Abstract

This study was guided by self-determination theory to explore the sport experiences of youth with a physical disability and the role of peers within this context. Interviews were conducted with eight youth using a relational mapping technique, and analyzed using a deductive thematic approach. Sport peers were broadly defined by the youth as individuals from a large age range and of all abilities. Youth perceived their sport peers to have dynamic roles throughout their participation in sport. The perceived roles of these sport peers included: supporting and thwarting basic psychological needs, and influencing the youths’ processing of sport internalization.

Findings focus on the complexity of peer need thwarting and supporting interactions in sport for youth with physical disabilities. Overall, peers have a multifaceted role in the sport experiences of youth identifying with a physical disability, and may, in some cases, thwart youths’ basic psychological needs.

Keywords: Peer Relationships; Sport; Basic Psychological Needs; Motivation
Sport participation at all levels of competition has been associated with an array of positive psychosocial health outcomes for youth, such as improved self-concept, depressive symptomatology, and life satisfaction (Eime et al., 2013), as well as an opportunity for friendship building (Smith, 2003). Sport may provide a competitive, yet collaborative environment for youth to engage with their peers. However, not all sport experiences for youth may be positive. In some cases, sport participation has resulted in adverse physical and psychosocial outcomes (e.g., injury and burnout; Holt et al., 2017). Competitiveness and the interpersonal relationships in and out of sport are potential influencers of positive youth development (Holt et al., 2017).

Peers have been identified as having an important influence on the developmental experiences of youth in sport (Smith, 2003). Within the literature, peers are defined as individuals who share a common characteristic with each other, regardless of their pre-existing relationship (e.g., Martin Ginis et al., 2013). For youth with physical disabilities (Jette & Branche, 1981), peers may play a pivotal role in sport experiences such as through providing motivation, constructive criticism, and/or psychosocial support (Kentta & Corban, 2014; Neumark-Sztainer et al., 2003). They may also provide a sense of belonging and meaningful social relationships (i.e., relatedness; Keegan et al., 2009), thus acting as a potential source of social support—often termed peer support. Peers may also contribute to the quality of sport programming for youth with physical disabilities by facilitating program adoption (Martin Ginis et al., 2013), providing friendships (Kramer, Olsen, Mermelsteing, Balcells, & Lilijenquist, 2012), and increasing overall levels of engagement (Duncan et al., 2005).

Ladd and colleagues (Ladd, Kochenderfer, & Coleman, 1997) have contrasted three predominant ways in which peers relate to each other. The first type, friendship, occurs in a positive one-to-one relationship. In the second type of peer relationship, acceptance, there is a
positive one-to-group relationship, such as being respected as a member of the team. Meanwhile, the third form of peer relationship, victimization, occurs when there is a negative one-to-one/group relationship, as in the case when bullying behaviours (social, verbal, physical, and/or cyber bullying) are actively expressed repeatedly over an extended period (Rodkin, Espelage, & Hanish, 2015). These three types of peer relationships are postulated to moderate the effects of each other such that a deficit in one type of relationship may impact the quality of the other two types of relationships (Ladd, Kochenderfer, & Coleman, 1997). For example, a child who feels socially isolated by fellow students in a physical education class (acceptance) may still enjoy a community sport program with their best friend (friendship) but to a lesser extent than if they had not had low acceptance at school. Both friendship and acceptance relationships contribute to positive psychological growth and well-being, while victimization can contribute to poor psychosocial well-being (e.g., Bredahl, 2013; Keegan et al., 2009; Kentta & Corban, 2014).

One theoretical framework that may be applied to the understanding of these three peer relationships in sport is self-determination theory (SDT; Deci & Ryan, 1985). SDT is comprised of six mini-theories that are used to understand human motivation (Ryan & Deci, 2000). Three of the six mini-theories within SDT—basic psychological needs, cognitive evaluation, and organismic integration—are central to understanding the meaning individuals’ place on their sport participation. As per cognitive evaluation theory, the social context can either support (e.g., a coach providing an opportunity for independent decision making) or thwart (e.g., a teammate laughing at a mistake made in practice) the three basic psychological needs of: autonomy, making one’s own decisions; competence, the sense of being accomplished at a given task; and relatedness, the perception of being connected to individuals and/or groups such as peers. Satisfaction of the three basic psychological needs can lead to greater internalized motivation.
and, according to the basic psychological needs theory, enhanced well-being (e.g., Ryan & Deci, 2000). Importantly, peer support has the potential to enhance the basic psychological needs (Kentta & Corban, 2014), providing a space where constructive criticism can be shared (Keegan et al., 2009).

Within organismic integration theory, multiple forms of motivation are posited where the six types of motivational regulation are arranged along a continuum from amotivation to the purest form of motivation, intrinsic motivation. Extrinsic motivation is situated along this continuum between amotivation and intrinsic motivation, and is composed of four forms of regulation that vary from complete external regulation to more internal forms of regulated motivation: external (external behavioural reinforcement), introjected (avoidance of external disapproval or gaining external approval), identified (personally valued behaviours), and integrated (fully incorporated behaviours that satisfy the basic psychological needs) (Ryan & Deci, 2000). Moving along the continuum of self-determined regulation is posited to be through the process of internalization, where greater internalization is characterized by more intrinsic forms of motivation and satisfaction of the three basic psychological needs (Ryan & Deci, 2000).

Peers engage in a variety of needs supporting and thwarting behaviours that may influence the different motivational states and well-being outcomes (Ryan & Deci, 2000). In sport, peers can provide constructive criticism (supporting the need for competence), while also excluding an individual by not selecting them for the team (thwarting the need for relatedness). Peers may also support individual’s need for relatedness by providing quality social relationships (Keegan et al., 2009; Kentta & Corban, 2014).

Need thwarting behaviours have been associated with controlling coaching styles (Bartholomew, Ntoumanis, Ryan, & Thogersen-Ntoumani, 2011), which may lead to external
forms of motivation (Ryan & Deci, 2000), and negative outcomes (Carr & Weigand, 2001) such as dissociation from sport. Additional negative impacts of need thwarting behaviours include: depression, disordered eating, and burnout among athletes in both individual and team sports across a variety of ages (Bartholomew et al., 2011). Youth from underrepresented groups, such as those with physical disabilities, may be at a greater risk of need thwarting behaviours from their peers than typically developing youth, given the presence of stigmatization and/or negative stereotyping (e.g., Bredahl, 2013; Stevens et al., 1996). There is currently a lack of research on need thwarting among peers in sport, particularly among youth with physical disabilities. It is important to consider both the need supporting and thwarting peer behaviours in sport environments within underrepresented youth populations, especially for understanding motivation and well-being outcomes given that need satisfaction is associated with adaptive outcomes such as positive well-being (Bartholomew, Ntoumanis, Ryan, & Thogersen-Ntoumani, 2011).

Within the current study, we aimed to enhance the body of research on peer support in sport by focusing on the quality of peer sport relationships and the influence of these relationships on supporting and thwarting the basic psychological needs of youth identifying with physical disabilities. Two research questions guided this study:

1) What are the peer sport experiences of youth identifying with physical disabilities?
2) What social contexts do peers provide and how do these relate to sport motivation?

Method

Participants

A purposeful sample of eight youth participated in this study. Participants self-reported having a physical disability (two also identified with having high functioning autism spectrum
disorder), and that they participated in sport at a variety of levels from recreational to international competition. Recruitment occurred between November 2015 and March 2016 through advertisements and in-person information sessions given by the first author at sport leagues within the Greater Toronto and Hamilton area in Canada. Participants were predominantly male \((n = 5)\), Caucasian \((n = 6)\), currently enrolled in wheelchair basketball programs \((n = 4)\), and participating in recreational-level sport \((n = 6)\). Table 1 provides a full demographic description of each participant. Three youth felt more comfortable with their mother present during the interview. The mothers were silent observers \(i.e.\), no interaction with the interviewer during the interview); however, their presence may have influenced their child’s responses.

**Data Collection**

University research ethics board approval was obtained. Potential participants responded in-person to a series of questions relating to the purpose of the study, the study procedures, and the potential impact of the study to themselves as a participant to screen for their cognitive capacity to provide consent. Once deemed eligible, a one-hour face-to-face interview was scheduled with the first author. All interviews were conducted in a private meeting space at the university or participants’ sport facility.

**Interviews.** All participants completed a short demographic questionnaire collecting information on items such as age, disability type, and sport background prior to beginning the interview. The first author followed a semi-structured interview guide to explore the youths’ sport contexts \(i.e.\), available upon request \(i.e.\), with supplementary relational mapping to promote further discussion. Relational mapping \(i.e.\), 2014 \(i.e.\), involves having the individual sketch the relationships within a given context, such as sport, allowing for elaboration on each
individual and/or group noted. The interviewer (first author) and participants then used these
relational maps to define ‘peers’ as perceived by the youth. In the findings, peers are grouped
into peers as a whole and separated into individual peers as necessary based on the discussion
and context. Maps facilitated discussions with the youth, and were not used as a form of data
analysis. The relational mapping technique was accepted and engaged in by all of the youth.

**Interviewer’s Notes.** The first author took detailed notes of thoughts and perspectives at
the completion of each interview. These notes consisted of SDT-related potential codes such as
needs, motivation and internalization, and self-reflections. These notes allowed for revisions to
the interview guide and provided context during data analysis.

**Data Analysis**

All interviews were audio-recorded, transcribed verbatim, and manually coded by the
first author. Braun & Clarke’s (2006) six steps of thematic analysis guided the data analysis
process, while the interviewer’s notes provided additional context. The first author began by
immersing herself in the transcripts prior to establishing initial codes. Codes were deductively
formed using concepts of the SDT mini-theories relating to autonomy, competence, relatedness,
motivation, and internalization of motivation. Openness to alternative themes was kept
throughout the coding process. A series of sequential coding steps were conducted by the first
author that focused on: (1) the three SDT mini-theories; (2) sequencing of the youths’ sport
participation; and (3) youths’ sport internalization. Overarching themes were then summarized
and shared with four experts (co-authors) in the field of physical activity, youth, physical
disability, and SDT to ensure clarity of themes. The themes were defined and named by the first
author. Finally, a report was produced (Braun & Clarke, 2006) and reviewed by a critical friend.
Needs in youth disability sport

(last author) with expertise in physical activity and disability across the lifespan with a personal
history of physical activity participation, to ensure clarity and appropriateness of the findings.

Following the thematic analysis, two vignettes were developed to illustrate a more in-
depth process of internalization and the interconnectedness of need supporting and thwarting
peer sport experiences for the youth. Vignettes are useful to present participants’ stories and
voices, especially in under-represented populations (Blodgett, Schinke, Smith, Peltier, &
Pheasant, 2011). Specifically, details related to the youths’ sport motivation and how they
responded to need supporting and thwarting peer experiences contributed to identifying the two
stories. The first author created the two vignettes following immersion in the transcripts and field
notes to best display the internalization process of sport and the interconnectedness of the
experiences peers provided on supporting and thwarting the needs of the youth. The two
vignettes are meant to represent youth who are at opposite ends of the motivation regulation
continuum and their experiences with need supporting and thwarting peer behaviours. Key
elements of each story were established and written as vignettes. The critical friend (last author)
was consulted during the development process of the vignettes.

Role and Impact of the Researcher. A constructivist paradigm approach guided this
study, assuming a relativist ontology and subjectivist epistemology (Lincoln, Lynham, & Guba,
2011). A dialectical, hermeneutic approach is preferred (Lincoln, Lynham, & Guba, 2011).
Furthermore, it is important to acknowledge the researcher’s active role in the research process
(Constantino, 2008). The first author’s past experiences, biases, and emotions during the data
collection and analysis process influenced the youths’ expressions and the manner of data
analysis. The first author has an extensive personal background in recreational sport, and
experience in volunteering and developing therapeutic and physical activity programs for
individuals of all ages with disabilities. Therefore, her theoretical perspective of SDT and positive outlook on sport and disability shaped the research questions, discussion, and the way the findings are presented—in content, participant responses, and language used.

**Study Rigour.** The authors’ constructivist orientation is evident in the data collection method and their approach to study rigour. Four steps were taken to ensure study rigour (Sparkes & Smith, 2014). First, the first author piloted the interview guide with individuals without disabilities involved in a variety of sports, and knowledge in sport and/or exercise psychology. Second, multiple data collection techniques were used including verbal discussion, relational mapping, and field notes. Third, a consultation with experts in the field of physical activity, youth, physical disability, and SDT was held during the theme revision process and ongoing discussions with a critical friend throughout. Fourth, the first author has provided her positionality and sources of potential biases, and accepts that they have shaped the research process. For example, the vignettes were developed based on the first author’s interpretations of the sport internalization process. However, by first asking how each participant defined their sport peers, a balanced perspective is presented throughout the findings and demonstrates the co-constructed nature of this research.

**Findings**

This section provides the youths’ definition of a ‘peer’ followed by an exploration of their sport experiences with peers’ need supporting and thwarting behaviours with accompanying quotes. The themes combine peer need supporting and thwarting experiences as they coexisted in the youths’ stories. All names used are pseudonyms.

Before delving into the themes, a brief description of the sport settings is warranted. The youth in this study had a variety of experiences. For instance, Trevor chose not to continue to
participate in physical education (PE) class after grade nine (when the mandatory curriculum is no longer in place), but did participate in out-of-school programs all year through his local soccer club’s accessible program and Special Olympics baseball programming. Comparatively, Lisa enrolled in PE classes past the mandatory years, as well as participated in a recreational wheelchair basketball team in her local area that included both youth with and without disability, and had participated internationally in para-badminton. Similar to Lisa’s sport experiences, Melissa, Anna, Kyle, and Yash were participating in both PE and out-of-school programs. Brad and Jordan no longer participated in PE but did participate in recreational and competitive out-of-school sport programming, respectively.

Defining Peers

When asked about how they defined a peer in sport, the youth indicated that a minimum level of relatedness and acquaintanceship was required for an individual to be characterized as a sport peer. As Kyle described, peers were people who, “you hang out with at times. The others at [sport program] are my peers because I see them here every Wednesday. They [peers] aren’t all necessarily friends.” Youth did not discuss general demographic characteristics such as age, disability status, or gender that may have limited who they defined as sport peers, except for one youth. Trevor felt that, “the little kids [approximately two years younger than him] are too small” to be considered sport peers.

Peers were perceived to be sources of support, emotionally and instrumentally, when explicitly defined by the youth. For example, Jordan discussed how, “a peer would be like my coaches and teammates, the people who I can go to for advice during or after a game. They’re full of information, helpful.” Jordan felt that peers could provide him with the information he needed to succeed in his sport. Interestingly, peers were also defined as coaches; these were
individuals who the youth associated positively with their past and/or current sport experiences. For example, the youth described how one coach, whom they considered to be fun and someone who would challenge their sports skills, and therefore regarded them as a peer. Meanwhile, the youth discussed how other coaches were perceived as controlling and inflexible, and thus, they did not consider this type of coach as a peer. The coach-peers and older teammate-peers were described by Jordan as, “well-educated and well-spoken people, 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.”

**Relatedness and competence: Need thwarting and supporting behaviours in sport**

Youth most often discussed need thwarting peer sport experiences in a PE context. During these experiences, they described being treated as ‘other’ because of their disability. Some participants perceived typically developing youth to be ‘braggy’ about their sports skills in PE class and felt disconnected from these students. Youth who expressed these experiences often withdrew from these environments either immediately, by asking not to participate, or did not enrol further in PE classes when they were no longer required to take the course. Such an experience can be noted in Kyle’s reflection on playing sports at school where he said, “I don’t really like playing team sports [at school], 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.” For Kyle, he was still participating in PE classes because they were a mandatory part of the curriculum, but he did not express enjoyable experiences in these classes. Kyle’s experience highlights how having a social environment that thwarts competence for team sports may reduce his willingness to continue with the sport. This experience also thwarted his relatedness to the group or specific individuals as illustrated through Kyle’s reference to his classmates as “super athletes.”
These acts of thwarting competence and relatedness seemed to be related to an external regulation form of sport motivation, and at times, amotivation. For example, sport programs at school (PE classes and/or extracurricular) and within the larger community were often perceived to not be appropriately adapted to create a safe environment. Some of the youth, such as Trevor, required more time and explanation during skill acquisition; neither of which was provided within his PE classes, thus thwarting his competence and sense of relatedness to his fellow classmates. Trevor dissociated himself from these PE classes given his perception of being incompetent in the chosen activities. As Trevor frankly stated, “I don’t do gym class anymore.”

While need thwarting of competence and relatedness was often discussed, youth also spoke of experiences where these two needs were supported by sport peers. These friendships and peer acceptance experiences in sport seemed to occur most often when youth felt related to others and when they defined the coach and teammates as peers. For Anna, her coaches, who she perceived to be her peers, were “like family. They are just fun to be around I guess.” In these more positive sport contexts, the process of internalization seemed to be further developed, expressed as integrated and identified regulation, and in some cases, intrinsic motivation. As Lisa said, “I’m never going to stop sport. Once you start, you just can’t stop!” and Melissa, “I just love it [sport] and the people.”

In these supportive peer sport contexts, youth felt related to one another, that there was no need to explain themselves and their abilities to anyone in the program. For Brad, after a couple of karate classes he began reflecting on his class experiences and realized that, 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. 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.

In Anna’s competitive sport experience, the relatedness need support she received from her
peers extended internationally. “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.” Finally, more experienced teammates acted as peer mentors
during practices which helped support the needs of competence and relatedness. For Yash, his
teammates taught him the fundamental skills for wheelchair basketball and encouraged 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.”

Competence and autonomy: Need thwarting and supporting behaviours in sport

Some youth felt that they had limited opportunities to participate in sports of their choice
due to the perceived inappropriateness or complete lack of adaptions provided within some sport
programs; thus, thwarting their autonomy. This situation was illustrated within Brad’s
recollection of his karate class. For Brad, he derived enjoyment first and foremost from feeling
competent and related to his peers in the karate program. Brad stated that, “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 things that I can do.” At first, Brad was hesitant
and unsure if karate was for him; however, over time he began to enjoy the sessions with the
help of friends that he made in the program, but also felt that he had nowhere else to go. Brad
also had a secondary motivator, perceiving that other programs thwarted his need for
competence and therefore, influencing his autonomy to try other sports. Brad’s experience
demonstrates an interplay between competence in sport and the autonomy to try new sports, in addition to suggesting identified regulation-extrinsic motivation. Within a PE context, youth often described being removed from the regular class and provided with alternative activities. For some, these alternative activities consisted of walking unassisted in the hallways, while others were provided with non-physical activity options, such as study time. In many cases, youth felt competent playing the sports in PE classes with physical assistance such as using a sport wheelchair; however, they were prevented from playing with their classmates due to administrators’ safety concerns for the other students, and perhaps their lack of knowledge and/or experience adapting the PE curriculum. Thus, all three basic psychological needs were thwarted in the context of PA classes: youth not being provided the option to participate in PE classes by teachers (autonomy), instructors lacking the knowledge, experience, and/or ability to adapt the curriculum activities to meet the youths’ functional needs (competence), and the youth being removed from the other students in the PE class (relatedness).

When asked explicitly about school-related sport participation, youth often responded bluntly such as Jordan who said, “No, I can’t [participate in PE]. I can’t do any stand-up sports,” demonstrating that his autonomy and competence were thwarted in this setting. However, Jordan overcame such need thwarting environments to find other opportunities to engage in sport-related activities. For instance, he spent his free time in the school gymnasium practicing his wheelchair basketball skills or at the community centre playing wheelchair basketball. The few youth who engaged in school sports and/or PE classes were restricted to participating where adaptations were not provided. They recognized that other youth with physical disabilities may not have felt as comfortable as they did within these settings, particularly given the absence of
any adaptations offered. Anna suggested that, “it would be a good idea [having a para track club] for someone who is just starting out and doesn’t know what to do.”

Comparatively, in settings where youth expressed a sense of enjoyment and self-efficacy, their coaches and teammates often supported their need for competence. In these mastery-oriented climates (competency supportive), youth were pushed to find their skill limits and expressed being highly motivated to maintain participation in sport, by trying a variety of sports or volunteering in sport programs. Among the sport programs Brad attended, he felt that in, “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.” For Lisa, her coach took the approach to push oneself further and provided a new way of looking at disability, “she’s [coach] like…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.”

By providing the youth with autonomy supportive environments, coaches enabled youth to share their opinions and to collaborate on adapting the activities. With their competence supported, youth were comfortable with trying a variety of sports. For example, Brad had participated in a multisport camp for youth with physical disabilities and had a positive first contact with a variety of sports that he felt he could join in later. “We [adapted sport 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 other things.” For Yash, participation in a multisport program where each week and within each session a different sport is practiced, provided him the opportunity to voice his opinions and demonstrate some personal agency over the activities that took place in that session. This experience, made available to him by his coach, supported his need for autonomy and competence. In Yash’s sport
experiences, he preferred these, “multisport [programs] because we can play whatever games we
want to play. Whoever is there can choose the games that they want to play,” further illustrating
autonomy support.

**Vignettes**

All the youth initially described an external form of motivation during their first contact
with sport (primarily through their mother’s suggestion). Over time, with personal experience
and peer interactions, the youth developed more internal forms of motivation for sport. The
following section highlights two vignettes of youth who expressed varied perceptions of their
internalization process for sport. The vignettes also showcase the interconnectedness of need
thwarting and supportive behaviours from their sport peers.

**Sideline**. The following is a vignette of a participant who expressed more external
forms of regulation for sport.

Kyle was participating in an inclusive multisport program, which he enjoyed
and felt related to his peers in the program because he felt they were at the same
competency level. However, in previous programs such as soccer and swimming,
he experienced many negative peer interactions. These negative experiences
included verbal bullying aimed at his low perceived competence for the activity,
and verbal as well as social bullying by others he perceived to be ‘braggy’ about
their own abilities by gloating over their success and his failure, resulting in Kyle’s
perceived lack of relatedness to other youth in the program. His negative peer
experiences often stemmed from a lack of adaptation on the part of the coaches to
meet his functional abilities. 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 Kyle used to describe his negative peer experiences in sport was
directed as ‘them,’ those he perceived to be good at the activity, versus ‘me,’ who
he perceived to be incompetent at performing the activity. This language solidified
Kyle’s sense of disconnection to the other youth in his sport program and PE class.

While he enjoyed the current program where he had peer acceptance and need
supporting interactions with coaches and teammates, he still experienced negative
peer interactions at school. Therefore, his need supporting sport peer experiences
were few compared to his need thwarting peer experiences, and his language
reflected external and introjected regulation for sport participation.

In both his ongoing and previous sport experiences, Kyle felt himself to be an
outsider, ‘other,’ not related, and 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, becoming entirely dissociated from sport (amotivation). With his PE
classes, Kyle spoke of how his teacher made special accommodations for him such
as providing solitary activities to work on his sports skills. This occurred on the
sidelines or within a separate space, where he was isolated from the rest of the
class. While this ‘sidelining’ can further thwart Kyle’s relatedness to the other
students in his class, his preference was for these segregated settings (both in
school and community) where he could be task-oriented. In a group setting, he felt
the pressure to be ego-oriented, comparing himself to typically developing youth.

This ego-oriented environment may be inherent to the sport program he attended,
perceived to be that way by Kyle, or a combination thereof. Either way, group
settings for Kyle were high-pressure environments where he felt that his sport
competency was inadequate. Furthermore, his motivation was extrinsic in nature
when he discussed his motivation for being 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.”

Broadly speaking, the youth in this study often spoke of experiences that were
representative of external forms of regulation for sport, when discussing school-related compared
to community-based sport experiences. This may be due to the selective nature of community-based sports programs which provide youth with more autonomy in choosing those environments with their parents compared to the compulsory nature of PE classes. This is similar to the
previous literature on physical activity experiences among youth with disabilities, where PE
classes were noted to be the most negatively experienced of all physical activity settings (e.g., Bredahl, 2013). Additionally, youth who expressed being sidelined were often content to
participate in more sedentary activities, such as Trevor who “would be playing video games,” if
he were no longer enrolled in a sports program.

**Sport is in My Blood.** The following is a vignette of a participant who expressed more
internal regulation forms of sport.

Jordan was a former football player who acquired a physical injury, which
provided him with the “opportunity” to take up wheelchair basketball. He described
the transition time when he was not participating in sports as “pretty devastating.”
When he was introduced to wheelchair basketball it fulfilled his “love for
adrenaline.” Jordan continued to play sports “because it’s in [his] blood.” While
having mostly positive growth experiences with sports programs, such as being recruited for higher level teams and making new friends (relatedness). Jordan also spoke about having negative peer experiences. For example, when he went to the school gym he often felt that he was not treated like everyone else by his classmates. “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 spoke of being able to take a negative interaction with someone and turning it into an opportunity to reflect upon his own abilities. Through these reflections, he would set new individualized goals that then motivated him to continue to improve both physically and mentally. For Jordan, his injury afforded him the opportunity to find a sport that he excelled in and could move further competitively than he had previously done in sport prior to his injury. When people treated him differently, Jordan thought of it as “a good socializing thing. The [wheel] chair is a good socializer.” In this way, he became an informal advocate for wheelchair basketball in his community because his conversations were around what he was doing at the gym and the wheelchair basketball league games he was training for. Further, he had internalized his love for sport so much that he perceived his wheelchair to be an extension of himself — “a broken chair, a broken body.”

Supporting his love for sport was his extensive support network of peers and family who actively encouraged his endeavours. This support ranged from peers providing him with constructive criticism on his sport skills to his family providing
tangible support by driving him to games and practices. “I think I have pretty good support from everyone, even my coaches.”

Similar to Jordan, other youth in this study exhibiting internalization of sport motivation expressed a deep connection with sport—intrinsinc motivation or integrated regulation for participating in sport. For them, discontinuation in sport was unfathomable and, as Anna stated, “Why would I do that?” Contrary to the youth expressing less internalization of sport motivation, those youth demonstrating more internally regulated forms of motivation for sport 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 sport in any capacity. For most of the youth, “it’s not just about the sport itself, it’s about the social aspect.” (Melissa). Sport was a part of their self-identity and their gateway to interacting with their peers.

**Discussion**

This study explored the sport experiences of youth identifying with physical disabilities and the influence peers may have on their basic psychological needs and motivational states. The following section discusses the potential consequences and implications of need supporting and thwarting influences of peers in the context of physical disability and sport.

**Basic Psychological Needs**

Many of the stories shared by the youth were suggestive of their autonomy being thwarted by peers particularly in relation to the provision of activity modifications that met their abilities. Lack of knowledge and experience with adapting activities and programs to meet the needs of children and youth with disabilities is a well-recognized concern within school (Bredahl, 2013; Fitzgerald, 2005; Goodwin & Watkinson, 2000) and out-of-school time (Arbour-Nicitopoulos et al., 2018; Rimmer et al., 2007; Shields & Synnott, 2016) settings. This lack of
knowledge and experience often translates to a lack of available programs for youth with physical disabilities (Mayer & Anderson, 2014; Magill-Evans, Darrah, & Adkins, 2003; Rimmer et al., 2007). Some youth in the present study reported that participating in alternative programs 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 former national team players whom he perceived to be sport peers.

Providing more opportunities to try new sports in welcoming environments (e.g., knowledgeable, friendly, and experienced instructors) for youth with physical disabilities with their peers may support the basic psychological needs, such as through Paralympic School Days (McKay, Block, & Park, 2015), or disability sport units embedded within PE classes (Grenier, Collins, Wright, & Kearns, 2014). For example, the Canadian Paralympic Committee’s FUNdamentals program (education.paralympic.ca) offers Canadian elementary school teachers curricula for a variety of sports that they can incorporate into their education plans including athletics, boccia, goalball, and sitting volleyball. Additionally, Sport England (sportengland.org) ensures that intra- and inter-collegiate sports are available in both Olympic and Paralympic sports with the opportunity to add alternative sports; thus, exposing England’s children and youth to disability sport. These types of programs may also assist in raising awareness of parasports among typically developing peers (McKay, Block, & Park, 2015), and consequently, may reduce stigmatization and exclusion of individuals with physical disabilities (Bredahl, 2013). Reducing stigmatization by peers and providing appropriate adaptations to skills may also increase autonomy for youth with physical disabilities to be more proactive in their sport participation.

Consistent with the peer support and sport literature for typically developing youth (Duncan et al., 2005), the peer sport experiences of youth in the current study (i.e., their sense of
needs in youth disability sport

relatedness) were closely connected to their continued participation in sport. For example, when asked to describe their PE classes, participants often indicated not having positive peer interactions, and consequently not enjoying the experience. Comparatively, positive peer interactions were discussed in community programs in this study, which may reflect a greater sense of belongingness through team membership as discussed by Ryan and Deci (2000). Positive peer interactions are important for fostering relatedness and may contribute to greater effort being exerted in sport (Vazou et al., 2006). Supporting youths’ need for relatedness can contribute to more internal motivation and enhance the peer climate of the sport program and/or team (Ryan & Deci, 2000). Supporting relatedness may also help combat the potential for exclusion (e.g., Williams, 2007) by building group cohesion, having experienced teammates act as mentors such as in Yash’s experiences, and by composing groups of similar youth such as in segregated programming. These outcomes not only have a positive impact on relatedness, but also competence.

Need Thwarting

Peer relationships are not always positive interactions (e.g., Ladd, Kochenderfer, & Coleman, 1997), and was at times discussed by some of the youth in this study. For example, in Kyle’s vignette he repeatedly experienced social bullying from peers where he.. feeling excluded within PE classes. He spent most of his time moving from one community-based sport program to another. He did not adjust well to novel settings, until his most recent sport program that provided him with peer (social) acceptance and need supporting experiences (competence and relatedness) that he previously lacked. Considering these interactional relationships, a holistic approach may be most appropriate for facilitating a positive experience for all youth in their sport participation by including more dialogue between the youth, coach, and parent(s) regarding
their sport experiences. Opening the lines of communication may help to reduce need thwarting, 
and support the youth’s needs for relatedness and autonomy by building a supportive sport 
experience for the youth.

Non-verbal or exclusionary interactions were primarily associated with the coach, 
instructor, and/or teacher lacking the necessary skills to adapt the sport or physical activity to 
meet the unique needs and/or interests of the youth. In these scenarios, the coach, instructor, 
and/or teacher was not considered a peer by youth. Lack of adaptation often created less 
opportunity for youth to participate in sport; thus, limiting their sense of autonomy, competence, 
and relatedness. Ultimately, the issue of not adapting sport programs must be addressed for youth 
to have more enjoyable experiences as has been noted by youths’ preferences for out-of-school 
programs that met their social and functional needs. Chronic exposure to need thwarting 
environments is associated with maladaptive outcomes in typically developing youth athletes 
such as depression, burnout, and negative affect (Bartholomew et al., 2011). Thus, coaches, 
instructors, and teachers must be attuned to the impact of need thwarting on the well-being of 
youth with physical disabilities within their respective activity spaces.

Additionally, verbal bullying may directly contribute to the need thwarting of both 
relatedness and competence, and indirectly through perceptions of feeling excluded, the need for 
autonomy (e.g., Kyle and Trevor’s negative experiences in PE programs). Verbal bullying 
segregates the aggressor from the targeted individual, thus reducing the sense of relatedness that 
an individual has to the group (Buhs, 2005). Depending on the content and context of the 
bullying, competence may also be thwarted. The belittling that Kyle had experienced in PE from 
some of his classmates for not performing a skill to a pre-determined standard is an example 
where verbal bullying and ego-orientation contributed to thwarting his sport skill competence.
This negative experience contributed to the opportunity for ego-orientation and exclusionary practices such as being ranked against the other students in his PE class based solely on skill. Experiencing these need thwarting environments may lead to behavioural avoidance coping strategies (Nicolas, Gaudreau, & Franche, 2011), which could indirectly thwart the need for autonomy. Avoidance may limit future sport opportunities to those where previous positive interactions have occurred, novel sport programs, or complete sport dissociation. Peer need thwarting, however, is not unique to youth with physical disabilities and should be addressed by all sport organizations (see Efrat, 2009 for a review of peer bullying).

The findings from this study suggest that peer need thwarting may not have the same impact among youth with physical disabilities who have processed their sport motivation differently. All the youth, regardless of their sport internalization, experienced some level of peer need thwarting, however not all youth interpreted these experiences negatively. Nonetheless, these negative peer experiences highlight the importance of establishing a positive first contact experience with sport. Among the youth in this study who expressed perceptions of more externally regulated forms for sport, their initial sport experiences were negative and these perceptions often pervaded their view of sport. The quality of a ‘first contact’ sport experience is critical to future sport participation, particularly among individuals with disabilities (No Accidental Champions; Canadian Sport for Life, 2013), and thus must be considered in sport programs for youth with physical disabilities. Coaches should also be aware that their role may be more than a coach, but a peer too as highlighted by the youth in this study.

**Strengths and Limitations**

Recruitment was conducted during winter, which may have excluded youth who participate in sport during other seasons. However, the youth in this sample participated in a
Needs in youth disability sport

variety of sports all year and provided their experiences from these sport programs. Furthermore, most of the sample was Caucasian, functioning independently, and currently playing recreational wheelchair basketball. It is important to note that youth with physical disabilities who are more independent are impacted to a lesser extent by barriers to sport participation than their more dependent peers (Law, Petrenchik, King, & Hurley, 2007); therefore, this sample of youths’ experiences are not representative, nor are they meant to be, of youth who are less independent. Finally, recruitment efforts were directed towards paid sports programming in the Greater Toronto and Hamilton area and may have biased the sample of youth. Despite the noted limitations, youth with a variety of physical disabilities were recruited from a range of sport programs and organizations. Thus, this study expressed the voices of youth with a wide range of community-based sport experiences.

Methodologically, this study has several strengths. First, using relational mapping provided youth with the opportunity to express themselves through multiple mediums. Secondly, taking a deductive approach to thematic analysis with openness to other themes afforded the opportunity to explore the complexities of the youths lived experiences while connecting the results to the theoretical foundation of SDT. Lastly, by including youth in the research process, it provides them with an opportunity to share their opinions and experiences. In past qualitative studies that explored community-based sport experiences of youth with disabilities, the coach and/or parent acted as the proxy to the youths’ experiences, thus failing to allow youths to speak for themselves (Shields, Synnot, & Barr, 2012).

Implications and Future Directions

This study highlights the importance of positive first contact within sport through all levels of peer-mediated environments (i.e., coaches, teammates, and friends). To provide positive
first contact experience with sport, an emphasis must be placed on teacher, program instructor, and coach education regarding the provision of supportive sport environments among youth with disabilities. Specifically, there is a need for education interventions around reducing peer need thwarting, and on how to support the needs of all participants through adaptations made to activities and/or programs. This may come in the form of additional training required by all individuals working with youth in sport, but how this will be done and by whom, must be further explored.

Mentorship and advocacy for adapted sports programs and disability rights should also be considered more broadly. While a recent study expressed athletes’ roles as disability sport advocates (Smith, Bundon, & Best, 2016), the question remains as to whose role it is to advocate for equality in community programming. This is especially important in youth disability sport, where questions arise concerning whether it is fair for youth to act as advocates for their sport when they are involved at a recreational level. This is an ongoing discussion that requires input from all sectors of sport and must include those of all ages and abilities.

Lastly, inclusive disability sport interventions should be considered. It was clear from the youth in this study that there was a strong interest in having friends and/or peers included in disability sport, regardless of ability. This need is currently being addressed from a competitive sport perspective (i.e., Canadian Paralympic Committee’s FUNdamentals program) where parasports are being promoted in schools across Canada. However, interventions that reverse-mainstream parasport and incorporate existing friend and peer networks within their design are warranted.

**Conclusion**
This study explored the peer sport experiences of youth identifying with physical disabilities with the integration of three of SDT’s mini-theories. Thus, the findings suggest that youth with physical disabilities encountered both need supportive and thwarting sport experiences, regardless of sport motivation. Importantly, the youth discussed need thwarting experiences occurring in PE classes and avoided community-based sport programs that were inappropriately adapted to meet their functional needs, thwarting all three of their basic psychological needs. Coach, instructor, and teacher education is highly recommended to improve the disability sport landscape for youth identifying with physical disabilities.

Acknowledgements

We would like to thank the participants for sharing their stories, the programs and organizations that opened their doors to us, and the Canadian Disability Participation Project for their ongoing support.
References


Needs in youth disability sport


Needs in youth disability sport


Table 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>Walk 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>Walk 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>Developmental Coordination Disorder</td>
<td>Walk 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>Walk 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>Walk Independent</td>
<td>Track &amp; Field (International)</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Trevor</td>
<td>15</td>
<td>Developmental Coordination Disorder</td>
<td>Walk 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. *registered in high school.