Youth Sport Participation and Peer Support in the Context of Physical Disability: A Qualitative Perspective

by

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A thesis submitted in conformity with the requirements for the degree of Master of Science

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Abstract

Despite the benefits of sport participation, there is a limited understanding on how to initiate and maintain sport participation among youth with physical disabilities. The purpose of this study was to qualitatively explore the role of peers in supporting sport participation among youth with physical disabilities using self-determination theory’s (SDT) mini-theories as guiding frameworks. Interviews were conducted with eight youth with physical disabilities using youth-engaging strategies, and inductively-deductively thematic analysis. Youth participated in a variety of sports, predominantly at the recreational level. Peers’ changing roles throughout the youths’ progression was expressed in line with the three basic psychological needs of SDT. Multi-level need thwarting and supporting behaviours were also highlighted to play a role in sport engagement, and the manifestations of their sport internalization. Peers may assist in creating positive sport experiences for youth with physical disabilities by fulfilling the basic psychological needs of SDT.
Acknowledgements

“Coming together is the beginning; keeping together is progress; working together is success.”

~ Henry Ford

Over the past couple of years, I have been blessed to meet such wonderful people. Each of them have helped me, if they know it or not, in producing this document, teaching me new research skills, and growing into the person I am today.

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Third, I would like to thank the youth who participated in this study for taking the time to talk to me about their sport experiences. I hope that I have done your experiences justice with what I have expressed in this document.

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<tbody>
<tr>
<td>ASD</td>
<td>Autism Spectrum Disorder</td>
</tr>
<tr>
<td>CP</td>
<td>Cerebral Palsy</td>
</tr>
<tr>
<td>DCD</td>
<td>Developmental Coordination Disorder</td>
</tr>
<tr>
<td>MPARC</td>
<td>Mental Health and Physical Activity Research Centre</td>
</tr>
<tr>
<td>PA</td>
<td>Physical Activity</td>
</tr>
<tr>
<td>PeerMCYS</td>
<td>Peer Motivational Climate in Youth Sport</td>
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Chapter 1
Introduction

1 Overview

1.1 Background on Physical Disability

Disability is a complex term that is used to describe “impairments, activity limitations and participation restrictions” (WHO, 2011, p. 4), and often holds negative connotations with respect to the interaction between the environment and personal factors of an individual with a health condition (WHO, 2011). Physical disability is one category of disability that is often characterized by neuromuscular dysfunction to varying degrees and differing aetiologies that impede a variety of motor activities such as walking and moving heavy objects (Jette & Branch, 1981). The most prevalent physical disabilities reported among Canadians from birth to 17 years of age are spinal cord injury (~1.82%), cerebral palsy (~ 0.67%), spina bifida (~ 0.54%), and muscular dystrophy (~ 0.36%) (Statistics Canada, 2015). Approximately 2.45 million Canadians (aged 15 years and older) are living with at least one type of physical disability (Statistics Canada, 2013); prevalence among children (under 15 years of age) is lower (Law et al., 2006a, 2006b), although no national statistics are currently available.

Symptoms and secondary health complications across the different physical disability groups vary. For example, among individuals with spinal cord injury (congenital and acquired), motor and/or sensory impairment is experienced below the level of the lesion accompanied with impaired thermoregulation and autonomic dysreflexia (i.e., uncontrolled hypertension below the lesion) at or above the sixth thoracic vertebra (Lindan, Joiner, Freehafer, & Hazel, 1980). Among those who have cerebral palsy, gross and fine motor impairments are experienced that affect movement and posture, all of which are permanent impairments that fluctuate on an individual basis throughout the lifespan (Rosenbaum, Paneth, Leviton, Goldstein, & Bax, 2006). Spina bifida, a neural tube defect, often leads to paralysis or severe motor impairments of the lower extremities, bowel and bladder (Seller, 1994), while muscular dystrophy is a genetic disorder that occurs almost exclusively in males and is associated with decreases in muscle tissue due to the inability to produce the protein dystrophin (Muscular Dystrophy Canada, 2015). Each of these
physical disabilities is unique for every person and impairment experiences may vary over one’s lifetime.

As a result of these symptoms and secondary health conditions, individuals with physical disabilities often experience decreases in their physical activity (PA) and social participation (e.g., Law et al., 2006a, 2006b; Sherrill, 2003), and have an increased risk of developing obesity and obesity-related conditions (e.g., high cholesterol and type II diabetes mellitus; Rimmer, Rowland, & Yamaki, 2007; Riordan et al., 2015). Despite the large, mostly cross-sectional literature on physical disabilities and clinical outcomes and/or co-morbidities, much of the research has been conducted among adults (aged 18+ years). As suggested by Sawyer et al. (2007), the limited research on adolescents with chronic conditions stems from the lack of consensus on the definition and age range that constitutes adolescence. Given the focus on PA within the current study, youth will be defined based on the Canadian Society for Exercise Physiology’s definition of this age group (i.e., 12 to 17 years; CSEP, 2015).

1.2 Youth with Physical Disabilities – A Priority Group for Promoting Physical Activity Participation

As defined by the World Health Organization (WHO), PA is, “any bodily movement produced by skeletal muscles that requires energy expenditure” (WHO, 2015a, p. 1). This includes exercise, planned and repetitive activity that aims to improve or maintain a component of physical fitness, and sport, physical exertion and skill used in a competitive manner against another or others for entertainment (WHO, 2015a). Among typically developing youth, participation in any PA is low, with only 9% (Canadian Health Measures Survey, 2015) meeting the Canadian Physical Activity Guidelines for Youth (i.e., at least 60 minutes of daily moderate to vigorous PA; CSEP, 2015), while 54% of Canadian youth report participating in some form of sport (not all meeting the Physical Activity Guidelines for Youth; Canadian Heritage, 2013). Among Canadian youth with physical disabilities, sport participation (both in formal and informal settings) has been reported to be lower than among typically developing youth, with no specific statistic being released (Law et al., 2006a, 2006b). These reportedly low levels of sport participation are troublesome given the higher risk of obesity and other secondary health complications (e.g., cardiovascular disease, diabetes) that youth with physical disabilities are often faced with throughout adulthood (Kohn et al., 2006; Rimmer et al., 2007).
Among children and youth (aged 5 to 19 years), obesity rates have increased by 47.1% worldwide between 1980 and 2013, and are expected to include over 70 million children by 2025 (WHO, 2015a). For youth with physical disabilities, rates of obesity have been suggested to be even worse than their typically developing peers, although no national or international statistics have been presented (Law et al., 2006a). Individuals with obesity are at an increased risk of developing a variety of secondary health complications including: diabetes mellitus, coronary artery disease, metabolic syndrome, hypertension, and dyslipidemia (WHO, 2015a). Among youth with physical disabilities, prevalence rates of overweight/obesity are higher compared to their age-matched, typically developing peers, and include, but are not limited to, youth with spina bifida (Shepherd et al., 1991; Simeonsson, McMillen, & Huntington, 2002), cerebral palsy (Hurvitz et al., 2008), muscular dystrophy (Zanardi et al., 2003), and traumatic brain injury (Patradoon-Ho, Scheinberg, & Baur, 2005). Engagement in healthy lifestyles, such as sport, can reduce the risk of obesity and these other aforementioned obesity-related complications (e.g., Warburton, Nicol, & Bredin, 2006; WHO, 2015a, 2015b). Additionally, the earlier in life a behaviour such as sport participation begins, the more likely that this behaviour will become part of one’s daily routine throughout their lifespan (Kohn et al., 2006). Furthermore, adolescence has been suggested to be the last opportunity to influence youth with disabilities to engage in healthy lifestyle behaviours, such as sport, and reduce obesity and obesity-related secondary health condition risks in adulthood (Rimmer et al., 2007; Belanger et al., 2015). Therefore, it is important to improve upon the healthy lifestyle behaviours among youth with physical disabilities so as to positively influence their long-term health behaviours and outcomes, and overall quality of life.

One way to improve positive health outcomes and physical activity among youth with physical disabilities is through engaging in sport. Sport can be classified as either a moderate or vigorous type of PA which can contribute to optimal well-being including enhanced cardiorespiratory fitness and endurance, high physical self-esteem and self-concept, and decreased risk of obesity and metabolic syndrome (Tremblay et al., 2011a; Sahlin & Lexell, 2015). Despite the many benefits that sport has to offer for youth with physical disabilities (see Section 2.1 for a more detailed review of these benefits), there are limited resources (e.g., facilities, programming) for youth with physical disabilities to engage in sport (Rimmer et al., 2007), particularly for those with the most severe forms of disabilities (Riordan, Kelly, Klass, & Vogel, 2015). Engagement
in sedentary activities, such as watching television or playing passive video games, often takes the place of both formal and informal physical activities (Law et al., 2006a). These findings are concerning given the association between sedentary activity and poor quality of life for youth (Tremblay et al., 2011b). As youth enter adulthood, they participated in less physical activities (Law et al., 2006a). For these reasons, further research is warranted to examine ways to intervene among youth with physical disabilities to both increase their PA behaviour, while simultaneously decreasing their time spent in sedentary behaviours. The present study will focus on the former.

Many strategies have been used to increase the PA behaviour of youth in general, such as the implementation of school policies related to daily PA (Strong et al., 2005) and physical education classes (e.g., Leiberman, James, & Ludwa, 2004). In a systematic review of PA examining health and fitness outcomes in school-aged youth (Strong et al., 2005), youth were found to benefit greatly from at least 60 minutes of daily PA as shown from an evidence-base that was largely cross-sectional and correlational in nature. However, in structured environments such as physical education classes, the use of inclusive strategies (a strategy that focuses on meeting the needs of all individuals, regardless of ability) have been implemented with mixed effectiveness (Sherrill, 2003). When implemented effectively, inclusion can have positive influences on the social skills and attitudes of youth without disabilities towards their peers with disabilities (Vogler, Koranda, & Romance, 2000), as well as the social skills of youth with disabilities (Dinomais, Gambart, Bruneau, Bontoux, Deries, Tessiot, & Richard, 2010). However, implementing inclusive practices, both within school settings and the larger community, can be difficult and may even decrease the amount of time that all youth are active (Lieberman et al., 2004). In general, student misbehaviour, teacher/instructor’s lack of knowledge, and the lack of promotion for peer support have all been cited as reasons why inclusion is not properly implemented (Goodwin & Watkinson, 2000). For example, students are left waiting for instructions to be given instead of playing games and sports, only participating in approximately three minutes of sport in an hour physical education class (Simons-Morton, Taylor, Snider, & Huang, 1993). Therefore, considerations should be made as to how best to engage all youth in sport.

Perhaps a more feasible strategy to assist in the initiation and maintenance of sport participation among youth with physical disabilities is through peer support. Peers are considered to be
individuals who have a shared lived experience, background, and/or understanding with one another, irrespective of their relationship to each other (e.g., Loughead & Hardy, 2005; Martin Ginis, Nigg, & Smith, 2013). A peer can be a friend, an acquaintance, or an unspecified individual (ibid). The critical aspect of a peer is that they have the ability to provide “social-emotional support, frequently coupled with instrumental support that is mutually offered or provided by persons having” a similar disability, condition, and/or background (Solomon, 2004, p. 393). The type of support provided from peers is referred to as peer support. The role of peer support in the initiation and maintenance of sport participation has been evaluated in the context of school settings, such as physical education classes, among youth without disabilities (e.g., Haring & Breen, 1992). In a randomized controlled trial of middle school students, after controlling for age, gender, and race, peer support explained the largest portion of the variation in the youths’ self-reported PA (Prochaska, Rodgers, & Sallis, 2002). However, much of the peer support literature is atheoretical, resulting in a lack of understanding of the underlying mechanisms of behaviour change in the context of peer support. Therefore, theory-driven empirical research is warranted on the role of peer support for facilitating sport participation among youth with physical disabilities.

1.3 Objective

The primary objective of this study is to explore, through the use of qualitative methods, the experiences of youth with physical disabilities with their peers in sport contexts using a self-determination theory lens.
Chapter 2
Review of the Literature

2 Overview

2.1 The Role of Sport

The physical and psychosocial health benefits of PA across the lifespan have been well documented (Tremblay et al., 2010a; Warburton et al., 2006). In a recent systematic review of sport participation among children and youth, Eime et al. (2013) reported that sport in any context (i.e., extracurricular activity, team sport, school and/or club sport, varied levels of sport, and overall sport participation) contributes to positive psychological and social health outcomes. For example, participation in team sports was associated with improved depressive symptoms, self-esteem, life satisfaction, and self-efficacy; similar outcomes were also shown for self-concept and anxiety for those who participated in any form of sport (Eime et al., 2013). By participating in sport, youth have an opportunity to engage in a competitive yet collaborative environment with their peers, which may contribute to overall positive youth development (Section 2.1.1 for a review). While all sport is strongly correlated with positive physical health outcomes, team sports have the added advantage of improving psychological and social outcomes (Eime et al., 2013). Individual sports have also shown positive (although to a lesser degree) associations with psychological outcomes and minimally to social outcomes (Eime et al., 2013). A limitation of this body of work is the focus on typically developing youth, thus leaving a gap in the disability sport literature.

2.1.1 Positive Youth Development: What It Is and Its Associated Factors

Positive youth development has been defined in a myriad of fashions (Fraser-Thomas, Côté, & Deakin, 2008; NRCIM, 2002), but is commonly characterized as leading to healthy, productive lives in which youth are satisfied, happy, engaged in community activities, assisting others, and participating in social and cultural activities (Fraser-Thomas et al., 2008). Outlined in 2002 (NRCIM, 2002), youth development occurs in four core domains: physical, intellectual, psychological/emotional, and social. Physical development refers to healthy habits (e.g., proper nutrition and engagement in PA) and health risk management skills (e.g., minimal alcohol consumption). Vocational, decision-making, critical reasoning and life skills are essential to
positive cognitive development. Positive psychological/emotional development includes mental health, conflict resolution, mastery experiences, autonomy, and self-confidence, while positive social development is facilitated by perceptions of relatedness with peers, parents, and other adults in addition to having a sense of place in society.

Many factors contribute to positive youth development including: feeling connected to peers, family and other adults (e.g., coaches and teachers), discovery of social place (i.e., role in society), the ability to function in various settings, and an association with a socially accepted institution (e.g., cultural practices; Fraser-Thomas et al., 2008). As operationalized by Roth & Brooks-Gunn (2003), the Five C’s of positive youth development are competence (sufficiency in the four categories of vocation, education, social, and cognition), confidence (including identity, self-esteem, self-concept, and self-efficacy), character (increased self-control, morality, and cultural or societal norms), connection (creating and maintaining meaningful relationships with individuals and/or organizations), and caring (identification with others and empathy). Through fulfillment of the Five C’s a sixth C—contribution (i.e., personal, interpersonal, and societal levels)—will develop (Lerner, Lerner, Bowers, & Geldhof, 2015). Defined as such, Roth & Brooks-Gunn (2003) conducted an evaluation of 48 programs (ranging from six weeks to six years in length) that were developed as either youth programs or youth development programs and found that the atmosphere, not the opportunities, that youth development programs provide make them more successful than standard youth programs (Roth & Brooks-Gunn, 2003).

Additionally, Lerner (2004) suggested that the Five C’s, and therefore positive youth development, can be influenced by: (1) the quantity and quality of adult-youth relationships, (2) youth skill-building activities, and (3) youth participation and leadership in community-based activities. Therefore, positive youth development can be achieved in many settings that promote youth development opportunities (Roth & Brooks-Gunn, 2003), and can be influenced in three distinct ways (i.e., adult-youth relationships, skill-building activities, and leadership activities; Lerner, 2004).

There are also three key social influences that should be taken into consideration when considering the most optimal setting for fostering positive youth development in sport: parents, coaches, and peers (Holt, Tamminen, Tink, & Black, 2009). In a qualitative study of young adults, Holt et al. (2009) found peers to be the individuals who provided the most meaningful and lasting interactions in youth sport. This finding was similar to previous work by Holt, Black,
Tamminen, Fox, & Mandigo (2008) which showed how female youth soccer players identified their veteran team members to take responsibility and introduce themselves to the new players. This veteran-rookie peer interaction was even noted when player personalities did not match, and further, players understood that it was best for them to work as a team and support one another to meet their personal and team goals (Holt et al., 2008).

Furthermore, as described by Benson (1997), there are 40 developmental assets (defined as a set of evidence-based developmental outcomes; see Table 2.1) of positive youth development. While meeting all 40 assets in one environment may be unrealistic, sport has contributed to many of these assets of positive youth development in typically developing youth (Fraser-Thomas et al., 2008). For example, sport can lead to high life satisfaction, citizenship, social engagement, peer relationships, leadership skills, successful career achievement in adulthood (Evans & Roberts, 1987; James, 1995; Wright & Côté, 2003), and lower levels of delinquency and poor behaviour in school (e.g., Eccles & Barber, 1999; Shields & Bredemeier, 1995). Moreover, high school sports have been positively associated with grade achievement and school attendance, despite the added time commitment that sport can have on individuals and their families (Eccles & Barber, 1999). Therefore, sport can positively influence many assets of positive youth development.

Table 2.1. Forty developmental assets of Positive Youth Development (Benson, 1997)

<table>
<thead>
<tr>
<th>Locus of Attention</th>
<th>Developmental Area</th>
<th>Assets</th>
</tr>
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<tbody>
<tr>
<td><strong>External Assets</strong></td>
<td>Support (1-6)</td>
<td>1. Family support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Positive family communication</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Other adult relationships</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Caring neighbourhood</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. Caring school climate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. Parent involvement in schooling</td>
</tr>
<tr>
<td><strong>Empowerment</strong></td>
<td>(7-10)</td>
<td>7. Community values youth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Youth as resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. Service to others</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. Safety</td>
</tr>
</tbody>
</table>
| Boundaries & Expectancies (11-16) | 11. Family boundaries  
12. School boundaries  
13. Neighbourhood boundaries  
14. Adult role models  
15. Positive peer influence  
16. High expectations |
|-------------------------------|--------------------------------------------------|
| Constructive Use of Time (17-20) | 17. Creative activities  
18. Youth programs  
19. Religious community  
20. Time at home |
| Internal Assets (21-25) | 21. Achievement motivation  
22. School engagement  
23. Homework  
24. Bonding to school  
25. Reading for pleasure |
| Positive Values (26-31) | 26. Caring  
27. Equality & social justice  
28. Integrity  
29. Honesty  
30. Responsibility  
31. Restraint |
| Social Competencies (32-36) | 32. Planning & decision making  
33. Interpersonal competence  
34. Cultural competence  
35. Resistance skills  
36. Peaceful conflict resolution |
| Positive Identity (37-40) | 37. Personal power  
38. Self-esteem  
39. Sense of purpose  
40. Positive view of personal future |

More recently, the personal assets framework (Côté, Turnnidge, & Evans, 2014) and the model proposed by Holt et al. (in press) highlight the importance of the dynamic and ecological processes of positive youth development. The personal assets framework (Côté et al., 2014) posits that the day-to-day, dynamic elements of sport (i.e., quality relationships, appropriate settings, and personal engagement in activities) enhance personal asset development (i.e.,
competence, confidence, connection, and character), which in combination are necessary for accumulated outcomes (i.e., participation, performance, and personal development). An over-emphasis of either of the outcomes during development can negatively influence both short- and long-term sport engagement. This framework identifies the implication of establishing positive first contact with sport on youth development (i.e., through the dynamic elements of sport).

Furthermore, the model proposed by Holt et al. (in press) suggests that distal ecological systems and individual factors can influence positive youth development via sport where the developmental climate can implicitly produce developmental outcomes (i.e., social, personal, and physical). These outcomes can be attained in the presence of a developmental climate and/or if there is a life skills program in place (i.e., an explicit process), however in combination greater outcomes can be achieved. Finally, by gaining developmental outcomes in and through sport, youth will be able to transfer these skills/outcomes to their communities. Therefore, the sporting climate and the life skills incorporated within sport programs are worthy of attention.

2.1.2 Sport Participation in Youth: Benefits and Factors Related to Participation

As previously mentioned, youth with physical disabilities are at a higher risk of obesity (e.g., Hurvitz et al., 2008; Shepherd et al., 1991) and obesity-related diseases (WHO, 2015b), and that the earlier in life a behaviour is initiated, the more likely it will be continued into adulthood (Kohn et al., 2006). For these reasons alone, priority should be placed on increasing opportunities for youth with physical disabilities to engage in sport as early as possible. Of note, symptoms that are associated with some types of physical disabilities, such as bladder/bowel management, can make sport participation more difficult when not taken into consideration by program instructors and/or coaches (Rimmer et al., 2007). This results in avoidance, for many youth, of engaging in moderate-to-vigorous intensity physical activities such as sport (Rimmer et al., 2007), which may translate into more time spent in sedentary pursuits compared to their age-matched, typically developing peers (Sallis & Glanz, 2006). In a systematic review examining the benefits of moderate-to-vigorous PA for typically developing youth (Tremblay et al., 2011b), engagement in PA was associated with increases in all measures of fitness (i.e., overall physical fitness, VO\textsubscript{2} max, cardiorespiratory and musculoskeletal fitness), and both physical (e.g., metabolic syndrome and cardiovascular disease) and psychosocial (e.g., self-esteem, socialization, and academics) well-being. Sport in particular can be used as one way to meet the
Canadian PA Guidelines for Youth (Tremblay et al., 2011c), which are associated with many health benefits (i.e., lower risk of high cholesterol, depression, high blood pressure, obesity, metabolic syndrome, low bone density, and injury; Janssen & LeBlanc, 2010). In addition to the reduction of secondary health conditions, sport can contribute to moderate improvements in quality of life among athletes with cerebral palsy (Groff, Lundberg, & Zabriskie, 2009), decreased or maintained progression of vertebral displacement among youth with spondylolisthesis (Muschik et al., 1996), and improved self-esteem among youth with a variety of physical disabilities (Shapiro & Martin, 2010).

Comparatively, sport may also have a negative impact on youth. For example, as Fraser-Thomas, Côté and Deakin (2005) discuss, youth may experience harmful physical outcomes (e.g., injury, disordered eating), and undesirable psychological (e.g., burnout, ego-orientation) and social (e.g., aggression, poor sports-personship) development from sport participation. The competitiveness of sport, the environment in which sport occurs, and the interpersonal relationships within and around sport have all been suggested as influencers of sport outcomes—for better or worse (Fraser-Thomas et al., 2005). However, overall we know that sport has numerous health and fitness benefits for all youth. What remains unclear is the best way to engage youth with physical disabilities in sport as well as how to maintain their engagement in sport. This study explores these two issues.

A proposed mechanism of sport participation is the level of commitment and enjoyment youth with physical disabilities show towards sport, therefore enhancing their perceptions of their physical abilities (Martin, 2006). Thus, consideration must be given to the perceived enjoyment youth have towards engaging in sport in order to enhance their opportunities to accrue the psychosocial benefits that sport has to offer. Based on the sport and motivational climate literature, both coaches and peers play a significant role in youths’ sport experiences. For example, in a sample of 266 typically developing youth, perceptions of task-orientation (i.e., focusing on the skill/task in its own right) were strongly correlated with peer motivation to learn the task ($r = .56$), while ego-orientation (i.e., focusing on status among others) was correlated with higher levels of peer comparison ($r = .54$; Carr & Weigand, 2001), suggesting that peers can have both a positive and negative impact on the physical education learning environment for youth.
Community-based sport can also provide physical benefits that can lead to improved health status, an area that is of great importance for youth with physical disabilities. With continued participation in sport and/or other PA into adulthood, there is evidence to support a decreased risk of overweight/obesity (Liou, Pi-Sunyer, & Laferrere, 2005), and the development of obesity-related illnesses (e.g., coronary artery disease, hypertension, type II diabetes mellitus), as well as several forms of cancer (e.g., NTFPTO, 2000; Pi-Sunyer, 2002; Warburton et al., 2006).

Additionally, adults with spinal cord injury who participate in sport do so for a longer duration and at a higher intensity than other forms of PA (Martin Ginis et al., 2010); therefore, sport can provide a greater opportunity for individuals with physical disabilities to reap the benefits PA has to offer to improve their physical and psychosocial health.

In sum, sport can facilitate positive youth development, friendships, creativity, psychological and physical health, and provides meaning in life for youth (e.g., Côté, Turnnidge, & Evans, 2014; Martin, 2006; Tremblay et al., 2011b). Despite these benefits, less than 60% of children and youth with physical disabilities self-report participating in formal activities, including sport (Law et al., 2006a; Murphy & Carbone, 2008). Some of these low participation rates may be attributable to the stigma that still exists around sport participation for individuals with physical disabilities (Misener & Darcy, 2014), as well as the social isolation that many youth with disabilities often face (Law et al., 2006a). Given the benefits of sport, in combination with the low participation rates in the disability populations, there is a need to examine ways to increase sport participation among youth with physical disabilities. Peer support may be one such method (Dennis, 2003).

2.2 Peer Support

Peers are often viewed as individuals who share a common characteristic but who may or may not have an existing relationship with one another (e.g., Loughead & Hardy, 2005; Martin Ginis et al., 2013). Peers have the ability to provide a variety of types of support (e.g., informational, emotional), and experiential knowledge (i.e., first-hand experience) to those with a similar disability, condition, and/or background (Solomon, 2004). They can also provide empathy and credibility to the program and to the information being provided (e.g., Orr, Tomasone, Martin Ginis, & Arbour-Nicitopoulos, in progress; Tomasone, Arbour-Nicitopoulos, Pila, Lamontagne, Cummings, Latimer-Cheung, & Routhier, accepted). Programming based on a peer support
paradigm has been used in various settings including mental health services (Solomon, 2004) and promotion of PA (Latimer-Cheung et al., 2013). In such programming, peers often play different roles such as leaders (i.e., those who develop and run the program), mentors (i.e., individuals who are senior members of the program and who are partnered with newer members with the aim of assisting them in their progress), or participants (i.e., members of the program themselves who have no formal role in the program; Solomon, 2004). These peer support roles have been examined within the context of mental health programs for youth (Solomon, 2004), with findings supporting the benefits that each of these roles have on improving the quality and effectiveness of the program for the peer provider as well as the participant in terms of well-being and reoccurring hospitalizations. However, these results are not limited to mental health programs, as research conducted among adults in cardiac rehabilitation (Colella & King, 2004), as well as within educational settings (Blosser & DePompei, 1991) suggest that peer support systems can improve the effectiveness of programs in relation to health, financial, and learning outcomes (Sherman, Devinney, & Sperling, 2004).

Peer support can be based on informal (e.g., friends, family, teammates) and/or formal (e.g., coaches, mentors) relationships. For example, Canadian Sport for Life recommends that athletes give back to peers as “their experiences make them a vital source of information and encouragement for upcoming athletes” (Canadian Sport for Life, 2013). Peer mentors are regarded as a “created source of [peer] support” (Martin Ginis et al., 2013, p. 435). They can be considered “paraprofessionals” (Martin Ginis et al., 2013, p. 435) given that these peer mentors have received specialized training that goes beyond expressing experiential knowledge and are accountable to the system in which they work (Dennis, 2003). Both formal and informal leadership roles are important in the development and maintenance of interactions among group members and differ between peers and coaches (Loughead & Hardy, 2005). For example, peers (both team captains and teammates) are perceived by athletes to be more socially supportive, democratic in their decision-making, and to provide more positive feedback than non-peer coaches (Loughead & Hardy, 2005). This perception of peers can also be seen in the business setting (Wheelan & Johnston, 1996) where informal peer leaders often direct activities and influence the work culture, suggesting peers to be important in the overall team/work experience regardless of setting.
2.2.1 The Psychosocial Benefits of Peer Support

Peers can have numerous positive psychosocial influences on each other in various settings. For example, integrating youth with autism into the classroom with typically developing students was found to have a positive influence on the youths’ school-related quality of life. The number, duration, and appropriateness of opportunities for social interactions between the youth with autism and typically developing youth also increased over the two-month study period (Haring & Breen, 1992). Adults with cancer have also been shown to benefit from peer support interventions in terms of emotional (e.g., encouragement and reassurance), informational (e.g., what to expect with treatment), and instrumental (e.g., carpooling) support from their peers (Campbell, Phaneuf, & Deane, 2004). Peer support can also benefit the mentor or supporter. In a secondary analysis of a randomized controlled trial of adults with multiple sclerosis, researchers noted greater improvements in self-perceptions (i.e., self-confidence, self-esteem, and self-awareness), as well as depression and social roles among mentors than mentees (Schwartz & Sendor, 1999). In the same study, focus groups conducted with the peer mentors suggested that the mentors gained a better sense of self and how they relate to others from participation in the intervention (Schwartz & Sendor, 1999). In sum, peer-based interventions can support the psychosocial well-being of the mentors and mentees.

Currently, there is a limited, yet promising, body of research examining the effects of peer-mediated PA interventions among adults (Martin Ginis et al., 2013). Of the interventions that have been examined, several delivery methods have been shown to be effective for increasing PA behaviour and self-efficacy among mentees, including telephone-based, small group-based, and mentor-mentee dyads. Within all of these interventions, there is minimal use of theory for guiding development and evaluation. Interventions have ranged in duration from four weeks to two years, and have primarily consisted of peers providing informational, emotional, and/or modeling support (Martin Ginis et al., 2013). Overall, these findings suggest that peers have the potential to increase the reach of PA-related interventions or programs; however, more theory-based research is needed to understand the dynamics and mechanisms behind peer mentor-mentee interactions (Martin Ginis et al., 2013), particularly among youth populations.
2.2.2 Benefits of Peer Support on Physical Activity Participation

In addition to the psychosocial benefits peer support has to offer to individuals, particularly youth, support from peers can also positively influence one’s PA behaviour. In a study examining the most common factors influencing youths’ PA participation, one of the top barriers for youth was a lack of peer support (Neumark-Sztainer et al., 2003). Social support has been suggested to positively influence typically developing youths’ engagement in PA, especially when the individuals who are providing the social support are friends (Duncan et al., 2005). While parents, teachers, and coaches can have a positive influence on youths’ PA participation, those supporters who are perceived to be most similar to the individual, such as peers, have been found to be the most influential (Duncan et al., 2005), regardless of whether the supporter is known to the youth. For example, in a study of elementary and high school students, participation in vigorous PA was positively associated with peer support (i.e., when the peer was perceived to be engaging in vigorous PA) across all age groups and genders (Sallis et al., 2002). Peers’ influential role can potentially be due to the multi-faceted supporting role that peers can offer to youth, such as through motivation (e.g., competitive and collaborative behaviours), evaluative communication (e.g., constructive criticism), and social relationships (e.g., Keegan et al., 2009).

With respect to physical disability and peer support, findings from two qualitative studies examining PA participation in adults with multiple sclerosis, cerebral palsy, and visual impairments suggest peers to be perceived as credible as health-care providers when suggesting programs and facilities for engaging in PA as well as other lifestyle activities (Orr et al., in progress; Sweet, Perrier, Podzhyun, & Latimer-Cheung, 2013). Peers were also considered resources for adapting PA, providing external motivation, and acting as role models to other individuals with similar abilities (Orr et al., in progress). This finding supports previous research among adults with spinal cord injury where friends or peers were reported to have introduced approximately 53 to 61% of Parasport athletes to their current sport (Latimer-Cheung et al., 2013; Wu & Williams, 2001). Despite the growing interest in peer support in the context of sport participation among persons with physical disabilities, there is no research conducted among youth. Of the studies that have been conducted on peer support among adults with physical disabilities, all have been atheoretical in nature thus leaving many unanswered questions related to the role of peers for youth with physical disabilities in their sport participation. Addressing
this gap within the literature is important for elucidating the role(s) peers may play in promoting sport participation among youth with physical disabilities. This will allow future research to address the underlying mechanisms in which peer support may act as an agent of change.

2.3 Self-Determination Theory (SDT) – A Framework for Understanding Peer Support in Sport among Youth with Physical Disabilities

In the present study, self-determination theory (SDT) is the dominant theory used to explore the perceptions of youth with physical disabilities of their peers within their sport participation. The following section provides an overview of SDT, as well as previous peer-based research that has used the SDT as a framework. Self-determination theory (SDT; Deci & Ryan, 1985) was the first behaviour regulation theory to expand from a single regulatory system framework. Previous perspectives posited that behavioural regulation occurs through an individual’s expectations of desired outcomes (e.g., Bandura, 1989); in contrast, SDT suggests that there are multiple forms of regulation (Ryan & Deci, 2000). Motivation is the basis of SDT, functioning as the regulating factor. Motivation is said to be (a) volitional or intrinsic, (b) controlled or extrinsic, or (c) amotivation, with each of these three levels of motivation being associated with different outcomes (Deci et al., 1999; Ryan & Deci, 2000; Ryan et al., 2005; Ryan et al., 2006). For individuals to be considered “self-determined”, they must fully internalize the behaviour that is to be regulated. Complete internalization manifests as the recognition of the behaviour’s meaning to oneself, acknowledging this perspective, and believing that one has a choice in the enactment of their behaviour (Deci & Ryan, 2010). To effect change in motivation, one must satisfy the three basic psychological needs: autonomy, competence, and relatedness (Figure 2.1; Deci & Ryan, 1985). SDT consists of six sub-theories: (1) cognitive evaluation theory, where intrinsic motivation or behaving for its own sake is critically influenced by autonomy and competence; (2) organismic integration theory, which posits that extrinsic motivation falls along a continuum of four types of regulation (external, introjected, identified, and integrated), each of which is influenced by autonomy and relatedness, and the degree to which these two needs are satisfied determines the level of internalization; (3) causality orientations, which proposes three reasons individuals choose to regulate their behaviour (i.e., autonomous, controlled, or amotivated orientation); (4) basic psychological needs, wherein autonomy, competence, and relatedness are posited to be essential for optimal human development and well-being; (5) goal
contents, which theorizes that intrinsic and extrinsic goals lead to different outcomes such that intrinsic goals are associated with positive health and well-being while extrinsic goals are associated with deficits in health and well-being; and (6) relationships motivation, which suggests that through high quality relationships all three of the basic psychological needs can be satisfied (see Gagne & Deci, 2014 for a full evolution of SDT). While all six sub-theories are important to SDT, the focus within the current study is placed on the basic psychological needs, cognitive evaluation, and organismic integration theories. These three mini-theories will be further discussed in the next section.
Figure 2.1. Self-determination theory as depicted in a schematic representation of all six of the sub-theories: (1) basic psychological needs, (2) cognitive evaluation, (3) organismic integration, (4) causality orientation, (5) goal contents, and (6) relationships motivation (adapted from Deci & Ryan, 1985).
2.3.1 Basic Psychological Needs Theory

The basic psychological needs theory is focused on three essential needs—autonomy, competence, and relatedness—which are assumed to be innate and universal (Deci & Ryan, 1985). These three needs must be continually satisfied in order to achieve optimal well-being. Wellness outcomes can be predicted at various levels, from general (e.g., global [personality] and domain [e.g., work]) to more specific (e.g., task [e.g., planning]) levels (Gagne & Deci, 2014). Below is a review of each of the three basic psychological needs.

2.3.1.1 Autonomy

There are many definitions and views of autonomy among philosophers, economists, and psychologists; however, the literal meaning is, “freedom from external control or influence; independence” (Oxford, 2015a). Some views of autonomy include incompatibilists, who separate autonomy from material determinism (i.e., changes in the material world result in changes in social and cultural ideas; Pinker, 2002); those who believe autonomy is illusory (i.e., the brain is controlled by neural and psychological pathways so there is no conscious will; Wegner, 2002) or bound to cultural value (i.e., there is always an underlying cultural motivation and therefore nothing is intrinsically motivated; Iyengar & DeVoe, 2003); and, those who describe autonomy as tyrannical (i.e., too much freedom encroaches on other’s freedom; Schwartz, 2000).

In philosophical terms, there are two broad traditions that are relevant to SDT. The first is the tradition from which SDT emerged -- *post-Husserlian phenomenology* (e.g., de Charms, 1968; Heider, 1958; Ricoeur, 1966). In this tradition, capacities, conditions, and consequences are dichotomized as either autonomous or heteronomous (i.e., controlled regulation). Autonomy is not reduced to solely internal regulation. For an act to be autonomous, the self must accept the external influence as a piece of itself. Thus, the act is fully processed and identified with the self, becoming owned. While the trigger to act may have originated from an external source, the self fully identifies with the act and is thought to have acted autonomously. Meanwhile, the second tradition views autonomy as an *analytic approach* (e.g., Frankfurt, 1971), which focuses on usage, plausibility, and value. Like the phenomenological perspective, the analytical approach (e.g., Frankfurt, 1971) supports autonomy as a part of the self. However, in the analytical approach, autonomous acts require reflection. If, upon reflection, the act is fully endorsed (i.e., identified), the act is autonomous; inner conflict or avoidance of reflection suggests heteronomy.
SDT is concerned with the nature, development, consequences, barriers and facilitators of autonomy. This is done through an empirical approach to motivation and personality. Ryan and Deci (2006) posit that autonomy, and its opposite, heteronomy, are regulated both internally and externally. Internal regulation manifests as impulses or demands, and external regulation by rewards and punishment. Through self-reports, six levels of motivation have been associated with the underlying continuum of autonomy: intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation, and amotivation. These six motivational types have been examined among different cultures and age groups (Ryan & Connell, 1989; see Section 2.3.2. for more information). Thus, SDT comprehensively states the importance of autonomy for well-being, development, performance, social integration, and creativity (see Figure 2.1; e.g., Deci & Ryan, 2000; Ryan et al., 2006).

2.3.1.2 Competence

As Deci and Ryan (1985) explain, competence is an innate psychological state. Competence can be defined as “the ability to do something successfully or efficiently” (Oxford, 2015b). Research indicates that climates that are more task- or mastery-oriented (i.e., those that focus on the skills and the task in their own right) are more conducive to internalization than ego-involving climates (i.e., those that focus on the individual achieving the skills for the task) as they endorse task competence and, therefore, intrinsic motivation (Deci & Ryan, 2000; Duda, 2001). This is a result of the controllability of task-oriented climates over ego-oriented ones. Vazou et al. (2006) reported that peer task-oriented climates are positively related to youths’ physical self-worth, sport enjoyment, and effort compared to a coach task-oriented climate. Contrarily, peer ego-involving climates are negatively related to enjoyment and effort, and associated with increases in competitive trait-anxiety. Overall, peers are important influences, along with parents, teachers, and coaches, when establishing a positive motivational climate for sport (Carr & Weigand, 2001).

2.3.1.3 Relatedness

Expression of intrinsic motivation is also contingent upon relatedness, the perception of being connected or associated with an individual and/or group. SDT posits that relatedness positively influences intrinsic motivation by providing a sense of security regardless of the behaviour performed in isolation or among those with whom the individual feels related (Ryan & Deci,
2000). Relatedness also plays an important role in extrinsically motivated behaviours such as those driven by guilt (i.e., introjected regulation). When others who are related to an individual (real or perceived) prompt, model, or value the behaviour, the individual may respond by initiating that same behaviour (Ryan & Deci, 2000, 2007). For this reason, SDT proposes examining both social (e.g., clubs) and developmental (e.g., school) environments surrounding an individual to assess the degree to which their basic psychological needs are being met.

2.3.2 Cognitive Evaluation Theory

Concerned with intrinsic motivation, cognitive evaluation theory (Deci, 1971) specifies how social factors (e.g., rewards, feedback) can influence intrinsic motivation (e.g., Gagne & Deci, 2014). The degree to which the three basic psychological needs are met is indicative of internalization and whether the individual is considered intrinsically motivated. As Frederick and Ryan (1995) explained, intrinsic motivation is innate, autonomous and self-determined, and can be sustained through “excitement and challenge” (pp. 6-7). Further, when extrinsic rewards are presented, it is how an individual perceives them in relation to their autonomy and competence for the behaviour of interest that can affect one’s level of intrinsic motivation (Deci, Koestner, & Ryan, 1999). Therefore, when situations interfere with satisfaction of the three innate needs, intrinsic motivation is less likely to be attained, and vice versa. Rewards can also be viewed as positive (i.e., informational) or negative (i.e., controlling), and it is how the individual perceives the reward that, in turn, affects intrinsic motivation (Deci, Koestner, & Ryan, 1999; Ryan, 1982). This is known as the locus of causality and contributes to the determination of motivation (Deci, Cascio, & Krusell, 1975; Frederick & Ryan, 1995). If rewards are expected as an outcome of behaviour then intrinsic motivation is often reduced. Likewise, an unexpected reward that is retrospectively evaluated as controlling the behaviour can lead to extrinsic motivation (Deci, Cascio, & Krusell, 1975).

Similar to rewards, the type of feedback provided on the behaviour can affect one’s level of motivation. Feedback can be perceived as informational or controlling regardless of whether performance-related, self-administered, or intrapersonal. Controlling feedback in any form (e.g., rewards) decreases intrinsic motivation (Frederick & Ryan, 1995) and can come from many sources (e.g., coaches, parents, and peers). In sports settings, coaches implement many motivational styles, and cultural differences have been shown to influence perceptions of
coaching styles among post-secondary athletes. For example, Japanese coaches were rated higher for autocratic coaching style whereas Canadian coaches were perceived as democratic (Chelladurai, Imamura, Yamaguchi, & Oinuma, 1988).

Based on this information, Mandigo and Holt (2000) provide four “propositions” of cognitive evaluation theory that include the following:

1. Autonomy — feelings of control and choice promote internalization;
2. Competence — perceptions of competence and appropriately challenging skills internalize motivation while challenges that over- or under-estimate skill decrease internalization;
3. Rewards/Feedback — informational types promote internalization whereas controlling types promote externalization; and,
4. Involvement — task-involved goals (e.g., improving technique) enhance internalization whereas ego-involved goals (e.g., winning a race) enhance externalization.

From this summary, Mandigo & Holt (2000) suggest several techniques to increase motivation among children and youth in PA environments. These include providing opportunities for children to choose the activity, minimizing controlling factors by providing informational feedback/rewards, individualizing instructions to optimally challenge every child, allowing children to set their own goals to enhance their perceived competence, and reducing importance of personal improvement. For example, in a study that focused on scholarship (i.e., a measure of personal improvement) and motivation among university athletes with and without scholarships, male scholarship athletes reported greater introjected and externally regulated motivation than male and female non-scholarship athletes as well as female scholarship athletes (Medic, Mack, Wilson, & Starkes, 2007). The prospect of losing their scholarships was perceived as a controlling reward among the male scholarship athletes, promoting the externalization of their sport behaviour. Therefore, there are many social factors to consider when comparing the intrinsic motivation of some individuals to behave, to those who are externally motivated or amotivated for the same behaviour.
2.3.3 Organismic Integration Theory

As Deci and Ryan (1985) explain, organismic theories are regulated by internal structures through dynamic experiences and by the active nature of humans, while integration is one’s development of their internal and external environments that guide action and the “harmony” (p. 114) that exists between them. Within SDT, organismic integration manifests as the differentiation between the three types of motivation (i.e., amotivation, extrinsic motivation, and intrinsic motivation), which correspond to one’s level of internalization for a particular behaviour. Specifically, extrinsic motivation, and its four levels, is at the heart of organismic integration theory where the degree of internalization among extrinsically motivated individuals fall along a continuum from highly controlled (i.e., external regulation) to volitionally endorsed (i.e., integrated regulation; Wilson, Mack, & Grattan, 2008). The least integrated form of external motivation, external regulation, occurs when autonomy is absent and external rewards are not internalized (e.g., avoiding punishment). Introjected regulation is somewhat more internalized than external regulation but remains on the lower end of the integration continuum. Individuals who experience introjected regulation express feelings of guilt or shame. Identified regulation represents a shift towards internalization as the individual begins to perceive the value in the behaviour. It is at this point that the basic psychological needs are being met, to a degree, and manifests as being a valued behaviour. The most internalized and autonomous of the extrinsic motivational states, integrated regulation is when an individual endorses the values/goals of the behaviour. However, what differentiates integrated regulation from intrinsic motivation is the ability to separate the outcome from the self, whereas intrinsically motivated behaviours are inherently motivating (Deci & Ryan, 2000).

To further distinguish the different types of motivation as well as the level of extrinsic motivation in a PA context, researchers developed the Behavioural Regulations Exercise Questionnaire (BREQ). The first edition of the BREQ assessed three levels of extrinsic motivation (i.e., external, introjected, and identified regulation) and intrinsic motivation (Mullan, Markland, & Ingledew, 1997); the second edition included amotivation (BREQ-2; Markland & Tobin, 2004); and most recently the third edition added integrated regulation and updated the introjection subscale (BREQ-3; Wilson, Rodgers, Loitz, & Scime, 2006). Previous studies have used the BREQ to predict future PA behaviour among university students (e.g., Barbeau, Sweet, & Fortier, 2009), and levels of exercise identity among adults (e.g., Strachan, Fortier, Perra, &
Lugg, 2013). In a path analysis of the basic psychological needs, levels of motivation, and PA, the basic psychological needs positively predicted self-determined motivation (i.e., identified and integrated regulation, and intrinsic motivation) which in turn predicted PA behaviour at 1-month follow-up. Subsequently, competence was negatively associated with non-self-determined motivation (i.e., external and introjected regulation), and did not predict future PA behaviour (Barbeau, Sweet, & Fortier, 2009). In an evaluation of exercise identity and behavioural regulation, self-determined motivation was positively related to exercise identity whereas external regulation was not related and amotivation was negatively correlated (Strachan, Fortier, Perra, & Lugg, 2013). Meanwhile, among the three types of motivation (i.e., intrinsic and extrinsic motivation, and amotivation) many considerations should be made. For example, the literature suggests that self-determined extrinsic motivation (e.g., identified regulation) can be just as important as intrinsic motivation in maintaining a targeted behaviour (Barbeau, Sweet, & Fortier, 2009). Further, goal content (i.e., the what component) and motives (i.e., the why component) have shown similar effects on determining levels of motivation and PA behaviour (Wilson, Mack, & Grattan, 2008). Therefore, the research has predominantly focussed on goal content and has provided little insight into PA goal motives. Qualitative explorations can be an important component to understanding goal motives.

Given SDT’s previous use in PA research, the present study will use this theory as a foundation for its data analysis. The mini-theories of SDT and peer support provide insight into the motives for engagement in a given behaviour, and thus can provide insight into the sport experiences of youth with physical disabilities.

### 2.3.4 Peer Support and SDT

Research suggests that peers and the unique support they provide (i.e., peer support) can foster autonomous environments (i.e., those that allow for individuals to make decisions independently) that can positively influence continued engagement in a given behaviour (Ryan et al., 2005). Peers have also been studied in terms of the motivational climates within which they help to create (e.g., Weigand et al., 2001). Motivational climate refers to how the social environment may influence an individual’s motivation and/or motivational processing (e.g., risk analysis; Nicholls, 1989), and more recently was empirically extended to include peers (Ntoumanis & Vazou, 2005). The Peer Motivational Climate in Youth Sports scale (PeerMCYS; Ntoumanis &
Vazou, 2005) is a 5-factor questionnaire containing 21 items that has been validated among typically developing youth athletes in both qualitative (Vazou et al., 2005) and quantitative (Ntoumanis & Vazou, 2005) analyses. Dimensions of relatedness support (i.e., endorsement and facilitation of a sense of belonging, and the creation of a positive team atmosphere), autonomy support (i.e., the degree to which a member of the team is able to be involved in decision-making processes), and competence (i.e., the use of normative or self-reference criteria to evaluate teammates’ performances) emerged in the course of the PeerMCYS’s development (Vazou et al., 2006). In a longitudinal study of typically developing competitive youth sport participants, a multilevel modeling approach using the PeerMCYS found that both peer and coach task-involving climates (e.g., those focused on skill acquisition) were more strongly predictive of positive outcomes (e.g., not cheating or burning out) than ego-involving climates (Ntoumanis, Taylor, & Thogersen-Ntoumani, 2012).

Moreover, individuals are highly motivated by recognition and love; this is contingent upon shared views and meeting each other’s expectations (Ryan, 1993). With the endorsement of behaviour by an individual’s family, friends, and/or peers, one is more likely to fully internalize the regulation of their behaviour (Ryan, 1993). Hence, facilitating a sense of personal relatedness with individuals who value the target behaviour is an important step towards initiating self-determination (Deci & Ryan, 2010). Within Parasport, coach and peer autonomy-supportive behaviours were more conducive to satisfying the basic psychological needs than non-supportive behaviours (Banack, Sabiston, & Bloom, 2011). Thus, sport participation can provide individuals (both typically developing and those with physical disabilities) the opportunity to engage with peers, fulfill their basic psychological needs and, consequently, contribute to psychosocial development (Kentta & Corban, 2014).

2.3.4.1 Victimization and Need Thwarting

While peers have the potential to support one another, it is important to acknowledge the potential negative role they may play in each other’s experiences. Specifically, there are three types of peer relationships—friendships (one-to-one relationship), acceptance (individual-to-group relationship), and victimization (one-to-group or individual relationship)—each of which are distinct, yet can influence the effects of one another (Ladd, Kochenderfer, & Coleman, 1997). For example, an individual may be bullied and experience low acceptance from their
classmates; however, the positive, close relationship with a ‘best friend’ may negate these negative group experiences. The individual may still report having unmet needs but their experiences in the given context are positive (Ladd, Kochenderfer, & Coleman, 1997). In school, these peer relationships have been shown to influence young children’s school adjustment, not vice versa (Ladd, Kochenderfer, & Coleman, 1997), suggesting that peer relationships can affect long-term engagement.

Moreover, need thwarting is not synonymous with the dissatisfaction of the three basic psychological needs. Dissatisfaction can be thought of as a relationship or a need not being as good as it could be, whereas thwarting is the active inhibition of a behaviour (i.e., it is a “feeling state”; Bartholomew, Ntoumanis, Ryan, & Thogersen-Ntoumani, 2011, p. 78). As Bartholomew and colleagues discuss (Bartholomew, Ntoumanis, Ryan, & Thogersen-Ntoumani, 2011; Bartholomew, Ntoumanis & Thogersen-Ntoumani, 2011), previous scales developed to assess the basic psychological needs focus solely on the positive psychological experiences, while disregarding the “perception that need satisfactions are being actively obstructed or frustrated within a given context” (Bartholomew, Ntoumanis & Thogersen-Ntoumani, 2011, p. 24). For this reason, the Psychological Needs Thwarting Scale (PNTS; Bartholomew, Ntoumanis, Ryan, & Thogersen-Ntoumani, 2011) was developed. In subsequent studies using the PNTS, need thwarting showed consistently negative associations with autonomy-supportive coaching styles and positive associations with controlling coaching styles (Bartholomew, Ntoumanis, Ryan, Bosch, & Thogersen-Ntoumani, 2011; Curran, Hill, Hall, & Jowett, 2014). Further, need thwarting is positively associated with disaffection, depression, disordered eating, negative affect, and burnout within individual and team sports in general, as well as weight-biased sports (e.g., wrestling) across a variety of ages (Bartholomew, Ntoumanis, Ryan, Bosch, & Thogersen-Ntoumani, 2011; Curran, Hill, Hall, & Jowett, 2014).

The negative effects of need thwarting may be heightened among those with physical disabilities given the presence of stigmatization (i.e., negative stereotyping). People with physical disabilities may be stigmatized/victimized due to an evolutionary, self-preserving process known as the disease-avoidance process. As Park, Faulkner, & Schaller (2003) posit, separating oneself from another who is perceived to be different was thought of as a potential lifesaving act. For example, people with leprosy have visible lesions denoting the presence of disease and, therefore, could act as a warning to separate oneself from them. While we know that physical
disabilities are not contagious, this disease-avoidance process establishes more false-positive assumptions than false-negatives. Evolutionarily speaking, this makes sense. However, in the 21st century the disease-avoidance process is a highly stigmatizing process, which goes against the Human Charter of Rights and Freedoms. Cultural differences exist in the presentation of the disease-avoidance process and habituation can alter the process’s effects (Park, Faulkner, & Schaller, 2003). With respect to need thwarting, the disease-avoidance process may help to understand why these need thwarting and victimizing behaviours persist. For example, among youth with physical disabilities, they have a harder time making friends and engage in less unstructured relationships with their friends (e.g., outside of school or programs) than their age-matched typically developing peers (Stevens et al., 1996). Therefore, need thwarting may affect the quantity and quality of the peer interactions that youth with physical disabilities have in sport environments, and contribute to negative experiences that decrease motivation to participate in subsequent sport events.

2.4 Summary of the Literature

With the threat of obesity and obesity-related illness on the rise, strategies to improve the health and well-being of all individuals are necessary (WHO, 2015). Of particular concern are youth with physical disabilities who are less likely to have the opportunity to participate in social and physical activities than their typically developing peers (Law et al., 2006a, 2006b). As Rimmer et al. (2007) suggest, establishing healthy behaviours during adolescence may be the last opportunity to affect long-term lifestyle behaviours within this group prior to the onset of adulthood. Thus, providing opportunities for youth with physical disabilities to be physically active is vital to their development and long-term well-being.

One method for increasing PA participation among youth with physical disabilities is through sport. Sport participation among typically developing youth contributes to an array of health benefits, and may contribute to a greater ability to achieve the Canadian PA Guidelines for Youth (Tremblay et al., 2011c). Sport participation is also associated with improved psychosocial well-being and positive youth development (e.g., Evans & Roberts, 1987). Despite these benefits, the majority of youth with physical disabilities are not participating in any sport (Law et al., 2006a), suggesting further research focus on examining ways to increase this target group’s engagement in sport. Peers may play an important role in meeting this gap through the
unique support they provide in establishing positive environments, engaging others in the target behaviour, providing a source of motivation, and in meeting the basic psychological needs as outlined by SDT (Ryan & Deci, 1985). The use of theory such as SDT (Ryan & Deci, 1985) not only fills one of the outlined gaps in the peer support literature, which has predominantly been atheoretical, but also aligns with much of the existing sport literature (e.g., Kentta & Corban, 2014; Perrier et al., 2012). This study endeavours to fill the aforementioned gaps in the youth peer support, sport, and disability literature by using a qualitative approach to investigate youth with physical disabilities’ perspectives on the role of peers in sport settings.

2.5 Qualitative Research Among Youth with Physical Disabilities

A review of the literature has revealed a lack of peer support research addressing youth with physical disabilities, and even less research on sport participation among youth with physical disabilities. Moreover, an atheoretical approach has often been used in the peer support literature, resulting in a gap in understanding the potential influences by which peer support affects behaviour. The exploratory nature of qualitative research allows for a deeper understanding of the topic (Munhall, 2012). Through the perspectives of those who are engaged in an experience, qualitative research looks to explore the significance about that given experience (Sparkes & Smith, 2014). For this reason, qualitative research methods were chosen to allow for a richer understanding of how peers influence the sport experience for youth with physical disabilities.

2.5.1 Considerations for Conducting Qualitative Research with Youth

When conducting research with youth, there are many factors to consider such as obtaining consent, implementing methodology, building trust, and working with parents/guardians. First, consent must be obtained from the youth or their parent/guardian prior to the study based on the youth’s level of understanding of the research. Gaining youth assent when their parent/guardian provides consent is also important. By having the additional assent of the youth, the researcher demonstrates a higher level of respect and interest in the youth’s opinions with the hope that this may elicit more open responses to the research question. Many researchers who work with children and youth have taken this view, and Heath et al. (2007) discussed it at length. Therefore, this study required youth consent or assent as necessary (see Chapter 3).
In terms of methodology, the methods used with adults may not be feasible to use when studying a phenomenon in youth. For example, while telephone interviews have been successfully used among adults (e.g., Opdenakker, 2006), they may not be a method of choice when conducting qualitative research among youth given the decreased ability to use social cues, such as body language, to build rapport and trust with youth (Opdenakker, 2006). Telephone interviews, while providing anonymity to the participant when discussing sensitive topics (e.g., bladder and bowel management), may also leave variability in the setting within which the participant is in while being interviewed. For example, the participant may be distracted or influenced by their parent/guardian in their responses (Heath et al., 2007), or of importance to youth with physical disabilities, have a secondary diagnosis, such as autism spectrum disorder, which may make maintaining attention over the phone difficult. Given the potential challenges of interviewing youth, and those with physical disabilities in particular, complementary techniques may be used (e.g., relational mapping) which cannot be utilized over the phone. For these reasons, face-to-face interviews were the chosen method for this study.

When conducting research with youth, delving into their experiences through dialogue may best be done through the use of narratives (Carr, 1986). By framing the questions in such a way as to have the youth tell a story, this allows for a greater understanding of the youth’s experiences on the explored topic (Ellis, 2006). Further, Ellis (2006) and Bagnoli (2009) describe how complementary methods or techniques can be implemented to have the youth express themselves more fully through various techniques such as arts-based methods. In particular, techniques such as relational mapping and photo-elicitation may trigger experiences, enhance the data collected (Sparkes & Smith, 2014), and allow individuals to express themselves in the modality they feel most comfortable (Bagnoli, 2009). First, relational mapping is a technique that is used to understand relationships and involves the participant drawing on a blank page a web of relationships (see Fig. 2.2); this technique is similar to time-lining (Sheridan, Chamberlain, & Dupuis, 2011). It has been suggested that by having the salient reference point (i.e., relationships) in view during the interview, the researcher-participant relationship can delve deeper and the researcher has a better understanding of the participant’s experiences. In a study conducted by Sheridan et al. (2011) with a sample of adults to discuss the participant’s perceptions, memories, and experiences with fatness and weight loss, relational- and timeline-
mapping allowed for augmentation of their discussion, including the initiation of narratives around that added detail (Sheridan et al., 2011, p. 556).

Figure 2.2. An example of relational mapping. With “me” [i.e., the participant] in the centre, the outer circles are individuals or groups who influence “me.”
Second, photo-elicitation involves the use of photographs to invoke one’s recall of relevant memories and experiences. The photos used can be derived from the researchers or the participant themselves. By using this technique, the researcher can direct the participant to specific aspects of the photo to gain a deeper understanding of a specific characteristic or, in the case of this study, peer relationships and the photo may help participants’ memory recall (Sparkes & Smith, 2014). For example, in a study of male body builders, Phoenix (2010) had participants describe their experiences and self-perceptions of a single participant-generated photo; with each of the three questions she posed, three distinct narratives emerged. Therefore, participant-generated photo-elicitation can be a powerful tool to trigger deeper reflection and discussion such as how participants chose the specific images to bring to the interview.

Providing the opportunity to use complementary methods when interviewing youth participants may allow for a greater rapport with participants and ascertain a deeper understanding of their experiences with their peers through sport. As such, this is the direction that I chose to take when conducting the interviews with the youth.

An additional consideration for conducting research with youth is the role of the parent(s). Parents provide a wealth of knowledge on their children’s past and present experiences; thus, it is critical to consult with them prior to the interviews. The parental consent process presents an opportunity for the researcher to ask parents about any potential negative triggers that may arise during the interview (e.g., bullying at school; Martin, 2006). For example, when discussing their experience with peers, a youth may be reminded of a time they were bullied, triggering negative experiences that they may not wish to express. However, as the researcher, having this previous knowledge from the youth’s parent may help to prepare for the interview, understanding where probing may not be appropriate and providing additional resources to the youth (e.g., counseling services; see Appendix A).

2.5.2 Philosophical Assumptions

Conducting qualitative research is a complex process, given the many ways of interpreting each individual’s subjective experience (Sparkes & Smith, 2014). Adhering to a paradigm, “philosophical assumptions and methodological commitments” (Sparkes & Smith, 2014, p. 8) can be made in order to understand and interpret each individual’s experiences. Paradigms are beliefs and worldviews that are unique to each person, which define the world, the individual,
and all of the potential relationships therein (Guba & Lincoln, 1994). This study employs a constructivist paradigm approach. As described by Guba and Lincoln (1994), constructivists adopt a relativist ontology, a transactional and subjectivist epistemology, and a hermeneutical and dialectical methodology. Constructivism’s relativism is dynamic, amenable to changes as individuals become informed and sophisticated in developing their social realities.

Epistemologically, constructivism assumes that knowledge is created during the interaction that occurs between the researcher and participant, allowing for a broader transactional and subjectivist outlook compared to other approaches (e.g., critical theory; Guba & Lincoln, 1994). Finally, constructivism posits that there must be an interaction between the researcher and participant to elicit the pre-existing social constructions held by the participant. Therefore, dialogue is a preferred methodology for a constructivist approach.

Using a constructivist lens, exploration of how social realities are formed is based on three principles: (1) that actions are influenced by the meanings that individuals attribute to them, (2) meanings are developed through social interactions, and (3) individuals must interpret these meanings (Esterberg, 2002). For this study, the experiences of youth sport participants with physical disabilities’ experiences are thought of as constructed through their own interactions, the interactions that occur at their sport setting as a whole, and the meanings that they place on their participation in sport.

### 2.6 Research Questions

Two foundational research questions guided this study:

- How do peers influence youth with physical disabilities in their sport participation?
- Do peers influence the basic psychological needs and motivational states of youth with physical disabilities in sport as outlined by the mini-theories of SDT?

These research questions provided the underlying framework for the interview guide (Appendix B) and the data analysis (Chapter 4). Overall, the study findings establish the role peers play in the lives of youth with physical disabilities who participate in sports, with the goal of providing the best quality sport experience possible. Additionally, this study expands the peer support literature in the area of youth with physical disabilities, and SDT and sport.
Chapter 3
Methodology

3 Methodology

3.1 Participants

A sample of eight youth participants (O’Reilly & Parker, 2013; Patton, 1990) aged 12 to 17 years (or youth still enrolled in high school) and who (i) self-reported having a physical disability, and (ii) were currently participating in any level (i.e., recreational, competitive, provincial) of sport were recruited. All levels of sport were included given the small population base being sampled (~4% of youth have physical disabilities and play sport; Law et al., 2006a). A demographic questionnaire (Appendix C) was administered at the beginning of the scheduled interview by the student investigator to determine participants’ age, gender, type of physical disability, mode of mobility, current and past sport experience, and level of sport participation. Given that all forms of sports have been related to positive physical and psychosocial health outcomes (Eime et al., 2013), youth involved in either individual- and/or team-based sports were eligible to participate in this study. Individuals who could not answer the screening questions (Appendix D) and/or those who had no parental/guardian consent were not eligible for study participation. Comorbidities were considered during screening (Appendix D), such as having a diagnosis of both cerebral palsy and autism spectrum disorder (Rosenbaum et al., 2007). Youth who identified with having a cognitive/learning disability were included if they could correctly answer the screening questions.

3.2 Procedure

Figure 3.1 provides a procedural overview of the study. The following section elaborates on each step of the procedure. Ethics approval was obtained from the Research Ethics Board at the University of Toronto prior to recruitment in the Fall 2015.
3.2.1 Recruitment

Advertisements posted on the websites and/or announcement boards of relevant organizations (e.g., Variety Village, Ontario Wheelchair Sports Association) and word of mouth were the primary modes of participant recruitment. Some organizations granted in-person information sessions for recruitment (e.g., Pickering Soccer Club, Toronto Tornadoes, Canadian Sports Institute of Ontario), which consisted of the student investigator speaking to the team at the beginning or end of the practice about the study (i.e., summarizing the letter of information) and answering any questions that the youth had. The number of youth per team varied between six to 30 participants, with only a small fraction of the youth (3.3 to 16.7%) meeting all of the inclusion criteria. Relevant organizations in the Greater Toronto, Hamilton, and Niagara areas were also contacted through the coordinated recruitment of participants for youth and parent studies that were being conducted simultaneously by researchers from the Canadian Disability Participation...
Project (CDPP). Additionally, the student investigator contacted participants from concurrent studies of Dr. Arbour-Nicitopoulos’ lab who expressed interest in further study participation.

3.2.2 Screening

Potential participants answered a series of short questions, in-person, regarding the information contained within the Letter of Information (Appendix E) to assess their ability to provide consent. These questions included what they will be asked to do and who will know about what they say. All potential participants had provided correct responses to these questions indicating that they were (i) able to provide their consent to participate in the study and (ii) were cognitively capable of participating in the interview. Thus, participant consent was then obtained (with no parental consent being required). Upon providing consent, a date, time, and location was scheduled for the face-to-face interview with the student investigator. If the youth felt more comfortable, they were allowed to have a parent present for the interview.

3.2.3 Interviews

Each interview was audio-recorded, lasting between 33 and 51 minutes (mean: 39.05 minutes, SD: .004). All interviews were conducted in private at the recruitment site in a designated meeting room at the organization’s facility. The use of a familiar environment may assist in participant recall of information relevant to the study (Sparkes & Smith, 2014). Recruitment continued until a coherent narrative emerged from the key themes expressed by the youth (O’Reilly & Parker, 2013; Patton, 1990).

At the outset of the interview, participants first completed the demographic questionnaire to obtain information on their age, disability, time with disability, sport background (type and time spent in each), and community mobility (Appendix C). The interview then proceeded in a semi-structured manner, drawing upon the full-course of the youths’ sport experiences (i.e., from their first contact with a sport to the present; see Appendix B for the interview guide). Questions also addressed how peers may or may not have influenced participants’ initiation in and maintenance of their sport participation. The questions did not explicitly address SDT constructs and/or its mini-theories, rather the questions focused broadly on time points in the youths’ sport experiences (e.g., first contact, maintenance) and their peer support (e.g., defined who their peers are, how their peers influence their sport participation). The semi-structured interview approach was chosen as it allowed for the opportunity to obtain richer, in-depth responses from
participants concerning their perspectives, experiences, and preferences for peer support in a sport setting. For their interviews, I provided all participants with the choice of bringing photographs of their sporting experiences to the interview to assist in their ability to recall and elaborate upon their experiences that were meaningful to them. I also offered to the youth the opportunity to draw or ‘mind-map’ their ideas and/or relationships within the context of their sport experiences (relational mapping; Sparkes & Smith, 2014). An example of a mind-map produced in the present study is presented in Figure 3.2. In the figure, the youth, Lisa, has placed herself in the centre with four distinct groups or individuals that influence her sport participation. In turn, each of these groups/individuals were discussed with respect to (a) why they were included on the mind-map, (b) how they influenced her sport participation, (c) were they perceived to be a positive or negative influence on her sport participation, and (d) if there was anyone she would like to add to the map after discussing each of the individuals/groups.

![Mind-map example](image)

**Figure 3.2.** A sample relational map (Lisa).
In addition to these techniques, I took field notes of thoughts and perspectives at the end of each interview (i.e., prior to leaving the facility). Field notes included information related to the SDT variables discussed and the context they were provided in (e.g., school did not provide autonomy but community sports did), environmental considerations (e.g., location of the interview, whether a parent was present), my general impressions on how the interview was conducted (e.g., did I feel like the youth was holding back, did I feel (un)comfortable with the discussion), and ideas that I had for how I should make future changes to the interview guide (e.g., deletions [ice-breaker changed to be more individualized to what I knew of the youth], and areas to further explore [probe question: how would you feel if you were no longer participating in sport]). These field notes provided context during data analysis and informed the iterative process of the interview guide.

3.2.4 Role and Impact of the Researcher

Given the constructivist approach used to guide this study, it is important to recognize my role as the researcher in the research process (e.g., Guba & Lincoln, 1994; Constantino, 2008). Within the constructivist paradigm, the researcher is an active participant in the expression of the participants’ experience. As the researcher, my experiences, biases, and emotions during each interview may have influenced the interaction with the participant, and therefore the way in which the youth expressed their perspectives. For example, I have previously participated in many sports at a recreational level and remain physically active. From my past and current experiences with PA, I have seen the benefits of participating in sport, not only for myself, but also for those around me. With respect to peers, I enjoy the motivation and competition that they provide to me in the context of sport. Therefore, during my interactions with the youth, I may have unconsciously presented peers in a positive manner (e.g., celebrating positive experiences and lamenting negative experiences) through my comments, body language, and/or tone of voice.

Over the past decade, I have also volunteered and worked with various programs for individuals of all ages with physical disabilities. For example, throughout high school I volunteered with the After School Program (a physiotherapy program for children and youth with physical disabilities) at Hamilton Health Sciences where I became interested in PA and rehabilitation for children and youth with physical disabilities. I maintained this interest over the intervening
years, volunteering at the MacWheelers program (a community-based PA program for adults with spinal cord injury and multiple sclerosis) at McMaster University and the aquatic therapy program (child/youth inpatients and outpatients with intellectual, physical, and sensory disabilities or a combination thereof) at Holland Bloorview Kids Rehabilitation Hospital. I have also worked as a personal trainer with individuals of all abilities from ages 15 to 73 years. This interest has provided me with extensive experience interacting with individuals with physical disabilities, as well as other types of disabilities, in rehabilitative and PA settings.

Through these experiences, I approach the research topic with a positive outlook on sport and the influence peers can have on participation; however, it is also important to consider how the participant perceives me as a researcher in the interview setting. It can be assumed that each participant has a preconceived opinion of why I am conducting this study (e.g., I view it positively) and my biases as a Caucasian, able-bodied, young female researcher from, a presumably, upper-middle class family given my attendance at the University of Toronto. These preconceived opinions and assumptions may influence participation in this study if the participant views sport positively or is from a seemingly similar background as myself. Alternatively, the participant may have strong negative opinions of sport and feel motivated to discuss these experiences in the interview, or they viewed me as the researcher negatively and chose not to participate in this study. Therefore, the individuals who chose to participate in this study were most likely motivated by polarized strong opinions of their sport experiences, and/or their preconceived opinions of my intentions as a researcher and the entire research process.

Given the varied backgrounds and life experiences of the participants, considerations were made for the possibility of negative events (e.g., distress) occurring during the interview. These considerations were made despite the fact that the discussion topics were seemingly non-sensitive (e.g., who are their peers, how did they get involved in sport, why do they continue to be in sport; Appendix B). Fortunately, no negative events occurred during this study and the additional resources collected to support them were not needed (see Appendix A). It was my role as the researcher to provide an opportunity to the participant to continue to discuss the topic, to move on completely or temporarily from the topic, or to discontinue the discussion itself.

For the aforementioned reasons, working within a constructivist paradigm, I remained reflexive (i.e., keeping field/journal notes) throughout the research process. I documented my
psychological (e.g., emotions) and physical (e.g., fatigue) state prior to conducting each interview, and my perspectives following each interview. In doing so, I accept the subjectivity that comes with this approach, and strived to describe the participants and their experiences fully (Chapter 5: Results).

3.3 Personal Reflections

Engaging in this study was enlightening, challenging, and overall a fantastic personal experience. Having only a limited background in qualitative research at the outset of this study, the practical experience of working with youth with physical disabilities afforded me the opportunity to challenge my skill in the craft of qualitative research. Prior to conducting the interviews, I interviewed several graduate students with very different backgrounds in sport and qualitative research to become more fluid with my interview style and explore methods of incorporating the additional interview techniques (i.e., photo-elicitation and relational mapping). Once I had done this, I felt ready to begin the interviews. While finding this practice valuable, the interviews were not without their challenges. Having previously conducted research among adult populations, at the outset I did find it difficult to probe deeper into some of the more negative experiences the youth and I discussed. However, I relied on my background in volunteering with youth with physical disabilities and over the course of the interviews, I became more comfortable with engaging in discussion of these more negative experiences. I did this through focusing on having a conversation with the youth and not being concerned with keeping strictly to my interview guide. This allowed me to relax and think about the experiences of the youth I had volunteered with previously since they had similar negative experiences to the youth interviewed in this study, both in and out of sport.

Keeping field notes and staying for the duration of the practice that I attended to recruit participants helped me in a couple of ways. First, I was able to provide context to the transcripts as I was analyzing them by perusing my field notes. Second, staying for the duration of the practice before I interviewed the youth helped me to ‘break the ice’ at the beginning of the interview and afforded the opportunity for more individualized probing questions. For example, I could ask the youth about an activity that I had seen during the practice such as the skill-based games that took place as warm-ups during some of the wheelchair basketball practices. At one recruitment location, I was even able to warm-up with the team, as an adult-sized sports
wheelchair was available. With that said, I have not changed my position throughout this research process. Following a constructivist paradigm, the youth and I co-constructed the meanings of the youths’ sport experiences and their peer relationships. Given that realities are multiple, intangible, mental constructions, I approached data analysis with a relativist lens (Esterberg, 2002; Guba & Lincoln, 1994). This allowed me to explore the individual stories, while understanding that they were based experientially and socially, and were therefore context- and situation-specific. By using a semi-structured interview guide in conjunction with alternative interviewing methods, I was able to act as a guide in the youths’ stories. Overall, I enjoyed the time spent with the youth, and throughout this process have reflected on my past sport experiences, finding new meaning to my own experiences.
Chapter 4
Data and Analysis

4 Data Analysis

The student investigator recorded, transcribed verbatim, and manually coded all interviews. Field notes were also recorded. Braun and Clarke’s (2006) six steps of thematic analysis guided the data analysis process. The first step was immersion. This entails actively reading and re-reading the transcripts looking for meaning, patterns, and narratives. Conducting immersion by perusing the data without coding is best to do at least once before moving onto the second step. The student investigator immersed herself in the data three times prior to moving forward with the subsequent steps of the analysis process.

Following immersion, the second step was to establish initial codes (Braun & Clarke, 2006). This step involves grouping data meaningfully using a data- or theory-driven method. Data-driven coding is dependent on the themes that appear within the data, whereas theory-driven coding is guided by the research questions that the researcher wishes to code around. For the purposes of this study, an inductive-deductive method was utilized where a data-driven method was initially implemented, followed by a theory-driven coding method that was based on SDT’s levels of motivation (i.e., intrinsic, extrinsic, and amotivation) and the three basic psychological needs (i.e., autonomy, competence, and relatedness). Initial codes included friendship, task orientation, encouragement, models, and low awareness; these initial codes were then considered with respect to SDT (e.g., autonomy, competence, relatedness, motivation, internalization). Given the complexity of the participants’ experiences a deductive approach was used to present the findings.

Following creation of initial codes, themes were identified in the third step (Braun & Clarke, 2006). This involved identifying and grouping codes based on broader concepts. From the initial 15 codes, five themes were identified. Codes were grouped in several ways. First, SDT-based themes were created by grouping codes that were discussed in relation to the corresponding SDT variable (e.g., autonomy, internalization), which resulted in overlap of codes within themes (e.g., supporting goals was grouped into autonomy and competence). Second, the temporal codes held in the youths’ sport experience (i.e., first contact, practice, continued participation) were used to group them into themes (e.g., friendships were discussed in the sport continued participation...
code but not the first contact code). Third, youths’ level of sport internalization (i.e., low and high) were used to group codes into a single theme; this is presented as a narrative to express the variability in the other themes based on the youths’ expression of their sport internalization.

Once themes were identified, the fourth step was reviewing themes (Braun & Clarke, 2006). This step involved refining the previously identified themes by collapsing themes into each other, dividing themes that were too diverse, or eliminating themes. Given the overlap of codes within themes and their complexity, codes were divided and collapsed in a deductive manner, such that the initial SDT-based themes (i.e., autonomy, competence, relatedness, and need thwarting) were divided and collapsed into the temporal and internalization themes as appropriate. For example, the theme of task-orientation was discussed as it related to autonomy and competence, and was collapsed into the theme of the youths’ progression through sport. This refinement occurred after revisiting the transcripts and discussion with my committee members (K.A.N., K.A.T., S.N.S., & J.R.T.).

After reviewing themes, step five was to define and name the themes (Braun & Clarke, 2006). This step included defining and further refining each of the themes as they are presented in the analysis (Chapter 5).

Lastly, the sixth step was to produce the report (Braun & Clarke, 2006). At this point, a critical friend (K.A.N.) reviewed the themes, not as a second analysis, but as a means of ensuring the themes were clear and appropriate. This critical friend is an expert in the field of PA and disability across all ages. As a Caucasian, female without a disability and with a background in PA, the critical friend has similar biases as previously discussed with respect to the student investigator.

4.1 Vignettes

To further explore the youths’ sport experiences in relation to SDT’s cognitive evaluation theory, vignettes were developed to illustrate two distinct stories: lower and higher expression of sport internalization. Following immersion in the transcripts and consultation with the field notes, the student investigator selected the two stories that best demonstrated low and high expression of sport internalization. These vignettes represent the polar ranges of the sampled youths’ internalization, with the remaining six youth falling on a continuum between the presented
vignettes. For each of the vignettes, a summary of the key elements of the story was established. A draft of the vignette was presented to the critical friend to ensure clarity and revised as necessary.

4.2 Study Rigour

Overall, conducting the thematic analysis represents the complex story, the themes presented in a coherent and convincing manner. Therefore, the reader should believe that the analysis has merit and is valid, as the report should be logical (Braun & Clarke, 2006). In order to ensure the study rigour several steps were followed. First, the interview guide was pilot tested with several individuals with various backgrounds in sport, and sport and/or exercise psychology to both provide the student investigator with practice and to confirm question clarity. Second, the student investigator used multiple data collection techniques: verbal discussion, relational mapping, and field notes. Third, a debriefing with experts in the field (K.A.N., K.A.T., S.N.S., & J.R.T.) occurred during the revision of themes, followed by ongoing consultation with a critical friend during the production of the report. Participants were provided a summary of the findings. Fourth, the researcher has provided a detailed background on her positionality, therefore acknowledging the sources of potential bias but also accepting them.
Chapter 5
Results

5 Findings

5.1 Participants

A detailed description of the demographic characteristics of each participant is provided in Table 5.1. Eight youth with physical disabilities (aged 13 to 18 years) participated in this study between November 2015 and March 2016. Two participants were aged 18 years but were deemed eligible for this study as they were still enrolled in high school. While the focus of this study was on youth with physical disabilities, two participants had a co-diagnosis of autism spectrum disorder (ASD) but sufficiently answered the screening questions (Appendix D) to be eligible to participate in this study. The majority of participants self-reported as being male \( (n = 5) \) and Caucasian \( (n = 6) \).

The current and previous sport involvement of the youth is presented in Table 5.1. Overall, there were a variety of team-based and individual sports that the youth were currently participating in primarily at a recreational level \( (n = 6) \). Two youth were participating at the national \( (n = 1) \) and international \( (n = 1) \) competitive levels in their current sport. Other sports the youth had previously taken part in included: baseball, figure skating, football, karate, skiing, soccer, horseback riding, and swimming. On average, the youth spent 5.8 years \( (\pm 3.8) \) in these other sports at the recreational level, with the exceptions of figure skating \( (n = 1) \) and football \( (n = 1) \) which were both participated in at the competitive level.

The majority of youth (five in total) participated in the interview alone, while three of them felt more comfortable with their mothers in the room. The mothers acted as silent observers and were not interacted with by the student investigator; however, their presence may have altered the youths’ responses. All youth accepted the opportunity to use relational mapping, however none of the youth brought a photograph that represented their sport experience. Therefore, the photo-elicitaiton technique could not be used in this study.
Table 5.1. Participant characteristics and sport experience.

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age</th>
<th>Diagnosis</th>
<th>Community Mobility</th>
<th>Current Sport</th>
<th>Years in Current Sport</th>
<th># of Previous Sports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melissa</td>
<td>15</td>
<td>Cerebral Palsy – Unspecified Type</td>
<td>Independent</td>
<td>Wheelchair Basketball (recreational)</td>
<td>1.5</td>
<td>0</td>
</tr>
<tr>
<td>Lisa</td>
<td>17</td>
<td>Cerebral Palsy – Unspecified Type</td>
<td>Independent</td>
<td>Wheelchair Basketball (recreational)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Jordan</td>
<td>17</td>
<td>Hip Growth Plate Damage</td>
<td>Manual Wheelchair</td>
<td>Wheelchair Basketball (national)</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Kyle</td>
<td>13</td>
<td>DCD (high functioning ASD)</td>
<td>Independent</td>
<td>Multisport Program (recreational)</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>Brad</td>
<td>18*</td>
<td>Arthrogryposis</td>
<td>Independent</td>
<td>Multisport Program (recreational)</td>
<td>0.5</td>
<td>3</td>
</tr>
<tr>
<td>Anna</td>
<td>18*</td>
<td>Double Below-the-Knee Amputation</td>
<td>Independent</td>
<td>Track &amp; Field (international)</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Trevor</td>
<td>15</td>
<td>DCD (high functioning ASD)</td>
<td>Independent</td>
<td>Soccer (recreational)</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Yash</td>
<td>13</td>
<td>Cerebral Palsy - Ataxia</td>
<td>Manual Wheelchair</td>
<td>Wheelchair Basketball (recreational)</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: Multisport programs are defined as those that provide opportunities for individuals to participate in soccer, basketball, sledge hockey, etc. either within sessions or within the program as a whole.

*registered in high school; ASD, autism spectrum disorder; DCD, developmental coordination disorder.
5.2 Key Themes

Participants were asked to describe their various experiences with sport from initiation to the time of the interview for each sport program they had participated in. Through these discussions, it became apparent that peers (as defined by the youth) were important influencers of the basic psychological needs described in SDT’s basic psychological needs mini-theory. Most importantly, peers were reported to foster positive social environments where the youth felt they could relate with others and were accepted. These positive social environments allowed for the youth to not only relate to others, but also to explore their abilities (competence) and be in control of their sport participation (autonomy). An overview of the youths’ sport experiences and their peer relationships are provided in Figure 5.1 and further elaborated upon with accompanying quotes in the remainder of this section. Where applicable, the suggestions given by the youth on how to continue to enhance the sport experience and peer relationships for youth with physical disabilities is interwoven throughout the key themes.

5.2.1 Peers – The Known Supporters

Peers, as previously described in Section 2.2, are individuals who share lived experiences, background, and/or understanding with one another, irrespective of the type of relationship (e.g., friendship, acquaintance; Loughead & Hardy, 2005; Martin Ginis, Nigg, & Smith, 2013). The youth in this study described peers in a slightly different manner than how peers have typically been defined within the literature. All participants felt that “peers are people [they could] relate to in some sort of way” (Brad), and therefore perceived a minimum level of relatedness to be required to consider someone as a peer. Interestingly, none of the youth could extend their definition of peer outside of their circle of acquaintances. As Kyle describes:

Peers are people who “you hang out with at times. The others at [name of sport program] are my peers because I see them here every Wednesday. They aren’t all necessarily friends.”

This distinction between friends and peers was clearly made as friends were always peers, but peers were not necessarily friends. When defining who their peers were, the youth tended to also describe the support that they received from these individuals such as models of sport skills,
motivators to meet individualized goals, and sources of disability-related information. Peers also were sources of emotional and informational support.

I think of well-educated and well-spoken people [peers], who know a lot about what they are talking about. They help you when you really need it and let you struggle when they know that you can fight through. (Jordan)

Another important distinction that was made by the youth between peers and friends was the age of the individual. The majority of youth had no defined age range that they placed on who a peer could be, as long as they could relate with them in some way (e.g., preferred sport, type of disability). In defining peers as such, coaches and both younger and older teammates were categorized by the youth as peers. However, for a couple of the youth (in particular those who expressed a lower sport internalization), age of peers was more concrete. Individuals were no longer defined as peers by these participants if they were perceived to be outside of the youth’s age range by a couple of years. As Trevor stated, “the little kids [~ two years younger than himself] are too small.”

Furthermore, peers were defined as being inclusive of all abilities (i.e., youth with and without disabilities). All of the youth had or were currently participating in sports programs that involved typically developing youth, and therefore their shared interest in sport connected them. The sport programs that were perceived to foster these connections between youth with and without disabilities were those that were considered by the youth to be inclusive (i.e., designed for youth of all abilities) or used reverse integration (i.e., initially designed for youth with physical disabilities however allowed typically developing youth to participate).
Figure 5.1. Overview of themes. Dotted line indicates indirect experiences.
5.2.2 Progression of Sport Participation

The youth were asked to describe their progression through sport from initiation to the time of the study. This process provided the youths’ background sport history that allowed for discussion on how their peer relationships fit within their sport experiences. For most youth, this process was considered with respect to their current sport as well as past sport experiences, providing a background for further discussion in subsequent themes of their peer interactions. The following four sub-themes emerged through these discussions: (i) introduction to the specific sport program (first contact), (ii) acquisition of new skills (skill acquisition), (iii) motivation to continue in the sport program (socialization through sport), and (iv) passion for further sport experiences (variety in sport participation).

5.2.2.1 First Contact

This sub-theme emerged through discussions with the youth on how they were first introduced to their sport. For many of the youth, their mother was the person who sought out and presented the sport program to them. While not explicitly stated by the youth, it can be assumed that the acceptability of the program was evaluated by the parent (i.e., the mother) prior to being introduced to the youth. There was no mention by the youth of any of the issues that have been previously reported to be important factors to consider for youths’ participation in a PA program (e.g., lack of physical accessibility, cost; Martin Ginis, Ma, Latimer-Cheung, & Rimmer, 2016b; Shields & Synnot, 2012). This evaluation on the part of the mother of the appropriateness of the program for their child is exemplified in Brad’s recollection of his PA (including sport) experiences:

A lot of my first physical experiences, save karate which I was alright with, have been through my mom being like, ‘I’ve signed you up for this. It starts next week.’ Not many options [for sport in the community].

In addition to mothers, other sources of initiates for the youths’ sport participation were individuals within their own support networks such as teachers, coaches of current sport programs (i.e., their coach recommending another sport or program), and friends, as well as those people within their parents’ support networks such as friends, neighbours, and co-workers. All of these individuals were reported to provide informational support to the youth about the
sport and/or about information on how to acquire the necessary equipment to play a specific sport.

Well, in 2012 I had a surgery for my hip. During my recovery I stayed at [name of the hospital]. Since I was in grade six I still needed to go to school, so there was a school there that I could go to. The gym teacher there told me to play wheelchair basketball. So I played that. (Melissa)

As highlighted in the above quote, many of the youth were told what sports to play by either their parents or individuals within their immediate support networks, reducing their sense of autonomy in discovering and choosing which sport they played. Despite the apparent lack of autonomy in the initial contact with their respective sports, the youths' social network remained autonomy-supportive through the provision of informational (e.g., skill performance), instrumental (e.g., transportation), and emotional (e.g., cheering) support. All of these types of support were implicitly mentioned by the youth to empower them in making decisions and inquiries with respect to their sport participation. For example, all of the youth were given the choice to discontinue their sport participation at the end of the initial season by their parents. However, they all chose to return or try another sport/program.

My parents put me into [figure skating] lessons so that I would know how to skate. But then I kept wanting to go back every year. Then I started doing skating competitions when I was about eight or nine years old. (Anna)

As illustrated through Anna, many parents were perceived by the youth to want their children to try activities. Ultimately the youths’ enjoyment of the activity was a primary concern for parents. This concern may have driven parents to provide their child with the opportunity to (dis)continue their sport enrollment, fostering a sense of empowerment among the youth. As Yash’s mother noted during the discussion of initiating sports:

I enrolled him in basketball but every year I ask him if he wants to continue, right?

Yash: Yes.
Yash’s Mother: So even though [I] found the program, I asked [Yash] if [he] wanted to continue. Just like swimming, or horseback riding. I don’t force [Yash] to continue. Skiing I didn’t think [he] would like it but [he] do[es].

Other youth noted the continued emotional and financial support that they were provided from family and friends. As Brad described his motivation to continue in his sport camp waned after some negative interactions with a fellow participant. His friends, however, were able to emotionally support and motivate him to continue attending the camp, which he did until he was too old for the camp.

I feel like at some points I have made them [friends] want to carry on [in sport] just like they have made me want to carry on. Like I gave up on [sport] camp, I went but I just wasn’t feeling it. I had a really long conversation with my friends and they convinced me to stick with it. I mean I got them to start [going to sport camp], so they wanted me to keep going. [asking] ‘what’s going on? I know that it’s hard, you can get it, it just takes time.’ (Brad)

Thus, in this phase of sport participation, peer interactions may be vital to maintaining sport participation once initiated.

5.2.2.2 Skill Acquisition

All of the participants described their first experience in their sport as challenging, particularly with respect to their low skill level (competence). The youth described struggling at first and discontinuing the sport, and even expressed anxiety over thinking about trying a new sport. These negative perceptions dissipated as the youth spent more time participating in the sport. This progression was a common occurrence with all of the different sports the youth discussed attempting.

Interviewer: What didn’t you like about sledge hockey?

Yash: It was too hard to move.

Interviewer: The sleds are a bit heavy. Have you tried wheel sledge hockey?
Yash: I tried but it was still too heavy. It was hard to coordinate…pushing and shooting.

Well sledge hockey seems cool, but I don’t know how it would be. Like, it looks interesting, I don’t know I’m nervous. (Melissa)

For some of the youth, their perceived lack of competence for a specific sport led them to search for appropriate alternatives. This occurred particularly among the oldest of the youth, who began to take more of an active role in their day-to-day decision-making.

Hockey, it’s something that I’ve wanted to do for a really long time but I can’t skate. Well I can skate just not well. So I’ve been looking for alternatives. I’ve always wanted to be a professional hockey player so not being able to skate kind of like cut that off. So now I’ve been looking for sledge hockey. (Brad)

Meanwhile, among the younger youth, their parents and/or coaches often provided the informational support that was needed for locating an alternative opportunity such as an adapted sport program or another team. Coaches supported the youth’s autonomy to engage in further sport opportunities, in addition to providing extra challenge to improve their skills. For Yash, he was participating in one program (i.e., multi-sport program) but his coach saw an opportunity to challenge his skills further through a wheelchair basketball program. As the coach was the same for both the multi-sport and wheelchair basketball program, Yash was able to drop-in to a wheelchair basketball practice to try the sport before committing to the team.

I got into wheelchair basketball by my mom enrolling me at [name of program] multi-sports program which is a bunch of different games. [Name of coach], the coach, said I should do wheelchair basketball. So I tried wheelchair basketball and I like it! So then I started playing wheelchair basketball. (Yash)

However, many of the youth had also discussed a perceived lack of awareness among other youth (both with and without a physical disability) about the opportunities in their community to participate in parasport (e.g., wheelchair basketball) such as Melissa who indicated that “…people don’t realize that they don’t have to use a chair to play wheelchair basketball.”
youth who were interviewed perceived a stigma with the term *wheelchair* which was believed to have a negative impact on other individuals’ participation in parasports (i.e., low numbers on teams). The low participation rate meant that the youth were often not able to play full games at the end of practice and sometimes their team would be forced to forfeit in recreational league games; thus hindering the youths’ opportunity for skill practice and play time. This had a great impact for some of the youth who took a longer time to learn a skill due to the nature of their disability. For example, Kyle, whom has developmental coordination disorder (which is characterized by impaired fine and gross motor skills, and associated with ASD), loved to swim and did well in private lessons where he could progress at his own pace. When he had to switch to group swim lessons (as a result of his family moving to a new neighbourhood where individual lessons were not available), he became frustrated with the lack of opportunity for individualized skill acquisition, thus reducing his sense of *relatedness* to the other youth in the program and, ultimately, for his discontinuation in swimming programs.

I like swimming a lot but my big weakness is with front crawl and I’ve been struggling with it for a long time. Because of that, I could never move on from there [to another level]. So I was basically stuck in the little kids’ group at the [name of community centre] because I couldn’t do front crawl very good, which is kind of annoying. I swim at the beaches and stuff. I don’t take lessons anymore because you just kind of do them [lessons]. I don’t really care about certain types of swimming; I just like to swim. (Kyle)

For some of the youth, their slower skill progression hampered their connection to peers who were enrolled in the same program/class, leading to verbal peer victimization (i.e., bullying). For Trevor, his experiences in physical education classes had been negative, reducing his *competence* to participate in subsequent classes and leading to alienation from the rest of the students in his class (all of whom Trevor perceived to be typically developing). Trevor did not register for physical education past the mandatory grade nine class. However, his experiences in segregated community-based sports programs were mainly positive since the other participants in these segregated programs were perceived by Trevor to have similar functional abilities as himself. This translated into Trevor perceiving greater *relatedness* to the other participants and associated them as being peers.
People would get upset sometimes [in physical education class]. They [youth without disabilities] don’t understand. When I don’t do something right they would tell me to ‘shut up’ or something. But the rec[reational] sports everybody has been good with it. (Trevor)

This peer victimization from typically developing youth is one of the many forms of need thwarting that was reportedly experienced by many of the youth, which often included being given inappropriate adaptations of rules, skill techniques, and/or equipment on the part of the instructor/coach (a further discussion on this topic is provided in 5.1.3: Multi-Level Need Thwarting). Despite these negative interactions, the youth in this study had described primarily positive sport exploration experiences.

**5.2.2.3 Socialization through Sport**

After participating in the sport program for a short period of time, the youth discussed how they began to make friends with the other sport participants and valued the time they spent in sport for the social engagement. For many, sport provided both long-distance and local friendships that the youth felt they would not have had otherwise given that sport was often the only social activity they engaged in outside of school. Sport also provided the youth with an opportunity to meet individuals of all ages with the same or similar disability as themselves. This was an extraordinary opportunity for many of the youth who had a rare disability (e.g., arthrogryposis), or for the youth to meet individuals with the same disability participating in the same sport as themselves (e.g., double, below-the-knee amputation participating in track).

I didn’t like it [karate] at first but then I really started to enjoy it. This is actually fun, I’m meeting people. I think that was the key, I really like that I got to meet people, different people. (Brad)

It was really cool to meet people from all over the world, especially those with the exact same disability as me! You could relate to them. I don’t know it was just really cool to meet people. (Anna)

It’s either you sit at home, maybe in-front of the computer and you try to do your homework, or you do sports and meet people, have fun. (Lisa)
The social experiences that sport offered to the youth were perceived to be important for making the activities enjoyable. The youth often reflected upon their previous sport and/or general PA experiences fondly as something they had done with a friend.

Even if you do an activity and you think this is not for me, you look back and you had a laugh. You did it with someone you are close with or became close with.

( Brad)

Given the positive experiences and social connections that the youth made through their sport experiences, it felt natural for the youth to participate at any capacity that they could within sports. For example, among the older youth, many returned to their sport programs as volunteers or mentors once they had reached the age limit for participating in a particular program. This new mentorship role provided some of the youth with the ability to give back to the younger youth by enhancing the quality of their sport participation (Martin Ginis, Evans, Mortensen, & Noreau, 2016a) through the application and teaching of sport skills.

When you show up they [the kids who are part of the program] have such a happy face, and they are all sad when they think about when you didn’t show up…they do some really funny things. When they finally learn something, you are just so happy for them! I’m never going to stop sport. Once you start, you just can’t stop! (Lisa)

These mentorship opportunities often involved the youth playing the role of a peer to children and/or youth in the younger aged sport programs. For example, Trevor and Lisa were members of soccer clubs and were now participating in the eldest youth age category. Prior to their own soccer practices, they would volunteer one-on-one with children in the younger soccer group where they were responsible for providing demonstrations of fundamental sports skills (e.g., dribbling) and assisting the coaches with making adaptations to the program to meet the child’s ability (e.g., larger shooting targets). In this peer mentor role, Trevor and Lisa were recipients as well as perpetuators of peer support practices in sport.

Finally, when reflecting on their ideal sport program, the youth wanted everyone to be involved (youth with and without physical disabilities) for the social benefits of sport. The youth provided general descriptions of their social experiences including meeting new people and having fun.
These social benefits were seen as valuable to all youth and encouraged engagement in parasport for youth without physical disabilities as much as for those with physical disabilities.

I feel like a lot of people should get involved. It’s not just about the sport itself, it’s about the social aspect. That is really good for everyone [not just those with disabilities]. For the social aspect, I know I keep saying it, I don’t know. It’s all about the social aspect for me at least. It’s a good opportunity. (Melissa)

As for the structure of the ideal sports program, there was a preference by the youth for sport programs that could be participated in by all regardless of ability (i.e., programs that included youth with and without disabilities). For the youth, there was no reason why individuals without physical disabilities could not play parasport. As Yash said, “They’d all have to use a [wheel] chair. It would make it more fun, maybe more fair.”

Including all youth in parasport may be a strategy for youth with physical disabilities to demonstrate their skill proficiency to play sports among typically developing youth. This may ultimately foster positive perceptions of youth with physical disabilities in sport, thus reducing peer victimization.

5.2.2.4 Variety in Participation

Overall, the youth spoke about having quite positive sport experiences. This was evident in the variety of sports and/or programs they chose to participate in throughout the year, and the peers they discussed with each program. There was always a sport to look forward to, due to the availability of a different sport or activity that they could participate in. In most cases, the youths’ parents supported variety through financial assistance (i.e., registration and equipment purchase) and motivation (i.e., encouraging participation in a variety of sports), and were able to provide the option to them of participating in multiple sports throughout the year. For example, Yash participated in several sports that he thoroughly enjoyed, with his face lighting up when he talked about what sport/activity was approaching next in the season.

Yeah, I play wheelchair basketball, swimming, horseback riding, and skiing. Skiing is my favourite because I can go fast…I can’t wait for summer to swim though! (Yash)
By participating in a variety of sports and/or programs, the youth not only challenged their skill acquisition but were also able to expand their social networks.

We [name of an adapted camp] did a bit more than everyone else did with sledge hockey, wheelchair basketball, canoeing, and archery...Most of my [variety in]

physical activity has come from joining things and being part of groups. (Brad)

This preference for participating in a variety of activities was also alluded to when the youth were discussing a single practice session for a particular sport. For example, the youth enjoyed how practices had time for skill development (e.g., shooting) as well as a chance to scrimmage, or that the multisport programs exposed them to several sports such as wheelchair basketball and sledge hockey. In the multisport programs that many youth participated in, there was an expression of autonomy when choosing the activities they were able to engage in within a particular session. For example, Yash took part in a multi-sport program where the coach provided each participant with the opportunity to choose activities for portions of the program. For Yash, this was why he preferred “multisport [programs] because we can play whatever game we want to play. Whoever is there can choose the games that they want to play.”

Multisport programs are often considered to be semi-structured programs that involve a warm-up, main activity time such as wheelchair basketball, and cool-down. Within the main activity time of the session, a variety of skills are taught as both traditional sports skills training (e.g., dribbling, shooting) and through games (e.g., tag and basketball). Each session can focus on a single sport (e.g., week one – basketball; week two – soccer) or may group common-skilled sports together (e.g., wheelchair basketball and wheelchair rugby). As Yash described above, multisport programs were perceived by the youth to facilitate a choice through the variety of sports and/or games that are offered to participants within and between each session. Given the wide range of activities taught in multisport programs, coaches/instructors were described as being able to take advantage of the flexibility in the presentation of the program and adjust each session to meet the needs of the youth who were enrolled. This allowed for schedule flexibility and input from the youth participants. As such, multisport programs not only provided the youth with a range of sport experiences but also the opportunity to have input towards the shaping of their experience. In this way, multisport programs are autonomy-supportive. However, the youth expressed how they felt limited in the past to what sports they could try because of equipment
restrictions. This is illustrated by Lisa who perceived other youth to have a lack of access to the necessary equipment to join a wheelchair basketball program she was participating in:

Right now it’s kind of hard to [play a game] because we have an uneven number of people showing up. We have more people lining up but like, we have no [wheel] chairs. (Lisa)

5.2.3 Multi-level Need Thwarting

Need thwarting—the active inhibition of needs—can negatively impact an individual’s perceptions. Unfortunately, most of the youth had experienced multi-level need thwarting interactions at both the policy (e.g., restricting participation in physical education) and/or interpersonal (e.g., teachers or other youth outside of the peer definition) level. This section will explore these interactions.

For some of the youth, being treated as ‘other’ because of their disability often had a negative impact on their sport experience. This was most often discussed with respect to physical education classes. Previous negative experiences with typically developing youth and their “braggy” (Kyle) behaviour often made it difficult for the youth to relate to their classmates who were typically developing and perceived as being more athletic than themselves. This ultimately led to the youth removing themselves from the environment.

I don’t really like playing team sports [with typically developing youth], since I’m not very athletic. I’ve had bad experiences with team sports. I don’t really like to surround myself with super athletes. (Kyle)

As Kyle highlights, the expression of low internalization for sport stemmed from a perceived lack of competence that was further dampened by a low perception of relatedness to others in the activity. The “bad experiences” (Kyle) added further to his, and the other youths’, low perception of relatedness, contributing to an overall low internalization of team sports with typically developing youth. There was a clear distinction made by the youth between peers who were perceived as athletic and those who were not such that friendships and acceptance only occurred among peers that the youth related to.
Furthermore, sports (school and community-based) were not always adapted properly for the youth to feel safe and comfortable in the particular setting. For example, Trevor required more time and explanation to learn a new skill but received neither in his physical education classes. This led to his dissociation with physical education classes, as he perceived himself not to be competent and accepted by his teachers and his classmates, who would often bully him about his behaviour. By not providing adaptations, coaches, instructors and/or organizations actively limit the opportunities available to the youth with physical disabilities (as was the case for many of the youth that were interviewed). The youth often felt that they had no other options, despite their interest in participating in other sports.

What made me stay [in karate] was really just the fact that I started to think that it is actually really good for me. With the way I am, it can be really hard to find [other] things that I can do. (Brad)

Additionally, in physical education classes, the youth were often not allowed to participate in the activities with their typically developing peers even if they brought in their own equipment. For example, many of the youth walked independently, but when playing sports they often would use an assistive device (e.g., a wheelchair). Safety for the other students was perceived to be the reason for not being able to bring in their own equipment, but for most of the youth, no explanation was provided to them. When asked if they participated in sports at school or in physical education classes, the youth stated:

No I can’t [participate in gym class], I can’t do any stand-up sports. (Jordan)

My EA [educational assistant] will make me do that stuff [standing] during gym class. (Yash)

For those who did participate in school sports and/or physical education classes, their options were often limited to non-adapted sports and games such as dodgeball. Anna was a track athlete and for her participating in school sports and physical education classes was not limiting as her prosthetics allowed her to participate in all activities. She did recognize that it may be limiting to other youth with physical disabilities.

I think it would be a good idea [having a para category track club] though for someone who is just starting out and doesn’t know what to do. (Anna)
5.2.4 Multi-level Need Supporting

While youth had experienced need-thwarting behaviours from many individuals (e.g., other youth, teachers), their overall perceptions of sport were “quite enjoyable” (Jordan). Youth described a host of positive, need supporting behaviours derived from a variety of sources such as family, friends, teammates, and coaches. More emphasis was placed on these positive experiences than the previously discussed negative experiences. In this section, need supporting behaviours will be broken down into the three main sources reported by the youth (i.e., family, teammates and friends, and coaches), and the environments that were discussed by the youth as playing an important role in the creation of these behaviours.

5.2.4.1 Social Support

Social support was perceived as being adequately provided from both parents and siblings. Parents were reported to “inspire” (Kyle) sport and PA participation among the youth through the modelling (i.e., parents were themselves active in sport and/or general PA) and emotional support they provided. Parents were also reported to play instrumental and financial roles in supporting the youths’ participation in sport. Therefore, parents did not just provide one type of supporting role; rather they played multiple supporting roles that were individualized to each youth and their needs. When Jordan first started playing wheelchair basketball, his father did not understand how the game was played and what Jordan’s attraction to the game was. So, Jordan’s father started to learn and play wheelchair basketball with Jordan. By doing this, Jordan’s father bonded with his son through sport. From this and other experiences, Jordan perceived that his family was “all there for [him] and proud of what [he was] doing.”

For other youth, they perceived their support to be coming from a family member motivating them to register for programs of interest to them. Brad, for instance, researched a multisport program that was beginning in his community and was unsure if he should join. His “mom was there saying to ‘do it’ [join the program]. ‘I’ll give you my credit card!’”

In contrast, siblings were primarily seen as a source of emotional support. For some youth, their older siblings were involved in sport, sometimes at a competitive level. In these situations, the sibling acted as a role model. Siblings also supported the youth by attending and donating at team fundraisers. For example, Lisa’s two older brothers played competitive basketball throughout high school and university, along with an array of other sports recreationally (e.g.,
For Lisa, who was several years younger, she had recently (within the past two years) begun to play wheelchair basketball with the hopes of competing outside of her recreational league. Therefore, her brothers’ experiences with competitive sport inspired Lisa. Additionally, her brothers’ busy sport and professional lives made it difficult for them to attend all of her games but they did make an effort to be there for special events such as fundraisers; this gesture was meaningful to Lisa, as she mentioned this a couple of times during her interview.

Like when they [brothers] were in high school and before that they trained [for their sports] almost every day and had to do homework. I’m starting to do that too [training and school]. So I’m just like, ‘how do you do this?’ … If I have a game or fundraiser, I’ll have them [brothers] come with their friends. They’ll give me money. (Lisa)

For Jordan, he came from a ‘football family,’ so for him it seemed natural that he would play football. Having family role models for sport participation provided him with an extrinsic source of motivation to initiate his participation in football — increasing his sense of relatedness to his older family members.

Well my brothers…then my cousins played and my grandpa played [football]. They got offensive and defensive player awards for the province. After that it kind of clicked in that I want to be a football player. I want to do that. (Jordan)

5.2.4.2 Peer Support

5.2.4.2.1 Teammates and Friends

Teammates were identified as peers who were perceived to facilitate a positive sport experience. Specifically, emotional support was reported to be the primary role of teammates in creating an environment where the youth felt as though they could relate to and be motivated by them. The youth often spoke of their teammates as their second family. This connection extended beyond teammates whom they saw weekly to teammates whom had since moved away (yet they were still in contact with them) as well as members of other international teams. These long-distance relationships were maintained by email as well as through social media (e.g., Facebook® and Snapchat®).
I think we are like a family. We will see each other at high school meets and we’ll help each other out and cheer them on. Like if someone is having a bad day like we know that person is having a bad day, we’ll try to make them better. (Anna)

Like if we both fall, we’ll laugh at that. The others [peers without physical disabilities] don’t know if you fell because of your disability or you just fell like us [those without physical disabilities]. And I just don’t care! (Lisa)

These relationships were highly valued, as teammates and peers with similar physical disabilities were perceived to be able to understand what the youth were going through. In this way, teammates were able to support the youths’ sport-related goals whether they were physical or emotional in nature. Overall, there was a greater sense of relatedness among these peers than typically developing peers with whom they would see more regularly (e.g., at school).

They [typically developing peers] find that it’s…I don’t think they really know how I would play basketball in a wheelchair. They might see it in pictures but I don’t think they really know how, and they don’t really know why I do it. I don’t say that I do it as a social concept, because of the different people [with physical disabilities]. I don’t think they [peers without physical disabilities] understand. They do find it interesting. (Melissa)

During basketball there are a couple of times during every practice when you get mad. So you know it’s usually a teammate or coach that will come over to let you know it is okay. Peers [with disabilities] usually give me advice; help me when I’m angry during the game. (Jordan)

5.2.4.2.2 Coaches

Coaches were often identified as peers due to their similar passion for the same sport(s) as the youth and/or their abundance of informational support. Not only did the youth speak of how coaches provided feedback on and adaptations for sport skills, but had also mentioned about the information coaches would provide on where to locate equipment, and connecting them to other teams and/or coaches. When struggling to improve her shooting, Melissa’s coach provided an alternative opportunity for Melissa.
My coach offered [for me] to go to another team’s practice…My coach says to grab the ball and make a turkey when you shoot. But the other coach said try shooting backwards. And that’s how I got the height on my shot. And that’s how I can shoot. (Melissa)

In terms of the coaches’ role in an ideal sports program, most of the youth wanted their current coach to be involved in the organizing and coaching of the new program. For the youth, it seemed natural that their coach would be involved again because they played such a prominent role in creating a positive sport experience and provided a wealth of knowledge.

She [coach] is quirky, but I love that. She knows so much about basketball and has a lot of connections. (Lisa)

The youth also identified coaches as models of behaviours, skills, and/or emotional support. There was an overwhelmingly large emphasis on coaches encouraging “a fun competitive” (Lisa) environment.

The coaches are really approachable and fun to be around, we joke around and stuff. They are great people I guess! (Anna)

Furthermore, coaches were perceived to be motivators who prevented the youth from using their physical disability as an excuse for why they could not participate or perform a task. Rather, coaches taught them how there was always an adaptation that could be made or a way to push themselves further to find out what they were truly capable of doing. In this way, the youth felt that they were given options for completing tasks and their skills were being continuously challenged.

In my own experiences, if I hadn’t done certain things I don’t think I’d be as well off as I am today in both increasing what I can do and knowing what I can do. Like karate, they [instructors] taught me that just because you can’t do this, don’t just give up. Don’t let one thing limit what you can do. (Brad)

She’s [name of coach] like even though you have a…like her mentality…even though you have a disability, you still have to work hard. You still can do it and you still have to do it. She’s right, but like it’s like really hard. (Lisa)
Thus, coaches were able to connect with the youth on a personal level so that they felt a sense of relatedness to the coach. In turn, this relationship fostered a sense of trust where the youth were able to challenge themselves and to be challenged by their coach.

5.2.4.3 Task-Oriented Climates

Associated with the sub-themes of Peer Support—Teammates and Friends, and Peer Support—Coaches, is the sub-theme that arose around the sport environment’s motivational climate. All of the participants described their positive sport experiences as being task-oriented where they did not compare themselves to others in their sport programs (which would be indicative of an ego-oriented environment). Task-oriented climates were manifested in several ways. First, many of the youth had set individualized goals focusing on skill and emotional improvement, and would often arrive prior to scheduled practices to work on these personal goals.

I like to get there about 45 minutes before practice or an hour. I strap in right away and shoot hoops…One of my main goals is actually not to get angry [with myself]. (Jordan)

In competition settings, this focus on skill over performance continued to be expressed.

I just focus on my technique; I try not to focus on the place that I get. I focus more on the time that I run. (Anna)

Second, coaches and teammates were an important promoter of the youths’ task-oriented climates. This was expressed in the narratives of what a typical practice would look like. For Yash, more experienced teammates acted as peer mentors during practice, teaching him fundamental wheelchair basketball skills and encouraging him.

Well, [name of teammate] helps me shoot. He tells me how to aim and I shoot at the target. And [name of other teammate], he helps me if I lose the ball when I’m trying to dribble and stuff. (Yash)

Third, task-orientation was expressed by what was not discussed by the youth. That is, the youth did not compare themselves to others (i.e., teammates), and did not perceive their coaches or teammates to compare themselves to teammates, even after being probed (e.g., how do your
teammates think of you?). Rather, the overall impression of their experience with teammates and coaches was positive.

You can just go and be the best that you can be. (Kyle)

Like they [names of coaches and teammates] teach me, give me targets, and stuff at basketball. (Yash)

As the youth highlight, the focus at practice was not on comparing themselves to other peers, rather it was on the task-at-hand. By emphasizing the task instead of the individual, youth may have perceived the ability to explore their own abilities and push themselves to improve; thus enhancing their competence and autonomy.

5.2.5 Low to High Internalization of Sport Participation

For all of the youth, starting a new program was described as an externally motivated behaviour. As previously mentioned, someone else (mostly their mothers) enrolled them in the program, but over time the youth began to recognize the benefits of sport and enjoyed the sport program. At the time of the interview, all youth described a more internalized level of motivation to continue in their sport than when they had enrolled in the sport program. All of the youth indicated that they initiated the discussion of continued participation in their respective sport with their parents by requesting that they be enrolled in the following session/season. This process of moving from low internalization to a state of higher internalization was experienced with every new sport that the youth participated in. Perceptions of a lack of skill (i.e., low competence), or low relatedness to friends or peers in the new sport were connected to lower expressions of internalization at the outset of sport programs. In this section, two vignettes are presented to describe the variation in the narratives of the youth who expressed (a) lower and (b) higher internalization of their sport experience.

5.2.5.1 Lower Expression of Internalization of Sport

The following is a vignette of a participant who expressed lower levels of internalization towards sport.

Kyle was participating in an inclusive multisport program, which he enjoyed.

However, in previous programs (i.e., soccer and swimming) he experienced many
negative situations. These negative experiences were overt bullying aimed at his low perceived competence for the specific activity, indirect bullying by others being “braggy” about their own abilities (e.g., gloating over their success and his failure), and his perceived lack of relatedness to other youth in the program. His negative experiences often stemmed from a lack of adaptation on the part of the instructors and/or coaches to meet Kyle’s functional needs. For example, when playing baseball in school, Kyle was placed in the farthest outfield where none of the other players could hit the ball, so that his deficits in hand-eye coordination would not be an ‘issue’ for the game. The language in which Kyle described his negative experiences was directed as a ‘them,’ those he perceived to be good at the activity, vs. ‘me,’ who he perceived to be bad at the activity. While he enjoyed the current sport he was participating in where he had positive experiences and need supporting interactions with coaches and teammates, he was still experiencing these negative interactions at school (i.e., during recess and within physical education classes). With respect to the situations, both ongoing and previous, where he felt himself to be an outsider or ‘other,’ he was quick to remove himself from the group. For previous sports programs, he told his parents not to sign him up for the following season/session. With his physical education classes his teacher made special accommodations for him such as allowing him to spend time away from the class working on his sports skills. This occurred on the sidelines or another space, away from the rest of the class. Kyle’s preference was for these solitary settings where he could be task-oriented because when in a group setting he felt the pressure to be ego-oriented (i.e., comparing himself to the typically developing youth). His motivation was extrinsic in nature where he wanted to be physically active: “Well I know that it’s important to stay healthy, that’s the main reason you should do it [sport]. And no matter who you are, you will find a sport that you like.”

Like Kyle, Trevor too expressed a low internalization for sport. Trevor’s story was similar in his experiences of need thwarting and peer victimization, however, Trevor was older and was able to discontinue his registration in physical education classes. More broadly speaking, the youth in this study expressed lower sport internalization stories, to varying degrees, when discussing their school compared to their community-based sport experiences. This can be due to the selective
nature of community-based sports programs (i.e., programs with better fit for their abilities) compared to the compulsory nature of school (i.e., physical education classes). Additionally, youth with lower sport internalization were content to participate in non-sport-related activities such as playing video games and drawing if they were no longer enrolled in their current sport programs. This is contrasted by the vignette below of a youth expressing high sport internalization.

5.2.5.2 Higher Expression of Internalization of Sport

The following is a vignette of a participant who expressed higher levels of internalization towards sport.

Jordan was a former football player who acquired a physical injury, which led him towards taking up wheelchair basketball. He described the transition time when he was not participating in sports “pretty devastating.” When he was introduced to wheelchair basketball it filled his “love for adrenaline” and he continues to play “because it’s in [his] blood.” While having a lot of positive experiences with sports programs, such as being recruited for higher level teams and making new friends, Jordan also spoke about having negative experiences. For example, when he goes to the school gym he is treated differently. “It’s very like, I shouldn’t say different; it’s like more of a ‘sorry’ in their voice. Like that’s too bad. But no, my injury is probably one of the best things that has happened for me.” He was able to take a negative interaction with someone and turn it into a more positive situation where he can evaluate his own abilities and experiences in parasport and perceive them to be improved from where he was previously. For Jordan, his injury gave him the opportunity to find a sport that he excels at and has moved further competitively than he had previously done in sport. When people treated him differently, Jordan saw it as “a good socializing thing. The chair is a good socializer.” In this way he has become an informal advocate for wheelchair basketball in his community because his conversations would stem from him practicing his skills at the gym (e.g., shooting hoops). Further, he had internalized his love for sport so much so that he perceived “a broken chair, a broken body”—his wheelchair was an extension of himself. Parallel to his love for sport, was his support network; he had a large network of
peers and family who actively supported his endeavours. “I think I have pretty good support from everyone, even my coaches.”

Like Jordan, the other youth in this study, who highly internalized their sport participation, expressed a deep connection with sport. For them, discontinuation in sport was unfathomable and as Anna stated, “Why would I do that [stop playing sports]?” Unlike the youth with lower sport internalization, those youth demonstrating higher sport internalization were at a loss for identifying what they would do if they were not playing sports and discussed that they would find a way to be involved in sports in any capacity.
Chapter 6
Discussion

6  Summary

The purpose of this study was to explore the sport experiences of youth with physical disabilities and the role that peers may play in influencing the basic psychological needs and motivational states, as outlined by the mini-theories of SDT. Using a deductive application of some of SDT’s mini-theories (i.e., basic psychological needs, cognitive evaluation, and organismic integration theories), this study explored how peers influence the three basic psychological needs and motivational states of youth with physical disabilities in the context of sport. Preferences for future sport programs and the role peers may play in such programs were also explored. The following section discusses the role of peers in sport on the three basic psychological needs, victimization, and need thwarting in youth with physical disabilities.

6.1  Autonomy

Autonomy, both as independent decision-making and a basic psychological need, is important for fostering wellness. In this sample of youth with physical disabilities, autonomy was not initially provided to the youth during their first contact with sport. Rather, their parents (most often their mothers) had made this initial contact. Given the young age at which the youth began participating in sport (as young as six years), it is common for parents to be the primary influencers of their child’s involvement in sport. This has been previously documented among typically developing youth whose parents play the most dominant role on their child’s PA behaviour between the ages of 4 to 12 years. It is not until adolescence (~ ages 13 to 18 years) when peers begin to show a more influential role on the PA behaviour of youth (Sallis, Prochaska, & Taylor, 2000). Similar to their typically developing peers, this sample of youth with physical disabilities were initially influenced by their parents when they were younger. However, contrary to the parental support experiences of typically developing peers, the parents of the youth who were interviewed, continued to play a large role in the youth’s sport participation, despite the increasing influence of their peers during this stage. This parental dependence may be due to the additional needs that many youth with physical disabilities require to fully participate in sport, such as the availability and cost of specialized equipment to play.
sports (e.g., sports wheelchairs), and assistance with self-care routines (e.g., bladder and bowel management). Therefore, parents of youth with physical disabilities may play a greater role in their child’s sport participation due to the instrumental supportive role they have in managing disability-related barriers and needs (e.g., Raina et al., 2005).

In addition to disability-related support, parents were described by the youth to provide many other types of autonomy support. First, parents extrinsically motivated the youth at the outset of their sport programs (i.e., enrolled their child within the sport), however they were open to providing their child with the choice to (dis)continue their sport enrolment. Second, parents were supportive of the youths’ sport goals both emotionally (e.g., cheering) and tangibly (e.g., buying equipment, transportation), and attended most (if not all) of their practices and games; all of which is similar to the parental support received by typically developing youth (Sallis et al., 2000). Combined, parents’ supportive behaviours and flexibility in their child’s continued participation in sport are illustrative of autonomy support by creating a positive motivational climate for sport participation (Weigand et al., 2001). This may, in turn, enhance the youths’ sport motivation (Deci, Cascio, & Krusell, 1975; Ntomanis, Taylor, & Thorgesen-Ntoumani, 2012; Ryan & Deci, 2006; Ryan et al., 2006) and positive youth development (Côté, Turnnidge, & Evans, 2014; Holt et al., in press).

In addition to parents, larger family units (e.g., siblings, cousins) were also perceived to have a positive influence on the youths’ sport participation. These larger family units supported the youth both emotionally (e.g., attending games and fundraisers) and financially (e.g., donating at fundraisers to buy new equipment), which provided the youth with the ability to autonomously set sport-specific goals. This was manifested predominantly through exposing the youth to alternative sport opportunities that they were part of, and for providing youth with the means to continue their sport participation (e.g., fundraisers—money going to the team for equipment, facility rentals). This is similar to what has been shown within the typically developing youth literature (Sallis et al., 2000). These larger family units were role models who were idolized at times by the youth for their sport participation while maintaining successful engagement in school and/or work. Given the positive influence that social support systems can have on the PA behaviour of youth and the varied types of autonomy support they can provide for an individual (Duncan et al., 2005), the autonomy support that was received from the extended family units for the youth in this study may contribute to a heightened internalization of sport (Ryan, 1993).
The youths’ sport peers (i.e., coaches and teammates) were also autonomy supportive in several ways. First, similar to parents and extended family units, peers supported the youths’ sport-related goal pursuits. Given peers’ participation in the same sport, this peer support was more constructive in nature (e.g., modelling or providing skill feedback) than the general social support that was received from parents and extended family units. For example, Yash often commented on how his teammates would provide targets for him to practice his shooting skills and cheer him on. While Yash’s parents and brother cheered him on, his teammates (i.e., sport peers) had the necessary skills and knowledge to constructively critique his performance.

Second, coaches who were able to adapt the skills and/or programs provided options for the youth to perform the skills. For example, in basketball, Melissa discussed being provided with a variety of shooting techniques, which she was then given the option by her coach to choose a technique(s) that worked best for her in a particular setting. Being provided with options to perform a skill presented the youth with the opportunity to gain control over their own skill performance, thus individualizing the skill to better meet their preference and/or abilities. Third, coaches provided flexibility in practice scheduling. This was especially true of multi-sport programs where coaches provided a variety of activities that the youth could choose from for a specific session. Collectively, peers fostered the establishment of positive, task-oriented climates which were conducive to enhancing the youths’ autonomy and, consequently, motivation for participating in the sport (e.g., Deci, Cascio, & Krusell, 1975; Ntoumanis, Taylor, & Thogersen-Ntoumani, 2012).

Furthermore, the climate in which the youths’ sport peers fostered may have contributed to positive youth development (Côté, Turnnidge, & Evans, 2014; Holt et al., in press). Through accommodating skills to meet functional needs and providing the flexibility in practice schedules, peer coaches may have influenced the appropriateness of the sport setting for these youth; thus, contributing to the youths’ engagement in the activities and their personal asset development (Côté, Turnnidge, & Evans, 2014).

6.2 Competence

Similar to autonomy, task-oriented climates have also been associated with competence and the overall promotion of intrinsic motivation, as they are conducive to internalization (Deci & Ryan, 2000; Duda, 2001). As Vazou et al (2006) discuss, task-oriented climates, such as those
experienced by this sample of youth with physical disabilities, are related to greater effort and enjoyment of sport. For example, Anna’s track practices and meets were perceived to be quite intense but she discussed focussing—and being encouraged to do so by coaches and teammates—on her technique not what place she achieved. She thoroughly enjoyed these experiences, her coaches and teammates, and the opportunities that they afforded her to “be successful in sport” (Anna). Therefore, the outcomes of task-oriented climates may contribute to the expressed increases in competence among the youth with physical disabilities over their sport participation (Vazou et al., 2006).

The low competence discussed by the youth at the outset of their sport participation may have contributed to their feelings of extrinsic motivation at the first contact stage. Evaluation of competence begins prior to the initial task performance (Deci & Ryan, 1985). For many of the youth, this process of competence evaluation led to feelings of anxiety, such as Melissa who discussed her desire to try sledge hockey but was too nervous and anxious to attend ‘give it a try’ days that she knew were available. In many cases, these feelings of anxiety resulted in a decrease in the youths’ motivation to participate in sports that they had not yet tried. Such feelings of anxiety and low competence contribute to both the initiation of and non-adherence to a variety of health-promoting behaviours for individuals with disabilities, including PA (Martin Ginis et al., 2016b), dental visits (Gordon, Dionne, & Snyder, 1997), and medication use (Turner, Williams, Sloan, & Haselkorn, 2009). However, peers (e.g., teammates and coaches) have been shown to foster positive motivational sport climates (Carr & Weigand, 2001) that can promote positive sport experiences. For example, the youth in this study described their peers to be “like family…great people to be around” (Anna) who “helped [them] be the best [they] could be” (Kyle). Therefore, there is a need to provide more opportunities to try new sports in welcoming environments for youth with physical disabilities, particularly those with low competence. One way of doing this may be to include peers in the recruitment for such opportunities and/or at the sport location (e.g., bring a friend, similar aged sport participants). For example, peers can act as ambassadors when programs are recruiting new participants and ‘give it a try’ days can be promoted to youth of all abilities, allowing youth with physical disabilities to bring typically developing friends while raising awareness of parasports among typically developing youth (e.g., Orr, Grassmann, Wright, McPherson, Faulkner, & Arbour-Nicitopoulos, unpublished).
An additional concern that was discussed by the youth was the low participant enrolment in parasport programs. This was perceived by many of the youth to be contributing to their inability to scrimmage (i.e., play the sport against teammates) and, at times, to force their team to forfeit league games. To counter this issue, some of the youth joined adult teams where they were the youngest and often the least experienced member of the team. Some youth found that this provided appropriate skill challenge, and may have promoted a higher internalization of that particular sport (Mandigo & Holt, 2000), such as Jordan who played in an adult wheelchair basketball league with ex-national team players. Meanwhile, for others, such as Trevor, joining an adult team was not an option. Through Trevor’s discussion, adult teams were perceived to be too challenging because participating in adult sport teams may have further externalized his sport participation by presenting too much of a challenge for his perceived ability in a particular sport skill, thus reducing his motivation to participate (Mandigo & Holt, 2000). Despite the motivation to engage in sport, for some of the youth, the low enrolment in youth parasport programs negatively impacted their opportunity for engaging in appropriately challenging skills (i.e., task and game) with peers who were of a similar age. Greater awareness of adapted sports/parasports among youth, regardless of ability, may be one way to mitigate this issue of low enrolment, and the consequential impact it may have on providing appropriately challenging skills. By creating a culture of adapted sports/parasports from a young age these sports can be ‘normalized,’ thus reducing or eliminating the stigmatization currently associated with them (Park, Faulkner, & Schaller, 2003). For example, the Canadian Paralympic Committee’s pilot program, FUNdamentals, targets awareness of parasports in Canadian schools, with an emphasis on Paralympic success at international competitions. This program has yet to be evaluated, although has the potential to enhance awareness of parasports, thus reducing the stigma associated them from a young age.

Furthermore, this study supports the growing literature on variety and its influence on continued PA participation (Sylvester et al., 2015). Among the youth who were interviewed, only one had not participated in more than one sport. While there are many barriers that have been noted to prevent youth with physical disabilities from engaging in a variety of PA, such as lack of programming and appropriate equipment (Martin Ginis et al., 2016b; Shields & Synnot, 2012) and a lack of child/parent confidence in community recreational staff skills to adapt activities to the level needed (Shields & Synnot, 2012), there are several benefits associated with engaging in
PA for this target group. First, participating in a variety of PA can demonstrate skill transferability, such as shooting a basketball may transfer into serving in seated volleyball or putting items away on a high shelf (an important skill for instilling independence in daily life). Perceiving an ability to transfer skills may address competence by providing appropriate challenge (Mandigo & Holt, 2000). Second, variety has been suggested to mediate PA adherence in a SDT model (Sylvester et al., 2015) whereby those who perceive greater variety in their PA routine and received the necessary variety support are more likely to adhere to their PA. In combination with task-oriented environments, variety may enhance sport internalization and competence, and therefore, motivation to participate in sports. Third, having a variety of experiences that expose youth with physical disabilities to a multitude of skills may contribute to their physical literacy. As defined by Physical and Health Education Canada (2016), physically literate individuals are those who "move with more competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of the whole person" (n.p.). Within the very definition of physical literacy is the connection between participation in a variety of physical activities and increased competence. To meet the needs of sport organizations, the first five stages of the long-term athlete development (LTAD; Canadian Sport for Life, 2013) model for individuals with disabilities are catered to physical literacy. In order, these stages are (i) awareness, (ii) first contact, (iii) active start, (iv) fundamentals, and (v) learn to train. As the LTAD model stipulates, progression through these stages leads to lifelong participation in sport (active for life; Canadian Sport for Life, 2013). When considering SDT, physical literacy explicitly addresses competence as a major component of establishing lifelong health-promoting behaviours. Overall, this suggests that there is a need to have youth with physical disabilities exposed to a variety of sports which may assist in increasing competence, physical literacy, internalization, and motivation to participate (and maintain participation) in sport.

6.3 Relatedness

The third and arguably the most emphasized of the basic psychological needs by the youth was relatedness (i.e., the need to feel connected to others). In particular, sport provided an opportunity for the youth to identify with other youth with similar physical disabilities whom they would likely not have otherwise met. Many of the youth spoke of being the only youth with a physical disability at their school or in their class; attending adapted sports programs connected
them with peers who they perceived to be more similar to them than the peers they interacted with in school. Consistent with the peer support and PA literature (e.g., Duncan et al., 2005), the youths’ sport experiences and social interactions were closely connected to their continued participation in sport. For example, Brad described his time at karate as a place where he was able to meet other youth, and that was something he really valued and looked back upon. The social experiences provided through sport have the potential to increase a sense of belonging (e.g., team membership; Ryan & Deci, 2000). This was shown to be the case in the current study where, for example, members of Anna’s club track team were competing against each other at a school track meet but still cheered for each other, or contacted each other ahead of time for meets that they were not even attending to wish each other well. These feelings of relatedness can contribute to a more self-determined form of motivation as well as enhance the peer climate of the sport program/team (Ntoumanis, Taylor, & Ntoumani, 2012; Ryan & Deci, 2000). The peer climate may also contribute to positive youth development outcomes on a personal, social, and/or physical level (Holt et al., in press). Moreover, feelings of relatedness to an individual can enhance that person’s position as a role model, which in turn can lead to the endorsement of the behaviour (Ryan, 1993). This endorsement contributes to internalization and therefore, maintained participation in that behaviour (Ryan, 1993). For some of the youth in the current study, their engagement in mentorship roles within their respective sport programs was representative of their endorsement of sport.

The importance of social interactions for youth has roots that extend beyond sport, and more generally, PA. In the camp literature, enhanced social interactions have been the primary benefit associated with youths’ participation in camp, particularly for those youth with chronic illnesses such as cancer (Gillard & Watts, 2013), or from vulnerable and/or marginalized sectors (e.g., Anderson-Butcher, Riley, Amorose, Iachini, & Wade-Mdivanian, 2014). In camp settings, relatedness among the campers has been associated with reductions in shyness and nervousness among new campers; these social benefits have been noted to be long-term and extending outside of the camp setting (Gillard & Watts, 2013). Additionally, in community sports camps, typically developing, marginalized youth who rated a higher sense of belonging (i.e., relatedness) had more positive results on other outcomes, such as effort, teamwork, self-control, and social responsibility (Anderson-Butcher, et al., 2014). Therefore, the importance of the social environments that are created by camps, and within the context of this thesis, sport programs are
important for fostering relatedness among the youth who take part in such programs, reducing their shyness and anxiety, and contributing to greater effort being exerted in sport (Vazou et al., 2006). These outcomes not only affect relatedness, but also competence, as increasing relatedness has been shown to reduce feelings of anxiety, which was a noted barrier of sport participation for youth in this study and within the broader physical disability literature (Martin Ginis et al., 2016b). Thus, as perceptions of relatedness increase so too may perceptions of competence as more time may be spent engaging in sport skills practice.

Not only had the youth experienced the positive influences of relatedness and socialization as athletes, but also as peer volunteers/mentors. This opportunity for mentorship aligns with Canadian Sport for Life’s (2013) initiative to encourage the role of peer volunteers/mentors among athletes, particularly youth athletes. As this study and previous research suggests, mentors can be provided with many psychosocial benefits from these mentor-mentee interactions, such as increased confidence, self-esteem, and self-awareness, and in turn experience lower levels of depression (Schwartz & Sendor, 1999). Therefore, the socialization opportunities provided through sport can contribute to feelings of relatedness as well as independently improve psychosocial well-being. For example, Lisa was volunteering with a younger soccer team for children with disabilities where she not only met new people, but also learned to translate her soccer knowledge into a tangible outcome (i.e., teaching a younger player how to execute soccer skills). For Lisa, this enhanced her love of soccer and challenged her own skills as a soccer player. Foundationally, this speaks to the belongingness and meaningfulness aspects of quality sport participation. These are two components of a larger model that recently highlighted the key components of facilitating quality PA (including sport) participation in persons with physical disabilities (Martin Ginis et al., 2016a). Belongingness and meaningfulness may be enhanced through mentorship where individuals are given the opportunity to give back to others. This was illustrated in the current study in several of the youths’ stories that they shared. By acting as peer mentors/volunteers, individuals may find meaning in their own sport experiences as they reflect upon and teach their sport skills to others, along with the social benefits that were previously discussed.

In addition to the mentorship opportunities that were available to the youth, coaches were often mentioned as being contributors to enhancing the youths’ perceptions of relatedness. For Yash, his coaches supported his autonomy in the multisport program, provided him opportunities to
further challenge his skills (i.e., introducing him to a wheelchair basketball program), were knowledgeable about the sport, and were generally regarded as fun people to be around. As Yash’s experience highlights, there are many aspects of coaching that can affect youth with physical disabilities’ participation in sport. For example, the informational feedback that the youth often spoke about—a common characteristic of a democratic coaching style—has been suggested to increase intrinsic motivation (Frederick & Ryan, 1995). Indeed, the youth expressed positive emotions (e.g., enjoyment) towards their coach and sport, satisfaction with the adaptations that they received through the programs, and felt supported to explore their own abilities. This highlights the importance for coaches to be adequately trained to work with youth with physical disabilities, as the quality of relationships contributes to long-term outcomes such as participation, performance, and personal development (Côté, Turnnidge, & Evans, 2014).

Adequate coach training includes the standard coach training that is presently required as well as additional training. Inclusivity training (e.g., National Centre for Health, Physical Activity and Disability (nchpad.org)) or an introduction course/resource on PA and physical disability should be considered for coaches and instructors to be capable and confident with appropriately adapting sport skills for youth with a variety of abilities while being able to maintain a safe place for youth to freely explore their abilities.

In SDT terms, the youth expressed higher internalization of their sport experiences and perceived their coaches to be autonomy- and competency-supportive (Deci, Koestner, & Ryan, 1999; Frederick & Ryan, 1995). Identifying coaches as peers further illustrates the youths’ perception of relatedness towards their coaches. Despite the larger age gap between the youth and their coach in comparison to their teammates, the youth felt that their coaches’ passion and knowledge for the sport enhanced their peer connection. According to SDT’s basic psychological needs theory, satisfying the three basic psychological needs (i.e., autonomy, competence, and relatedness) predicts positive well-being (Deci & Ryan, 1985). The coaches who were identified as peers in this study may have contributed to positive well-being among the youth. Examining well-being was beyond the scope of the present study and, therefore, should be explored in future research on sport programs for youth with physical disabilities.

Peers can originate from various contexts and may have different roles based on the situation (Park, Faulkner, & Schaller, 2003; Solomon, 2004). While typically developing youth were identified as peers, in the sport context these peers were perceived to hold a periphery supportive
role for youth with physical disabilities, such as occasionally attending fundraisers or
tournaments. Therefore, these peers added only minimally to the sport experiences of the youth
in this study. Given that peers can be conceptualized as a context-specific identifier (Ladd,
Kochenderfer, & Coleman, 1997), it is unknown whether peers who are typically developing
would provide more supportive roles in other contexts. For example, if the same youth who were
interviewed were also asked to identify the peers that supported their academic behaviour, they
likely would have identified different peers to be more or less supportive than with respect to
those who played a role in their sport behaviour.

Given the interactions that exist among the three types of peer relationships (i.e., friendship,
acceptance, and victimization; Ladd, Kochenderfer, & Coleman, 1997), it is important to be
cognizant of each of these relationships when working with youth with physical disabilities. If
one type of peer relationship is negatively perceived (e.g., bullying in physical education
classes), it may affect more than just that relationship, and therefore have an impact on youths’
ability to adjust to a new setting such as a sports team/program (Ladd, Kochenderfer, &
Coleman, 1997). Considering these interactional relationships, a holistic approach may be most
appropriate for facilitating a positive experience for youth with physical disabilities in their
continued sport participation.

6.4 Victimization and Need Thwarting

Victimization is a key component for understanding peer relationships (Ladd, Kochenderfer, &
Coleman, 1997). While the youth in the present study expressed predominantly positive
relationships and experiences, there were also examples of negative peer relationships that
cannot be overlooked. For some, the need to feel related to their peers was actively denied by
either non-verbal or verbal peer interactions, or a combination thereof, in both school and
community-based recreational settings. Non-verbal (i.e., exclusionary) interactions were
primarily associated with the coach, instructor, and/or teacher lacking the necessary skills
required to adapt the specific sport or activity to meet the unique needs and/or interests of the
youth. By not appropriately adapting the sport program, the opportunities for youth with physical
disabilities to participate in sport are reduced; thus, limiting their sense of autonomy and
competence. This lack of individualized adaptation may result in the youth either under-
estimating (e.g., joining less skilled or younger teams) or over-estimating (e.g., joining adult
teams) their own abilities, and therefore, presenting inappropriate challenges. As Mandigo and Holt (2000) discuss, both over- and under-estimations of skill can thwart competence and, therefore, may contribute to externalization of the target skill/behaviour. With externalization, participation in the target behaviour—both short- and long-term—may be negatively affected (Deci, Koestner, & Ryan, 1999; Deci & Ryan, 2000). Chronic exposure to need thwarting environments has also been associated with maladaptive outcomes in typically developing youth athletes such as depression, burnout, negative affect, disordered eating, and physical symptoms (Bartholomew, Ntoumanis, Ryan, Bosch, & Thogersen-Ntoumani, 2011).

In addition to non-verbal interactions, verbal victimization may directly contribute to thwarting of both relatedness and competence needs, and indirectly, the need for autonomy. Verbal victimization segregates the aggressor from the targeted individual, thus reducing the sense of relatedness that an individual has to the group (e.g., Buhs, 2005). Based on the content and context of the victimization, competence may be thwarted. As described in Kyle’s narrative, relatively lower competence for sports skills may be the result of what is being said (e.g., belittling an individual for not performing a skill to a pre-determined standard) and/or from the situation (e.g., ranking youth based on skill) of the victimization. Experiencing these negative and need thwarting environments may lead to behavioural avoidance coping strategies (Rimmer et al., 2007; Sallis & Glanz, 2006). This indirectly thwarts autonomy, as the options for participating in sport are often limited to (i) those where previous positive interactions have occurred, (ii) novel sport programs, or (iii) complete removal from sport participation. Once again, the pattern of reduced basic psychological needs promotes externalization and less motivation to participate, and the potential for complete dissociation from sport. Additionally, peer victimization contributes to inferior relationships, decreased engagement in activities, and an overall poor sport climate which are all posited to negatively influence positive youth development (Côté, Turnnidge, & Evans, 2014; Holt et al., in press).

Peer victimization, however, is not unique to the target population (i.e., youth with physical disabilities). A review of peer and/or friend sources of influence on PA among typically developing children (aged 4 to 11 years) suggests that peer victimization, notably verbal, is negatively associated with PA participation (Efrat, 2009). Most recently at a policy level, the National Academies of Sciences, Engineering, and Medicine released a report on the state of bullying (i.e., peer victimization) and its prevention in the U.S.A. (Rivara & Le Menestrel,
The report, while focusing on school settings, highlights the negative effects of bullying on the victim and aggressor, both physically and psychosocially. Importantly, the report provides best-practice recommendations for policy makers and educators, stating that counselling, in combination with programs that target at-risk of bullying youth (or those already being bullied), can be the most effective at reducing bullying (Rivara & Le Menestrel, 2016). These programs involve development of social-emotional skills and de-escalation approaches. Therefore, it is encouraged that not only educators undergo appropriate bullying reduction training, but also community-based PA program coaches and instructors. By implementing an education program for educators and coaches on bullying and the best ways to reduce its occurrence and effects, experiences of peer victimization (bullying) may be reduced, assisting in promoting more positive sport experiences for all youth.

The impact of victimization and need thwarting may not be equal between youth with physical disabilities who have high and low sport internalization, as the findings from the present study highlight. All of the youth, regardless of sport internalization, experienced some level of victimization and need thwarting, however not all interpreted these experiences negatively. Perhaps some of the youth were maladapted to coping with victimization and need thwarting interactions, such as not having the quality or quantity of support outside of sport. This may have made them more vulnerable to perceiving an overall negative sport experience, lessening their sport internalization. For example, Trevor rarely discussed having support from anyone other than his mother and expressed predominantly negative experiences in his past sport engagement. On the other hand, some of the youth may have experienced chronic victimization and need thwarting that accumulated over their lifespan to result in lower sport internalization. This was seen with Kyle who tried a variety of sport programs and was supported by friends and family, but was either faced with verbal victimization or maladapted sport programs that could not meet his functional needs. However, this seems less likely as all of the youth in the present study were exposed to victimization and/or need thwarting over the duration of their sport and PA experiences. Nonetheless, this highlights the importance of establishing a positive first contact experience with sport, across all peer interactions. Among the youth in the present study who expressed perceptions of lower sport internalization, their initial sport experiences were negative and these perceptions pervaded their view of the majority of sport. It was not until they attended a program that could appropriately meet their needs (i.e., physically and socially) that their
perceptions of sport became more positive. Therefore, using the principles (e.g., when to specialize sport participation, focusing on physical literacy skills) outlined in the LTAD model (Canadian Sport for Life, 2013) is integral for, not only sport programs, but for physical educators as the model provides a road map for positive, lifelong sport participation—beginning with awareness and positive first contact with sport.

6.5 Strengths and Limitations

As with all studies, the present study is not without its limitations. Given recruitment was conducted during winter, youth with physical disabilities who only participate in sport during the other three seasons were not reached which likely reduced the pool of potential participants from which to recruit. However, the youth in this sample had participated in various sports all year round and provided their experiences from all of these sport programs. Moreover, youth with physical disabilities face many challenges to engaging in activities of daily living and extracurricular activities in the winter which age-matched typically developing youth do not perceive as barriers (Lindsay, Morales, Yantzi, Vincent, Howell, & Edwards, 2015). Further, the majority of this sample of youth with physical disabilities were Caucasian, functioning independently, and currently playing wheelchair basketball at a recreational level. It is important to note that higher functioning youth with physical disabilities are impacted to a lesser extent by barriers to PA participation than their lower functioning peers (Law, Petrenchik, King, & Hurley, 2007). This may have skewed the perceptions of this sample of youth towards more positive experiences and having the opportunity to be physically active through sport. Finally, the recruitment strategies (i.e., the Greater Toronto, Hamilton, and Niagara areas and participation in paid sports programming), may have biased the sample as the youth may have all come from middle to upper class families. Combined, these limitations restrict the views obtained in this study to youth with physical disabilities from higher socioeconomic backgrounds.

Despite the noted limitations, this study did recruit youth with physical disabilities from a variety of sport programs and organizations. In doing so, youth with several types of physical disabilities participated in the study. With a variety of physical disability types included, this study was able to express the voices of youth with a wide range of barriers to community-based PA participation, and potential, secondary complications and/or co-morbidities associated with their disabilities.
Methodologically, this study has several strengths. First, interviewing youth poses challenges in being able to engage in deep and meaningful conversations (Opdenakker, 2006). By providing the options for youth to bring in their own photo (i.e., participant-derived photo-elicitation) and to use relational-mapping, this study allowed youth to express themselves through several mediums. Although none of the youth chose to bring in their own photo, having the opportunity to do so contributed to the collaborative environment that is key to the constructivist paradigm (i.e., participant and researcher collaborating on the construction of the content of the dialogue and the meanings placed on them; Guba & Lincoln, 1994). Secondly, taking an inductive-deductive approach to thematic analysis allowed for a more thorough discussion. This approach afforded the opportunity to highlight and explore the complexities of the youths’ lived experiences while connecting a theoretical foundation (i.e., SDT) to the themes. If a deductive-only approach was taken, the narratives told would be restricted to the constructs of SDT and would have limited the complexities that were noted in the youths’ sport experiences. Lastly, interviewing the youth themselves strengthened the methodology of this study. By including youth in the research process, it provides them with a voice—an opportunity to share their opinions and experiences. In past qualitative studies that explored community-based PA experiences of youth with disabilities, many relied solely on the coach/instructor and/or parent to discuss the youths’ experiences, thus failing to allow the youth to speak for themselves (e.g., Shields, Synnot, & Barr, 2012). Thus, valuable contributions may go unheard without youth being involved in the research process.

6.6 Implications and Future Directions

This study highlights the importance of positive first contact within sport—consistent with the LTAD framework (Canadian Sport for Life, 2013)—through all levels of peer-mediated environments (i.e., through coaches, teammates, and friends). In order to provide this positive first contact experience with sport, several considerations should be taken. First, an emphasis must be placed on teacher, program instructor, and coach education. Specifically, there is a need for interventions and education around reducing peer victimization, and on how to support the needs of all participants through adaptations made to activities/programs. This may come in the form of additional training required by all individuals working with youth in sport and general PA settings, but how this will be done and by whom, must be further explored.
Second, there is a need to have adaptive sports equipment more easily accessible to individuals of all abilities. Programs currently exist for renting sports equipment through organizations such as Ontario Wheelchair Sports Association, Parasport Ontario, and rehabilitation hospitals (e.g., Holland Bloorview Kids Rehabilitation Hospital’s recreation equipment loan service). While rehabilitation hospitals loan equipment for free, there are restrictions based on proximity to the hospital and age (e.g., Holland Bloorview is targeted to children and youth). However, for many, continuously renting equipment may be expensive over time and/or the equipment is not customized to the user. Purchasing sports equipment is even more expensive. Consider the price of a day-to-day wheelchair (~ $2 500; Invacare, 2016), a basketball wheelchair ($2 000 to $5 000; Wheelchair Basketball Canada, 2016), and running blades (conservatively $10 000; Award Prosthetics, 2016). These are all additional expenses that individuals, specifically typically developing youth, do not have to consider. Future advocacy work needs to be done to reduce the costs of adapted sports equipment, thus making sport more accessible to all youth.

Third, mentorship and advocacy for adapted sports programs and disability more broadly needs to be considered. While a recent study expressed athletes’ roles as disability sport advocates (Smith, Bundon, & Best, 2016), the question remains as to who’s role it is to advocate for equality in community programming. This is especially important in youth sport. Is it fair to have youth act as advocates for their sport when they are involved at a recreational level? Whose onus should it be to develop and provide more opportunities to participate in adapted/parasports? This is an ongoing discussion that requires input from all sectors of sport and must include those of all ages and all abilities.

Lastly, interventions that include peers of all abilities in parasport should be considered. The findings from this study, as well as an ongoing scoping review (Orr et al., unpublished) suggest that typically developing youth lack an awareness of parasport. It was clear from the youth themselves that there is a strong interest in having friends and/or peers (regardless of ability) included in adapted/parasports. This need is currently being addressed from a competitive sport perspective through the Canadian Paralympic Committee’s FUNdamentals program (education.paralympic.ca) where parasports are being promoted to schools across Canada. Thus, interventions that reverse-mainstream parasport, and incorporate existing friend and peer networks within their design are warranted.
Chapter 7
Conclusion

This study integrated SDT’s mini-theories to explore the experiences of youth with physical disabilities in sport and the influences their peers had on their sport participation, expanding the peer support literature for this population, and for SDT and sport. The findings from this study suggest that youth with physical disabilities encounter both positive and negative sport experiences no matter their sport motivation. Future work is recommended for increasing coach and teacher education on how to (i) appropriately adapt sports for youth with physical disabilities and (ii) mitigate peer victimization. Overall, it is important to remember that youth with physical disabilities want to connect with others and find purpose; as Brad said:

I mean my goal is to be able to say I’m a part of or I’ve done something, not just I’ve watched something on TV.
References


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Appendices

Appendix A: Resource Form
Youth Sport Participation and Peer Support Study:
Additional Resources

If there is ever a need to discuss some of the topics that arose during the discussion or that may
arise in the future, please feel free to contact one of the following:

Children’s Mental Health of Ontario: 416-921-2109


Kids Help Phone: [http://www.kidshelpphone.ca/Teens/Home.aspx](http://www.kidshelpphone.ca/Teens/Home.aspx) or 1-800-668-6868

Teen Health and Wellness: [http://www.teenhealthandwellness.com/static/hotlines](http://www.teenhealthandwellness.com/static/hotlines)
INTRODUCTION AND INSTRUCTIONS:
Hello, my name is Krystn. Thank you for agreeing to participate in this discussion. Just to remind you, I am looking for feedback about sport participation; the role peers have or have not had on your sport participation, and the role peers can have in sport. In a minute, we will begin, but first, I would like to walk you through the form that is in front of you.

[For Facilitator: Review informed consent/assent form and answer any questions. Collect signed assent/consent form (if not done so previously) and ensure that participant has a copy of the Letter of Information to take with them.]

Confidentiality: [READ ALOUD] Before we begin our discussion, I want to spend a few moments talking about confidentiality, and to go over some basic ground rules for our discussion today:
I will not link quotes or ideas with any one person from this study.
We are assuming that when we learn about one another’s views, they remain confidential. In a small community (like your sport team) like this, people are identifiable to some degree by their views and opinions.
I may also step in if I feel the conversation is going off topic.
You can expect this discussion to last about 1 hour.

Use of a Tape Recorder:
As you will recall, this discussion will be recorded to increase accuracy and to reduce the chance of not hearing what is said.
You may choose to stop the audio-recording at any time if you do not feel comfortable.
All tapes and transcripts/notes will be kept under lock and key.
Names will be removed from the notes. Participants will have numbers attached to their name, which only I will know.
Only myself, my supervisor (Dr. Arbour-Nicitopoulos) and the research team on this project will have access to the transcripts (with your name removed) of this discussion.
I will also ask that when using abbreviations or acronyms (i.e., short-forms); you say the full name at least once to help me with the transcription.

INTERVIEW QUESTIONS:
Can you tell me about your experience as an athlete? [Ice-breaker question]
Can you tell me about how you started participating in sport?
Probe Questions:
- How did you find out about this sport?
- Can you tell me about the people in your photo?
- Would you like to draw out what you are telling me?
- Who else do you know playing [sport]?
- Can you tell me more about…?
- What is it like to…?
- Do you have anything else to add?

Why did you start participating in sport?
Probe Questions:
Did someone tell you about this sport? Who tell me more about them?
Tell me about the people in your photo.
Would you like to draw out what you are telling me?
What do others think of playing [sport]?
Can you tell me more about...?
What is it like to...?
Do you have anything else to add?

Why do you continue to participate in sport?

Probe Questions:
Can you tell me more about the people in the photo?
Do you have any goals for your sport participation? Tell me more about these goals.
Why do come to practice/games/competition?
Can you tell me more about...?
What is it like to use...?
Is there anything else you would like to share with me about your sport participation?

Can you walk me through your routine for getting to and from your practices/games?

Probe Questions:
How do you get to your practices/games?
Tell me more about what you do when you get to practices/games?
Tell me more about what you do after practices/games?
Can you tell me more about...?
What is it like to...?

Who do you consider to be your ‘peers’? [Probes: other potential peer groups that are not mentioned; keep note of who is/isn’t included in their definition of peers]

Probe Questions:
Tell me about a time when a peer influenced (made it better or worse) your participation in sport?
Do your peers support you in any way? If so, how? Why?
Do your peers hold you back in any way? If so, how? Why?
Can you tell me about your peers outside of sport? What do they think about you playing [sport]?
Can you tell me more about...?
Is there anything else you would like to share with me about your peers’ impact on sport participation?

If you were starting a new sport program, how do you think you would like your peers to be involved?

Probe Questions:
Would you like to talk to a peer before starting a sport? What topics would you think you would like to discuss with them?
What type of experience would you like them to have?
Can you tell me more about...?
Is there anything else you would like to share with me about your sport participation and/or peers?

Do you have any comments about sport and/or peers?

Probe Questions:
Can you tell me more about...?
Have you shared all that is significant with reference to sport and/or peers?
Is there anything else that you would like to share?
WRAP-UP: Remind participant that their comments are confidential, and that what was said in the room, should stay in the room.
Appendix C: Demographic Questionnaire

Youth Sport Participation and Peer Support Study
BACKGROUND INFORMATION SHEET

INSTRUCTIONS: Please fill in this form to provide us with some basic background information about you.

Gender:
☐ Male ☐ Female ☐ Transgender ☐ Prefer Not to Answer

Age: __________

Ethnicity: ________________________________

Type of Disability:
☐ Cerebral Palsy ☐ Spina Bifida ☐ Spinal Cord Injury ☐ Amputation
☐ Juvenile Rheumatoid Arthritis ☐ Other: ______________________

Current Sport(s): ________________________ Length of Time: ______________

Past Sport(s): ____________________________ Length of Time: ______________

At what level do you currently participate in sports?
☐ Recreational ☐ Competitive ☐ Provincial ☐ National ☐ International

Primary Mode of Mobility Outside of Home:
☐ Walk Independently ☐ Cane ☐ Walker ☐ Manual Wheelchair
☐ Power Wheelchair

RESEARCHER USE ONLY

Study ID Number: __________________
Appendix D: Cognitive Screening Questionnaire

What will you do in the study? What else? Do you want to do all of these things?
What if you start and decide you don’t want to be part of the study anymore?
Who will know what you say?
Why do you think we are doing this study?
Will I use your name when I write a report?
Do you have to do this study?
Will taking part hurt you in any way?
Who can tell you more if you have questions about the study?
Appendix E: Letter of Information and Consent Form

Youth Sport Participation and Peer Support Study
Letter of Information

Principal: Krystn Orr
Co-Investigator: Dr. Katherine Tamminen
Investigator: Faculty of Kinesiology & Physical Education, University of Toronto, Toronto, Ontario, Canada
(416) 946-7949
krystn.orr@mail.utoronto.ca

Co-Investigator: Dr. Kelly Arbour-Nicitopoulos
Faculty of Kinesiology & Physical Education, University of Toronto, Toronto, Ontario, Canada
(416) 978-2725
kelly.arbour@utoronto.ca

Why are we doing this study?
Sport participation can have a positive influence on youth’s overall well-being. Peers may have a potential influence on youth’s decisions to try sport and/or stick with a sport. The purpose of this explorative study is to talk to youth who are currently participating in sports (at any level) about their thoughts towards sport and the role that peers may play in their sport participation.

What will happen during the study?
If you voluntarily agree to participate in this study, you will be asked to do the following:
Participate in one, 60-minute face-to-face discussion with the student researcher;
Discuss questions relating to sport participation and peers;
Bring in materials (e.g., pictures) to assist in your discussion of sport and your sporting peers (optional).

You will arrange the date and time of the discussion. The discussion will be one-on-one with the researcher (Krystn Orr) at a location, outside of your home that is most convenient to you. You will be asked for your feedback on sport participation, peer involvement, and the role you would like peers to have in sport. The discussion will be audio recorded for more accurate data collection and analysis.

Are there any potential harms, risks, or discomforts that I should be aware of?
There are no known risks associated with participating in this study. You will be asked for your feedback and considerations for sport participation and peers, and the discussion will be audio recorded. The student researcher (Krystn Orr) will answer any questions you may have, and you can take a break if you need to. You do not have to answer questions that make you feel
uncomfortable or that you do not want to answer. The researchers have a duty to report any suspected cases of abuse or neglect of youth under the age of 16 to the authorities.

**Are there good things about this study?**
The findings from this study will provide researchers and sport programmers with a better understanding of the relationships and experiences of youth in sport programs.

**Will I receive anything in return for my participation in the study?**
You will receive a $15 gift card for your participation in the study.

**Who will know about what I did in the study?**
No one will know your answers to the discussion other than the researchers. You will be assigned a fictitious name so that all of your responses will remain confidential and anonymous (i.e., your name will not be linked with any of your responses). The discussion will take place in private and the audio recording will be kept in a secure database that will be stored in Dr. Arbour-Nicitopoulos’ lab. The only people who will have access to your responses are the research team (i.e., Ms. Krystn Orr and Drs. Arbour-Nicitopoulos and Tamminen). The audio recordings of the discussion will in no way be connected to your real name, email address, or other personal information, in order to maintain your privacy and will never be said in any reports regarding this study.

**Can I decide whether I want to be in this study?**
Yes. It is up to you if you want to be in the study or not. Nobody will be angry or upset if you do not want to be in the study. If you choose to participate in the study, you are allowed to request to have any of your responses removed from the study at any time, up until our research team starts to examine the data (two weeks after the time of the interview). If you choose to no longer take part in this study, the data that we have collected from you up to the point that you decide to no longer participate will be used in any reports for the study, unless you ask the researchers for your responses to be removed from these reports. You can choose not to answer any questions if you do not feel comfortable, and still remain in the study. A brief summary of the discussion will be sent to you to review where you can add, remove or clarify any comments. Overall, you can stop at any point in the discussion or withdraw from the study without consequence. You do not need parental consent to withdraw from the study.

**Who can I speak to if I want to learn more about participating in this study?**
If you have questions or require more information about the study itself, please contact Krystn Orr by email at krystn.orr@mail.utoronto.ca.
If you have concerns or questions about your rights as a participant or about the way the study is conducted, you may contact:

Office of Research Ethics, University of Toronto
ethics.review@utoronto.ca
416-946-3273
Consent

I, ___________________ (Name of Participant or Parent) consent to [having my child ___________________ (Name of Child)(if necessary)] participate in this study. I have been given information about the youth sport and peer support study being conducted by Ms. Krystn Orr and Drs. Kelly Arbour-Nicitopoulo and Katherine Tamminen of the University of Toronto. I have had the opportunity to ask questions about my [child’s] involvement in this study and to receive the additional details I requested. I understand that if I agree to participate in this study, I [my child] may withdraw from the study at any time.

I further understand that,
In order for me [my child] to participate in this study, I [he/she] must:
1) be registered in a sports program,
2) have a physical disability,
3) be able to read/speak in English, and
4) Not have a cognitive disability.

If I [my child] experience[s] any discomfort or hesitation during the discussion, I [he/she] has the right to decline a response and/or completely withdraw from the study at any point without consequence. My [their] withdrawal from the study will remain confidential and will not affect my [their] sport participation.

I have [my child has] the right to refuse that any of the discussion responses be kept on file for analysis and reporting purposes.

My [child’s] participation in this study involves a single 60-minute discussion with the researcher (Ms. Krystn Orr). This discussion will be audio recorded and the researcher will make notes.

My [child’s] participation in this study will remain confidential. I [they] will not be identified by their real name in any reports that directly use their responses.

My [child’s] participation in this study is completely voluntary. If I [they] choose not to participate in this study, my [their] access to my [their] current programs will not be affected. Only the research team will have access to the data, in order to maintain confidentiality and prevent negative consequences from disclosure of personal information.

The University of Toronto Research Ethics Board has reviewed and approved this research project. If I have any questions or concerns regarding the research protocol or methodology, I may contact the University of Toronto Office of Research Ethics at (416) 946-3273 or via email ethics.review@utoronto.ca.

☐ I voluntarily agree to [allow my child to] participate in this study. (Please check)
☐ I have been given a copy of this consent form. (Please check)

<table>
<thead>
<tr>
<th>Participant/Parent/Guardian</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Phone Number*</th>
<th>Email Address*</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Researcher Printed Name</th>
<th>Researcher Signature</th>
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</thead>
</table>

*Please provide one or both of the above contact information. This will be how we will contact you to schedule the study meeting time.
Youth Sport Participation and Peer Support Study
Youth Assent Form

Why are we doing this study?
Sport participation can have a positive influence on youth’s overall well-being. Peers may be a potential influence on youth’s decisions to try sport and/or stick with a sport. The purpose of this study is to talk to youth who are currently participating in sport about their thoughts about their participation in sport and the role that peers may play in their sport participation.

What will happen during the study?
If you voluntarily agree to participate in the study, you will be asked to do the following:
Participate in one, hour-long discussion;
Discuss questions relating to sport participation and peers;
Bring in materials (e.g., pictures that represent your sport experience to you) to assist in your discussion of sport and your sporting peers (optional).

You will be contacted to arrange the date and time of the discussion. The discussion will be one-on-one with the researcher (Krystn Orr) at a convenient location to you. You will be asked for your feedback on sport participation, peer involvement, and the role you would like peers to have in sport. The discussion will be audio recorded for more accurate data collection and analysis. A brief summary of the discussion will be sent to you to review. At this time, you can add, remove or clarify any comments.

Are there good things and bad things about this study?
The good thing is that your responses will help us better understand how we can improve sport programs for youth. All of your responses will be anonymous, so your comments cannot be linked to you.

Who will know about what I did in the study?
No one will know your answers to the discussions other than the researchers. Your sport participation will not be changed by participating in this study. If the researchers suspect abuse or neglect in participants under the age of 16, we have the responsibility to report it.

Can I decide whether I want to be in this study?
Yes. It is up to you if you want to be in the study or not. Nobody will be angry or upset if you do not want to be in the study. The researcher will talk to your parents/guardians about the study. You should talk to them about it too. You have the right to withdraw at any time from this study up until one week after your discussion, without having to have your parent’s consent. At this time data analysis will have begun. If you have any questions or concerns about your rights as a research participant please contact the Office of Research Ethics at ethics.review@utoronto.ca or call 416-946-3273.
Assent

I, ___________________ (Name of Participant) consent to participate in this study. I have been given information about the youth sport and peer support study being conducted by Krystn Orr and Drs. Kelly Arbour-Nicitopoulos and Katherine Tamminen of the University of Toronto. I have had the opportunity to ask questions about my involvement in this study and to receive the additional details I requested. I understand that if I agree to participate in this study, I may withdraw from the study at any time.

I further understand that,

In order to participate in this study, I must:

1) be registered in a sports program,
2) have a physical disability,
3) be able to read/speak in English, and
4) Not have a cognitive disability.

If I experience any discomfort or hesitation during the discussion, I have the right to decline a response and/or completely withdraw from the study at any point without consequence. My withdrawal from the study will remain confidential and will not affect my sport participation. I have the right to refuse that any of the discussion responses be kept on file for analysis and reporting purposes.

My participation in this study involves a single one hour discussion with the researcher (Ms. Krystn Orr). This discussion will be audio recorded and the researcher will make notes. My participation in this study will remain confidential. I will not be identified by my name in any reports that directly use my responses.

My participation in this study is completely voluntary. If I choose not to participate in this study my access to my current programs will not be affected.

Only the research team will have access to the data, in order to maintain confidentiality and prevent negative consequences from disclosure of personal information.

The University of Toronto Research Ethics Board has reviewed and approved this research project. If I have any questions or concerns regarding the research protocol or methodology, I may contact the University of Toronto Office of Research Ethics at (416) 946-3273 or via email ethics.review@utoronto.ca.

☐ I voluntarily agree to participate in this study. (Please check)
☐ I have read and understand this Informed Consent Form. (Please check)
☐ I have been given a copy of this consent form. (Please check)

__________________________  ___________________________
Participant Signature       Date

__________________________  ___________________________
Researcher Printed Name     Researcher Signature