basketball Ontario is an example of an organization that has incorporated the LTAD into their program as they decided on June 17, 2006 to implement FIBA Official basketball rules (International Basketball Federation). FIBA rules are used at every amateur national and international basketball competition in the world, including the Olympics. Basketball officials implemented these rules, which are athlete-centred and aligned with the LTAD, and are supported by both federal and provincial governments.

Since the goals of school PE curriculum in Canada and organized youth sport programs both want the youth today to lead active/healthy lifestyles in the future, the LTAD may be an effective and positive method to follow or use as a guideline. The LTAD program of learning sport provides for age appropriate skill development in children with an emphasis on building confidence and keeping children, youth and adults in sport for life.

*Physical Activity in School and Leisure-Time*

Ntoumanis’s (2001) study on 424 students aged fourteen to sixteen, examined the intention to be physically active after the school years. The intention to be physically active after the school years was positively predicted only by intrinsic motivation (Ntoumanis, 2001) and this was a similar finding to Vallerand et al.’s study (1993) that looked at the issue in the context of education. They found that self-determined types of motivation were related to concentration and positive emotions in class, academic satisfaction, reported grades, and future intentions with schooling (Vallerand et al., 1993). Therefore, it is rightly expected that the intention to be physically active would be predicted by the most self-determined form of motivation, intrinsic motivation. It is a
common argument that positive experiences in PE class could influence children to adopt physically active adult lifestyles, which can improve public health (Sallis & McKenzie, 1991) and this is an important issue directly affecting the future. However, it is also very important to look at something more short-term as the public wants young people to be active right now as well as in the future. By studying their intention to partake in physical activity during leisure-time (after school hours and on the weekends), this will be helpful and relevant when trying to assess the likelihood of future exercise-related activity.

Standage et al. (2003) found in their study, on twelve to fourteen year olds, that students who were self-determined within the context of PE had higher intentions to be physically active in their leisure time. Overall, their intention to partake in physical activity was positively and moderately associated with self-determined motivation, weakly related to introjected regulation and negatively associated with amotivation.

There are numerous social factors in physical activity environments that can play an important role in determining student motivation to be active in their leisure-time. Links have been made between one’s motivation to be active in different contexts including during leisure-time. Intrinsic motivation in the context of school physical education can directly affect intrinsic motivation in another context such as in a person’s leisure-time (Hagger, Culverhouse, Chatzisarantis & Biddle, 2003). Therefore, support or promotion of behaviours (such as physical activities) in an educational context can lead to participation in related activities in a different context. Hagger et al. (2003) found that correlations supported relationships between intrinsic motivation and identified regulation in a physical education context, with identified regulation and intrinsic motivation in a leisure-time context. Also found was that external regulation and
introjected regulation in a physical education context were significantly and positively correlated with external regulation and introjected regulation in a leisure-time context. These results indicate that the types of self-regulation or perceived locus of causality (Ryan & Connell, 1989) when participating in a PE context predicated the perceived locus of causality or participants' reasons to be physically active in their leisure-time (Hagger et al., 2003). Overall, intrinsic motivation in a physical education setting predicts identified regulation in a leisure-time physical activity context (Hagger et al., 2003).

The most common reasons for participating in sport are enjoyment and social interactions (Cote & Hay, 2002). Both of these things should be a major part of a young person's experiences in both school PE and organized sport settings. Previous literature has recognized how different individuals in a young person's social network have had an impact on the motivation of young people to be physically active. One of the main places that young people can be reached is within the school setting where they have constant social interactions. Auweele et al., (1999) stated that schools have numerous advantages in the targeting of physical activity because they contain people at ages where change is most likely to occur, schoolwide strategies should enable almost all members of an age cohort to be targeted and a delivery structure is already in place through PE and other curriculum areas or school practices (Auweele et al., 1999). Sallis et al., (1992) state that the setting with the most promise for having a public health impact is the schools because virtually all children can be reached in schools. Children of all different skill levels, backgrounds and abilities come together in PE classes and in this setting, they are influenced by peers or teachers. It is through physical education that young people experience a variety of physical activities, and it is these experiences that may determine
involvement in leisure time. The amount of physical activity opportunities in Ontario schools appears satisfactory, but the actual engagement is still low (Dwyer et al., 2006). Previous studies have confirmed that strategies to increase student participation in PE, intramural programs and inter-school sports programs need further consideration (Dwyer et al., 2006).

A challenge for physical education teachers today is motivating young students to be active, by creating a learning environment that will enhance their intrinsic motivation. Competence and autonomy are both needs that are to be fulfilled, according to the self-determination theory, and these are directly influenced by one’s environment and social influences. Mitchell (1996) found that intrinsic motivation is likely high when students perceive the learning environment to be non-threatening to their self-esteem and physically challenging, which is similar to Koka and Hein’s (2003) results that found perceived challenge and perceived threat to sense of self as the best predictors of intrinsic motivation. High intrinsic motivation includes high effort, feelings of enjoyment, competence, autonomy (self-determination) and low levels of pressure and anxiety (Auweele et al., 1999). Teachers can help students to feel good about themselves and their abilities by putting them in situations that will allow them to feel successful. Both perceived competence and perceived interest or enjoyment in the activity, are important factors when examining a young person’s motivation. Koka and Hein (2003) suggest that teachers who provide more positive general feedback are more likely to be successful in facilitating childrens’ intrinsic motivation because this behaviour enhances both children’s perception of competence and interest to be physically active. By providing students with the opportunities to feel successful among their peers, non-threatening and
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optimally challenging learning environments in PE class, and by providing them with positive general feedback, it is predicted that the students will feel more competent and in turn, their intrinsic motivation will increase.

Deci and Ryan's self-determination theory clearly recognizes the strong relationship between perception of competence and motivation. The degree to which students perceive themselves to be competent at an activity and self-determining (relating to their performance or behaviour) is directly connected with their level of intrinsic motivation toward the activity. Past research has started to investigate this issue regarding children who participate in structured sports outside of the school environment. A study was done to examine primary school children (boys and girls) and their perceived competence in physical education as well as their enjoyment in the subject. The results of this study by Carroll and Loumidis (2001) found that children of high perceived competence participated in significantly more physical activity (quantity and intensity) outside school than those of low perceived competence. Those children with high perceptions of competence also spent more time participating in team sports traditionally taught in PE compared to those with low perceived competence. The children who had negative perceptions of their competence in PE may be making conscious decisions not to participate in specific physical activities which they have experienced at school (Carroll & Loumidis, 2001).

**Autonomy Support**

Past research has emphasized the importance of autonomy support on the motivation of young people to be physically active. Ryan and Deci (2000) state that perceived autonomy support is the degree to which people perceive others in positions of
authority to be autonomy supportive. Hagger et al. (2003) found that perceived autonomy support in physical education affected leisure-time physical activity. Autonomy support refers to the amount of freedom a child is given to determine his or her own behaviour. In Hagger et al.’s (2003) study, physical educators were specifically examined as the authoritarians. Teachers can foster autonomy by avoiding external rewards, controls and pressures since these things will only undermine one’s intrinsic motivation. Overall, Hagger et al. (2003) found that perceived autonomy support predicts an internal perceived locus of causality in a physical education context. Perceived autonomy support in physical education directly influenced intrinsic and identified motives in a physical education context and there was a direct effect from autonomy support in physical education to leisure time physical activity (Hagger et al., 2003).

Research by Standage et al. (2003) concluded that perceptions of an autonomy-supportive environment positively predicted important motivation-related constructs in a physical education setting. Their study found students felt more autonomous, competent, and related when perceiving an autonomy-supportive climate that was low in controlling features. Standage et al. (2003) feel that PE teachers are generally more aware of the importance of fostering competence among children of all abilities and behaviours to support this need were displayed by teachers in the study more than relatedness or autonomy. Consistent with previously mentioned studies, perceived competence and autonomy support are crucial factors when predicting self-determined motivation in young people. The motivational sequence proposed by Vallerand (1997) has perceived autonomy support affecting the perceived locus of causality, which in turn influences motivation and behaviour. This model or sequence relates to intrinsic motivation in one
context such as school physical education and it can affect intrinsic motivation in another, such as leisure time (Hagger et al., 2003). For example, if autonomy support is not given in a context (a teacher gives controlling or performance-related feedback), the child's behaviour will be negatively affected as their intrinsic motivation was decreased or thwarted. Overall, it is expected that intrinsic motivation and identified regulation will significantly and positively influence attitudes and perceived behavioural control. Also, the attitudes and perceived behavioural control will completely mediate the relationships between intrinsic motivation and identified regulation on intentions to participate in leisure-time physical activity (Vallerand, 1997).

Social agents' autonomy supportive behaviours have a positive impact on perceived autonomy, competence and relatedness. Giving children the chance to make choices and take initiative while minimizing control will influence them in a positive way. These autonomy-supportive behaviours have a direct influence on the three basic needs, which impact intrinsic and self-determined extrinsic motivation (Mageau, & Vallerand, 2003).

The purpose of the current research study is to examine how thirteen year-old females perceive and describe their lived experiences of being physically active in school PE and organized youth sport settings through a self-determination theory lens.
Chapter 3: Methods

This chapter discusses the methods used in the current research study. Participant selection, participant contact and procedure, study design, data collection, data analysis and trustworthiness are the topics addressed in this chapter.

Participant Selection

Participants for the current research study were selected based on ‘purposeful sampling’ (Patton, 2002). It was decided that participants of a particular age and a particular sex would be involved in this study. Thirteen year-old females were included in the study because the researcher was interested in the experiences of young people at this age. Other criteria or standards required them to be members of a community hockey team, attend public school in the Niagara district and they must consistently participate in PE classes. Consistently participating means taking part in all offered PE classes, which for these participants was usually every second weekday. These females were selected purposefully to permit inquiry into and understanding of a phenomenon in depth (Patton, 2002). Seidman (2006) feels that purposeful sampling is an effective basic strategy of selecting participants for interview studies. Participants were selected for this study by the hockey coach since she was more familiar with the attendance of players at hockey than the researcher was, and the coach was also told to ask them about attendance in PE at school. They each completed an informed consent form and they all had parental consent before data collection began. Each of the five participants were able-bodied students who wanted to participate in the current study.

Qualitative studies generally have a small sample size to allow researchers to gain rich information about each individual. This study has an emphasis on in-depth
understanding of participants’ experiences and focusing on five individuals, rather than a larger number, contributed to getting information-rich cases. Having a small sample size of five participants allowed the researcher to pay attention to detailed data and learn a great deal about issues of central importance to the purpose of this study (Patton, 2002). Sampling was aimed at people who would be ‘information rich’ (Patton, 2002) and provide insight about the phenomenon, which is the experiences of being a young person who is physically active in school PE and youth sport.

The participants were all thirteen years old when the interviews were conducted and they had physically active backgrounds. All five participants reported being involved in sports after school, on the weekends and during the summer while growing up. They were involved in sport teams organized by the community such as ice hockey, ball hockey, soccer, lacrosse, tennis, swimming and rowing as well as school sport teams such as basketball, soccer and volleyball. The choice to deal with young people who were physically active was based on the fact that they had numerous experiences in both PE and sport settings. Participants were able to discuss different coaches, teachers and peers they had dealt with and someone who was not as active would not have such a wide range of experiences to talk about. The information from participants’ positive experiences could eventually be used to help those people who are not physically active.

Through the informed consent process (Appendix A) participants were told that all information would remain anonymous and confidential. Pseudonyms were assigned to each of the interviewees in order to maintain confidentiality when specific quotes were used for research purposes.
Participant Contact and Procedure

Upon gaining approval from the Brock University ethics committee, a local hockey league was contacted via email about interviewing five female players from the pee-wee level team (ages twelve and thirteen). With permission gained from the hockey league, contact was made with the pee-wee hockey coach over the telephone to give a brief introduction of the researcher, the research study and a time and place was selected to meet in person. The researcher met with the hockey coach and team manager before one of the team’s practices to talk in more detail about the purpose and nature of the research study. At this time, the researcher was introduced to the parents and potential participants before watching the team engage in an on-ice practice. This first contact visit (in-person) to the arena aided in selecting participants and helped build a foundation for the interview relationships.

The coach chose five players who fit the participant requirements. The coach was given guidelines for what type of individuals would be fitting for this study and she then chose five participants based on her own knowledge of their attendance and personalities. Time restrictions and schedules did not allow for specific individuals to be studied before selection, it was trusted that the coach could select five candidates based on the information she was provided with. The researcher had a meeting with them to explain the information sheet and consent form in words that were appropriate for thirteen year-olds. The researcher told them about the study, what the interview questions generally entailed, and gave them an information letter that includes the researcher’s contact information (Appendix B). Participants and their parents also received a consent form, which they were asked to read and sign if they wished to be involved in the study.
At this time, the hockey team’s schedule was collected and discussions with individual parents took place concerning when would be the most convenient dates to conduct interviews. The interviews took place at both Brock University and the team’s home arena at times requested by the participants and their parents.

It was critical for the researcher to establish rapport with the participants before interviewing them by being friendly and talking with them about fun subjects. Rapport refers to a positive relationship between interviewer and child that sets the tone for the entire assessment process and helps increase both the amount and accuracy of the information provided (Greca, 1990). I showed personal interest and attention to the subjects by being attentive, nodding my head and using appropriate facial expressions. Interviews were the major source of data collection in this study, which is why developing rapport with participants was critical. As part of the procedure, observations and a reflexive journal were also done to improve upcoming interviews and continue establishing a positive relationship with them from initial contact to the completion of their final interview.

Data Collection

An interview strategy developed by Dolbeare and Schuman (1982) and described by Seidman (2006) was used in this qualitative research study. A series of three separate interviews were conducted with each participant and recorded with an audio recording device. All three interviews were held in the same location with the exception of one participant whose first interview took place at Brock University and the next two took place at the arena. These in-depth interviews used structured, open-ended questions to find out about their experiences as youth participants in PE at school and organized youth
sport in the community (See Appendix C). The interview questions used for this study were developed in collaboration with my thesis committee. To help the researcher improve on interviewing techniques throughout the process, observations and reflexive journals were recorded after each interview and reviewed before the next interview took place.

**Interviews**

In-depth interviews were conducted with each of the five participants while following Seidman’s (2006) three-interview structure. I had some previous experience conducting interviews with various age groups of children for qualitative research and these experiences helped prepare me for the interviews in this study. The interviews were open-ended and the first few questions were asked solely for the purpose of establishing rapport with participants and making them feel comfortable talking with me. Good interviews are ones in which participants feel at ease and talk freely about their points of view (Greca, 1990). Each interview was spaced from three days to a week apart to allow time for the participants to think about the preceding interview but not leave too much time that they lose the connection between the two (Seidman, 2006). Interviews were approximately forty minutes long and I went into them with a pre-determined list of questions, but was constantly exploring (for example, asking to hear more about a subject) and encouraging subjects to tell stories throughout the interviews. When interviewing young people it is important to use language that they will easily understand and I made sure to do this throughout the interview process. I asked them questions regarding their physical activities during school hours, in their leisure time and what motivates them to do all of these things. (See Appendix D).
In-depth interviewing is used because one has an interest in understanding the lived experience of other people and the meaning they make of that experience (Seidman, 2006). By listening to the participants, I was able to learn how events affected their thoughts and feelings and afterwards I could develop a picture in my mind of what happened to them.

The first interview in the series of three establishes the context of the participants' experience as they will be asked to tell as much as possible about her or himself in light of the topic up to the present time (Seidman, 2006). Following the interview protocol (Seidman, 2006), the purpose of interview one was to get a focused life history of each participant. I focussed on the participants’ past experiences in school as well as any physical activities and youth sports they were involved in growing up. The initial question of “What physical activities do you enjoy playing?” allowed participants to feel comfortable talking in an interview situation. I asked how they came to be participating in a community hockey team and talked to them for approximately forty minutes about all their physical activities and experiences in PE class. The length of time for this interview was pre-determined to suit participants of a young age and they were told about the forty minute time period before the interview began so they knew what to expect. After completion of the interview the tape was transcribed immediately, which gave me the opportunity to read and reflect on how participants answered the questions. Transcribing the interviews at this time also allowed me to ensure that the goals of the first interview had been achieved because if they had not, I could address specific topics in the next interview.
The second interview in this series concentrated on details of the participants’ present lived experience in the topic area of the study (Seidman, 2006). They were asked about specific activities they engage in during PE classes and at their hockey practices and games. The participants were asked to talk about their experiences in school PE, in youth sport and they were asked to reconstruct a certain PE class or practice/game as a way to get details about these situations. During this interview, I asked about experiences within the context of social settings and asked them to talk about relationships with teachers, coaches, parents, classmates and teammates. The CET (cognitive evaluation theory) helped me consider the effects of social contexts/factors that influence one’s level of intrinsic or extrinsic motivation for an activity. Therefore, the second interview asked questions specific to the four major CET propositions. Questions addressed if they feel they have control over how they achieve personal goals, if they feel optimally challenged and competent, what rewards and feedback they get and if they participate in these activities for personal enjoyment or if they are pressured by others to be involved in these activities. Some questions were: Tell me about a time when somebody gave you feedback on your hockey game? What does it feel like to play hockey? How are you challenged in PE class? Why do you play hockey on your own time? Interviews were transcribed directly upon completion and were read over carefully to prepare for the final interview in the series. The details given by participants in this second interview were eventually analyzed relating to the issues of autonomy, competence and relatedness (self-determination theory needs).

The third and final interview had participants reflect on the meaning of their experience. Participants were to look at the factors in their lives that occurred to bring
them to their current situation. As an interviewer, I reminded participants of their past experiences that were mentioned in interviews one and two, and had them look at their present experience in detail and within the context in which it occurs. The combination of exploring the past to clarify the events that led participants to where they are now, and describing the concrete details of their present experience establishes conditions for reflecting upon what they are now doing in their lives (Seidman, 2006). Since a foundation was built in the first two interviews, the third one focused on the participants’ understanding, reflections and meanings of their experiences.

Data Analysis

The current study was based on human experiences and I made sense of them by collecting participants’ interpretations of those experiences. I reported the realities that were found, relied on voices and interpretations of participants through extensive quotes and presented themes. A file was created on each participant regarding their experiences in school PE classes and organized youth sport with all of the information that was gathered throughout the research study. The fifteen interviews were transcribed immediately after each interview was complete. The words of participants were analyzed by physically categorizing and organizing (cutting and pasting onto posters) themes based on the pre-determined categories of autonomy, competence and relatedness.

I made a conscious effort to focus on the individual experiences of participants from the beginning to the end of this research study by keeping an open mind and setting aside my personal experiences and opinions. The participant selection and the three phase interview (Seidman, 2006) processes meant that I had personal contact with participants before interviewing them and I was consciously aware of staying open-minded, or setting
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aside any previous experiences with them, and focussed on the current purpose of each interview. By focussing on the purpose of each interview and the purpose of the entire study, my personal experiences in PE and sport stayed separate from those of the participants. Any personal information was strictly recorded in the reflexive journal.

Since this study that was model driven (by the self-determination theory), the next step in data analysis was to read through every statement from the interview transcripts relevant to the topic. I kept an open mind about the material and looked at the content from a self-determination theory viewpoint. However, I was seeking what emerged as important and was of interest to the study by letting the words from the interviews speak for themselves. Categorizing of sub-themes on each poster was not pre-determined, only the three major needs and the division of the two settings (PE and sport) were pre-determined. The statements were organized based on the coding information sheet (Appendix D), which explains the meanings, definitions and relevant information about each of the three needs. Statements were then placed on a poster under one of the three pre-determined headings. After the quotes were organized under one of the three major headings of autonomy, competence or relatedness, any repetitive or similar statements were grouped together. Next, the statements on each poster were reviewed to find any emerging themes under the major heading in both PE class and youth sport settings. For example, ‘Future goals in hockey’ was an emerging theme found on the competence poster, so any statements discussing that topic were physically taped together on the hockey section of the poster and the most descriptive or well-described quotes were placed on top of other quotes in this section.
Once all of the emergent themes were identified and organized onto posters, the content of the three posters was reviewed by another person, other than the researcher. A colleague who has a good understanding of the self-determination theory read through the participants’ quotes and the coding guide (Appendix D) to ensure that this information was put under appropriate headings based on the three needs and made suggestions of some changes.

The participants’ quotes were colour coordinated on posters to visually aid in the analysis of the data. The observation notes that I wrote after each interview and my reflexive journal notes were also considered when put with participants’ files or personal inventories. By analyzing the data as described, the essences and meanings of each participant’s experiences related to their motivation were assessed in both the school PE class and youth sport situations. Any connections or differences were examined within these two contexts and I found how the students’ motivation to be physically active was related in both environments or situations that, traditionally, have been separated as being two different entities.

Data analysis started as a deductive study as it was decided at the beginning of the research process that the three needs would be the main categories in which the results would be placed under. Themes that emerged within the autonomy, competence and relatedness sections were discussed in the two situations of PE class and youth sport. Any relevant and unique experiences of the participants were also discussed in this study. Overall, the current study began as deductive and made a transition to follow an inductive style. The thoughts and reflections of the researcher were also included in the overall process. Rossman and Rallis (2003) argue that qualitative research relies on sophisticated
reasoning that is multifaceted and involves the iteration between theoretical ideas, data, 
and the researchers' reflection on both. This research study incorporated all three of those 
and the process seemed to mesh well with the style of qualitative study that was 
conducted.

**Trustworthiness**

Since I was interested in deeply understanding the experiences of five specific 
individuals regarding their involvement in school PE and organized sport, issues 
regarding trustworthiness were crucial to consider in this type of research study. Lincoln 
and Guba (1985) identify the four criteria of credibility, transferability, dependability and 
confirmability, as being critical when establishing trustworthiness in a research study.

**Credibility and Transferability**

Building trust with participants was important to the credibility of this study. I 
spent time watching the hockey team at the arena and at off-ice training so they would be 
comfortable with me being in those settings. The time spent in these settings was casual, 
as I would go to the arena to hand out consent forms or collect schedules from parents 
and stay afterwards to watch the hockey practices. Participants, parents and coaches got 
used to having me spend time with them during training and hockey situations. It was 
important for me to become a familiar face in the hockey arena in order to develop trust 
with participants. Trust is 
a developmental process to be engaged in to demonstrate that pledges of 
anonymity will be honoured; that hidden agendas are not being served, that the 
interests of the respondents will be honoured and that they have input (and 
actually influence) the inquiry process (Lincoln & Guba, 1986, p 303).
Denzin and Lincoln (2005) state that "gaining trust is essential to the success of the interviews, and once it is gained, trust can still be very fragile" (p. 708). Trust and rapport were especially important to this study as I conducted in-depth, one-on-one interviews with the participants as the main source of data. I understand that building trust is a time-consuming process and felt that spending time with participants in sport settings allowed them to trust me and be more comfortable in an interview situation compared to if we had never met before.

The three interviews of each participant were compared to one another as well as to the observations. I checked for consistency of what the participants said during multiple interviews (three-phase interview method) about similar issues, since certain topics were addressed more than once throughout the three interview series. I also examined the interviews of different participants and compared them as data was gathered in this study. A colleague who is familiar with the self-determination theory and qualitative research methods read through the interview quotes and reviewed the coding that was used in this study. She made suggestions for where certain quotes belonged based on the three psychological needs and this second opinion was helpful because of the overlaps or connections between the needs.

Transferability of the findings is a key issue in the trustworthiness of a research study. I provided thick descriptions of data and this is necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer is a possibility (Lincoln & Guba, 1985). The thick descriptions in my data provide potential appliers with the necessary information and details if they want to transfer findings to another study.
Dependability and Confirmability

Dependability is another one of the factors regarding trustworthiness. Lincoln and Guba (1985) emphasize that naturalistic inquiry should be judged by dependability and authenticity. Dependability is defined as “a systematic process systematically followed and authenticity is reflexive consciousness about one’s own perspective, appreciation for the perspectives of others, and fairness in depicting constructions in the values that undergird them” (Patton, 2002, p. 546). The thesis committee had the opportunity to read through and question the methods used in this study. This review of the data, interpretations and findings was used to examine if the product is supported by data.

Confirmability refers to whether the product of research (the findings and interpretations) was supported by the presented data (Lincoln & Guba, 1985). Confirmability was addressed in this study through different techniques such as observations and a reflexive journal. Also, participant profiles were created to give readers a deeper understanding of the individuals involved and provide more quotes that were not included in the results section.

Techniques for Establishing Trustworthiness

Observations and a reflexive journal were both used to establish trustworthiness in the study and the purposes of these techniques are further discussed in this section.

Observations

Since I used a tape-recorder to capture audio during these interviews, it was important to use another data collection method as well to strengthen and verify information. After each interview I jotted down observations of the participant’s non-verbal behaviours while talking. Doing this helped me remember certain things about the
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person being interviewed and it helped me visualize the specific interviews when looking back and analyzing all of the data during the data analysis process. Observations focused on the external behaviours of each participant and the purpose of doing this was to compliment the interview data that was gathered. Patton discusses some advantages of using observations as a method in research studies. He states that through direct observations the inquirer is better able to understand and capture the context within which people interact and understanding context is essential to a holistic perspective (Patton, 2002).

I observed the participants’ body language in these situations to develop rapport and consider when preparing for the remaining interviews. Reviewing observation notes after each interview allowed me to improve on interview techniques and interactions with participants in the next interviews. Observations allowed me to personalize each interview slightly and adjust my strategies to create a comfortable environment for participants during the interview process. Together, the information gathered through observations and the interviews gave a more complete picture of the participants’ experience.

Reflection Journal

Reflexivity involves researchers being aware of their own responses and it emphasizes the importance of self-awareness, political/cultural consciousness, and ownership of one’s perspective (Patton, 2002). It turns the focus on both the researcher and the research act as part of the dialectic between the researcher, the research process and the research product (O’Donoghue & Punch, 2003). This reflexivity or self-reflection was done in the form of a journal for the current research study. Upon completion of each
interview and throughout the entire research process I completed a reflexive journal on
the methodology and my self (See Appendix E). It included details on the daily schedule
and logistics of the study, personal reflections and insights and it was also a
methodological log where decisions and rationales were recorded. The reflexive journal
was guided by specific headings or questions that were developed before entering the
field. Completing this journal was an effective way to observe the self, others, and
interactions of self with others. Descriptive comments regarding the participants,
conversations with participants, the physical setting and my own personal behaviours
were noted. Also, reflective comments on methods, ethical dilemmas or conflicts and
future improvements were discussed in this journal. My reflections on the research
process helped to understand the interviews and the participants further as this style of
study requires researchers to consider themselves and the methods they choose to follow.
Chapter 4: Results

The fifteen interview transcripts were analyzed to reveal how thirteen year-old females perceived and described their experiences of being PE students in school and participants of organized youth sports outside of school. Through careful and comprehensive descriptions, participants described how they felt about physical activities in their everyday lived experiences. The three needs discussed in the self-determination theory (autonomy, competence and relatedness) were major categories addressed in this research study. Significant statements from the interviews were categorized based on those three needs using Appendix D as a guide. Statements were considered significant if they related to any of the three needs or if they helped describe the participants' overall experiences in one of the two settings that were examined. Overall, reoccurring and relevant themes concerning motivation issues were discovered throughout the research process and these underlined ideas are discussed in this section. Tables 1 and 2 summarize emergent themes by category, theme, environment and participant.

Factors that influenced their levels of motivation by either enhancing or thwarting it in both of these environments are discussed using participants' own words. The pseudonyms that participants will be referred to in this research study are Jane, Mandy, Tara, Kelly and Cora.

**Autonomy**

Autonomy is the belief that one is the originator and regulator of his or her actions (Deci & Ryan, 1985). Autonomous individuals experience their behaviour as an expression of the self and “even when actions are influenced by outside sources, the actors concur with those influences, feeling both initiative and value with regard to them”
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(Deci & Ryan, 2002, p. 8). Regarding autonomy, participants in this study discussed examples of when they were given choices or options in different situations, when they felt in control of their own actions and when they made decisions themselves. They also talked about not being pressured by others and the autonomy support displayed by parents, coaches and PE teachers.

Based on the words of these participants, it became evident that feeling autonomous or self-determined was important to them, in both sport and PE situations. They discussed the desire to regulate their own actions and feel in control over how they achieve their goals. Even though most of the sports they played in PE class and in their leisure-time were team oriented, participants were able to display leadership and decide for themselves how to perform. In addition to regulating their own actions, participants often took on an authoritative role by helping their peers. Participants liked to be given the opportunities to make personal choices in both environments but it was also common for the PE teachers or coaches to provide minimal choices, which was not autonomy supportive.

**Autonomy in Hockey**

The need of autonomy was discussed by participants when they talked about personal experiences in hockey situations.

**Leadership.**

Mandy and Jane took on leadership roles by helping teammates during hockey situations and a few other participants felt in control by telling their parents where (which town or team) and how they wanted to play.

Mandy: The line I had last year, there were two young players, younger than me, and they were kind of like learning and I had the puck most of the time and I
...
would pass to them. And I would tell them what to do, like ‘Go over here and I will pass to you’.

Tara: I used to play boys hockey and I didn’t really like it that much anymore so I asked my dad if I could try out for girls hockey.

Control.

The participants reflected on experiences in hockey when they felt like they had some control and they mentioned relevant situations with teammates and parents.

Jane: Most of the girls like me because I was showing them new rules and that I would stand up for them because I was the captain. So whenever something was happening they would call my name, like ‘Jane make them stop’.

Kelly participated in an activity (hockey) in which she felt she had some control over how personal goals were achieved, but a challenge she faced when being part of a team sport was illustrated.

Kelly: For me, I am just sort of that person that even if we are down I don’t quit until the whole game is done because I know that we can score goals and we have scored goals on them before, so it would be possible to come back and stuff. But then some people, different personalities, they say ‘oh we are down we are never going to come back’ and just give up and then it is kind of hard to get things going if you have people who have given up.

Kelly’s experiences in team sports were expressed and even though she had to work with other people to reach the goal of winning hockey games, she knew what she was capable of and regulated her own actions by trying hard in practices or games regardless of others’ actions.

The personal choice to participate.

The participants in this study were not pressured to be involved in hockey and other youth sports. Instead, they made choices for themselves regarding these activities and participated for personal reasons. Health and Enjoyment were the main reasons they participated in physical activities such as hockey regularly. In particular, Jane, Mandy,
Kelly and Cora placed an importance on being physically active and living an active lifestyle for health reasons.

Kelly: When you play sports or something, it makes it fun and also to be in shape so you are healthy.

Cora: I like being active and I don’t like sitting around doing nothing and I enjoy doing a lot of different sports. Because a lot of kids in my class don’t do sports in their spare time and they just don’t do anything.

Mandy: I want to be healthy also, I just think I like to play sports and I don’t want to stop.

Jane: I think because I like to be active and whenever I am active I feel healthy. And if I am not active, then I feel that I am unhealthy and I need exercise... because then I would get overweight and I wouldn’t like that and eating all junk-food you could get sick. If you don’t get enough exercise you might feel sick or something like that.

Health reasons were mentioned by these participants, however, enjoyment was the main motivation or reason why the girls participated in physical activities growing up.

The five participants in this study enjoyed playing sports and chose to have physical activities be a part of their daily schedules which was illustrated by the girls:

Tara: Well like if you are upset with school, hockey makes you feel better. It is good exercise too. And it keeps my schedule busier and I like that.

Enjoyment was evident in both organized sport and school PE settings, but based on their experiences, playing hockey was enjoyable for different reasons. Participants liked how playing hockey made them feel and how it gave them something to focus on.

For example, attention could be focused towards a specific skill like skating, or getting their mind off of school or simply winning a game or tournament. The girls got involved in hockey at a young age (all before the age of 9), and they all currently play hockey on a female team during their leisure time.
Jane: In gym, some of the sports I don’t enjoy or sometimes I just don’t feel like playing. But hockey, because it is one of my favourite sports I always want to play and I am always ready and I want to go out there and try my hardest.

*Autonomy support of parents and coaches.*

Participants discussed how their parents allowed them to make decisions for themselves and they did not pressure them to play on a specific team or behave a certain way. Parents were described as helpful and supportive.

Cora: My mom and dad let me do my own thing for hockey. It is what I want to be doing and they drive me and stuff, but they won’t go and like force me to do stuff.

The role of parents is discussed further in the relatedness section, but it should be noticed that they displayed characteristics of being autonomy supportive in sport settings.

Hockey coaches were socializing agents who were in control of the drills, ice-time and positions, but they were also seen by participants as being supportive. They did not use external rewards in practices and the girls did not feel pressure from coaches, often they would put pressure on themselves instead.

Tara: Because your coach supports you and tells you certain things and your teammates are there for you also, to help you out. They tell me when I get on the ice but we need that because we are just learning, and a lot of it I will just get on the ice, play, and I figure it out myself anyways.

Cora: Well I sometimes like when they help me with things in practice but I don’t like being told what to do that much, so a little bit is okay. I usually know what to do, like we do the drills lots ...and if they tell me I’m doing good that is cool.

Jane and Mandy talked about times when their hockey coaches made them do numerous skating drills and they did not enjoy this. Coaches displayed controlling behaviour as they made players do repetitive drills and Jane would have preferred to do alternative drills involving pucks.
Jane: She wants us to get in shape but we were so tired from the game still and we just wanted to do shooting or at least pick a new drill, not do even more skating.

These participants often talked about playing hockey by choice and for their own personal reasons, not because they were pressured to by parents or controlled by coaches.

*Autonomy in PE*

The need of autonomy was discussed by participants when they talked about personal experiences in PE situations.

*Control.*

Participants perceived their PE teachers to be generally controlling, but similarly to hockey situations, some of them felt in control of their own behaviour when dealing with classmates.

Cora: I am a pretty good athlete. All the kids in my class count on me for doing certain things in my class and my teacher counts on me to do things too. The other day I told you that we had skipping routines, we didn’t have any group leaders or anything, but my group pretty much listened to me and my teacher commented to me about that.

Jane: My teachers show that they are in control and whatever you want to do they aren’t going to make it just because you want it... they are in control of the kids.

Tara: I would like to have more control when it comes to specific activities in PE class such as helping with drills. Well like some of the drills, they aren’t really constructive. They aren’t really teaching us what to do or anything and a lot of us have different drills that could help us more but he never asks us about drills or anything so we don’t really get to show other people what we want to do.

*Autonomy support of teachers.*

One of the ways that teachers were autonomy supportive was providing their students with choices throughout the classes and allowing them to make decisions for themselves. All of the participants said that they would have liked to be given more choices in PE class whether it was the types of games played, the equipment or who was
on their teams. Kelly specifically liked to be able to pick what she wanted to do for activities:

Kelly: I like getting good marks and stuff so I want to participate plus if we actually participate he will let us do what we want to do in gym. If we don’t, then we are going to skip or something, which is something nobody really wants to do.

Tara: Our teacher would give us two options, like which game we wanted to play so everyone got to vote for one and like we have more girls in our class and all the girls would pick the same sport so we would always get to play the sport we wanted. Because not a lot of people like badminton and so he gives us another option. Like sometimes we have to play badminton but like getting another choice gives us more freedom of what we want to do.

Autonomy supportive behaviours displayed by teachers, such as giving choices helped participants feel good about themselves, and this positively affected their behaviours and competence. Overall, participants enjoyed when PE teachers were autonomy supportive by creating an environment where they could feel successful, in control and when they were given choices rather than being controlled and pressured to do things one specific way.

**Competence**

Competence refers to feeling effective in one’s ongoing interactions with the social environment and experiencing opportunities to exercise and express one’s capacities (Deci & Ryan, 2002). The need for competence is a felt sense of confidence that leads people to seek challenges that are optimal for their personal capacities and to maintain and improve those skills through activity (Deci & Ryan, 2002). Statements regarding competence from participants in this study involved being optimally challenged, balancing activities to their abilities, boredom (sitting on the bench, not being able to participate) during activities, rewards, feedback, personal improvement and goal setting. They spoke of positive and negative examples that were related to their feelings
of confidence in physical activity settings. Feelings of competence and a desire to improve on sport skills in the future were discussed with participants. They also spoke about the impact of others on their competence and the numerous factors relating to their experiences in PE and sport settings.

Participants experienced feelings of competence from their active involvement in physical activities in PE class and hockey situations. A summary of each of the participants’ levels of competence is expressed (Appendix F) as an overview of this issue.

Overall, these participants were not optimally challenged in PE class, but they had been optimally challenged during hockey situations which made them feel like they want to get better or improve at that sport. Personal improvement was stressed only in hockey situations. These five girls expressed their hopes of improving upon certain hockey skills and one of the main reasons that they could do this was based on the meaningful feedback that has been given to them in hockey situations.

**Competence in Hockey**

The participants in this study felt competent when playing hockey and these feelings came from getting a lot of ice-time, being named the team captain, beating teammates at on-ice drills and being put on the ice by coaches at key moments in the games. They described themselves as good players and also explained that other people such as coaches, parents and teammates thought they were good players as well.

Jane: Probably this year being captain of my team because that means I was a good player this year and I stood out in front of everyone else. And when we were doing shoot-outs they picked the captain which was me so I had to go shoot so that kind of seems like I had a good shot... I don’t think I am the best skater but I am close to being one of them. Because, well I do treadmill which helps me skate more and then I also go out with my dad’s team to practice skating too and do his drills. So I learn extra things then. But also when we do relay races, I always beat the other players on my team and sometimes I even beat my coaches.
Kelly: I am a good player because when there was a time they needed to put someone on the ice, like we needed a goal or penalty kill or something, they put me on the ice.

*Effective instruction of coaches.*

Although there were similarities, sport coaches were often described as being different than PE teachers because of the fact that they went into greater detail about specific skills during practices and games. Hockey coaches were seen as role-models who were supportive and helpful with specific hockey skills. Participants also felt that coaches gave them information that would be useful to them in real-life situations sport situations.

Jane: Usually my hockey coach does a better job than my teacher because my teacher just briefly goes through it.

Tara: My coach helped me because she plays hockey, she’s a forward. She taught me where to go in different situations and my dad takes me out to skate and shoot and stuff... they are always encouraging and if you need help, they are always there to help you out. And I guess usually they have played hockey before too and they know the game so if you need advice on what to do, they can help you.

Kelly: I couldn’t, you know when the defence rings the puck around you and you have to hit it off your skates and up to our stick. I was having a little problem with that and I couldn’t do that properly so I asked one of my coaches and they told me how to do it better, to turn around and get the puck and give it to the centerman. I listened and then when I went to the game I did it right and I actually did the break-out properly.

Mandy: They are always involved in the practice, they are teaching you stuff that is useful. I learn more from a teacher or coach that is nicer to me and I want them to like me. You get more ice time if they like you and you learn more because they are nicer to you.

Jane: Just learning stuff that you get to be a better hockey player from different coaches. Like different coaches teach you different things or they teach you the same things and you can improve upon it every year.

Coaches and parents were identified as giving encouragement, advice and specific feedback to participants regarding their performances in sport. This feedback impacted
their competence as they were more aware when they did something well, since they were specifically informed about it, and they were able to feel good about themselves afterwards.

Kelly: I like it when people say I did something wrong and then help me to do it better and even if it means going on the ice for that extra practice earlier to help what I did wrong better so that I can take that and put it in the game... It is nice anytime because then you know you are doing something well or you know you aren’t doing something so well like if they tell you before or after you go on the ice, you can improve next time you go on the ice.

Tara: A lot of coaches do if I make a mistake or so something wrong, they tell me after my shift... I like it because then I know what to do better the net shift. Or if you did something good they let you know and then you feel better.

Participants thought it was valuable when coaches gave positive feedback and reminded them about the fun aspects of the sport, rather than yelling and only pointing out the negative things.

**Optimal challenge.**

Participants felt optimally challenged in hockey situations, however, they wished for more challenges in PE class. The participants liked to be challenged in hockey situations, they realized what they needed to work on and in turn, they truly wanted to improve their hockey skills.

Kelly: First of all, it is a lot of fun. Also, because it is like a break and because it is challenging, you have to push yourself. Especially hockey, you have to push yourself to do better because you want to make it on in the tournament or whatever. Also because you get to meet all new people and it is just fun because you get to have fun together and encourage each other.

Even though they all felt like “good players”, they wanted to be challenged by coaches or drills in practice because they knew there would be a reward involved, they would play even better in future games. Participants were all able to identify areas in hockey that they could improve upon.
Jane: I like to learn new things and I think the more I practice the more I will get better. So if I keep on practicing during hockey then I will get better on the ice and sometimes I use a ball and a sponge puck and a real puck and try it on ice. So I start at different levels to see if the ball is easiest and then get up to a heavier puck.

Cora: I am a pretty decent player but I need to work on different things like skating better, and aiming with my shot because sometimes they go anywhere.

Kelly: I got off to a rough start but they think I have improved a lot so I’ve gotten a lot better and am doing pretty well now, and the treadmill thing has improved my skating already... I would like to improve even more, like my skating, so I could help my team forwards and backwards and to get more points, not just goals but assists.

Future goals.

Participants believed in themselves and spoke confidently about their skills relating to hockey, which led them to setting goals for the future. Their experiences relating to hockey gave them the desire and confidence to believe they could be successful at higher levels of competition in the future. They spoke about both short-term and long-term goals involving mostly hockey. Being involved in sports outside of school gave them goals to strive for and these hopes for the future were a motivating factor that keeps them playing sports and being active. Some goals they had were to play for the Canadian team at World Championship tournaments, to play on the Olympic team, play university hockey, get scholarships, to be a captain, to make the high-school teams, play on a house league team as an adult and also to stay healthy. Besides setting goals for themselves regarding hockey and general health, the participants talked about goals that their relatives have set for them as well. It was illustrated that being physically active was not only important to them, but striving for certain goals was important to their family members as well.
The text on the page is not clearly visible due to the quality of the image. It appears to contain paragraphs of prose, possibly discussing a topic, but the content is not legible enough to transcribe accurately.
Mandy: I want to be on the Canada team and I want to become captain, really bad. I have never been captain and I just want to be captain. I always have, I have been assistant but I have never been a captain. My dad wants me to go on the Canada team if I can make it, it would be really good. And my mom says if you can get a scholarship and go to university, she wants me to go to Brock.

Cora: I would like to play on an Olympic team if I had the chance to, I would. And I want to try out for the high-school team and all those kind of things, like university and stuff. I will probably do certain activities like running or hockey or soccer or whatever. You want to have a good life and you don’t want to be cooped up in your house all day. You want to have a job and you want to keep active.

Tara: In high-school I will try and make the teams in school and everything. Maybe try in university too... Well my dad wants me to get to a high level of hockey, when I get older.

Jane: I want to try and make it to the Olympics. Because all my grandparents think that I can make it... if I am not healthy in the future then I think I will feel unhealthy because I like to have a healthy body and when I am older, if I don’t keep it up then I will feel like I don’t want to move around. I want to stay healthy so I am always active and get up and go see people.

Two of the participants want to stay involved with hockey in the future by being a hockey coach and this was discussed often by Kelly. She wants to be a pee-wee hockey coach, which is what her dad currently does.

Kelly: When I am a bit older, I would want to coach. I think it would be fun to help a team go get through and win some type of medal or something. I think I would like to coach peewee. It is right in the middle. My two peewee years were a lot of fun so I think I would like it.

Mandy: It would be cool to be a coach of the NHL or something, or I just really like hockey.

Overall, the participants who were active in school PE and hockey in their leisure-time hoped to continue being physically active in the future by playing and/or coaching sports in both settings.

Mandy: I really enjoy it and I want to do it as my job and I want to do really good at it. Skating, like hard, and getting the puck and just going with it. I like doing
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that. It just feels like I don't know how to explain it. I just enjoy having everyone watch me I guess.

**Competence in PE**

In PE class, participants felt very competent and successful with their performances as well. Participants' competence levels, based on their own statements, are displayed in Appendix H. They felt they were top students and this belief came from comparing themselves to classmates. Tara rated herself a 9/10 (based on a scale from 1-10 and 10=the best student in class) in PE class and described her experiences,

A lot of people in our class, they are not really athletic or anything, like not many of them play sports or anything so when they are learning something it is kind of hard for them because they don’t really know the sport that much. Like when we are picking teams for dodgeball or soccer I would always be one of the first ones picked.

Mandy rated herself a 10/10 in PE class,

I am really involved, most of the girls are a 5 though because they don’t want to break a nail. Me and my friends are really involved because they are really athletic too and all of the guys are into it. Those girls, they don’t enjoy it enough so they don’t even try, they don’t want to embarrass themselves.

Jane only felt successful in PE class sometimes, depending on the activity, and she felt negatively influenced by the actions of her classmates, “some of the sports I do participate in, but then half my class doesn’t participate, they stand and talk, mostly girls. And then the boys all hit each other and everyone”.

**Lack of optimal challenge.**

Based on their experiences, these individuals were not optimally challenged in PE and not all of the activities were balanced to their abilities. In PE situations, they described the activities as being “easy” and “boring”.

Kelly: Sports where we do have some challenges like to reach a certain goal or whatever or you try to do something, but I would say it [PE] is not really hard,
null
you do to the best of your ability it is not like you have to be the top person in the class. Because obviously there are some people who are more active and better at some sports than others so there is always going to be those few people who are higher up than you so it is sort of what you can do.

In contrast to hockey situations, they did not explain any hopes of improving skills in PE class. The participants had certain goals relating to how they could improve for hockey, but Jane and Cora were the only two who identified something that they wanted to improve upon in PE class,

Cora: Right now I get an average of ninety on my report card and I kind of want to bump it up to ninety-five or something like that

Jane: If I am learning a sport I want to learn it properly and not fool around like I am learning badminton and I want to learn that sport because my aunts and uncles play it. I didn’t know how to, but now I am learning how to play it.

The other participants were not striving to get better in PE and they thought that since they were involved in class, unlike certain classmates, improving skills was not necessary to be successful. PE teachers were providing opportunities for the participants to feel successful among peers, but they were not stressing personal improvement in class.

Jane’s experiences in PE class were described,

Most of the sports that we play or the obstacle course or whatever we do in PE is not really difficult and because I am a sporty person I don’t find it difficult because I know how to play all those sports, or most of them at least... learning new stuff which mostly doesn’t happen, we just re-practice everything.

Kelly and Tara had suggestions for making PE class more exciting to them,

Kelly: I think it would be more challenging if they did make it so that you have to get a score or something, like do more challenges, like if you do ten baskets and get three, next time try to get more baskets in a row. That is just an example, but like more challenging for yourself.

Tara: I’d like to do harder skills or like neat tricks or something. We just do basics, the basic things. We don’t really do any tricks or anything.
One of the main issues that emerged and was discussed by participants regarding their competence in PE and sport situations was sitting on the bench and not getting to participate in the activities. Waiting around, not getting to participate in activities or play the games affected the feelings of participants in a negative manner. Sitting on the bench was the worst part of PE class and youth sports for most of these participants and contributed to the fact that they were not optimally challenged in PE situations.

Jane: You just sit on the bench and the time is up you don’t get to participate in it and you are sad that you didn’t even get to participate in the gym class and they are having a blast. You feel upset.

Mandy: We are playing tennis right now and playing the games we have to wait like twenty minutes on the bench. I bring my homework to do on the bench... soccer, baseball and hockey I didn’t like getting sat. I used to suck obviously and I didn’t like getting sat.

Kelly: We were doing obstacle courses with a student teacher and what we had to do we cut out half an hour to start writing things down and it wasn’t fun because in gym you are supposed to be up and not sitting down and we ended up sitting in the gym on the floor writing things, it wasn’t fun... The best part is when we are playing basketball or dodgeball or something where we all get to play at once instead of having to sit down and wait for your turn because that kind of stinks.

Challenging competition.

Participants liked when their parents and coaches played hockey with them and a similar theme emerged when talking about PE teachers. Participants liked PE teachers who were physically active and played the sports themselves. Having active or skilled teachers challenged them to get better at certain activities and gave them something to strive for. It was evident that these girls liked having a PE teacher who they could physically model themselves after.

Tara: Our PE teacher plays sports too so he really knows what to say, so he is like our hockey coach... I guess you kind of get better, you learn something from them. You watch what they do and you try it out too.
Tara: We were playing soccer at school and our PE teacher he likes soccer the best and he plays, he used to play in a really high level of soccer. So he would do a lot of really neat drills so a lot of girls in our class would bring it to our soccer coach and he would let us try it.

Based on their experiences, these were the qualities that participants enjoyed about or desired for a PE teacher.

Cora: They would be fit and stuff and they would be physically active and they would teach you to be physically active and how to be fit and all that.

Mandy: nice, sense of humor, like the sport and not just teaching it just for fun, or because they have to and they actually know how to play the sport. There are some things I wish my PE teacher would do. I wish he would teach us one thing about it, teach us something we would actually do that would help us.

Tara: if they played with us, it is fun playing against them sometimes and they beat us too. It is fun to play against somebody better than you.

PE class was not described as optimally challenging by these participants, however, they were challenged when trying to model after or mock the actions of skilled PE teachers.

Rewards.

Participants talked about the importance of receiving feedback much more than they discussed rewards. Not getting external rewards did significantly affect and continues to affect Jane’s feelings towards a certain sport. She recalled a situation that happened when she played on the basketball team and she has disliked basketball ever since. She had a negative experience and was very upset that she wasn’t rewarded at the end of the season.

Jane: Basketball I don’t enjoy because I have bad memories about it... it reminds me of when I was little and I was playing and I didn’t enjoy it and my coaches weren’t properly teaching me and at the end of the season, or half way through, I didn’t like it so I quit. And then at the end of the season they didn’t even give me anything like a trophy or anything so I was upset. And then I never played basketball ever since. It like ruined my life by playing basketball.
Transfer of skills and fitness in PE.

These participants valued being able to transfer skills between PE and sport situations. Both PE and hockey were seen as training for each other or other activities such as school sports teams (cross country or soccer) done after school. Playing sports, such as hockey, allowed participants to improve their fitness levels and feel successful at certain strength and stamina exercises done in PE class. Kelly made links or connections between these two situations,

Kelly: Doing hockey three or four times a week, it makes me more physically fit so I am not out of shape or anything. It helps me in PE class if we have to do running or stamina sort of things I can last longer because I am fit. If I wasn’t playing hockey I wouldn’t be as fit and then I wouldn’t be able to last as long.

Overall, Kelly felt that playing sports helped her physically in PE class and she also said that PE class helped with her sports (played in leisure-time) in some ways as well.

Kelly: Sometimes they do competitions, like strength competitions. There is one thing where you sit on the wall and see how long you go. That helps me in hockey because you need your leg muscles for hockey. And also in gym class, my teacher taught us basketball skills like what certain things to do for basketball that will help you do better when you play an actual game, like the right postures and stuff.

Participants explained how the skills they learned and certain practice drills done in PE and hockey situations were transferable between different sports. Specific drills that participants learned from coaches and teachers in PE and youth sport were often recalled in different situations. One student discussed how the soccer drills they learned in practice could be used in the sport of floor-hockey. She found it helpful to have the same people involved in both situations, since they would know the same drills or plays as each other.

Tara: We did off-ice training too. We did a lot of push-ups, laps, and everything so I guess I got faster in running and stuff. I did cross country at school so then doing off-ice helped me. It was kind of training for cross country... In soccer we
have drills that we know and all the girls on our soccer team we kind of like put another sport into that position. Like if we were playing floor hockey, there are passing drills and stuff from soccer (out of school), but we don’t really get to use them since some people don’t really get it. Sports out of school you are always with the same people. You kind of make up your own plays sometimes but in PE if you are with other people, who don’t know that play then it will be different.

Mandy made a link between school PE and organized sport as well, as she felt that being involved in hockey improved her level of fitness.

Mandy: If I wasn’t active in school when it comes to hockey then I would be like the slowest person because I wouldn’t be ready, I wouldn’t be active. I think PE helps you be active for hockey... If I didn’t play hockey I would probably be overweight right now because I eat a lot of junk-food.

The transfer of skills from PE to sport situations and vice versa challenged participants and prevented boredom.

Relatedness

Relatedness is “the seeking and development of secure and connected relationships with others in one’s social context” (Deci & Ryan, 2002, p. 7). It refers to “feeling connected to others, to caring for and being cared for by those others, to having a sense of belongingness both with other individuals and one’s community” (Deci & Ryan, 2002, p. 7). Out of the three needs addressed in the self-determination theory, relatedness was the one that participants discussed and described the most throughout all of the interviews. They talked about their relationships with parents, coaches, peers (classmates and teammates), siblings and teachers, whom all played significant roles in the participants’ physical activities.

At the young age of thirteen, participants have already experienced the growth and development of relationships with other people in both PE and sport (hockey) situations. Having positive socializing agents for females at this age was a major factor
that became evident after having conversations with these participants. They valued the roles of parents and coaches in hockey situations and valued their friends the most in PE class situations.

*Relatedness in Hockey*

Experiences involving relatedness were described by participants as they discussed relationships in sport, specifically hockey, situations.

*Influential family members.*

Participants wanted to have a sense of belongingness with their family members and participate in the same sports that they saw family members were already involved in. The siblings of participants influenced their decisions to get involved in sports during their own time and helped practice or develop skills. Brothers and sisters were mentioned numerous times in the interviews when they talked about joining and playing sports. Both younger and older siblings acted as role-models to these participants as they watched them having fun while playing sports and in turn, wanted to try participating in those sports too.

Mandy: Well, I wanted to do it and it also looks fun (hockey). Because my sisters did it before me and I just saw them doing it and it looked like fun.

Jane: My younger brother, he started before me and then I would always go to the arena with him and I liked that sport and I would play it at home with him. So I enjoyed playing that. So my personal thing is that I enjoyed hockey when I first started... they are younger but still they teach me how to stick-handle, some tricks which I like to learn. But then they teach me that and my parents don’t know how to do it but my brothers do.

Tara: My brother plays atom rec. A couple of my friends and cousins they played hockey a lot so when they came over we played street hockey so I wanted to try.

Parents influenced children and played a major role in their child’s participation in hockey during the sampling years. During the sampling years (the first stage of sport
involvement), the participants’ parents provided them with opportunities to try playing a number of different sports. In hockey settings, Jane, Mandy and Kelly identified their parents, specifically their Dads, as being very helpful with practicing and improving their hockey skills.

    Jane: My mom expects me to, like whenever my brothers are out practicing, she says ‘Jane go practice your stick handling’ because that is another thing I really need. My dad he just wants me to be a good hockey player and like the game and play it for fun, not for money or anything. Just have fun playing.

Jane also liked when her parents showed their support, because at times she wanted to play hockey and her teammates were not interested in playing, so having her parents gives words of support and advice kept her spirits up.

    Tara, Mandy and Kelly have parents who physically went outside with them to practice shooting pucks and gave individual coaching or instructions. Kelly’s dad “is really into the sport, he coaches and everything”, which created a connected relationship as she was active in hockey.

    Kelly: Well my dad would always take me to do shots and everything in the backyard and that made my shot a lot better.

As well as being supporters, some parents acted as role-models to their children. Mandy’s dad played on a Junior ‘B’ hockey team and he told her about that experience which has encouraged her to get involved in hockey as well.

    Mandy: My dad he gets the ice here, for me and him and he shows me stuff I need to work on and I practice it. My mom will tell me also what I need to work on sometimes when my dad isn’t home, she will come outside with me and play.

Jane found it valuable that her parents are physically active themselves.

    Jane: I think I am physically active because my whole family is, so whenever they want to play I go out to be physical too and also it runs in the family. Like my mom was physical and now I am physical and now my whole family is physical.
Parental support was more evident regarding sport situations than it was in PE situations. Parents were more involved in hockey and supported their children with encouragement and verbal feedback. The meaning of support to Mandy was expressed.

Mandy: My mom and dad and friends telling me good job and stuff. It is not always looking at the negative things that you did wrong but looking at the good things and always helping you and showing you.

Mandy: It is easier too if your parents are showing you their support that they want you to have fun.

This type of encouragement showed that they cared for her and this was important in sport and PE situations.

A summary of the results section was created for readers to see the main themes that emerged in both PE and sport settings regarding the needs of autonomy, competence and relatedness (Appendix G).

*Strong relationships with teammates.*

Establishing positive and connected relationships with their peers was a major issue for participants in both sport and PE situations. However, there were differences between the relationships of participants with their teammates in sport situations compared to relationships with their classmates in PE situations. Teammates in sport were extremely important to participants as friendships with them were more meaningful than with classmates in PE class. Hockey teammates were seen as being very supportive on and off the ice, fun, accepting and these relationships transferred over to school situations. Participants illustrate how they work together with teammates and support each other:

Kelly: It feels good because you are getting to work with your teammates and you are getting closer because you work together and you have to. It is not just like it comes easy like you say 'ok we are going to win this game' and it just happens.
You have to work for it and stuff and just that feeling that you have to do this and everybody is keeping each other going and stuff and that is what makes it fun.

Jane: Whatever sport you are in, if one person gets down you help to cheer them up to help them get back into the game to help your team win the game. I like to be supported a lot because I get down on myself a lot and my team says ‘oh come on you can do it, I know you can’.

They spent a lot of time socializing with teammates and often play with each other on sport teams more than once, which had a positive affect on building friendships:

Jane: You meet new friends at each sport. So then you get more and more and then as you move up you stay with them because of the age groups.

Tara: Like playing with people you knew last year, it is a lot of fun because you already knew them but you get to know them even more the next season and meeting the younger ones is a lot of fun. They are really excited to play with the older ones and a lot of them are really hyper and it is kind of funny to watch them.

Kelly: I feel that I get along with all of them and just because our team accepts anybody even if they are the worst player they still accept them, it is not like they would be mean or anything, they are nice.

Mandy compared her hockey teammates to family by saying:

Mandy: They are like my sisters because we hang out and give hugs and kisses on the cheek and we tell each other our secrets and stuff. And we help each other out when we are playing.

Tara stood out from the other participants when it came to issues involving relatedness because of the great importance she placed on her friends. She started playing certain sports because her friends were playing them and one of the main reasons she enjoyed being physically active was that she’d get to be surrounded by friends. Tara’s teammates meant a lot to her, influenced how she felt at times and motivated her to continue playing on sport teams each year.

Tara: All the girls on our team have great personalities and stuff, like they are all enthusiastic so our tournaments we have a lot of fun. Our team was really good this year so it was fun. At long tournaments we have a lot of parties and stuff so we kind of get closer together and we took a coach bus to a couple of games and we talked a lot... like being in tournaments together and playing soccer during the
summer we are always together... you talk to your teammates if you are on a team. And when you are at school you start talking to them more too.

Overall, playing sports with their friends was enjoyable and added to the experiences valued by these participants.

Cora: Being with your friends and winning and having fun. It is a fun sport and I like playing it because you can be with your friends and you are in control on the ice and you can do what you want to do.

Tara: I guess for something else to do other than just studying all the time, something to take your mind off school. Say you fail a test and you are out playing hockey with all your friends and it is a lot of fun and if you are really mad, you just skate it out and score a goal or something.

*Developing teamwork skills.*

Feeling connected with other people in caring relationships was important to participants. Lessons relating to teamwork, discipline and effort from hockey were carried over to PE situations.

Jane: When I was younger in hockey or gym class I didn’t know you were supposed to work with a team. I thought I had to be an individual but once I got to last year, I found out that you have to work as a team to get through something... This year and last year we learned to be a team to work together, stuff like that, to do with sports which I brought over to hockey to bring with my team so we would work like a team. We did activities in gym which we had to figure out puzzle or something working as a team and then when we brought it over to hockey, hockey is a whole team sport and you can’t be an individual to play.

Hockey is a team sport and throughout their interviews, each of the participants discussed the importance of teamwork while being physically active both in and out of the school environment. They constantly talked about communicating with others, ‘doing it for the team’ and how they contributed to their teams.

*Relatedness in PE*

The relationships that participants developed in PE situations were also important as they wanted to feel a sense of belonging in class and be liked by their classmates.
Friends make PE class enjoyable.

Depending on the activity, participants had fun in PE class but they liked the social aspects of PE more than anything, such as simply spending time with friends. They enjoyed PE for different reasons compared to playing hockey as it was more of a time to be social with friends than work at improving skills. This difference between the two situations is illustrated in the following quotations.

Kelly: I would say I try harder in hockey games. I think because it means a lot more to me because hockey means a lot to me. And you want to win because you want to do well that season. If you have too many losses you might not make it into the playoffs or something. In gym class it means a lot to me too because I want that good mark, but it is not "I am not going to get into a playoff" or anything because it is not a competition.

Cora: You do a lot of fun things and you learn new activities that you do. Like when you do track and field you learn high jump and all those things. And you play with your friends a lot at school and stuff. PE is just for fun, to be active and ready for certain things. But during hockey it would be for certain things like a championship, you are in a game or to get ready for a tournament or practice.

Sometimes, Jane enjoyed participating in PE because it allowed her to hang out with friends, learn new things and play against people that she wanted to “get back at”. She did not enjoy all of the sports they did in PE class, or the teachers and she thought it was more fun at a younger age when they played with parachutes and learned new dances. She felt sad when she did not get to participate in activities and just had to watch others play the games. Based on her experiences, Jane talked about negative experiences when she did not feel a connected relationship with a teacher and she spoke about positive experiences when in a secure relationship with friends in PE.

Jane: I don’t enjoy PE classes that much because some of the sports I don’t enjoy. I don’t enjoy the teachers that are teaching, problems like that.

Jane: I like playing with my friends. Also there are a few sports that you don’t get to play until grades 7 and 8. Those sports are ones that you don’t really play until you are that old. So it comes new so like this year I get to play badminton, which
is kind of new to me because at the cottage we play it but we fool around because we don’t know what we are doing. It is fun to learn new things.

Participants described their relationships with classmates as being much different than with teammates. They did not find classmates in PE class to be of much importance. In PE class, they chose to socialize with the peers who also played sports with them outside of school hours. This is illustrated with the following quotes.

Tara: I don’t really think they are that important. Well, some of the classmates are on my team so they are important, but not so much the other ones, I don’t really know them.

Jane: If you have friends at school and friends at hockey you get closer to them because you are in the same sport as them and then if you sit next to them you get even closer to them because you get to talk with them ‘Oh we had an excellent game’ and then they talk back. But if you don’t have someone, then you talk to them but they don’t really say anything because they don’t know what they think of the game.

Profiles of Participants

To gain a deeper understanding of the five participants and to get a better sense of who they are, profiles were created for each of them. Seidman (2006) says that profiles are an effective way to share what was learned from the interviews. Each profile tells a story in sequential process (in order of interviews) using the participant’s words. Brackets were used to clarify what certain passages were about and also to fill in missed words. Certain characteristics of oral speech that are not used in writing (such as “um”, “ah”, “uh”) were deleted to give the profiles a story-like flow. Each profile uses the voice of the participant to share their experiences and story with readers. Refer to Appendix H to read the profiles of the five participants in the current study.

Kelly, Jane and Tara stood out as having the three needs fulfilled the most, as they discussed a majority of the emerging themes in this study. Mandy and Cora both
discussed a lot of the themes as well, but not as much as the other three participants. Relatedness emerged as the need that was important to all five participants and their experiences in PE and youth sport (Refer to Table 2). When comparing all five participants, they all described factors regarding autonomy, competence and relatedness within both situations. Saturation was reached as the majority of the themes were reported by all five participants.
Chapter 5: Discussion

Consistent with research done on links between PE and leisure-time physical activity such as sports, results from this study found these settings have the potential to meet the three psychological needs. Participants made connections between the two settings and were able to transfer useful skills, such as teamwork and various physical skills, from one environment to the other. The current study found that being physically active in PE and sport, according to thirteen-year old females, had some differences but was valuable to them. School PE situations allowed young people to have fun and spend time with friends, and organized youth sport situations challenged participants to improve their physical skills, set future goals and build close relationships with teammates. When involved in both situations, participants have the potential to meet the essential needs of autonomy, competence and relatedness. Specific themes emerged within each need and information from the interviews addressed the needs in PE and sport contexts.

In recent years, declining PE enrolment continues in Ontario as it still lacks appeal to many students and it received lower priority in contrast to other academic subjects (Dwyer et al., 2006). PE class was appealing to participants in the current study when they were able to learn skills that they could use in their leisure-time sport settings as well. When PE class was seen as beneficial to their overall fitness level and relationships with peers, they felt that participating in PE class was appealing as they would be in better physical shape or condition and improve their sport performances. The LTAD promotes this sharing of information between settings and athlete development, which is displayed when young people can transfer skills between PE and sport situations. As shown on Table 1, the emerging themes in this study regarding autonomy
Experiences of Motivation

in PE include control, autonomy support of teachers and personal choice to participate. Themes regarding competence include effective instruction of teachers, lack of optimal challenge in class but effective or challenging instruction by teachers, rewards and improved fitness. For relatedness, strong relationships with teammates were brought into PE class and friends made PE class enjoyable for participants.

PE is a compulsory course for thirteen year olds to take in school and creating an environment that provides them with positive experiences and enhances their intrinsic motivation to be physically active is desirable. Because of decreased participation in school PE by high-school students and lower physical activity rates by young people in general (Sallis et al., 2000), the factors that influence them in this setting have been the focus of current research studies. Previous literature that examined PE situations indicated that intrinsic motivation is likely to be high when students perceive the learning environment to be non-threatening to their self-esteem, physically challenging and when teachers continually provide experiences enabling students to be successful (Koka & Hein, 2003). This type of environment is also likely to increase their perceived ability (Koka & Hein, 2003). Participants in the current study emphasized the importance of being physically challenged in physical activity situations and they desired to be challenged in PE even more. These highly motivated females spoke about times when they felt a sense of control over their classmates in PE and they were able to feel successful when teachers encouraged them or let them be leaders in group situations. Past literature also discussed how environments that promote choice and self-mastery provide situations in which intrinsic motivation is nurtured (Standage et al., 2003). The PE
environment is definitely a place where teachers can allow students to make choices and feel successful at a variety of physical activities.

The connections between school PE and youth sport were explored in the current study. School PE is a setting where young people should be taught the fundamental movement skills and be given the opportunity to practice them. This basic learning is critical as it teaches them both physical and social skills that can be used throughout their lifetimes in different environments. School PE is connected to youth sport because young people who get involved in sports during their leisure-time have even more of an opportunity to develop their skills, make friends and be healthy in this other setting. If young people get accustomed to being physically active during their own time, this may continue into the future when they get older, graduate from high-school and enter adulthood. The LTAD links both PE and youth sport with lifelong participation in physical activity and considers developmental age as well as the lifestyle, customs and laws of Canadians. The connections found in the motivational experiences of young females in PE and youth sport settings can help the LTAD plan to grow and be implemented in more areas across the country.

The participants of this study were all actively involved in youth sports and that is another situation where the three psychological needs were addressed. Young people choose to participate in organized youth sports and because it is activity specific, and they learn about playing the sport in greater detail than they would in PE classes. Organized youth sport environments allow young people to develop meaningful friendships and focus on skills that can benefit their health and performance in other situations such as PE class. There are both similarities and differences in organized youth
sport and PE situations that influence a young person’s motivation to be physically active. One’s confidence or competence in their abilities to be successful when doing physical activities emerged as a major factor in the amount of time young people spend being active. Past research has found a relationship between situations where perceived competence in PE influenced physical activity outside school and vice versa (Carroll & Loumidis, 2001). The participants in this study were generally competent in PE situations, they enjoyed participating in physical activities and they all were very active in sports during their leisure-time as well. The CET stated that people will be more intrinsically motivated if they are participating in an activity out of enjoyment rather than being controlled or pressured (Mandigo & Holt, 2000). Participants enjoyed playing hockey and were intrinsically motivated in this situation. According to past research this could be related to their active involvement in school PE.

Table 1 addresses the themes that emerged in this study in the hockey or sport setting. The need of autonomy was addressed in this situation as participants discussed leadership, control, autonomy support of parents and coaches and they had made the personal choice to participate in the activity. Themes that emerged regarding competence were the effective instruction of coaches, optimal challenge, future goals and improved fitness. Relatedness was also met as they described influential family members and strong relationships with teammates in this situation.

The participants in this study described the positive affects of being good at sports and having others tell them they were good players, which they liked to hear. This feedback encouraged them to want to get better or physically improve their skills. By knowing what it felt like to be successful in physical activity situations, participants
strived to feel that way more by improving and setting goals for themselves. According to past research on feedback, it was found that information-based feedback given in response to student performances resulted in increased perceptions of competence and increased levels of intrinsic motivation (Koka & Hein, 2003). The CET also confirms that informative feedback enhances intrinsic motivation (Mandigo & Holt, 2000). Participants in the present study enjoyed getting feedback from their sport coaches and found feedback to be more valuable if the coach or PE teacher displayed athletic skills themselves.

Results from this study were in line with the CET when discussing how people have greater motivation when they have control over their environment (Mandigo & Holt, 2000). The CET is relevant to coaches and teachers that are looking to create a positive environment for young people and increase the intrinsic motivation of students. PE teachers should seek to promote class structures that are autonomy-supportive and mastery focused, as these dimensions facilitate self-determined motivation (Standage et al., 2003). The autonomy supportive behaviours of social agents such as teachers, coaches and parents have been studied in past research. A study by Pelletier et al. (2000) found that experiencing relationships as controlling undermines the intrinsic motivation of athletes. Ryan and Deci (2000) stated that the primary reason people initially perform actions is because the behaviours are prompted, modeled, or valued by significant others to whom they feel (or want to feel) attached or related. This importance of relatedness was supported in the present study where participants got involved with physical activities because of siblings and friends. Connecting with peers and building strong relationships with them were very important in both PE and sport situations to
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participants. The friendships that were formed in sport situations carried into school settings and PE class was a time to visit with friends.

The issue of parental role modelling has been the focus of past research studies. Sallis et al. (2000) stated that examples of when parental modeling was an important influence in the physical activity of young people have not been identified. Moore et al. (1991) found that role modelling is an important form of parental influence. The current study provides evidence of parental modelling being a factor in participants’ decisions to continue being physically active. It was just one of numerous factors involved, but participants mentioned how they were influenced by their parents’ own participation in sports and physical activities. Modelling was apparent in both PE and sport as coaches were models in PE and parents or teachers were in sport situations.

This research study examined the lived experiences of participants, but it also addressed their futures. The LTAD model’s overall goal is lifelong participation in physical activities and all of the participants in this study discussed how they plan on being physically active in the future. Creating an environment in PE classes where students will feel competent with themselves can also help them attain recommended levels of physical activity overall. Social support from coaches, parents, teachers, and peers are essential for continued engagement in youth sport (Weiss & Williams, 2004). Social agents have an important role in the motivation of young students today. One way to get young females motivated to be more physically active during school PE is to encourage them to be more physically active with a sport of their choice during leisure-time. The organized youth sport experiences of these participants are where they built the
strongest relationships with peers and it gave them a foundation of physical and social skills to take with them after graduating from high-school.

The current study identified and described the experiences of these five young females. By participating in both school PE and organized youth sports, the females in this study experienced social interactions with numerous people, developed specific skills that could be used in different situations and felt good about themselves in these situations. Family members were responsible for getting all five participants involved in sports, specifically hockey, and parents played a major role in motivating them to practice or continue working hard. Playing hockey during their leisure-time was socially important for participants as it developed their strongest friendships and gave them something to strive for, whether it was improving certain skills, meeting new friends or playing at a higher level in the future. They recognized specific things they could improve upon regarding hockey, but still felt competent with their performances because of the meaningful feedback given by parents and coaches. Experiences with sports on their own time gave participants a sense of being in control and inspired them to set hockey specific goals for themselves. The results found that PE class was looked at differently as it was seen as a time for them to have fun, play with friends and be leaders among their peers. They stood out as being top students in this environment because of their athletic backgrounds and experiences with hockey, which also meant they did not feel optimally challenged by the activities done in PE class. However, participants did feel confident in PE situations as teachers gave them opportunities to feel successful and practice some of the things learned in hockey or other after-school sports.
The experiences of young females in this study, who participated in both school PE and youth sports, addressed motivation issues relating to the needs of autonomy, competence and relatedness. According to the self-determination theory, fulfillment of these needs is necessary to be intrinsically motivated and participants were able to discuss relevant things that enhanced and thwarted their personal motivations to be physically active. The integration of experiences with both of these settings allowed them to feel in control of their own actions, competent in their environments and connected with other people in different social contexts. Numerous factors influenced their motivation to be physically active throughout the years and currently they are motivated to be physically active mostly for enjoyment, health and social reasons. Weiss and Williams (2004) state that affect (or emotion) is a critical influence on child motivation because it is the final influence and they suggest that positive emotions, such as enjoyment, excitement, and pleasure, increase future motivation participation. Being physically active in high-school and into adulthood is planned by all participants which is fitting with the LTAD’s goal of having young people experience lifelong participation (Canadian Sport Centres, 2006) in order to lead active and healthy lives.

From the perspective of these thirteen year-old participants, the current study found that there are connections between motivational factors involving physical activity in both PE class and youth sport situations. Similar to other research studies, issues of relatedness were prevalent for females of this age group. It was important to them to form relationships with others in both environments and parents played a major role while participants were growing up. Friends are becoming more important at this age and certain social factors often enhanced their motivation to get involved in physical
activities. As expected during the sampling years, the parents of participants played a major social role as they introduced their children to various sports at a young age and allowed them to be active in different sport environments. Côté (1999) recognizes the sampling years as having great importance and that was consistent in this study as the experiences of participants before the age of thirteen had a major impact on their physical activity levels and goals for the future. The females in this study have experienced the sampling years and are entering a new developmental stage where the importance may be placed on different social agents. For example, it is expected that coaches will play more of a role than parents did, but the overall social dynamics could change with age and experience. Results from this study can be applied to the real world to help improve PE class and youth sport environments by addressing the factors that emerged as being helpful in enhancing a young person's intrinsic motivation.

The results of this study impact the PE curriculum, sport policies and the LTAD model. Clearly, young people benefit from being involved in physical activities and there are options regarding the settings or environments that this takes place in. By creating more sport opportunities both in and out of school, young people can get involved at times and places that are enjoyable and convenient for their personal situations.

To promote a culture of sport participation and performance, the roles of physical education, school sports, recreational sports, and performance sports should all be linked because the independent development of these programs is expensive and ineffective. Thus, by focusing on the common building blocks that all young people need, we can reduce costs and increase the benefits associated with sport participation. (Crocker, 2007, p. 269)
Nations such as England have taken initiatives to create partnerships or links between school PE and youth sport. An example of one initiative or strategy was the 2006 PE and school sport Public Service Agreement target to enable 75% of five to sixteen year olds to do at least two hours of high quality PE and out of hours school sport per week (Ofsted, 2006). Over £1.5 billion was invested by the Government in England over five years in hopes of transforming PE, school sport and club links. This initiative had great success and even the number of sporting opportunities for young people was greatly increased. The target was not only met in partnership schools, but it was exceeded as 80% of pupils (of the 16,800 schools involved) in partnership schools participate in at least two hours of high quality PE and school sport in a typical week. The development and implementation of such strategies is a positive option for nations such as Canada to consider when looking to create physical activity links and increase the amount of physical activity done by young people. The findings in the present study can extend the current knowledge in the fields of education, youth sport and motivation. Hopefully, the strategies used to link school PE and youth sport in other countries will contribute to the development of Canada’s own steps towards progress regarding this issue. The LTAD model is a step in the right direction of linking these two situations as it provides a framework for reviewing current practices, developing new initiatives, and standardizing programs (Canadian Sport Centres, 2006). The school curriculum and sport programs share the same goal and now they need to strengthen the connections and links which can result in a positive physical activity experience for young people in Canada.

The connection between participants’ motivation to be physically active in school PE and organized youth sport was expressed during the interviews. Connections include
the transfer of specific skills from one environment to another, the desire for leaders (parents and coaches) to be physically active themselves and the environment requirements of having autonomy supportive social agents to address autonomy, competence and relatedness needs. Half of the themes that support the development of the psychological needs were not met in PE settings and this means there is room for improvement in school PE classes.

Limitations and Future Research

The current study used in-depth interviews and thick description as a primary source of data collection. Interviewing is an effective way to learn about people’s interior experiences, learn what they perceived and how they interpreted their perceptions (Weiss, 1994). Understanding the lived experiences of five young girls through in-depth interviews was the major source of data collection in this research study, however, I do recognize the limits on our understanding of others. Seidman (2006) reminds us that it is never possible to understand another person perfectly, because to do so would mean that we had entered into the other’s stream of consciousness and experienced what he or she had. If we could do that, we would be that other person (Seidman, 2006). Interviews do provide access to the context of people’s behaviour and give us a way to understand the meaning of that behaviour. By ensuring that my study was trustworthy, and that it followed the described method, I am confident that the lived experiences of the five respondents and the meanings of those experiences are better understood and supported by quotations and case descriptions in this final dissertation.

I also acknowledge that this research study was aimed to find out information about only one specific age group. The five participants were all thirteen year-old females
who participated in physical activity during school hours as well as on their leisure time. They all lived in the same area of Ontario (Niagara area). In order to understand the positive factors relating to motivation of young females in these two situations, participants had to have experiences with physical activities in both situations. The participants in this study were generally physically fit and very active, but many of the ideas could be applicable for inactive young people as well and used to motivate them by making the PE or youth sport environment more positive or desirable. These participants’ experiences in both PE and youth sports are significant when understanding the link between these environments. Results from this study apply to the five females in this study, but further studies using males as participants or young people of different ages could be done to gather more data in future studies. Future studies could even examine the experiences of young people who are only active in one of the settings and compare this to people who engage in physical activities in both settings.

A limitation to this study was that the number of quotes used to express the results were not equally distributed throughout the paper. This was due to the fact that certain participants gave richer and more descriptive answers to the interview questions than the others did. The quotes used from Jane doubled the number of times that quotes from Cora and Mandy were used. In the analysis process, similar quotes were put together and the best description of a certain theme or experience was selected to be used in the paper, which meant quotations from participants with the most relevant or detailed statements were used more often. This could be better balanced in future studies and the researcher’s interview techniques could improve in order to get stronger quotes from all participants.
Also noted is the fact that participants in this study play a physically demanding team-sport, hockey, so this could limit the transferability of information (results) to females who play individual or less physically demanding sports. Hockey was the main connection that all participants had, however, they had experiences involving several other physical activities including involvement in individual sports. Future studies could look at the differences or similarities of experiences between team-sport participants and individual-sport participants regarding their motivation during school PE and organized youth sport. Females who have dropped out of sport and PE could also be examined.

Upon reflection of the methodological decisions used in this study, some limitations were noted. The sampling approach that was used allowed the hockey coach to choose five participants based on guidelines provided by the researcher. This means that five females were selected regardless of their skill level of hockey. It may have been effective to do the selection process differently, possibly by watching the players beforehand and choosing participants who displayed a wider range of skill level. For example, a few of the lower skilled players could be selected along with medium and top players based on hockey performance. Based on the time restrictions, convenience and resources of this study, the players selected by the coach were used and that selection was used. Also, since this was a qualitative study using in-depth interviews as the source of data collection, only five females were used as participants because of lack of time to interview any more. I felt content with the methodological approach that was taken in this study, however, it would have been even more effective to interview more females who made up a wider range of skill-levels. Future studies could also focus on players who are
all at a similar skill-level for their sport based on initial scouting of their sport abilities by coaches and researchers.

A pro to the methodological approach to this study was the use of Seidman’s (2006) series interview strategy. Talking to the participants on three different occasions resulted in descriptive quotations and allowed the researcher to address numerous topics with them, while establishing rapport over time. A clear purpose was pre-determined for each interview and this helped the interviews stay on topic and made for successful conversations. If certain topics were not discussed in the first few interviews, the third interview gave the opportunity for them to be addressed and this interview style was well suited for the purpose of this qualitative study.

**Conclusion**

The purpose of this study was to examine how thirteen year-old females perceived and described their lived experiences of being physically active in school PE and organized youth sport settings using the self-determination theory as a lens. From the five participants’ perspectives and based on their own words, significant relationships and motivational factors related to being physically active in both settings were described. Results indicated that the experiences of these participants in both PE and organized sport greatly influenced their relationships with others and enhanced their competence when doing physical activities. Many factors enhanced participants’ intrinsic motivation and social agents had a major role in their desire to be active in the future. Overall the needs of autonomy, competence and relatedness have the potential to be addressed in both PE and hockey situations.
The links between PE and sport relate to the transfer of skills between both settings and the combination of experiences make lifelong physical activity a great possibility. The LTAD model is a great way to make connections between these settings and further information should be researched to make the LTAD more effective for Canadians. In the future, teachers, coaches and parents should share resources and information with each other to further the connections between these two settings. Of course, there will always be differences in school PE and organized youth sports, however, encouraging young people to participate in both could be beneficial in their feelings of autonomy, competence and relatedness, or their overall motivation to keep being active into adulthood.

Most of the past research in this area has examined motivational issues either in the school PE setting or in the sport setting. Some of the research links both settings together, but then focuses on one or the other and limited studies are purely from the youths’ perspective. The present study attempts to include both environments equally and make links between them because getting young people involved in physical activities at a young age is crucial. The links between school PE, organized youth sport and lifelong participation in physical activity are complex, however, learning about the experiences of young people who are going through it today can help improve the situations for others in the future. The major issue of young people being physically inactive is a broad area to study with many factors involved, but asking them directly to share personal experiences gives rich information to those trying to improve and enhance the intrinsic motivation of young people.
Experiences of Motivation

References


Experiences of Motivation


Table 1

Summary of Emergent Themes by Category, Theme and Environment

<table>
<thead>
<tr>
<th>Category and Emergent Themes</th>
<th>Hockey</th>
<th>Physical Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Autonomy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Autonomy Support of Parents and Coaches/ Teacher</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Parental Support</td>
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<td></td>
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<tr>
<td>Personal Choice to Participate</td>
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<tr>
<td><strong>Competence</strong></td>
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<td></td>
</tr>
<tr>
<td>Effective Instruction of Coaches/ Teacher</td>
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</tr>
<tr>
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<td>X</td>
</tr>
<tr>
<td>Optimal Challenge</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Future Goals</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lack of Optimal Challenge</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Rewards</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Improved Fitness</td>
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<td>X</td>
</tr>
<tr>
<td><strong>Relatedness</strong></td>
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<td></td>
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<tr>
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</tr>
<tr>
<td>Strong relationship with teammates</td>
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<td>X</td>
</tr>
<tr>
<td>Friends make class enjoyable</td>
<td></td>
<td>X</td>
</tr>
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Table 2

Summary of Emergent Themes by Category and Participant

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<th>Tara</th>
<th>Kelly</th>
<th>Mandy</th>
<th>Jane</th>
<th>Cora</th>
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<td>Control</td>
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<tr>
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<tr>
<td>Effective Instruction of Coaches/Teacher</td>
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<td>X</td>
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</tr>
<tr>
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<tr>
<td>Lack of Optimal Challenge</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Rewards</td>
<td></td>
<td></td>
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<td>X</td>
<td></td>
</tr>
<tr>
<td>Improve Fitness/Transfer Skills</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>Relatedness</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Influential Family Member</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Strong relationship with teammates</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Friends make PE class enjoyable</td>
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<td></td>
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</table>
Appendix A

Consent Form
BROCK UNIVERSITY DEPARTMENT OF PHYSICAL EDUCATION AND KINESIOLOGY
Informed Consent Form

TITLE: Youth’s Experiences of Motivation in School Physical Education and Sport
Principal Investigator: Amy Patrick, Brock University

- During this study your child will be asked to answer questions in a 1 on 1 interview setting on three separate occasions.
- Each interview will last approximately 40 minutes and questions will be about their experiences in phys-ed classes and about their experiences in organized youth sport, specifically hockey.
- All three interviews will be recorded with an audio recording device.
- Given the instrumentation used to collect the information in this study (e.g., questionnaires, video, interviews), the risk associated with participation revolve around the disclosure of personal or sensitive information. This may make some participants uncomfortable. If appropriate, referral to a counsellor will be provided.
- All personal data will be kept strictly confidential and all information will be coded so that your child’s name is not associated with his/her answers. Only the researchers will have access to the data, which will be stored in a locked offi data will be shredded five years after the completion of the study.
- Your participation and your child’s participation in this study are voluntary and you and/or your child may withdraw from study at any time and for any reason without penalty.
- There will be no payment for your child’s participation.
- There is no obligation for your child to answer any question/participate in any aspect of this project that you or your child consider invasive, offensive or inappropriate. These safeguards and other previously mentioned safeguards are in place to protect the psychological health of the children.
- Parents are welcome to read the interview questions ahead of time if desired. Please notify Amy with this request.
- In rare cases it is not possible to ensure confidentiality of the information gained from interviews because of mandatory reporting laws. Under Ontario’s Child and Family Services Act I have an obligation to tell someone in a position of authority about any suspected child abuse (e.g., if participants tell me that someone is hurting them).
- This study has been reviewed and approved by the Brock Research Ethics Board (File #06-200).
- If you have any questions or concerns about your participation in the study, you may contact Amy Patrick at 905-732-9159 email: ap01ap@brocku.ca
- For answers to pertinent questions about the research participants’ rights, please contact the Research Ethics Officer (reb@brocku.ca) (905) 688-5550, ext.3035.
- If requested, feedback about the use of the data collected will be sent to you during the Fall of 2007.
- Please complete the back of this page if you wish to have the information sent to you.
- Thank you for your help! Please keep this portion of the consent form and complete the bottom portion and return to your child’s hockey coach or Amy Patrick.

-------------------------------

CONSENT FORM

Child's Name: ____________________________ Hockey Team: ____________________________

☐ I have read and understood all relevant information pertaining to this study
☐ I understand that I or my child may ask questions in the future
☐ I give permission for my child to participate in the Brock University study conducted by Amy Patrick.
☐ I do NOT give permission for my child to participate in the Brock University study conducted by Amy Patrick.

Signature of Parent/Guardian: ____________________________ Date: ____________________________

Signature of Student: ____________________________ Date: ____________________________

Signature of Researcher: ____________________________ Date: ____________________________

PLEASE RETURN THIS FORM TO YOUR CHILD'S COACH OR AMY PATRICK ASAP
Do you wish to receive a summary of the results from this study?  □ Yes  □ No (no other information required)

If you answered yes, please complete this form and return it with the consent form. The summary report will then be sent to you once all the data has been analyzed. This form will be stored in a locked office and later destroyed once the summary report has been sent to you.

Name: ____________________________                    Email (optional): ____________________________

Mailing Address (optional)

Street, P.O. Box, Rural Route #, Apt. #, etc.

City ____________________________ Province ____________________________ Postal Code ____________________________
Appendix B

Information Letter
August 28, 2007
Youth’s Experiences of Motivation in School Physical Education and Sport

Researcher: Amy Patrick, Graduate Student
Department of Applied Health Sciences
Brock University

Faculty Advisor: Jamie Mandigo
Department of Physical Education
Brock University

Dear Parent(s) or Guardian(s):

The following letter and consent form are to inform you of a study I wish to conduct and to ask your permission for your child to participate in the study. The title for this study is called: Youth’s Experiences of Motivation in School Physical Education and Sport. The purpose of this study is to investigate the relationship between the experiences of young females in PE (physical education) at school and in youth sport (ice-hockey) during leisure-time. The motivational factors relating to participation in both of these situations will be examined.

I am a graduate student of Applied Health Sciences at Brock University. My research interests pertain to ways to facilitate children’s intrinsic motivation. I am interested in this area because I feel that if we can better understand how to motivate children, they will enjoy themselves and reap the many benefits of participating in physical activity.

Your child has been selected to participate in three interviews where they will be asked to talk about their experiences regarding physical education classes at school as well as being involved in youth sports, specifically ice hockey during their leisure time. Each of the four participants were selected by your child’s coach and I based on the belief that they will be able to share in-depth knowledge about their sport and PE experiences. Your child has also been identified as someone who can communicate effectively. This study seeks to gain feedback from females about the impact that physical education classes have on their participation of youth sports such as hockey. The three interviews will ask questions on this subject and each interview will take approximately 40 minutes. Four females will be asked to participate in this study and the data collected during this study will be stored in a locked office at Brock University. Data will be kept for one year and then interview tapes will be deleted and transcripts will be shredded. Access to this data will be restricted to Amy Patrick and Jamie Mandigo.

Participation in the research project will be strictly voluntary and students do not have to participate in the research project if they choose not to. Any presentation or publication resulting from this study will not contain any identifiable information regarding your child.

This study has been reviewed and received clearance from the Ethics Review Committee of Brock University (#06-200). Should you allow your child to participate, you and/or your child will have the option of withdrawing from the study at any time for any reason without consequence. Simply inform Amy Patrick that you wish to withdraw from the study and your information will be removed upon your request. As well, you and your child have the right to not answer any question or to participate in any aspect of this project that you or your child consider invasive, offensive or inappropriate.

If you have any questions or concerns about this request, please contact Amy Patrick (905) 732-9159 or her advisor Dr. James Mandigo (905) 688-5550, ext. 4789, or email Amy at ap01ap@brocku.ca. If you wish to talk to someone not involved in this study, you may contact the Research Ethics Board at Brock University, (905) 688-5550 Ext. 3035, reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

Your written consent is needed to allow your child to participate in the interviews. To indicate your consent, please complete the enclosed CONSENT FORM and return it to your child’s hockey coach or Amy Patrick as soon as possible. As well, if you wish to receive a summary of the results, please complete the back of the informed consent with your contact information. Thank you for your time and consideration.

Sincerely,

Amy Patrick
Brock University Graduate Student
Appendix C

Interview Guide

...
Interview Guide: Interview #1

Focus: To get a focused life history on each participant and focus on the participants’ past experiences in school as well as any physical activities and youth sports they were involved in growing up.

A:
1- What type of physical activities do you enjoy doing?
Probe- Which is your favourite and why?
2- List all of the physical activities that you can remember doing.
Probe- How old were you when you did these activities?

3- Tell me about your memories of playing ______ (hockey and the activities they mentioned in 1st question).
Probe- What is your earliest memory of playing _____? What are your favourite parts about playing on the hockey team? Why did you join these sport teams?

4- Can you tell me about some good memories/experiences you had while playing hockey?

5- Can you tell me about a time when you did not enjoy playing hockey?

B:
6- What do you like about PE class?
Probe- What don’t you like about PE class?

7- How often do you participate in PE (physical education) class at school?
Probe- What are your favourite parts of PE class? Why? What are the worst parts of PE class? What types of things do you usually do in PE class?

8- Can you tell me about some good experiences and memories you have about PE class?
Probe- When you think of PE class what do you think of right away?

9- Can you describe a bad experience or memory you have about PE class?
Interview Guide: Interview #2

Focus: Details of the participants’ present lived experience in the topic area of the study.

HOCKEY-Please describe a typical hockey practice.
Probe- How good of a player do you think you are compared to your teammates? (Have them put themselves on a scale). Why? Does your family think you are a good player? Does your coach think you are a good player? How can you tell? Do you feel close to your teammates?

Can you give me some examples of when people have helped with your hockey skills?

What are some goals you have involving hockey?
Probe- What type of goals have you made for yourself? What type of goals do other people have for you in hockey?

-Who makes most of the hockey decisions in your life?
Probe- Who do you feel is in control of your hockey game? In what ways? Examples?

Who has been the biggest influence in your decisions to be on the hockey team?
Probe- Do you feel like part of the team? Why? What is the best part of being on a team?

Is playing hockey easy or difficult for you? (Scale) In the game of hockey what are you good at?
Probe- What is the most challenging part of hockey for you? What would make it easier/harder? Is hockey a challenge? In what ways is it a challenge? Are you bored during hockey practice or the games? What would make it more exciting for you?

What does it feel like when you are playing hockey?

What makes playing on the hockey team enjoyable?
Probe- What makes playing on the team NOT enjoyable? What do you enjoy the most/least?

What feedback have you been given about your hockey skill level and overall game?
Probe- Who gave that to you? When do you usually get feedback? Does anyone ever give you advice on hockey?

What is the most rewarding part of playing hockey?
Probe- Where does hockey fit into your daily schedule/life events?

On a scale of 1-5 (5 being the highest) how much do you enjoy playing hockey?
Probe- Would you be able to switch sports if you wanted to? Do you feel pressure to keep playing hockey next yr and the yr after?
PE - Please describe a typical PE class.
Probe- How good do you think you are in PE compared to your classmates? (Have them put themselves on a scale). Why? Do your friends think you are good? Does your teacher think you are good? How can you tell? Do you feel close to your classmates?

Can you give me some examples of when people have helped you in PE class?

What are some goals you have involving PE class?
Probe- What type of goals have you made for yourself? What type of goals do other people have for you in PE class?

- Who makes most of the decisions in PE class?
Probe- Do you ever feel in control during class? Examples?

Who has been the biggest influence in your decisions to participate in PE class?
Probe- Would you choose to participate every day? Why? What is the best part of going to PE class?

Is PE class easy or difficult for you? (Scale) Give me some examples of what you are good at in PE class.
Probe- What is the most challenging part class for you? What would make it easier/harder? In what ways is it a challenge? Give me some examples of when you were bored in PE class. What would make it more exciting for you?

What does it feel like when you are participating in PE class?

What makes PE class enjoyable?
Probe- What makes playing class NOT enjoyable? What do you enjoy the most/least?

What feedback have you been given about your performance in PE class?
Probe- Who gave that to you? When do you usually get feedback? Does anyone ever give you advice on how to improve in PE class?

What is the most rewarding part of PE class?
Probe- Where does it fit into your daily schedule/life events?

On a scale of 1-5 (5 being the highest) how much do you enjoy being active in PE class?
Probe- Would you choose to participate in PE class for every grade in highschool? Do you feel pressure to keep choosing to take PE class in the future?
Interview Guide: Interview #3

Focus: Participants reflect on the meaning of their experience. They will need to look at the factors in their lives that occurred to bring them to their current situation.

This was based on answers from interviews 1 & 2.

*These questions are highly reflective upon previous answers but generally I asked questions about these main categories: The meanings they have given to... hockey, PE class, sport in their lives, coach/peer/parent/teacher relationships, self-competence/confidence in skill level, rewards/feedback etc.

What is the meaning of being physically active to you?
What are some reasons that you are physically active?
Why is being physically active important to you and part of your daily life?
What does it mean to you to have enjoyment in PE? ______ in hockey or sports after school?
What are the reasons you participate in hockey and school PE?
Why are you physically active/exercise?
Are there any things that your PE teacher does that you wish your hockey coach would do?
VISE VERSA
Have you learned anything in PE that will help you during hockey practice/games?
Describe an example of when something you learned in PE was useful for a sport you play after school.... Vise versa.
Does PE class help you be a better hockey player? How? Explain.
VISE VERSA
How has being a hockey player relate to or been helpful for your performance in PE?
Do you try harder in PE class or in hockey practice/games? Why do you think that is?
What does being “supportive” mean to you?
How important are your teammates and coach to you in hockey?
How important are your classmates and teacher to you in PE class?
How do you feel that PE in school and hockey or sports you play in your own time are related?
Is it important to you to keep an active lifestyle in the future? Why??
How important are your classmates and teacher to you in PE class?
Will you play hockey and other sports after school in the future? Why or why not? Who will make this decision?
Will you continue taking PE class all through highschool? Why or why not? Who will make this decision?
In what ways have you been rewarded for playing well in hockey and in PE class?
In the context of modern technology, advancements in communication have led to significant improvements in the efficiency and speed of information exchange. These advancements have been driven by rapid developments in computing, networking, and data storage technologies. The integration of these technologies has enabled the creation of new forms of communication platforms that allow for instantaneous and global connectivity.

In this digital age, communication has evolved beyond traditional means such as letter writing and telephones. Modern communication methods include email, instant messaging, social media, and video conferencing, among others. These tools have revolutionized the way people interact, enabling real-time collaboration and global connectivity.

One of the most significant changes in communication has been the rise of the internet. The internet has transformed the way information is shared, providing access to vast amounts of knowledge and resources. It has also facilitated the development of social networks, virtual communities, and online markets, which have further expanded the scope and reach of communication.

The integration of technology in communication has not only improved the speed and efficiency of information exchange but has also led to new opportunities for innovation and collaboration. Businesses, for example, have leveraged these technologies to create new products and services, while individuals have used them to connect with others, learn new skills, and pursue personal interests.

However, the digital age has also raised concerns about privacy, security, and the potential misuse of communication tools. As a result, it is crucial to address these issues to ensure that the benefits of modern communication technologies can be fully realized while maintaining the integrity and security of the information shared.

In conclusion, the advancements in communication have had a profound impact on society, shaping the way we think, learn, work, and interact with each other. As technology continues to evolve, it is essential to adapt and develop strategies to harness its potential while mitigating its risks. The future of communication is likely to be shaped by ongoing advancements in technology, the social and cultural contexts within which they are implemented, and the role of regulatory frameworks in guiding their use.
Appendix D

Coding Information Sheet for Analysis

[Content of the coding information sheet for analysis]
AUTONOMY

-is the belief that one is the origin and regulator of his or her actions
-participate in an activity they feel they have some control over how they achieve their personal goals.
-autonomy support: the degree to which people perceive others in positions of authority to be autonomy supportive
-teachers can foster autonomy by avoiding external rewards, controls and pressure
-social agents autonomy supportive behaviours have a positive impact on perceived autonomy, competence and relatedness
-give choice, goal choice
-self endorsement/self-organization of one’s own behaviour
-absence of pressures,

COMPETENCE

-is the belief that one can efficaciously interact with the environment
-feelings of competence and optimal challenge enhance IM. When children are challenged, or the activity is balanced to their abilities, they are more likely to enjoy it and take part in the activities since they’re challenged in a positive way. Challenges enhance competence
-challenge them so they don’t get bored
-rewards and feedback (informative?) IM will be enhanced, evaluate on effort and improvement rather than on ability. Feedback from coaches and teachers can have an impact on their competence
-stress personal improvement
-teachers can provide students with opportunities to feel successful among their peers, optimally challenging them, give feedback...
-goal setting, challenge, students can try and beat their own score, personal bests,
-doing drill after drill “will not sustain motivation or enhance perceived competence”, feel like they are being controlled

RELATEDNESS

-is the seeking and development of secure and connected relationships with others in one’s social context
-feeling connected to others, to caring for and being cared for by others, having a sense of belongingness both with other individuals and with one’s community
-Friends, parents, teammates, classmates, teachers, coaches
Appendix E

Reflexive Journal Guideline
**Reflexive Journal**: My reflections on the research process.

*Situation*: what actually happened? Which people/words/comments struck me? What sounds/smells/sensations do I recall?

*Affect*: Incorporating my feelings and intuitions.
What was the high/low? What was my mood/feeling? What was my gut reaction?

*Interpretation*: what did I learn?
What can I conclude from this experience? How does this relate to concepts, theories...?

*Decision*: what will I do as a result?
What do I need to do before this sort of thing happens again? What should I do differently next time? What was the significance of this experience in my life?

*This journal was written throughout the entire interview process (in a notebook) and included details on the daily schedule and logistics of the study, personal reflections and insights. It was also a log where decisions and rationales were recorded.*
# Appendix F

## Competence Summary Chart

<table>
<thead>
<tr>
<th>Competence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>Ability to influence and guide others towards a common goal.</td>
</tr>
<tr>
<td>Communication</td>
<td>Skill in conveying information effectively and clearly.</td>
</tr>
<tr>
<td>Decision Making</td>
<td>Ability to make informed choices based on available data.</td>
</tr>
<tr>
<td>Time Management</td>
<td>Competence in scheduling and prioritizing tasks efficiently.</td>
</tr>
<tr>
<td>Teamwork</td>
<td>Capacity to collaborate effectively with others towards a shared objective.</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Flexibility to adjust to changes and new situations.</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>Skill in identifying and resolving issues ingeniously.</td>
</tr>
<tr>
<td>Creativity</td>
<td>Ability to generate original and innovative ideas.</td>
</tr>
</tbody>
</table>

*Note: This chart serves as a summary of key competencies relevant to the context of the document.*
<table>
<thead>
<tr>
<th></th>
<th><strong>P.E. class</strong></th>
<th><strong>Hockey team</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Jane</strong></td>
<td><strong>Scale 1 – 10 (10 is highest)</strong></td>
<td><strong>Scale 1-10 (10 is highest)</strong></td>
</tr>
<tr>
<td><strong>Self:</strong> 7</td>
<td>“because some of the sports I do participate in but then half my class doesn’t participate, they stand and talk, mostly the girls. And then the boys all hit each other and everyone.”</td>
<td><strong>Self:</strong> 8 or 9</td>
</tr>
<tr>
<td><strong>Teacher:</strong></td>
<td>“He probably does [think I am good] because I don’t talk very much and I actually participate in it but he doesn’t see that if you like it or not. He just marks you on if you are participating in the sport.”</td>
<td><strong>Family:</strong> 7</td>
</tr>
<tr>
<td><strong>Cora</strong></td>
<td><strong>Self:</strong> 9</td>
<td><strong>Self:</strong> 6 or 7</td>
</tr>
<tr>
<td></td>
<td>“Not a lot of people in our class, they are not really athletic or anything like not many of them play sports or anything so when they are learning something it is kind of hard for them because they don’t really know the sport that much.”</td>
<td><strong>Family:</strong> 7</td>
</tr>
<tr>
<td></td>
<td><strong>Teacher:</strong></td>
<td><strong>Coach:</strong></td>
</tr>
<tr>
<td></td>
<td>“He coaches most of the sports, teams for our school and I am always picked for the teams.”</td>
<td>“I play a lot on power play and penalty kills and then sometimes at tournaments if we need a goal, she puts me on.”</td>
</tr>
<tr>
<td><strong>Mandy</strong></td>
<td><strong>Self:</strong> 10  “I am really involved. Most of the girls are a 5 though because they don’t want to break a nail. Me and my friends are really involved because they are really athletic too and all of the guys are into it.”</td>
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<tr>
<td></td>
<td><strong>Self:</strong> 8 or 9  “When I go out on the ice, I am the one who always has the puck. I’m the one who always skates hard out with my line.”</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Family:</strong>  “They always say ‘You played amazing’ and give me good comments and stuff and sometimes they will give me, if they think I did bad ‘Oh you didn’t do very good at this and work on that’ and I will just work at that at the next game.”</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Coach:</strong>  “I don’t think [the coach] likes me but she thinks I am a good player…last year in a really big game in a tournament, I was playing really good and she said to me ‘You have been working really hard for this, you deserve this, get a goal’ because it was a shoot out and I did get a goal and it was good for her to tell me that.”</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Kelly</strong></th>
<th><strong>Self:</strong> 9  “For girls, I’d say around 9. There are some girls that are just as active as me but most of the girls are really not active at all, stand back, talk, not do anything.”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Teacher:</strong>  “He gave me a really good mark and I do what he asks and I try and I just play because we finally get to get out of class. I try hard so we get that privilege … to do what we want to do, not what he wants to do.”</td>
</tr>
<tr>
<td></td>
<td><strong>Self:</strong>  “It was a pretty good team so we were all pretty good out there.”</td>
</tr>
<tr>
<td></td>
<td><strong>Family:</strong>  “I got off to a rough start but they think that I improved a lot so I’ve gotten a lot better and am doing pretty well now.”</td>
</tr>
<tr>
<td></td>
<td><strong>Coaches:</strong>  “I think they think I am sort of a good player because when there was a time they needed to put someone on the ice, like we needed a goal or penalty kill or something, they put me on the ice.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tara</strong></th>
<th><strong>Self:</strong> 8  “because a lot of kids in my class don’t do sports in their spare time and they just don’t do anything. There are a couple of kids in my class who are really good athletes they play hockey AAA and stuff, boys.”</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Teacher:</strong>  “She is the coach of the basketball and volleyball teams for the past two years and I was on both teams and I was captain.”</td>
</tr>
<tr>
<td></td>
<td><strong>Self:</strong> 7  “because some of the kids on my team don’t communicate together and don’t pass as much. I didn’t score any goals this year because I pass a lot. I communicate with everyone.”</td>
</tr>
<tr>
<td></td>
<td><strong>Family:</strong>  7  “They encourage me near the end, tell me stuff that I should or shouldn’t have done.”</td>
</tr>
<tr>
<td></td>
<td><strong>Coach:</strong>  “I got the Assistant Captain and she counted on me a lot…to do the warm up, the running and stretching and stuff.”</td>
</tr>
</tbody>
</table>
Appendix G

Overview of Results

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
<th>Column 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
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<td>Text</td>
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<td>Text</td>
</tr>
</tbody>
</table>

Experiences of Motivation
<table>
<thead>
<tr>
<th>Autonomy</th>
<th>Competence</th>
<th>Relatedness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hockey</strong></td>
<td>- Felt competent, saw themselves as good players</td>
<td>- Family members very influential (joining and playing)</td>
</tr>
<tr>
<td>- In control (teammates, parents), regulated own actions</td>
<td>- Coaches are seen as role-models as they know and play the game (effective)</td>
<td>- Parents helpful, supportive and acted as models if they played too</td>
</tr>
<tr>
<td>- Personal choice to participate in hockey</td>
<td>- Optimally challenged</td>
<td>- Parents physically active themselves</td>
</tr>
<tr>
<td>- Displayed leadership</td>
<td>- All had hockey related goals (play, coach or both)</td>
<td>- Strong relationships with teammates</td>
</tr>
<tr>
<td>- Autonomy supportive parents</td>
<td>- Hockey made them feel good and could work on specific skills</td>
<td>- Lessons learned in hockey such as teamwork transfer to PE</td>
</tr>
<tr>
<td>- Coaches were controlling but also supportive/helpful</td>
<td>- Personal improvement stressed</td>
<td></td>
</tr>
<tr>
<td>- Health and enjoyment main motivators</td>
<td>- Feedback</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PE</strong></td>
<td>- Competent</td>
<td>- Friends made PE class enjoyable</td>
</tr>
<tr>
<td>- Had some control, desired more control and choices</td>
<td>- Not optimally challenging (repetitive, boring, want to try more specific skills)</td>
<td>- Social time</td>
</tr>
<tr>
<td>- Teachers showed signs of being autonomy supportive and sometimes were controlling</td>
<td>- Sitting on bench was the worst</td>
<td>- Classmates not as important as friends who they play sports with after school</td>
</tr>
<tr>
<td>- Given choice of activities sometimes</td>
<td>- Teachers as models, challenged them to play better</td>
<td>- Being with friends most important</td>
</tr>
<tr>
<td>- Wanted more choices/options (activities)</td>
<td>- Not many rewards, some feedback</td>
<td>- Hockey teammates also important during PE class</td>
</tr>
<tr>
<td>Environment</td>
<td>Condition</td>
<td>Effect</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>Groundwater</td>
<td>Elevated pH</td>
<td>Corrosion of metal pipes</td>
</tr>
<tr>
<td>Air</td>
<td>High humidity</td>
<td>Mold growth</td>
</tr>
</tbody>
</table>

**Key:**
- Elevates pH
- Corrosive properties
- Mold growth

**Possible solutions:**
- Use pH-adjusting chemicals
- Implement air dehumidification systems
- Use mold-resistant materials
Appendix H

Profiles of Participants
Jane (13 years old)

I enjoy doing, playing soccer, hockey, volleyball, any sport that would get your heart rate up. I enjoy being physical… sometimes hockey I like better but then sometimes if the team is not right, then I don’t like hockey and I like soccer better. I took swimming lessons when I was little. Soccer I played with Little League. Hockey I started when I was about six, I think. I don’t know if I played other sports. Mostly those three, I am pretty sure. [Hockey] My younger brother started before me and then I would always go to the arena with him and I liked that sport and I would play it at home with him. So I enjoyed playing that. And then the first time I tried it I think I liked it but then it is all different in my family because my brother tried it when he was the same age and he didn’t so he had to wait another year. So my personal thing is that I enjoyed hockey when I first started. Soccer, my mom just put me in it to be active, [Soccer teams] so you just run around and chase the ball. And then swimming lessons, we go to our cottage every year so to practice swimming my mom put me in that.

[Hockey] First I started off playing with the boys which I enjoyed and then last year I started playing with the girls which is different. Both the boys and girls have different ways of playing. The boys always want to play and the girls sometimes they don’t want to. Playing with my friends, I enjoy doing that. Swimming I just like being in the water. I think I like playing in the water. You meet new friends at each sport. So then you get more and more, and then as you move up you stay with them because of the age groups. My favourite parts [about playing on a hockey team] are that if you are mad at someone then you can take the puck away from them. It makes you feel good. Same with soccer. When you score in soccer or hockey it makes you feel good because you are representing your team and then your team is happy for you also. I remember this year I went to take a penalty shot and I slipped on an edge and I embarrassed myself in front of everyone and I felt really bad and my team cheered me up and that made me kind of feel better. And then soccer just like falling down and hurting yourself you kind of get down on yourself.

[About PE class in school] I kind of like playing with my friends. You are against them but you are also on the same team. The sports we play the sports team, and then in gym we practice. So then we get better at that sport. Sometimes our teacher picks sports that not everyone likes to play which isn’t his fault. Like basketball, I don’t enjoy because I have bad memories about it from when I was little. And some [sports] are boring because not the whole class can come on. Half the class comes on and then you have to wait your turn and it is more of a waiting then a playing. [Favourite part of PE class] is getting to play the games because that way you aren’t sitting on the bench and you are actually getting to get your heart rate up and get physical. Sometimes you just get to sit on the bench and the time is up and you don’t get to participate in it and you are sad at that you didn’t even get to participate in the gym class and they are having a blast. You feel upset. When I was little it was more fun because we played with the littlest stuff… like we had a parachute and because we were little we liked to play with that and we had a parachute with the ball in top and we liked to throw it up. So I think that was pretty fun but once you get into like grade four and up you repeat the same games over and over.
null
[When I think of school PE] I think of playing the sports that I play outside of school. Because whenever I am physical I always think of hockey and soccer because they are the main sports that I play and I enjoy playing. Sometimes if we are playing basketball I don’t really... it reminds me of when I was little and I was playing and I didn’t enjoy it and my coaches weren’t properly teaching me and at the end of the season (or half way through) I didn’t like it so I quit and then at the end of the season they didn’t even give me anything like a trophy or anything so I was upset. And then I never played basketball since. It like ruined my life by playing basketball. My parents say that oh you are good because you are tall but I don’t enjoy it because of those memories.

When I am at the rink all I want to think about is hockey to practice and concentrate on the game but then sometimes other girls don’t want to and they talk about ‘oh what did we do last week’, ‘do you want to come over tonight’, and then when the game comes they don’t want to play. When I first started playing hockey I was taught how to skate which was a big thing because if you can’t skate then you can’t play hockey. Stick handling also from my parents and when my brother are older. They are younger but still they teach me how to stick handle, some tricks and that which I like to learn. But then they teach me that and my parents don’t know how to do it but my brothers do.

Sometimes I make the decision about where I want to play like they can give me two places where I want to play and I choose the one where I want to. I think I could be in control because this year I was ahead of everyone else so I was leading them on what to learn... All different feelings through the whole game because sometimes bad things happen and if anything bad happens you always feel bad or upset. If anything good happens you score you feel really happy because you showed your team that we could score. I like playing one on one with a girl or three on one. I like to learn new things and I think the more I practice the more I will get better. So if I keep on practicing during hockey then I will get better on the ice and sometimes I use a ball and a sponge puck and a real puck and try it on ice. So I start at different levels to see if the ball is easiest and then get up to a heavier puck. I enjoy it so much [hockey] I just want to keep on playing and improve my skills.

[PE] The most I enjoy playing with my friends and teaming up on someone. The least I enjoy is probably hitting your own friend with the ball. In gym, some of the sports I don’t enjoy or sometimes I just don’t feel like playing. But hockey, because it is one of my favourite sports I always want to play and I am always ready and I want to go out there and try my hardest. I like it because that way then when I help someone else out then they help me out, then they are returning it to me, they are supporting me. If someone is down, like in the example of dodgeball and the ball is coming toward them when they are down, I kind of like go after the ball to try to help them or tell them to duck if it is heading for their head, stuff like that.

I think I am physically active because my whole family is, so whenever they want to play I go out to be physical too and also it runs in the family. Like my mom was physical and now I am physical and now my whole family is physical.
Kelly (13 years old)

[I like] hockey, soccer, basketball, swimming, baseball sometimes, rowing I like to row. I also like to roller blade. [Mostly] I like hockey, swimming and rowing. Hockey is like a team sport and you get to make lots of friends and stuff and it is really active. Swimming is more individual and you are challenging yourself. Rowing, I just started rowing. My brother rowed and it looked like a lot of fun and I tried it and it is a lot of fun. It is hard work but it is fun. Soccer I played when I was 4, I danced when I was about 4 too. Then I started a swim team when I was 6. I started hockey when I was 7. Rowing I started when I was 10, no 11. Dance, well my mom wanted me to dance. Soccer, I think I just sort of started because it is kind of a sport that looks fun when you are little. Swimming, I always swam when I was little so I just asked my mom and she got me in. Hockey, I wasn’t allowed to do it when I was little but finally I was allowed to when I was 7. My brothers played and I felt like it was real fun so I got to play. I really liked [hockey] when we came 2nd in the really big tournament and it was a lot of fun. When you get on the ice... you want to go out there and win and it just makes it a lot of fun.

Last year in the summer, I was younger in the swim team in the age category but when we went to the big meet, the regional meet, I came first in the butterfly category. I hadn’t come first all year. I kept coming third or fourth. I came first so I was really proud. [In PE class] I like playing dodgeball because it is a lot of fun and it is a break from doing work at school. You get to go break and have fun and instead of sitting down you get to walk around, or run around and stuff. I don’t like the dancing. Well, I like the dancing but it is like square dancing or something. I remember last year when we did the square dancing, it wasn’t fun at all. We kind of dropped the subject. We started it but we never finished it because not a lot of people were getting it so we had to give up. I remember last year I went to help with the grade 7 and 8 because they needed people to fill in and that was a lot of fun because the teacher ran it really well and people were getting it. I like that it [PE] trains me for cross country or track and field.

I would want to coach. I think it would be fun to help a team go get through and win some type of medal or something. I think I would like to coach Peewee [hockey level]. It is right in the middle. My two Peewee years were a lot of fun so I think I would like it... I would like to continue playing hockey for a while more because I really enjoy it and I don’t want to quit because it is so much fun and even if you are having a bad day you still have fun when you play.

I have improved so much from a certain time area because I have gone not just, not necessarily on offensive, I do forechecking but I don’t score a lot but I can set up plays and stuff and I backcheck well so that is mostly what people tell me. I have improved so much and I just have to keep going because I am doing well and that they will tell me things I did wrong in the game and things I did well like my backcheck. It makes you feel good when you play [hockey in spare time] because sometimes it is frustrating but usually it is just fun because you are being active and you are, I don’t know how to explain, you are being around with people and helping each other out and encouraging each other and stuff and it is good... It is totally different when you are
playing hockey than when you are at school or at home because you get to, just being in that game, getting down or getting ahead, you just want to work harder to get that point, set up a nice play, or you do a nice play, a good thing like a forecheck or a backcheck or you get a goal or something and you just want to do that and it just pushes you and makes it fun and you, just overall it is really fun.

I want to get it higher again [PE mark], when we have to do a lab we get to run or walk, I’d rather run so I get those extra marks. DPA is involved in our gym class where we go out for 20min and run or whatever and I have already started but run more so I can get those extra marks cause if you don’t run you lose marks for DPA. I like getting good marks and stuff so I want to participate plus if we actually participate he will let us do what we want to do in gym and if we don’t then it is just OK then we are going to skip or something which is something nobody really wants to do.

When you are physically active, when you play sports or something, it makes it fun and also to be in shape so you are healthy...even like walking to school, instead of getting a drive. I don’t know I am active every day. Every day I am pretty much running around or walking or something that is active other than just sitting down all day. When I played after school basketball, my shooting practising helped me in games we play because you have to shoot baskets to people in or points so that helped me.

I always want to be healthy and the more healthy you are the better, because then even when you are older you can continue on to play sports and it wouldn’t be a problem for you. And also health issues, if you aren’t active, you might have worse health.... First of all they [sports] are a lot of fun. Also, because it is like a break and because they are challenging, you have to push yourself, especially hockey, you have to push yourself to do better because you want to make it on in the tournament or whatever. Also because you get to meet all new people and it is just fun because you get to have fun together and encourage each other.
The presentation of data is crucial in understanding the outcomes of experiments and studies. Effective presentation can enhance the clarity and accessibility of information, allowing for better interpretation and communication of results. In the context of data analysis, it is essential to choose the right tools and methods to effectively visualize and interpret data. Various tools and methodologies are available, each with its strengths and limitations. For instance, histograms, bar charts, and line graphs are commonly used for visualizing distributions, comparisons, and trends, respectively. These tools can help in identifying patterns, outliers, and associations within the data. Additionally, software and applications such as Microsoft Excel, R, and Python provide extensive capabilities for data analysis and visualization. It is important to select the appropriate tool based on the nature of the data and the specific research questions.
Mandy (13 years old)

I like to swim, I like to hang out with my friend. She always comes over and we stay up and do tennis on the street or something like that. I have this thing called DDR [video game] you actually sweat in it. It is fun and you actually play it. It's fun. [When younger at] school I joined the soccer team. I also played baseball. And that's pretty much it. And hockey. My dad [was] telling me these were really fun and I thought it was fun and I got to travel. Cause my sisters did it before me and I just saw them doing it and it looked like fun.

[In hockey] I like skating, like hard, and getting the puck and just going with it. I like doing that. It just feels like I don't know how to explain why I like it. I just enjoy having everyone watch me, I guess. I have always been an active person so I always like just enjoy doing those kinds of things because I was a tomboy when I was little. Last year when I played hockey we had two penalties so I was the only forward on the ice and I got a breakaway and got a goal. I don't like basketball, I suck. I don't know how to play. I guess if I got into it I would be good at it but I don't get it and I suck.

[In PE class] I usually like when we are scrimmaging, whatever game it is I don't know... because it shows how good you are not just practicing, you just go and do it. I don't know, I have never been captain and I just want to be Captain [in hockey], I always have. I have been assistant but I have never been a captain. I really enjoy it and I want to do it as my job and I want to do really good at it. I like to play the game, scrimmage, and being with my friends.

[Being physically active means] working hard, exercise or whatever you are doing, working hard and not eating junk food after. I work hard. I don't just lay around. I just am active all the time, everything I do is active. I enjoy it [sports], I find it like all fun. It is really fun and I enjoy it. If I wasn't active in school when it comes to hockey then I would be like the slowest person because I wouldn't be ready, I wouldn't be active. I think PE helps you be active for hockey... If I didn't play hockey I would probably be overweight right now because I eat a lot of junk food... It helps in my report card, it would also be good in PE for my marks. PE isn't that important to me but hockey is and I just do PE because [the teacher] tells us to. I enjoy PE but hockey is more important to be working harder.

[My teammates and hockey coach] are important. I want them to like me. You get more ice time if they like you. And you learn more because they are nicer to you and I learn more than from a teacher or coach is nicer to me. [My classmates and teacher in PE class] tell me what to do, and when it comes time to learn this in high school or something I will know how to do it because the teacher has taught me. When I was in PE class we were learning about soccer and you are supposed to kick like this and when I play house league soccer and I do that, it is better. I want to be healthy and also, I just think I like to play sports and I don't want to stop.
Tara (13 years old)

[I enjoy] hockey, soccer, basketball, volleyball. [Favourite is] volleyball because you enjoy playing with your friends and it is an active sport. I started playing hockey when I was about 8 and I played because my neighbour and I used to play in the driveway and that was fun. Soccer I started when I was 3 because my parents signed me up and I thought it was fun and now I still play. For basketball and volleyball, I play as a school sport. Last year when we won the playoffs [in hockey] I remember that because I scored the winning goal. [Hockey and soccer] they are a lot of fun and you still keep in shape during summer and winter. You play all year round. You meet new friends and you get really close to your friend.

[In PE class] you do a lot of fun things and you learn new activities that you do. Like when you do track and field you learn high jump and all those things. And you play with your friends a lot at school and stuff. This semester/term we did jump rope and it got really boring after a while. [In PE] we practice track and field, we do the running and stuff, we play dodgeball sometimes and now we do skipping. We play basketball and volleyball sometimes. We do a lot of drills, passes and stuff like bounce passes in basketball and stuff and in volleyball you learn how to bump and spike. When I was younger, I used to not be very good at gym class but now that I am older I am a lot better.

When I just started [hockey] I didn’t know anything about the game so they taught me how to skate and shoot and this year I am getting better with my slapshot and [my coach] taught me good techniques. I’d like to raise my endurance in skating because I get tired really easy and I want to have better aim with my shot. I would like to play on an Olympic team if I had the chance to, I would. And I want to try out for the high school team and all those kind of things, like university teams and stuff. [Playing hockey] You feel like you are in control, you choose what you want to do and stuff. You get to be with your friends on the ice and different things like being with them and just have fun. [What is not enjoyable is] if you are in a game and you lose, I don’t like losing. [I like] being with friends and winning and having fun. [Hockey] is a fun sport and I like playing it because you can be with your friends and you are in control on the ice and you can do what you want to do.

I have fun doing it [PE class] even though you don’t get to do what you want. I like most sports and stuff and activities so I enjoy doing them. [Being physically active means] that you don’t sit around all day. You do activities instead of sitting on the couch watching cartoons, you go outside and play basketball. I like being active and I don’t like sitting around doing nothing and I enjoy doing a lot of different sports. I go to school and then I have something to do after school. Like I have badminton after school or I will have hockey or soccer or running or basketball practice.
Cora (13 years old)

[I enjoy] sports: Basketball, Soccer and hockey. [When younger] I played tennis and lacrosse. [My favourite sport is] probably hockey because it is faster and more physical and it is fun hitting people. I played boys hockey, age probably 7 and then I started soccer, just house league with my friends. And I took tennis lessons for about a couple of months. And then I played lacrosse for one season and I think I started basketball a couple of years ago with a girls team. And then I came to [name of town] last year for girls hockey. I didn’t like it [lacrosse] that much. I don’t like tennis either. A couple of my friends and cousins they played hockey a lot so when they came over we played street hockey so I wanted to try it ice hockey. Soccer I started with my friends too and then we went to a girls team after and we played there and then one of the parents they were a basketball coach so they wanted me to go and try out for the girls team in [name of town] too.

This year we were in a [hockey] tournament. we were in the semi-finals and we were tied 0 – 0 for practically the whole game and then with a couple of like 19 seconds left, I scored. There was a big pile on top of me [of teammates]. At the beginning of this season, our coach she told me I was going to play forward this year and it was my first time playing forward and I didn’t really like it that much cause I really didn’t know what to do. I like forward a lot better than defence now. I played a lot of overtimes and shootouts in tournaments but we usually lost in them but it was a lot of fun with the suspense and everything. [Goal for hockey is to] become more social with my team and bond closer to them and probably just learn how to play the game better and I try to keep my studies at school kind of higher than sports. They seem more important.

There are two other girls both from [same town] and I used to play with them and they asked me to come along with them and play where they wanted. Being older, I kind of talk more this year than last year. I was really shy, being one of the younger ones. [Best part of being on the team is] just getting to know everyone and through them you meet other people and sometimes the people you hang out with they know them too, you see them around a lot. It is kind of hard not to make other people on your team mad at you. Like sometimes you make a mistake and everyone is really upset and stuff so like last year I let in a goal. It hit my skate and went past my goalie. And a couple of kids weren’t happy with that.

[Hockey] is always exciting. The teams we play they are competitive, we are on the same level as them. We weren’t smoking any teams, they were always close games. A lot of my coaches do if I make a mistake or do something wrong they tell me after my shift. Then I know what to do the next shift. Or if you did something good they let you know and then you feel better. If you really need to win that game and if you scored a goal that was really important that is a good feeling

Everything is so much more packed with my schedule. Basketball is the same season as hockey so sometimes I skip a hockey game or basketball game to go to the other one. And I had hockey practice right before I had basketball practice like every
Experiences of Motivation

I was really tired after that and then the next day at school I would be kind of sluggish and really tired. I really like playing it [hockey in my spare time]. When I was younger I really liked it and I am liking it more. My teammates, I connect more with them because they are girls too not guys anymore and I think our teams are a lot closer so it is a lot of fun. I like [hockey] it way better than basketball and soccer and next year I might quit basketball because it is kind of conflicting with hockey a lot. I missed basketball a lot more than hockey and I didn’t really like it because I was letting my other basketball team down and I didn’t really like that.

I like PE class, it is fun playing games and everything, and not getting involved, I don’t know. I like it. [The best part of PE class is] probably learning it and doing the drills because you can bring that to other sports you play out of school too. [PE class] I feel really energetic and I try to get involved as much as I can. I like that even if we are playing a scrimmage, he will divide us into four teams and if the two other teams are playing, he will let us do other stuff so we are always moving. But sometimes when we are not playing things he will make us do really hard things like situps and pushups.

I play a couple of sports every week (soccer, basketball, hockey) and practice almost every day. It is a lot of fun to play [different sports]. And it is fun to meet people on your teams. I am not sitting at home all the time, on my couch watching tv or on the computer all the time. This weekend I had basketball and I was having a really bad shift and I couldn’t stand it anymore so I had to get off and then after a while I thought about what my gym teacher told me to do so I did that and then I got back out there and had a good shift after that. [PE class] helps you get physically active too like if you are at school and playing, maybe running or something, and you have a sport after school and you are warmed up for that too.
Appendix I

Approval from Brock’s Research Ethics Board (REB)
DATE: March 2, 2007
FROM: Linda Rose-Krasnor, Chair
        Research Ethics Board (REB)
TO: James Mandigo, PEKN
    Amy PATRICK
FILE: 06-200 PATRICK
TITLE: The Relationship of Students' Motivation to be Physically Active During School Physical Education and Youth Sport

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

DECISION: Accepted as clarified.

Note: The Brock REB is now using the terminology “ethics clearance” rather than “ethics approval” to indicate that it has reviewed a project and found it to be consistent with ethical principles. Use of the “clearance” terminology is consistent with current practice by REBs. It reduces the likelihood that participants may confuse REB review with peer review of a project’s scientific merit or general endorsement of the project itself. Please revise participant materials accordingly.

This project has received ethics clearance for the period of March 2, 2007 to June 1, 2007 subject to full REB ratification at the Research Ethics Board's next scheduled meeting. The clearance period may be extended upon request. *The study may now proceed.*

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

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

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

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

Please quote your REB file number on all future correspondence.

LRK/law
Brenda Brewster, Research Ethics Assistant
Office of Research Ethics, MC D250A
Brock University
Office of Research Services
500 Glenridge Avenue
St. Catharines, Ontario, Canada L2S 3A1
Appendix J

Feedback Letter
Dear Parents/Guardians and Study Participants:

Please find enclosed a summary of the results from a study entitled: *Youth's Experiences of Motivation in School Physical Education and Sport* conducted in 2007.

As you may recall, the purpose of this study was to gain a better understanding of the relationship between children's motivation in school physical education and their motivation to be physically active in organized youth sport. This type of research, I feel, is important to help us better understand how to motivate children to be physically active. The responses provided by the children in this study were extremely valuable in furthering our understanding of issues pertaining to children's physical activity motivation.

During the study, your child participated in three interviews where they spoke about their memories and experiences in school phys-ed class as well as youth sport, specifically ice hockey. This data was then analyzed and based on these analyses, here is a brief summary of some of the more interesting findings we have found to date:

1) 
2) 
3) 
4) 

Should you have any further questions or comments about this study, please feel free to contact me by phone or email (see contact information below). Thank-you once again for you and your child's participation in this study.

Sincerely,

Amy Patrick

Brock University

Phone: (905) 732-9159       Email: ap01ap@brocku.ca