

EXPLORING THE COACH-ATHLETE RELATIONSHIP OF WHEELCHAIR BASKETBALL  
ATHLETES WHO HAVE AN ACQUIRED IMPAIRMENT

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## **Abstract**

Research has demonstrated that engagement in sport has a positive effect on people who have an acquired impairment including but not limited to, increased well-being and life satisfaction. One person who can foster the benefit of sport participation is the coach. More specifically, the quality of athletes' parasporting experiences is strongly influenced by the relationship they share with their coaches. However, little research has explored the coach-athlete relationship in the context of parasport, and specifically, with athletes who all have an acquired impairment. Therefore, the purpose of the current study was to explore wheelchair basketball athletes' perceptions of the coach-athlete relationship following the acquisition of an impairment. To collect data, two separate interviews were conducted with six elite wheelchair basketball athletes who had an acquired impairment. First, a timelines approach was used to learn about the acquisition of the athletes' impairment. Second, a semi-structured approach was employed to gather their views on their coach-athlete relationship. Both interviews were transcribed verbatim and a thematic analysis was used to analyze the data. The analysis revealed that the coach-athlete relationship was strongly influenced by both positive (e.g., adaptability) and negative (e.g., yelling) coaching behaviours. Additionally, athletes identified personal preferences, including coaches who addressed gender differences, maintained professional relationships at the national level, and had parasport experiences, as contributing factors to the coach-athlete relationship. The current findings provide a portrayal of coaching behaviours, characteristics, and expertise that not only influence the parasport coach-athlete dyad, but also affect the well-being and athletic development of athletes who have an acquired impairment.

## Résumé

La recherche a démontré que l'engagement dans le sport a un effet positif sur cette population, qu'il génère une augmentation du bien-être et de la satisfaction. L'entraîneur est une personne qui peut favoriser les avantages de la participation sportive. Plus précisément, la qualité des expériences parasportives des athlètes est fortement influencée par la relation qu'ils partagent avec leur entraîneur. Cependant, peu de recherches ont exploré la relation entraîneur-athlète dans le contexte du parasport et plus particulièrement, avec des athlètes qui ont tous un handicap acquis. Par conséquent, le but de la présente étude est d'explorer les perceptions des athlètes de basketball en fauteuil roulant sur la relation entraîneur-athlète après l'acquisition d'un handicap acquis. Pour collecter les données, deux entrevues distinctes ont été menées avec six athlètes de basketball en fauteuil roulant de niveau élite qui avaient un handicap acquis. Premièrement, une approche de ligne de temps a été utilisée pour en savoir davantage sur l'acquisition du handicap des athlètes. Deuxièmement, une approche semi-structurée a été utilisée pour recueillir leurs points de vue sur leur relation entraîneur-athlète. Les deux entretiens ont été transcrits textuellement et une analyse thématique a été utilisée pour analyser les données. L'analyse a révélé que la relation entraîneur-athlète était fortement influencée par des comportements d'entraîneur à la fois positifs (p.ex., capacité d'adaptation) et négatifs (p.ex., crier). De plus, les athlètes ont dit préférer les entraîneurs qui abordent les différences entre les sexes, qui maintiennent des relations professionnelles de niveau national et qui ont vécu des expériences parasportives. Ces facteurs contribuent à la relation entraîneur-athlète. Les résultats actuels donnent une image des comportements, des caractéristiques et de l'expertise des entraîneurs qui influencent non seulement la dyade entraîneur-athlète parasportif, mais affectent également le bien-être et le développement athlétique des athlètes qui ont un handicap acquis.

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## Chapter 1

### Introduction

Over six million people in Canada and 600,000 people in Quebec have an impairment (Statistics Canada, 2018). More specifically, impairment refers to a condition affecting the intellectual (e.g., Down syndrome) or physical (e.g., hearing) abilities of an individual (International Paralympic Committee, 2016). As a result, people with impairments often encounter environmental and social barriers that impact the quality of their life (e.g., Wareham et al., 2017), which can include a reduction in physical activity (Martin, 2013). The positive health effects of physical activity include the diminished risk of diabetes (Chimen et al., 2012), cancer (Metsios et al., 2019), obesity (Whooten et al., 2018), and cardiovascular disease (Metsios et al., 2019). In addition to positive health outcomes, physical activity has benefitted people with impairments on a social (e.g., promoting inclusion; Martin, 2013) and psychological (e.g., diminishing risk of depression; Warburton et al., 2006) level. Despite the positive effects of physical activity, people with impairments remain twice as inactive compared to their able-bodied counterparts (Statistics Canada, 2018).

Prior to the middle of the twentieth century, people with impairments were excluded from sport due to their ‘abnormality’ and ‘deficiency’ (DePauw, 2009). This view of impairment slowly changed as war veterans returned home with physical and psychological needs that could not be treated by traditional practices (DePauw, 2009). Following World War II, Dr. Ludwig Guttman started incorporating physiotherapy and sport participation into rehabilitation practices for war veterans as a way of improving their quality of life (Anderson, 2005). Although physical activity was incorporated into rehabilitation practices, patients with a spinal cord injury (SCI) considered rehabilitation exercises repetitive and monotonous (Anderson, 2005). As a result, war

veterans created their own outdoor physical activities as a way of distracting themselves from the long recovery process (e.g., dividing themselves into teams with the goal of hitting a wooden puck; Anderson, 2005). Noticing the appearance of recreational activity, Dr. Ludwig Guttman created the first competitive parasport called ‘wheelchair polo’ in 1945 (Anderson, 2005). Although abandoned less than a year after its creation due to its ‘dangerousness’ for the patients, ‘wheelchair polo’ would later lead to the creation of many parasports such as wheelchair badminton and wheelchair basketball (Anderson, 2005). Indeed, parasport would rapidly move from a recreational level (e.g., in a hospital backyard in 1944; Anderson, 2005) to a competitive level (e.g., Stoke Mandeville Games in 1948, which would later become the Paralympic Games; Canadian Paralympic Committee, n.d.) contributing to the expansion of the popularity of parasport (DePauw, 2009).

The first official Paralympic Games occurred in 1960 at Rome and included 400 athletes from 23 different countries (Canadian Paralympic Committee, n.d.). Since then, the participation rate continued to increase every four years (Mauerberg-deCastro et al., 2016). Indeed, new participation records were established in the 2016 summer Paralympic Games at Rio of Janeiro (4,328 athletes from 158 countries including 162 Canadian athletes) and 2018 winter Paralympic Games at PyeongChang (567 parasport athletes from 49 countries including 55 Canadian athletes; Canadian Paralympic Committee, n.d.). The increased popularity of the Paralympic Games enhanced the caliber of competition as many parasport athletes established performance records in the last Olympics (e.g., swimmer Aurelie Rivard set two world records in the 2016 Paralympic Games; Canadian Paralympic Committee, n.d.). As a result, the increased amount of media coverage (e.g., 2018 Paralympic established a TV audience record of 2.02 billion people; Canadian Paralympic Committee, n.d.) not only displayed the abilities of Paralympic athletes

worldwide, but also enhanced the level of awareness and integration regarding people with impairments participating in physical activity (Canadian Paralympic Committee, n.d.). With respect to people with an acquired impairment, empirical evidence has demonstrated the importance of physical activity for improving their well-being (e.g., Day & Wadey, 2016). Despite this, a Canadian study demonstrated that only 12% of individuals with a SCI met the physical activity guidelines (Rocchi et al., 2017). This is alarming since studies have found that individuals with a SCI experienced enhanced life satisfaction (e.g., positive moods) from engaging in leisure time physical activity (Chemtob et al., 2019; Taran et al., 2018). More specifically, Taran et al. (2018) suggested that individuals with a SCI achieved life satisfaction and a decrease of physical pain by maintaining engagement in leisure time physical activity.

Specific to people with a congenital impairment, this population has experienced higher disability self-concept and life satisfaction compared to those who acquired an impairment (Bogart, 2014). This may be explained by the fact that individuals with an acquired impairment experience more pronounced psychological stressors, such as post-traumatic stress (Day, 2013), shock, anxiety, denial, depression, vulnerability, and anger (Day & Wadey, 2016; Hammer et al., 2019) due to their trauma. Among the 4,529 cases of SCI reported every year in Canada (Spinal Cord Injury BC, 2021), it has been revealed that these individuals experienced an identity crisis (Popowich et al., 2011) and difficulties in their self-esteem, self-image, and self-confidence (Manns & Chard, 2001). More specifically, Popowich Sheldon et al. (2011) interviewed 64 males with a SCI to explore their body image and self-concept. Among the results, participants highlighted the ongoing challenges of adapting and accepting their new bodies. Additionally, participants mentioned the struggles associated with social reintegration leading to a decrease of confidence, self-doubt, embarrassment, and frustration. This psychological turmoil is

undoubtedly exacerbated as a result of decreased independence (particularly mobility) that comes from acquiring an impairment, which can also affect their levels of sport participation (Hammer et al., 2019; Manns & Chard, 2001; Rocchi et al., 2017).

One person who can foster the benefits of sport participation for both athletes with and without an impairment is the coach (e.g., Bentzen et al., 2021; Cregan et al., 2007; Falcão et al., 2019; Tawse et al., 2012). Indeed, research has identified parasport coaches as an important support agent for parasport athletes (Alexander et al., 2020; Allan et al., 2018; Banack et al., 2011; Bentzen et al., 2021; Crawford et al., 2014; Cregan et al., 2007; Culver & Werthner, 2018; Falcão et al., 2015; Martin & Whalen, 2014; Santos et al., 2018; Tawse et al., 2012). In fact, parasport coaches play an important role in supporting parasport athletes by developing an environment that provides the opportunity to develop on both a personal and sporting level (Bentzen et al., 2021; Cregan et al., 2007; Santos et al., 2018; Tawse, et al., 2012), including but not limited to their body image and feelings of belonging (Alexander et al., 2020; Hammer et al., 2019). These outcomes are related to a positive coach-athlete relationship where trust, respect, and cooperation are central to the relationship (Jowett, 2007).

In fact, parasport coach-athlete relationships are an important support structure for allowing athletes to be successful in their athletic and social environments (Santos et al., 2018). The coach-athlete relationship is characterized by reciprocity and mutual understanding of thoughts, feelings, and behaviours (Jowett, 2007). Jowett (2007) conceptualized the coach-athlete relationship using the 3 + 1C's model, which encompasses closeness, commitment, complementarity, and co-orientation. Taken together, the level of interdependence of these constructs determines the quality of the coach-athlete relationship (Jowett, 2007). To date, previous parasport research has identified the importance of a positive parasport coach-athlete

relationship (e.g., Bentzen et al., 2021; Alexander et al., 2020; Banack et al., 2011; Cheon et al., 2015; Cregan et al., 2007; Tawse et al., 2012). However, few parasport studies have included an entire sample of participants with an acquired impairment. Given that athletes with an acquired impairment experience additional psychological stressors (Day, 2013; Day & Wadey, 2016; Hammer et al., 2019) compared to athletes with a congenital impairment, it will be interesting to explore the implications of the parasport coach-athlete relationship following the acquisition of an impairment. Finally, the literature lacks a deeper understanding that focuses on the role of the coach in facilitating the physical and psychological well-being of parasport athletes with an acquired impairment (Bentzen et al., 2021; Cregan et al., 2007; Tawse et al., 2012).

### ***Purpose of the Study***

The purpose of the study was to explore the wheelchair basketball athletes' perceptions of the coach-athlete relationship following an acquired impairment. The purpose of this study was based on the following research questions:

1. What coaching characteristics can influence the coach-athlete relationship of wheelchair basketball athletes?
2. What coaching behaviours contribute to a positive coach-athlete relationship?
3. What coaching behaviours are detrimental to the coach athlete relationship?
4. What coaching styles are preferred by athletes who have an acquired impairment in a context of team sports?

### ***Significance of the Study***

Following a trauma, athletes with an acquired impairment experience physical and psychological challenges requiring a period of transition/adaptation from abled-bodied to non abled-bodied (Day, 2013). Despite the increase of empirical research in parasport, the parasport

coaching literature has largely ignored many of the distinctions (e.g., transition/adaptation) that are a part of coaching athletes with an acquired impairment (e.g., Bentzen et al., 2021; Tawse et al., 2012). Moreover, the perceptions of parasport athletes with an acquired impairment appears to be absent from the scientific literature as far as best coaching practices.

In Canada, the Coaching Association of Canada created ‘*Coaching Athletes with a Disability*’ e-learning module that offers information regarding the benefits of parasport, as well as insights for creating safe and inclusive environments for parasport athletes (Coaching Association of Canada, 2017). However, the e-learning module has yet to provide guidance, strategies, and/or coaching practices for helping athletes transitioning into parasport. This lack of information is problematic as it forces coaches to rely on informal learning opportunities that may not contain accurate or best coaching practices (Douglas et al., 2018; Fairhurst et al., 2017; McMaster et al., 2012). Therefore, the results of the current study developed our knowledge regarding coaching athletes with an acquired impairment which may provide coaches with strategies and behaviours that could facilitate the athletes’ transition/adaptation process. Given the importance of effective coaching behaviours and strategies, the results may provide information about effective coaching practices and the parasport coach-athlete relationship. In turn, this will enhance our knowledge regarding the parasport coach-athlete relationship.

### ***Delimitations***

The following delimitations were identified for the present study:

1. Participants will have an acquired impairment for at least one year.
2. Participants will be elite wheelchair basketball athletes (currently competing at the provincial or national level).
3. Participants will be either female or male parasport athletes over the age of 18.

### ***Limitations***

The following limitations were identified:

1. The results may only be applicable for elite wheelchair basketball athletes.
2. These results will only demonstrate parasport athletes' perceptions of the coach-athlete relationship, thus the parasport coaches' perceptions are not included.
3. Results will be limited by the abilities of parasport athletes to recall events or their experiences. In the context of the present study, experiences will be specifically related to the parasport athletes' involvement in sport following an acquired impairment.

### ***Operational Definitions***

Following the purpose of the research, the following definitions will be used:

**Parasport.** A sport or a physical activity designed for individuals with a physical impairment (e.g., wheelchair basketball). This includes adapted equipment and rules to ensure an equal playing ground for all participants with an impairment (Crawford et al., 2014).

**Parasport Athlete.** Athletes with an impairment competing in parasport (e.g., provincial level; Crawford et al., 2014).

**Parasport Coaches.** Individuals who provide instructions, training, personal support, and teach sport specific skills to athletes with an impairment. More specifically, parasport coaches are important figures for developing a parasport athlete competing either individually or in a parasport team, on a personal and athletic level (e.g., Cregan et al., 2007, Tawse et al., 2012).

**Physical Impairment.** A physical impairment refers to a decrease in a person's functional abilities resulting in a loss of independence in performing daily activities (e.g.,



walking; Handicaps Welfare Association, 2020). There are congenital/hereditary and acquired impairment. Congenital/hereditary impairment refers to a person who was born with a physical impairment (e.g., genetic disorder; Handicaps Welfare Association, 2020). Alternatively, acquired impairment refers to an individual who acquired an impairment at some point in their life due to a trauma or accident (e.g., car accident; Handicaps Welfare Association, 2020).

**Spinal Cord Injury.** Spinal cord injury is defined as a damage to the spinal cord due to a trauma (e.g., sport injuries) or a disease (e.g., cancer; World Health Organization, 2013). The symptoms associated with this acquired impairment depends on the location of the spinal cord injury and therefore, may be temporary or permanent. The symptoms vary from loss of motor control of the arms, legs, and body, to higher functional problems including difficulty with bladder control and heart rate (World Health Organization, 2013).

## Chapter 2

### Literature Review

This chapter will entail two main sections. The first section will introduce the topic of coach-athlete relationship and the elements affecting the quality of this relationship. Moving forward, the second section will address parasport coaching and the different elements influencing both parasport coaches' and athletes' environments. Additionally, the parasport coaching section will highlight effective coaching behaviours contributing to parasport athletes' development.

#### *Coach-Athlete Relationship*

The coach-athlete relationship is an important pillar for athletic performance and psychological well-being (Jowett & Poczwardowski, 2007). This dyadic relationship is greatly enhanced by effective coaching practices rather than the personal characteristics of the athlete or sport performance (Jowett, 2005). Preserving an effective coach-athlete relationship leads to positive outcomes, such as development of the self and partnership for both coaches and athletes (Jowett & Poczwardowski, 2007). To further explore the coach-athlete relationship, this section conceptualizes this relationship and provides examples of effective and ineffective coaching practices.

**3+1Cs Model.** Coach-athlete relationship is defined as thoughts, feelings, and behaviours between coaches and athletes that are interdependent and interrelated (Jowett & Poczardowski, 2007). This dyadic relationship has been operationalized using different theoretical frameworks, including the 3 + 1Cs model introduced by Jowett (2007). The initial idea of this model came from the interdependence theory that was created by Thibaut and Kelley (1959) and further developed by Kelley and Thibaut (1978). Interdependence theory explores the process by which

people influence one another by the course of their interactions (Jowett, 2007). Jowett (2007) applies interdependence theory in a sport setting to show how interdependence is a key component of the coach-athlete relationship for several reasons, including helping coaches and athletes shape their belief and actions as well as influencing the conscious process of both coaches and athletes. Jowett (2007) argues that interactions occur within an interdependent context, such as training and practice. In these circumstances, coaches and athletes communicate their thought processes and emotions, and consequently, influence one another on a personal level (e.g., decision making) (Jowett, 2007). Therefore, interdependence of the coach-athlete relationship shapes the self, thought processes, and behaviours. Jowett (2007) included this theory within her 3+1Cs model as a way of demonstrating the interdependence as well as the interrelation occurring within the coach-athlete relationship.

The 3+1Cs model was initially conceptualized with three Cs of closeness, commitment, and complementarity (Jowett, 2007). Closeness refers to the affective component of the coach-athlete relationship and is felt through mutual trust and respect between coaches and athletes (Jowett, 2007). Commitment represents the cognitive element of the relationship and involves shared thoughts of attachment and the will of maintaining the relationship over time (Jowett, 2007). Complementarity is the behaviour component and refers to the level of cooperation between the coach and the athlete (Jowett, 2007). Indeed, studies have demonstrated that the level of closeness, commitment, and complementarity influence the level of satisfaction for both coaches and athletes (Jowett, 2007). For example, Jowett and Meek (2000) showed that higher levels of closeness, commitment, and complementarity were related to higher athletic and personal well-being for all participants. Additionally, Adie and Jowett (2010) surveyed 194 athletes about the quality of the relationship with their coaches based on the 3Cs. Results showed

that athletes who scored higher on the three different constructs were more likely to engage in a mastery-approach goal which in turn, led to a higher level of intrinsic motivation. Thus, coaches and athletes that share mutual feelings of trust, feelings of attachment, and engage in co-operation will most likely experience athletic progress and personal growth (Jowett & Cockerill, 2003).

The construct co-orientation was later added to help assess the quality of the coach-athlete relationship, resulting in the 3 + 1Cs model (Hackfort et al., 2019). Co-orientation is defined as perceived goals, knowledge, and interests that are shared between coaches and athletes regarding the 3Cs (Hackfort et al., 2019). Following the principles of interdependence theory, Jowett (2007) argues that co-orientation can be assessed through the level of interdependence between the three different constructs of closeness, commitment, and complementarity. Previous studies (Adie & Jowett, 2010; Jowett, 2005) illustrated that closeness, commitment, and complementarity can be depicted from a direct perspective, a metaperspective, or both. A direct perspective refers to an individual's view on the three constructs regarding the other member (Jowett, 2007). Some thoughts such as "I care about my coach" or "I have confidence in my coach", demonstrates a high level of closeness from an athlete's perspective (Jowett, 2007). On another note, a metaperspective refers to the ability of perceiving other's level of closeness, complementarity, and commitment, within their regards (Jowett, 2007). For instance, an athlete could perceive his/her coach's high level of closeness by using sentences such as "My coach has confidence in me" or "My coach cares about me" (Jowett, 2007). Jowett (2009) aimed to establish a connection between the 3Cs (commitment, complementarity, closeness) and the quality of coach-athlete relationships by verifying direct and meta-perspective of 192 student-athletes using the Coach-Athlete Relationship Questionnaire (CART-Q). Results

demonstrated that the 3Cs predicted the perceived value of the relationship, perceived support, as well as the level of disagreement between coaches and athletes. Thus, this dyadic relationship and the 3+1Cs construct can be integrated within a larger theoretical framework of interdependence theory and has demonstrated to be an efficient tool at assessing positive and negative coach-athlete relationships (Jowett, 2007).

**Positive Coach-Athlete Relationship.** A positive coach-athlete relationship is defined as a situation where coaches and athletes share high levels of closeness, commitment, and complementarity (Jowett, 2007). More specifically, a positive coach-athlete relationship has been essential for both athletic (e.g., improvement in sport) and personal (e.g., increase in self-confidence) development (Adie & Jowett, 2010; Jowett, 2008; Jowett & Meek, 2000; Jowett & Poczwadowski, 2007). For instance, the strong and trusting bond between swim coach Bob Bowman was undoubtedly an important agent in Phelps' athletic achievement of twenty-three Olympic medals. Bowman's role went above and beyond the sporting environment as he also acted as a friend, a counsellor, and role model to Phelps (Ruane, 2004). Likewise, Phelps called Bowman a member of his family (Ruane, 2004). This interpersonal relationship, characterized not only by athletic achievement but also by mutual appreciation, trust, friendship, and cooperation, aligns with the characteristics of an effective coach-athlete relationship. To further explore the impact of a coach-athlete relationship, Jowett and Cockerill (2003) interviewed 12 Olympic medalists and found that coaches who adopted an athlete-centered approach shared mutual feelings of cooperation, loyalty, and respect. The authors therefore identified these characteristics as markers for athletic success and well-being.

Empirical evidence has demonstrated the importance of a positive coach-athlete relationship (Adie & Jowett, 2010; Davis et al., 2018; Jowett, 2008; Jowett & Meek, 2000). In

fact, when coaches adopted an athlete-centered approach, athletes reported a higher level of self-concept (Jowett, 2008), satisfaction, self-esteem, and self-perception (Jowett & Meek, 2000). Adie and Jowett (2010) assessed athletes' meta-perceptions of 194 British track-and-field athletes competing in University Athletics Clubs regarding their coach-athlete relationship, approach- and avoidance- achievement goals, and intrinsic motivation. The authors demonstrated that athletes who perceived their coaches as being committed, respectful, and readily available reported engaging in mastery-goal approaches as well as experiencing higher levels of intrinsic motivation. Building from this research, Davis et al. (2018) used the CART-Q questionnaire to survey 82 university athletes to assess the correlation between effective coach-athlete relationships and factors pertaining to athlete performance, specifically, cognitive performance, physical performance, and athlete exhaustion. Although the results revealed no association between effective coach-athlete relationships and physical performance on a running task, healthy coach-athlete relationships were associated with an increase in cognitive performance, a lower level of anxiety, as well as a lower level of exhaustion for athletes. Furthermore, other findings have indicated that effective and healthy coach-athlete relationships have led to a higher level of ambition (Moen et al., 2018) and motivation (Jackson et al., 2009) among elite athletes. In sum, high levels of dependence between coaches and athletes does not only lead to athletic improvement and success, but also contributes to athletes' well-being and development of personal and social competencies (Jowett & Meek, 2000).

**Negative Coach-Athlete Relationship.** A negative coach-athlete relationship occurs when coaches and athletes share low levels of interdependence within the three different constructs of closeness, commitment, and complementarity (Jowett, 2007). Characterized as being ineffective and unsuccessful, negative coach-athlete relationships are associated with

negative psychological effects, such as irritation, loneliness, unhappiness, and hopelessness (Jowett & Poczardowski, 2007). These psychological disturbances can be detrimental to athletes' and coaches' personal and athletic development (Jowett & Poczardowski, 2007). Jowett and Carpenter (2015) surveyed 15 coaches and 15 athletes performing at different levels (university, regional, national, and international) to investigate interpersonal behaviours that governed coach-athlete relationships. Among the findings, authors discussed behaviours occurring between coaches and athletes associated with poor coach-athlete relationships. More specifically, athletes reported that yelling, ignorance, overtraining, using sarcasm, avoiding open dialogue, humiliation, intimidation, and embarrassment, were associated with negative coach-athlete relationships which undermined their athletic development. To that end, coaches mentioned that lack of commitment, fooling around, disrespect, and poor attitude from athletes were behaviours that they associated with conflictual relationships.

Negative coach-athlete relationship is damaging for both coach's and athlete's happiness, motivation, and performance success (e.g., Blanchard et al., 2009; Jowett 2007). More specifically, the literature revealed that poor coach-athlete relationship influenced athletes' physical and mental preparation for the Olympics (Gould et al., 1999), their levels of autonomy (Blanchard et al., 2009), rate of burnout (Isoard-Gautheur et al., 2016), levels of frustration (Rocchi & Pelletier, 2018), as well as athletic satisfaction (Kassing & Infante, 2009). Indeed, Gould et al. (1999) explored Olympic athletes' preparation for the Atlanta Olympics. Among the findings, athletes identified that lack of confidence, lack of respect, lack of experience, as well as poor communication were detrimental to their preparation for the games and their achievement of a medal. Furthermore, Blanchard et al. (2009) assessed coaching controlling behaviours from 207 athletes' who were participating in an college basketball league in Canada. Perceived

controlling behaviours were found to result in a decrease in autonomy, consequently altering an athlete's personal development. Additional empirical evidence demonstrated that poor coach-athlete relationships were associated with a higher rate of burn-out for athletes (Isoard-Gautheur et al., 2016), higher level of frustration (Rocchi & Pelletier, 2018), as well as a lower level of satisfaction, which in turn, altered athletic performance (Kassing & Infante, 2009). Taken together, the literature demonstrated that negative coach-athlete relationship leads to a state of indifference, contempt and dissatisfaction, which altered the degree of interdependence between coaches and athletes (Jowett, 2007).

To date, the coaching literature has mainly focused on studying coach-athlete relationships from the perspective of non-marginalized populations. Although limited in nature, researcher have begun to study the coach-athlete relationship from the perspective of underrepresented populations, including but not limited to racial (see Jowett & Frost, 2007), gender (see Murugeesan & Hasan, 2016), sexual (see Cunningham, 2012), and disabled (see Alexander et al., 2020) populations. Despite the increase of academic interest in coach-athlete relationships among underrepresented populations, it is beyond the scope of this paper to address each of the aforementioned dyads. However, given the purpose of this study is to examine the coach-athlete relationship in the parasport context, the next section will focus on addressing this gap in the literature.

### ***Parasport Coaching***

Parasport coaching plays an important role in parasport athletes' personal and athletic development (e.g., Alexander et al., 2020; Banack et al., 2011; Cregan et al., 2007; Culver & Werthner, 2018; Kean et al., 2017; Santos et al., 2018; Tawse et al., 2012). In fact, not only does effective parasport coaching lead to improved athletic performance, but also results in higher



levels of parasport athlete confidence, knowledge, and independence (Alexander et al., 2020). Although coaching parasport athletes may be similar in many ways to coaching able-bodied athletes, many contextual differences related to the coaching environment have been observed (Cregan et al., 2007). Therefore, the following section will demonstrate the different characteristics of the parasport coaches' environment, parasport athletes' environment, as well as effective parasport coaches' behaviours.

**Parasport Coaches' Environment.** The increased volume of parasport participants can be explained by the improvement of parasport literature, an enhanced classification system, a higher quality of technology, and an enhanced quality of training of parasport athletes (Mauerberg-deCastro et al., 2016). Specifically related to the quality of parasport athletes' training, coaches play an important role in creating an environment that provides parasport athletes with the opportunity to develop on a personal and sporting level (Cregan et al., 2007; Santos et al., 2018; Tawse et al., 2012). Despite the increase of athletes participating in parasport, the number of effective parasport coaches remains relatively low (Mauerberg-deCastro et al., 2016). This could in part be due to the number of barriers that parasport coaches face on a regular basis (Wareham et al., 2019).

Parasport coaches often encounter environmental and social barriers that can be detrimental to their coaching development (Duarte et al., 2020; Misener et al., 2016; Patatas et al., 2018; Taylor, Werthner & Culver, 2014; Válková et al., 2017; Wareham et al., 2017; Wareham et al., 2019). More specifically, parasport coaches must deal with discrepancies regarding the amount of funding (Patatas et al., 2018; Válková et al., 2017), accessibility to training resources (Wareham et al., 2017), as well as availability of support staff (Taylor et al., 2014) in comparison to coaches of abled-bodied athletes. These challenges have often been

attributed to the predominant ideology of how impairment is socially constructed within the society (Misener et al., 2016). More specifically, there is a common belief that people with an impairment are less competent (Rohmer & Louvet, 2012) and physically weaker (Ysasi et al., 2018) in comparison to people without an impairment.

Indeed, Wareham et al. (2017) interviewed 12 parasport coaches from various sports (e.g., wheelchair basketball, equestrian sport, swimming) to explore their holistic experience, including the rewards and challenges associated with parasport coaching. Parasport coaches discussed the presence of prejudice in parasport coaching. The common belief that coaching parasport athletes was highlighted as detrimental to the reputation of a coach from an outside perspective. More specifically, parasport coaching was viewed as a charitable act rather than an elite vocation by coaches of elite athletes without an impairment. One of the parasport coaches mentioned, "...the way that it was presented was that only nice people would do that. So you know, hard-nosed, ambitious coaches weren't going to do coaching with disabilities, nice people do that" (p. 1191). Similar findings were obtained by Wareham et al. (2019) who interviewed 10 Australian administrators and policymakers to investigate aspects affecting recruitment and retention of elite parasport coaches. Among the findings, participants mentioned that having the need to acquire parasport specific knowledge (e.g., adaptation to sport equipment) discouraged potential coaches to become involved in parasport coaching. Additionally, elite parasport coaches revealed that factors such as lack of prestige (e.g., 'sub-elite' of able-bodied sport), stigma, discrimination, and lack of funding discouraged them from committing to parasport coaching. Consequently, this negatively affected administrators' and policymakers' ability to recruit effective parasport coaches. Taken together, these two studies highlighted the limited

environmental and social resources available to parasport coaches as well as the discernable inequities between parasport and non-parasport coaches (Wareham et al., 2019).

In addition to the environmental and social barriers, effective parasport coaches have reported extra responsibilities that were unrelated to their head coaching position (Cregan et al., 2007; Tawse et al., 2012; McMaster et al., 2012; Taylor et al., 2014; Wareham et al., 2017). Research has shown that parasport head coaches take on the role of assistant coach (McMaster et al., 2012) while also serving as emotional support for parasport athletes to ensure their development (Wareham et al., 2017). According to Wareham et al. (2017), parasport athletes also experience difficult emotions due to their impairment that are unique to parasport, such as frustration of being forced out of able-bodied competition due to injury. Due to these emotional challenges, it has been argued that social support is an important factor within a parasport environment as it enhances the quality of the coach-athlete relationship, quality of experience, and decreases the level of stress for parasport athletes (Alexander et al., 2020). Therefore, it is vital for parasport coaches to support athletes on an emotional level to create a supportive environment (Alexander et al., 2020; Santos et al., 2018).

Research has shown that providing emotional support is only one of many responsibilities related to coaching parasport (Cregan et al., 2007; McMaster et al., 2012; Santos et al., 2018; Tawse et al., 2012; Taylor et al., 2014). Taylor et al. (2014) conducted a case study exploring the learning and development of an elite Canadian parasport coach. Among the findings, the participant discussed the expectation of having to fill several roles such as being a fundraiser, mechanic, manager, recruiter, nutritionist, trainer, prosthetics specialist, and a coach for a variety of athletic classifications (e.g., visually impaired, athletes with cognitive impairment, paraplegic). Tawse et al. (2012) found similar results where parasport coaches highlighted their

involvement in running local and regional programs to promote parasport development while being a full-time head coach. Therefore, it is argued that the extensive responsibilities of a parasport coach are in part due to the lack of resources (e.g., funding, parasport coaches, accessibility), resulting in a decreased availability to invest time in their athletes or attend formal learning workshops (Taylor et al., 2014).

Parasport coaches reported the importance of having access to formal learning opportunities (e.g., online classes and seminars) contributing to parasport coaches' knowledge (Bentzen et al., 2021; Douglas et al., 2018; Duarte & Culver, 2014; McMaster et al., 2012; Taylor et al., 2014). Bentzen et al. (2021) conducted a scoping review to provide an overview of the parasport coaching literature. Although the authors found the presence of many formal learning opportunities for parasport coaches, including an online program called *Coaching Para-Sport: An Introductory Programme* (International Paralympic Committee, 2015), parasport coaches reported the need for additional formal-learning opportunities to become available (McMaster et al., 2012). In fact, parasport coaches argued that formal education is often expensive (Duarte et al., 2020) and lacks accessibility (Bentzen et al., 2021). As a result, coaches are requesting more inclusive courses where information about parasport, impairments, and classification is offered and thus enabling them to acquire in-depth knowledge specifically related to parasport coaching (McMaster et al., 2012).

Due to the lack of formal-learning education programs, parasport coaches identified non-formal learning opportunities as their primary source of knowledge (Douglas et al., 2018, Duarte & Culver, 2014; Fairhurst et al., 2017; McMaster et al., 2012). Duarte and Culver (2014) investigated the experience of an adaptive Canadian sailing coach, Jenny, using narrative inquiry. The participant highlighted the difficulty of accessing information regarding parasport

coaching, forcing her to rely on non-formal learning opportunities, such as learning from colleagues, athletes, and mentors. Mentor-mentee relationships have been considered essential in parasport coaching due to their important implication in facilitating learning for parasport coaches (see Duarte et al., 2020; Fairhurst et al., 2017; Lepage et al., 2020; McMaster et al., 2021; Tawse et al., 2012). In fact, Fairhurst et al. (2017) interviewed six elite Paralympic coaches to investigate their learning and educational experiences. Participants reported learning about technical skills, effective planning, and impairment-specific knowledge from their respective mentors due to the lack of formal learning opportunities. These results are in line with Lepage et al. (2020) who found that unstructured learning opportunities including learning from mentors, communities of practice, trial and error, and the Internet (e.g., YouTube videos), were dominant sources of information for parasport youth coaches to acquire effective coaching knowledge. Therefore, the current literature shows that the lack of formal learning opportunities forces parasport coaches to develop knowledge using trial and error, mentors, and other parasport athletes (Fairhurst et al., 2017). Although parasport coaches rely mainly on non-formal learning opportunities, more effort should be invested in creating a parasport coaching certification to facilitate the acquisition of parasport coach knowledge (Duarte et al., 2020; McMaster et al., 2012).

Taken together, parasport coaches' environment includes many physical (e.g., lack of accessibility) and social (e.g., discrimination) barriers, which may influence the quality of parasport coaching (Patatas et al., 2018; Taylor et al., 2014; Wareham et al., 2017; Wareham et al., 2019). In fact, the current lack of resources affects the amount of responsibilities that parasport coaches encounter (Tawse et al., 2012) and the accessibility of formal learning opportunities (McMaster et al., 2012). Nevertheless, many parasport coaches managed to

overcome these challenges and ensure the development of their parasport athletes by creating a supportive and competitive environment (Cregan et al., 2007; Lepage et al., 2020; Tawse et al., 2012). Interestingly, research has shown the necessity of providing an optimal environment for parasport athletes as it is associated with higher levels of confidence (Alexander et al., 2020), commitment (Tawse et al., 2012), motivation and well-being (Page et al., 2001).

**Parasport Athletes' Environment.** Athletic performance of parasport athletes have been affected by their physical and social environment (Campbell & Jones, 2002; Cregan et al., 2007; Evans et al., 2018; Jaarsma et al., 2014; Kean et al., 2017; Patatas et al., 2018; Patatas et al., 2020; Santos et al., 2018). Kean et al. (2017) explored the social and physical environment using a multiple case study to compare an Australian and an American wheelchair basketball programme. Among the findings, participants identified the high cost of specialized equipment (e.g., wheelchair) to be problematic as it made quality parasport equipment difficult to access even though it was essential for parasport athletes. As a result, this inaccessibility to suitable material resulted in lower athlete performance. Furthermore, Jaarsma et al. (2014) surveyed 76 Dutch Paralympic athletes to explore the barriers and facilitators of sport participation. In addition to the financial barriers, parasport athletes identified factors that were considered detrimental to their development including having poor access to transportation, as well as a lack of disabled-friendly facilities in their neighbourhood. The athletes argued that the aforementioned barriers promoted exclusive environments separating parasport and non-parasport athletes (Jaarsma et al., 2014).

Despite the physical and social barriers, studies have shown that parasport athletes benefitted from a supportive environment, both on a personal and athletic level (Cregan et al., 2007; Hammer et al., 2019; Kean et al., 2017; Patatas et al., 2020; Santos et al., 2018; Stapleton

et al., 2016; Tawse et al., 2012). In fact, studies from parasport athletes have found that developing a close relationship with their coaches facilitated their personal and athletic development (e.g., Alexander et al., 2020; Culver & Werthner, 2018; Hammer et al., 2019; Santos et al., 2018). Additionally, social support outside the sporting context (e.g., family, romantic partners, health care professionals) has also been identified as a crucial component for parasport development (e.g., Cregan et al., 2007; Kean et al., 2017). For instance, parasport athletes discussed the importance of parental support with regards to transportation, motivation, and financial assistance (Kean et al., 2017). Similarly, Tawse et al. (2012) found that parents, volunteers, and an Integrated Support Team (IST) (e.g., nutritionist, sport psychologist, physiotherapist) facilitated the holistic development of parasport athletes with a spinal cord injury by providing support on a nutritional, rehabilitation, and training level. Therefore, parents and IST are key agents as they encourage and support parasport athletes to surpass themselves and reach a higher level of athletic performance (Tawse et al., 2012).

Additionally, peer support has shown to be an important factor contributing to parasport athlete experience (Crawford et al., 2014; Hammer et al., 2019; Stapleton et al., 2016; Tawse et al., 2012). In a study by Crawford et al. (2014), parasport athletes highlighted that peer interaction not only improved parasport athletes' knowledge regarding their impairment, but also enhanced their feeling of belonging within the parasport community. Indeed, Hammer et al. (2019) found that parasport athletes with an acquired impairment stressed the importance of peer support as it created a strong feeling of relatedness within their parasport community contributing to their personal growth. Furthermore, using the Social Cognitive Theory as a framework, Stapleton et al. (2016) surveyed 95 parasport athletes to explore the factors behind higher (e.g., national/international) versus lower (e.g., recreational/regional) level of sport

participation. Although no significance was found between self-regulatory efficacy and level of sport participation, results showed that a higher level of peer support (e.g., helping a teammate) led to a higher level of self-regulatory efficacy (e.g., higher level of confidence) which in turn, was positively associated with positive outcomes (e.g., higher level of satisfaction) and self-regulation (e.g., intention and planning). Therefore, parasport athletes identified peer support as an important component for knowledge acquisition, enhancing feelings of belonging, and creating long lasting and meaningful relationships with other parasport athletes (Crawford et al., 2014).

Although social support is essential within the parasport athlete environment (e.g., Hammer et al., 2019; Santos et al., 2018), parasport athletes highlighted the importance of having an environment that is physically demanding, challenging, and highly competitive (Allan et al., 2018; Crawford et al., 2014; Evans et al., 2018; Robbins et al., 2010; Tawse et al., 2012). As such, research has highlighted the importance of parasport coaches creating a high-performance environment by including a high set of expectations (Robbins et al., 2010; Tawse et al., 2012). Specifically, it encourages athletes to surpass themselves on a personal and athletic level (Tawse et al., 2012) and enhances athletic identity (Allan et al., 2018). Additionally, Crawford et al. (2014) found that when immersed in a challenging environment, parasport athletes accepted their injury better and developed a new sense of self. Therefore, parasport athletes benefit from a physically demanding environment as it allows them to venture outside of their comfort zone enabling them to achieve their full potential (Robbins et al., 2010; Tawse et al., 2012).

Taken together, it has been established that parasport athletes face many physical and social barriers that can impede athletic performance (Kean et al., 2017). Although coaches were



identified as important agents in helping parasport athletes achieve their potential (Cregan et al., 2007; Santos et al., 2018), other external agents such as peer support (Crawford et al., 2014; Hammer et al., 2019), family, and IST were also essential within the parasport athlete environment (Tawse et al., 2012). Additionally, parasport coaches stressed the importance of having a challenging environment since it contributed to the attainment of parasport athlete potential (Tawse et al., 2012). Indeed, a challenging and ideal parasport athlete environment can be developed and maintained through the consistent application of effective parasport coaching practices (Tawse et al., 2012).

**Effective Parasport Coaching.** The parasport literature has identified effective coaching strategies and behaviours (Alexander et al., 2020; Banack et al., 2011; Cheon et al., 2015; Cregan et al., 2007; Culver & Werthner, 2018; Douglas et al., 2018; Martin & Whalen, 2014; Tawse et al., 2012). More specifically, these effective coaching strategies have resulted in enhanced levels of satisfaction, motivation, cohesion, and confidence in parasport athletes (Martin & Whalen, 2014). Among the multiple effective parasport coaching strategies and behaviours identified in the literature, this section will focus on aspects of autonomy, independence, creativity, and team dynamics (Alexander & Bloom, 2020).

First, the importance of implementing autonomy-supportive behaviours have been acknowledged in the coaching literature (Gillet et al., 2010; Solberg & Halvari, 2009). Indeed, elite abled-bodied athletes said that autonomy-supportive behaviours were essential for enhancing their intrinsic motivation and facilitating their athletic performance (Gillet et al., 2010). The significance of implementing autonomy-supportive strategies was also identified by parasport athletes as an important factor of their growth and development (Banack et al., 2011; Cheon et al., 2015; Crawford et al., 2014). Based on the principles of the Self-Determination-

Theory, Banack et al. (2011) surveyed 113 Canadian Paralympic athletes to explore the relationship between autonomy-supportive coaching behaviours (e.g., providing athletes with choices), basic psychological needs (e.g., competence), and intrinsic motivation (e.g., sport enjoyment). Results demonstrated that autonomy-supportive coaching behaviours enhanced parasport athletes' autonomy and relatedness, consequently improving parasport coach-athlete relationships. Additionally, parasport athletes' perceptions of coach autonomy and competence were related to higher levels of intrinsic motivation (Banack et al., 2011). In terms of performance, Cheon et al. (2015) surveyed 33 Korean coaches and 64 Korean athletes to explore the benefits of implementing autonomy-supportive behaviours. The participants were randomly assigned to either the experimental (autonomy-supportive intervention program) or control (no intervention) group. Results indicated a higher level of athletic performance for parasport athletes in the autonomy-supportive group (e.g., winning more Olympic medals) in comparison to the control group. Indeed, parasport athletes who perceived their coaches as controlling (control group) reported lower levels of motivation and engagement. To summarize, parasport coaches employing autonomy-supportive behaviours facilitated parasport athlete motivation (Banack et al., 2011), engagement, and performance (Cheon et al., 2015).

Second, the coaching literature has identified the importance of adopting a holistic approach when coaching abled-bodied athletes as it led to enhanced personal (e.g., increase of independence) and athletic development (e.g., improvement of athletic skills; Falcão et al., 2017; Falcão et al., 2019; Vallée & Bloom, 2005; Vallée & Bloom, 2016). Specific to parasport, developing athlete independence (e.g., teaching them how to manually use a wheelchair) has been identified as an effective and important strategy (Allan et al., 2018; Crawford et al., 2014; Tawse, et al., 2012; Válková et al., 2017). Allan et al. (2018) interviewed 21 current or former

athletes with an impairment to explore the meanings behind their participation in parasport. Among the results, parasport athletes identified participation in parasport as an important feature in developing independence and enhancing the quality of their parasport experience. In fact, results suggested that acquiring independence provided parasport athletes with the ability and freedom to live self-sufficiently (e.g., maneuvering around by themselves) with a sense of purpose. In addition to personal growth (Tawse et al., 2012), Crawford et al. (2014) demonstrated that participation in parasport improved parasport athletes' strength and endurance. Consequently, parasport athletes reported an increase of independence and positive psychological states (e.g., enhanced clarity and perception of life, lower level of anxiety). Therefore, fostering parasport athlete independence is a valuable and effective strategy to improve athletes' functioning (e.g., bladder management, learning how to use a wheelchair; Tawse et al., 2012), as well as their levels of fitness, performance, and well-being (Crawford et al., 2014).

Third, research has found the impact of coaches for creating a positive and supportive training environment for athletes (Côté et al., 1995; Sullivan et al., 2012). Specific to abled-bodied sport, coaches stressed the importance of building a structured, competitive, and challenging training environment involving creative drills to facilitate athletes' motivation (Côté & Sedgwick, 2003). Although limited within the abled-bodied coaching literature, creativity has been identified as an important strategy of effective parasport coaching (Alexander et al., 2020; Arnold et al., 2017; Cregan et al., 2007; Culver & Werthner, 2018). Alexander et al. (2020) interviewed eight female parasport athletes to explore effective and ineffective parasport coaching practices. Among the results, participants discussed the importance of having parasport coaches that were open-minded, thought creatively, and adapted to their impairment. Similarly,

Culver and Werthner (2018) found specific coaching characteristics associated with effective coaching practices including being imaginative and creating inventive drills. Notwithstanding the limited resources of parasport coaching, it is vital for parasport coaches to have sport specific knowledge (Patatas et al., 2020) and use creativity to ensure an optimal environment for parasport athletes (Cregan et al., 2007). Indeed, failure to provide an effective and inventive training environment leads to higher a level of stress for parasport athletes (Arnold et al., 2017). Therefore, creativity, innovation, and adaptation are essential strategies of effective parasport coaching as it optimizes parasport athletes' satisfaction and athletic performance (Alexander et al., 2020).

Lastly, the coaching literature demonstrated the importance of athlete leadership (Cotterill & Fransen, 2016) and coaching leadership (Lefebvre et al., 2021) in facilitating task and social team cohesion (Price & Weiss, 2013). Specific to abled-bodied sports team, Filho et al. (2015) found that social and task cohesion were essential for enhancing athlete communication. Consequently, it was suggested that having a high level of team cohesion contributed to the development of team dynamics. The important strategy of developing team dynamics has also been acknowledged within the parasport coaching literature (Alexander & Bloom, 2020; Allan et al., 2020; Campbell & Jones, 2002; Caron et al., 2016; Falcão et al., 2015; Tawse et al., 2012). Caron et al. (2016) interviewed 10 parasport team leaders to explore leadership and team cohesion. Parasport athletes reported the importance of creating a dynamic environment by motivating, supporting, and communicating with teammates. As such, participants were key players in enhancing team's task and social cohesion by organizing social gatherings outside of practices and encouraging socialization between players. Characterized as team building, both parasport coaches and athletes have identified the importance of organizing

social events for enhancing team cohesion (Allan et al., 2020; Campbell & Jones, 2002; Falcão et al. 2015). Falcão et al. (2015) explored the perceptions of seven parasport coaches regarding team cohesion. Participants revealed the importance of using different techniques and strategies to enhance team dynamics such as team bonding, goal setting, and effective communication with parasport athletes. The importance of communication was also highlighted in a study by Campbell and Jones (2002), who demonstrated that ineffective communication between parasport coaches and athletes decreased team dynamics. Consequently, low levels of team dynamics were associated with an increased of team conflict and therefore, higher levels of stress for parasport athletes (Campbell & Jones, 2002). In sum, it is crucial for parasport coaches to develop a positive team dynamic as it contributes to social and task cohesion (Caron et al., 2016) and athletic performance (Campbell & Jones, 2002).

### ***Conclusion***

In conclusion, parasport athletes and parasport coaches encounter many social (e.g., exclusion; Patatas et al., 2018; Taylor et al., 2014; Wareham et al., 2017; Wareham et al., 2019) and physical (expensive cost of equipment; Cregan et al., 2007; Evans et al., 2018; Jaarsma, et al., 2014; Kean et al., 2017; Patatas et al., 2018) barriers impacting athletic performance. Despite these challenges, the importance of quality coaching (Cregan et al., 2007), peer support (Crawford et al., 2014; Hammer et al., 2019), and external support (e.g., family; Lepage et al., 2020), have been identified as important factors that can enhance the quality of the parasport experience. This thesis will focus on the value and benefits of the coaching strategies and behaviours for enhancing the success of parasport athletes, and particularly those living with an acquired impairment. Specifically, this thesis will aim to investigate the impact of parasport

coach-athlete relationship regarding wheelchair basketball athletes' who became involved into parasport following an acquired impairment.

### Chapter 3

#### Methods

Qualitative research involves a subjective and naturalistic interpretation of the world (Denzin & Lincoln, 2011). Qualitative research relies on researchers' interpretative practices to analyze the data with the aim of understanding the meanings behind human lived experiences (Denzin & Lincoln, 2011). Considering the diversity and complexity of qualitative research, this chapter will present a description of the chosen qualitative methods and methodology to address the research questions of the current study.

#### *Philosophical Assumptions*

Philosophical assumptions underlie the researchers' worldview and belief regarding the nature of knowledge (Guba & Lincoln, 1994). From a qualitative perspective, individuals construct their meanings and beliefs from interacting with the external world (e.g., socialization; Sparkes & Smith, 2014; Sperka, 2019). Through this constant interaction, people develop a basic belief system regarding the nature of reality (ontology) and knowledge (epistemology) which determines the way a research question phenomenon is framed (Sperka, 2019). Following the principles of qualitative research (Guba & Lincoln, 2014), the present study followed a *constructivism paradigm*. *Constructivism* aims to understand the creation of meanings behind a human's lived experiences (Poucher et al., 2020; Sparkes & Smith, 2014). According to Guba and Lincoln (1994), a *constructivism paradigm* embraces the beliefs that people construct the world around them through experiences and social interactions. These interpretations vary from time to circumstances, meaning that they are not stable and depend on the individual, time, and context (Sparkes & Smith, 2014). In the context of the present study, the *constructivism*

*paradigm* influenced researchers' choices regarding the structure of the research including sample of participants, data collection, and data analysis (Sperka, 2019)

Following the philosophical assumptions of *constructivism*, this research study was guided by the ontological position of *relativism* which endorses multiple realities (Poucher et al., 2020). Indeed, ontology itself refers to the researchers' view about reality, leading to questions such as “what is reality?” regarding human nature (Poucher et al., 2020). Among the various ontological positions available, the *relativist ontological* position believes that it is possible to have many accurate interpretations of the same phenomenon as it is constructed between people and social situations (Guba & Lincoln, 1994). As such, reality is a result of “multiple individual mental constructions about the world, which are shaped through lived experiences” (Poucher et al., 2020, p. 26). Alternatively, epistemology refers to the nature of knowledge landing on a continuum from an *objective* to *subjective* position (Guba & Lincoln, 1994). Based on the philosophical assumptions of *constructivism*, this study followed a *subjective epistemology* recognizing the importance of the interactive process between participants and researchers (Guba & Lincoln, 1994; Poucher et al., 2020). *Subjective epistemology* highlights the inter-dependent relationship between the researcher and the participant, while emphasizing the influence of the researcher's past experiences and personal values in the process of shaping and mediating the content of the study (Poucher et al., 2020; Sparkes & Smith, 2014). Specific to this research, the rationale for this approach was to provide the participants an opportunity to share their experiences regarding their coach-athlete relationship and sport participation following the acquisition of an impairment.



### ***Methodology***

Methodology includes various theories and practices providing information about the potential methods used to conduct research (Braun & Clarke, 2013; Sperka, 2019). Among the various methodologies available in qualitative research (e.g., *phenomenology*, *ethnography*, *narrative research*, etc.), a *case study* was used in the current study. A *case study* allows researchers to collectively study a ‘case’ to capture the essences of the participants’ experiences while increasing knowledge regarding the phenomenon of interest (Sparkes & Smith, 2014). More specifically, it is useful to answer the ‘how’ and ‘why’ questions regarding the phenomenon of interest which can be an individual, an event, a business, and so on (Sparkes & Smith, 2014). Specifically, a *collective case study* was used for the current study as many cases will be analyzed jointly providing the researchers the opportunity to study and understand the phenomenon of interest (Sake, 2005). Consequently, it is argued that a better understanding will lead to an increase of empirical knowledge specific to the case being studied (Sake, 2005). In the context of the present study, the cases included only athletes with an acquired impairment. It is believed that a collective case study will allow researchers to identify the commonalities regarding the experiences of parasport athletes with an acquired impairment.

### ***Participants***

Sampling is a process whereby researchers must make strategic decisions regarding individuals, locations, events, and times relevant to the research question (Sparkes & Smith, 2014). Specific to qualitative research, purposive sampling is mainly used to acquire knowledge regarding a specific individual, population, or setting (Sparkes & Smith, 2014). More specifically, the participants are chosen because they will provide rich and valuable information regarding the phenomenon of interest (Patton, 1990). Purposive sampling is a broad category

underlying fifteen different sampling subsets *including typical case sampling* and *deviant case sampling* (Patton, 1990). For the purpose of this study, a *criterion-based sampling* was used as it aims to “understand cases that are likely to be information-rich because they may reveal major system weaknesses that become targets of opportunity for program or system improvement” (Patton, 1990, p.177). This sampling method requires researchers to establish a set of criteria where participants are chosen due to their defining characteristics that suit the purpose of the study (Patton, 1990). Following the principles of *criterion-based sampling*, this study recruited parasport athletes with an acquired impairment based on a predetermined set of criteria: (a) they acquired their impairment for at least one year, (b) they were current or retired wheelchair basketball athletes, (c) they were currently competing or competed at the provincial or national level, (d) they were male or female parasport athletes over the age of 18. Six participants were recruited for the current study. It is worth noting that at the time of the interviews four athletes had been coached by the same coaches - two by the national coach and two by the provincial coach. The remaining two athletes did not share coaching experiences with any other athletes in the study.

As mentioned above, all the participants were current/retired elite wheelchair basketball athletes. Considered one of the most popular parasports (Robbins et al., 2010), there are hundreds of thousands of people who play wheelchair basketball in over 100 countries all around the world (International Paralympic Committee, 2021). Specific to Canada, there are over 2,500 Canadian athletes, officials, and administrators who are involved in wheelchair basketball (Wheelchair Basketball Canada, 2021a). In fact, Wheelchair Basketball Canada is one of the 105 National Organizations of Wheelchair Basketball (NOWBs) worldwide dedicated to the evolution of wheelchair basketball (International Wheelchair Basketball Federation, n.d.).

Specific to the province of Québec, there are currently 19 wheelchair basketball clubs offering different levels of competition (e.g., Division 1, 2 and 3; Wheelchair Basketball Canada, 2021b). Indeed, wheelchair basketball is known for its inclusiveness as both able- and non-able bodied individuals participate (Spencer-Cavaliere & Peers, 2011). Despite the similarities between wheelchair and stand-up basketball, there are distinct differences between the two sports including the amount of dribbling (e.g., in parasport, only two pushes are allowed when an athlete picks up the ball). In addition to the differences in the rules and regulations, wheelchair basketball follows the classification system designed by the International Wheelchair Basketball Federation (IWBF) with regard to athletes' functional abilities (Wheelchair Basketball Canada, 2021c). Ranging from 1 (low functional ability) to 4.5 (high functional ability), every team is allowed to have a maximum of 14 total points among the five players present on the court (Wheelchair Basketball Canada, 2021c). The purpose of this classification process is to provide an equal playing ground for wheelchair basketball teams (Wheelchair Basketball Canada, 2021c). Therefore, it is essential for parasport coaches to have an in-depth understanding of the classification system to build a successful wheelchair basketball team.

**Procedures.** Prior to the beginning of the interviews, ethics was obtained from the McGill University Research Ethics Board (REB). Once the REB approved the research, the participants were recruited via email through the primary author's personal connection to Parasport Québec. More specifically, Karine Côté, sport director of Parasport Québec, agreed to serve as a gatekeeper for this study and helped us to connect with the possible participants. Her parasport contacts were vast and likely attributed to her active involvement within the parasport community since 2011. Among her well-established career, she was an assistant coach for the Québec wheelchair basketball junior team, which won medals at the Canada Winter Games. In

addition to her coaching experience, she is currently employed as the director of Parasport Québec where she oversees wheelchair basketball, as well as tennis, powerchair soccer, rugby, and curling.

Based on recommendations from Karine Côté, the primary author reached out via email to possible participants (see Appendix A). Participants demonstrating an interest toward the study were provided with a consent form explaining the benefits and risks of the study (see Appendix B). Then, two interviews were scheduled according to participants' preferred time and location. The interviews were audio-recorded and transcribed verbatim. Taking into consideration the COVID-19 pandemic, interviews were conducted through Zoom. Additionally, one pilot interview was conducted allowing the primary researcher to become familiar with the interview process and to help evaluate the effectiveness of the interview guide. Afterwards, the research supervisor provided feedback and recommendations regarding the primary researcher's interview skills and technique. As a result, necessary modifications were implemented based on the suggestions of the supervisor.

### ***Data Collection***

There are multiple ways of collecting qualitative data including in-person interviews (unstructured, semi-structured, or structured), observation, media, focus groups, and so on (Sparkes & Smith, 2014). Among these methods, interviews are one of the most common techniques used to collect qualitative data (Sparkes & Smith, 2014). Interviews are described as an activity where two or more persons engage in an active conversation and co-construct knowledge regarding their own world (Sparkes & Smith, 2014). The primary aim of interviews is to encourage the participant(s) to communicate their stories from their own perspectives in a way that their feelings, emotions, and behaviours are shared with the interviewer (Smith & Sparkes,

2016). Therefore, qualitative interviews are not an objective and neutral tool, and instead are shaped by the researcher's and participant(s)' subjectivity and social/personal factors, such as motivations, memories, and emotions (Smith & Sparkes, 2016). Taking into consideration the interactive process occurring with interviews, this method of data collection was chosen for the current study. In fact, interviews allowed the researcher to communicate with the participants and gain a deeper understanding of their experiences in parasport following an acquired impairment (Sparkes & Smith, 2014).

**The Interviewer Biography.** Researchers are actively involved in the process of qualitative data collection (Braun & Clarke, 2019). Indeed, researchers have the responsibility to make the participants feel comfortable and relaxed during an interview while engaging in active listening and appropriately noting non-verbal cues (e.g., tone speed; Sparkes & Smith, 2014). Due to the nature of qualitative research, data collection highly depends on the researcher's subjectivity (Braun & Clarke, 2019). As such, many factors can influence data collection such as gender, culture, and past experiences (Sparkes & Smith, 2014). Therefore, it is importance to acknowledge the experiences of the researcher as they influence and shape the research process.

The primary author played competitive basketball for 11 years, including three years in U Sports. In addition to her athletic experience, the primary author volunteered with Parasport Québec before COVID-19 began. Among the 10 hours of volunteering, she was a scorekeeper for the Boccia Tournament of the Centre d'Activation de la Vie Active (CIVA) and for a regional wheelchair basketball tournament. Additionally, she was invited to participate in future parasport activities (e.g., playing wheelchair basketball, scorekeeping at the 2020 Canadian Wheelchair Basketball League National Championship). Furthermore, the primary author completed the *NCCP Coaching Athletes with a Disability* e-learning module offered by the

Coaching Association of Canada. This module provided information about the benefits of parasport participation, effective and respectful communication, and tools for creating an inclusive and safe environment for people with an impairment (Coaching Association of Canada, 2017).

**Documents.** Documents have been extensively used to gain a better understanding in qualitative research studies (Bowen, 2009). Documents include analysing participants' biographies or autobiographies, reviewing public records, and examining documents from the participant (e.g., pictures, books, diaries; Bowen, 2009). Regarding the present study, documents included an examination of each participants' biography as well as previous athletic records. This provided the researcher with insight on the participants' athletic involvement (e.g., number of years competing at an elite parasport level) as well as the context behind their parasport involvement following an acquired impairment (e.g., car accident). Consequently, the information helped the primary researcher prepare for the interviews while also facilitating the analysis process of the participants' responses (Bowen, 2009).

**Timelining.** Prior to the start of the first interview, the researcher encouraged the participants to share their personal experiences through the use of *timelining*. When using a timelining approach, the researcher asked specific questions to the participants regarding their lived experiences to create a narrative timeline regarding a series of events that took place (Sparkes & Smith, 2014; Heelis et al., 2020; Williams, 2018). These experiences included information regarding their accident/trauma, support system (e.g., coaches, medical people, family), comorbid conditions, as well as their sport history. Following the purpose of the study, the timelining followed a pre-established set of questions.

1. How did you acquire your impairment?

- a. When did you acquire your impairment?
  - b. How long was your rehabilitation process?
2. Who supported you during the time you were adapting to your impairment?
  - a. How were they supporting you?
3. Did you develop any other conditions associated with the acquisition of your impairment? (e.g., health related issues). If yes, what conditions did you develop?
  - a. How did it affect your life?
  - b. How have you dealt or still deal with these conditions?
4. How did you become involved into parasport?
  - a. Which level did your start competing at?
  - b. What role did parasport play in your life?

These questions provided an opportunity for the participants to share their experiences while also allowing the researcher to better understand the career and life experiences of each participant (Heelis et al., 2020; Williams, 2018). The participants were informed of the use of *timelining* prior to the first interview.

**Interviews.** Among the four different forms of interviews identified by Smith and Sparkes (2016), *individual semi-structured interviews* were used for the second interview. *Individual semi-structured interviews* occurred in a face-to-face situation where the researcher invites the participant to answer open-ended questions related to the topic of interest. This type of interview is known for its open dialogue allowing participants to express their perspectives, emotions, and attitudes toward a certain subject (Sparkes & Smith, 2014). Throughout the interaction between the participant and the researcher, the participant further articulates the meanings behind their experiences allowing co-construction of the phenomenon of interest

(Sparkes & Smith, 2014). Furthermore, the primary researcher maintained an engaged conversation while taking notes regarding specific details (e.g., non-verbal body language) as a way of completing data collection and allowing researchers' reflexivity (Braun & Clarke, 2013). Although there were a pre-established set of questions, semi-structured interviews allowed the interviewer to ask unplanned questions generating unanticipated insights specific to the phenomenon of interest (Smith & Sparkes, 2016). Therefore, semi-structured interviews were an effective method of data collection due to its structure and flexibility allowing the researcher to explore the personal meanings and experiences of parasport athletes who have an acquired impairment (Sparkes & Smith, 2014)

**Interview Guide.** An interview guide (Appendix C) was created which began with opening questions that focused on the athletic career of the participant. Moving forward, key questions were asked to the participant regarding their parasport coach-athlete relationship, transition into parasport, and preferred/effective coaching behaviours. To ensure quality data of the semi-structured interviews, prompts were used by the researcher to obtain further information and help participant transparency (e.g., "Tell me more about this experience"; Braun & Clarke, 2013; Smith & Sparkes, 2016). Once the key questions of the interview were addressed, the researcher concluded the session by asking summary questions and concluding questions (Smith & Sparkes, 2016).

### ***Data Analysis***

Qualitative data analysis is defined as an "interpretive process of meaning-making that begins at the outset of the investigation" (Sparkes & Smith, 2014, p. 115). More specifically, it involves the procedures of data transcription, data management, interpretation of the data (e.g., content, possible interrelationships), and reflexivity regarding writing and potential presentations



(Sparkes & Smith, 2014). Reflexive thematic analysis was used in the current study (Braun & Clarke, 2019). Also known for its flexibility, thematic analysis requires the researcher to analyze and interpret a dataset by demonstrating the shared meanings behind the participants' experiences (Braun & Clarke, 2019). As such, the researcher plays a key role in this approach due to their active involvement in the interpretation of data and knowledge production (Braun & Clarke, 2019). Indeed, due to its production of rich and nuanced data, thematic analysis is one of the most widely used data analysis methods in qualitative research (Braun & Clarke, 2019).

Thematic analysis was conducted using the six phases recommended by Terry et al. (2017). In fact, these six phases were followed in a back and forth manner rather than a linear, fixed, manner to ensure methodological coherence throughout the analysis process (Poucher et al., 2020). The first phase consisted of familiarising oneself with the data by reading the interviews in an engaging and critical way. The *familiarization* phase included re-reading the data and listening to the audio-recorded tape multiple times while taking notes in order to think with, rather than about, the story in relation to the research questions. Indeed, the main purpose of this phase was to become closely familiar with the data (Terry et al., 2017). The second phase, *coding*, involved labeling the data with a few words or small phrases (e.g., benefits of parasport) that represented the meaning behind the participants' experiences. The purpose of *coding* was to help the researcher understand the data and to develop insight while providing a strong foundation for the analysis (Terry et al., 2017). Moving forward, the third phase consisted of *constructing themes* by providing a summary of the data and shaping a first version of the potential patterns of meanings. More specifically, the researcher examined the codes and combined them together to create possible candidate themes capturing the common patterns behind the participants' experiences. Considered as an active process, themes did not passively

emerge from the data, but instead were created through the intensive analysis of the researchers. Using the research questions as a guide, this phase ended with the collection of the coded data that were significantly related to the potential themes. The fourth phase, *reviewing themes*, consisted of re-evaluating and clarifying the identified candidate themes to ensure coherence between themes, coded data, and the research questions. Phase five referred to *defining and naming the themes*. The researcher identified and described every identified themes while ensuring they capture the essences of the participants' experiences. In such, this phase was about telling a story about the data representing the lived experiences of the participants. The last phase, *producing the report*, consisted of writing a report regarding the final analysis and findings.

### ***Trustworthiness***

To assess the quality of qualitative research, researchers use strategies that widely differ from quantitative research. Indeed, terminologies such as validity and reliability are not relevant due to the purpose of qualitative research, and are replaced by criteria including rigour, credibility, and coherence (Tracy, 2010). Considered as an indicator of quality by researchers, reviewers, and journal editors (Smith & McGannon, 2018), the choice of criteria mainly depends on the philosophical assumptions of the research (Smith & McGannon, 2018). For instance, researchers use the criteria in a flexible way rather than a fixed and predetermined manner when following the principles of a *relativist* ontological perspective (Smith & McGannon, 2018). As a result, the criteria can be modified according to the context and purpose of the study contributing to the quality and credibility of the work (Smith & McGannon, 2018). In lines with the philosophical assumptions and methodology of the current study, the criteria of critical friend, substantive contribution and width, and coherence will be discussed in the following section.

**Critical Friend.** This study used a ‘*critical friend*’ to ensure rigour and trustworthiness of the data (Smith & McGannon, 2018). The former involves two or more researchers engaging in an open dialogue whereby interpretations regarding the data are shared and feedback is provided (Smith & McGannon, 2018). As a result, the various interpretations of the case being studied clarify meanings behind the identified codes, facilitates the process of reflexivity, and therefore, improves the qualitative analytical process of the research (McGannon et al., 2021; Sparkes & Smith, 2014). Specific to this study, ‘*critical friend*’ aligns with the philosophical assumptions of *constructivism* as it highlights the important role of social construction within the research process (Smith & McGannon, 2018; McGannon et al., 2021). Indeed, the primary author shared her interpretation with a doctoral student who has substantial experience in qualitative research and parasport coaching and has experience coaching athletes with impairments. Therefore, the co-author challenged primary author’s assumptions and encouraged *reflexivity* with the possibility of providing a different interpretation of the results (McGannon et al., 2021). By challenging the primary author’s thought process and critical thinking, this process enhanced the rigor and trustworthiness of the findings and therefore, improved the quality of this research.

**Substantive Contribution and Width.** To ensure the homogeneity of the sample of participants (Smith et al., 2014), the researcher purposely recruited individuals based on a very specific set of criteria. This ensured that the sample of participants represented elite wheelchair basketball players who had an acquired impairment. Furthermore, direct quotes of the athletes were included in the results section allowing the readers to interpret and make their own interpretations of the findings (Smith et al., 2014). This also provided support for comprehensiveness and the quality of the data presented in this study.

**Coherence.** Coherence was illustrated by providing a complete and meaningful picture of the participants through the use of timelines and semi-structured interviews. In fact, the data provided information regarding the athlete's personal and athletic experiences (Smith & Caddick, 2021). This provided the readers with a creative and meaningful representation of each participant's story inviting them to make their own interpretations and construct their own understanding of these experiences in a coherent manner.

## Chapter 4

### Results

This chapter will present the results from the virtual interviews conducted with six athletes who have an acquired impairment. Overall, the interviews lasted 512 minutes, which included both the timelining and the main interview. The timelining interviews averaged 23 minutes and ranged from 17 to 33 minutes. The main interviews averaged 62 minutes and ranged from 42 to 86 minutes. Afterwards, every interview was transcribed verbatim which produced a total of 96 pages of transcripts and 57,905 words. Subsequently, the researchers identified three overarching themes: *athlete foundation*, *coaching behaviours*, and *coaching preferences*. Additionally, seven themes were identified including personal evolution, parasporting experience, wheelchair basketball environmental factors, positive coaching behaviours, negative coaching behaviours, coach understanding and connection, and coaching expertise. The following section will be organized around the three main themes and will include quotations from the athletes to help the reader understand the themes in greater detail. A pseudonym (e.g., Marie) was assigned to each athlete to protect their confidentiality.

#### ***Athlete Foundation***

This overarching theme describes factors and experiences related to parasport athletes' environment, personal life, and athletic development. More specifically, this section is divided into three themes that are called *personal evolution*, *parasporting experience*, as well as *wheelchair basketball environmental factors*.

**Personal Evolution.** This theme encompassed athletes' personal experiences related to the acquisition and rehabilitation of their impairment. While all six athletes acquired their impairment, it happened at different ages: two athletes acquired their impairment when they were

children (8 and 9 years old), two when they were teenagers (15 and 16 years old), and two when they were in their early 20s (20 and 24 years old). One athlete (Elizabeth) acquired an impairment due to a hockey accident which resulted in a decrease of functional abilities in her knee. Due to her trauma, she is unable to run or do any types of physical activity. Although she is able to walk, her condition is irreversible which forced her to turn to parasports. On the other hand, the five other athletes (Katherine, Cynthia, William, Sebastien, and Hannah) acquired a spinal cord injury due to either an accident (e.g., car, motorcycle, etc.) or illness (e.g., cancer). Following the trauma, all six athletes highlighted the long recovery process which ranged from 6 months to 36 months. For instance, Sebastien spent five months at the hospital and two months at the rehabilitation center while William spent two months at the hospital and 10 months at the rehabilitation center.

During the recovery process, five athletes identified health care professionals as being competent, kind, and understanding, which facilitated their rehabilitation. For example, Sebastien stated: “The health care professionals were great. Generally speaking, everybody was, as far as I could tell, professional, courteous, and caring ... My experience was awesome”. Furthermore, all six athletes highlighted the importance of receiving support from either their friends or families, or both. In fact, these social agents played an important role throughout the athletes’ rehabilitation by providing emotional support (e.g., encouragement), help (e.g., adapting the house), and distraction (e.g., watching movies). For instance, William highlighted how his family supported him during his rehabilitation:

My family was very present. My whole family including my aunts, my uncles, my cousins, and my parents. My family was really there for me. I was at the hospital every day. So, every day I would have somebody new by my bed side.

Although every athlete recovered from their trauma, they all had to deal with conditions related to their decrease of functional abilities (e.g., heterotopic calcification, Charcot's column, dysreflexia, etc.), which impacted their quality of life:

Following an accident, I developed a scoliosis that gives me back pain. I have chronic back pain. Unfortunately, there is nothing I can do to help it. There are no treatments available that could possibly help. It flares up.... A month ago, or so, I had the worst back pain I ever had since my accident. It was really bad. It was keeping me up at night. That has never happened before. For two weeks straight, it was hell (Cynthia).

The athletes reported experiencing discomfort and frustration from their impairment. However, every athlete adapted to their health conditions and engaged in various activities after leaving the rehabilitation center, including parasport. In fact, four athletes went right from the rehabilitation center to wheelchair basketball as they were introduced to the sport via different ways: two athletes were initiated to the sport by a health care professional (e.g., kinesiologist, physiotherapist) and two via a demonstration at their rehabilitation center. Another athlete became involved through personal connections right after leaving the hospital, while one took the initiative himself and contacted a parasport organization seven years after the acquisition of his impairment.

Taken together, athletes acquired their impairment through differing personal and traumatic experiences. However, they all highlighted the importance of receiving support from their support group, which typically included their family and friends. Although there were times when athletes experienced discomfort and secondary conditions resulting from their impairment, they all started playing wheelchair basketball through different avenues and have maintained their involvement in the sport from when they started playing.

**Parasporting Experience.** This sub-theme includes experiences related to their athletic evolution and experiences. Each athlete first started playing wheelchair basketball at a recreational level which was characterized as less structured and fun. Over time, athletes developed athletically and started to recognize the potential of playing at higher levels:

At first, it was really for fun. I did not really have any expectations. At one point, it developed, and I was like, “I might like to be part of the provincial team.” After that, I said, “Ah, maybe I would like that to be part of the best team in the world” (Hannah). I never had this big dream of playing on the national team, but I just really enjoyed wheelchair basketball. I was also pretty good at it. I mean, I did work hard for it, but it never was a, “Oh one day, I will be on the national team and go to the Paralympics” It just happened because I liked it, I guess(William).

Every participant achieved substantial athletic accomplishments, which included medals at the World Championships and the Parapan American Games, participation in the Paralympic Games, and national titles. Further, the five athletes who were still training and competing discussed their goals for the future:

For my goals, I am aiming for the Paralympics for sure. If I go to Tokyo, I know that I will not be on the starting five since I am a new player on the team, but it would be fun anyway. I am aiming more for the Paris Paralympics in 2024, and my goal would be to have more playing time (Elizabeth).

Thus, all six participants experienced elite parasport participation. While they were introduced to playing wheelchair basketball at a recreational level, they quickly climbed the ladder with multiple athletes representing wheelchair basketball at the provincial and/or national level.



**Wheelchair Basketball Environmental Factors.** This sub-theme presents aspects of the wheelchair basketball environment that athletes considered to be fun and enjoyable. In fact, wheelchair basketball provided an environment for the participants to meet other athletes who had an impairment, which contributed to their learning: “When I started, all my teammates had friends and some of them had kids. Everybody had a life. They travelled and they did a lot of activities. I did not know I could do that” (Katherine). In particular, the participants felt understood by their peers which developed their feelings of relatedness to the team as well as their own personal development:

Sports makes me feel part of something. When I play basketball, I feel part of a family. Wheelchair basketball is literally like a family. Wheelchair basketball is different from everything I have tried. It feels like a family and it is a family. You feel like you are a part of something when you play wheelchair basketball (Katherine).

Personally, my transition into parasport went really well. I could not have asked for better. So, on a scale of 1 (negative experience) to 10 (positive experience), I would rate my transition as a 10. I was lucky. The coaches were super nice. They listened to me, they were receptive, and they were present. Everyone, including the parents and the athletes, they were all happy to see you. Everyone wanted to see you play. It was like a family welcoming you with open arms and you were about grow up with them (Elizabeth).

Additionally, four athletes recognized the importance of the coaches’ role on their level of enjoyment in a practice context:

I would say that my coach really helped my transition into parasport by making the game fun. He wanted us to win, but he made the game fun. For me, it was a pleasure to play

basketball every time. Even practices, I did not see them as a chore or something boring.

I really saw basketball as something exciting (William).

In fact, all six athletes reported that wheelchair basketball had a significant impact on their lives for several reasons, including providing a sense of purpose and a new sense of self. Every athlete acknowledged that wheelchair basketball was their passion and described their gratitude towards the sport:

Parasport is an important part of my life. If there was no parasport right now, I do not think life would be worth it. I love sport. I always loved sport and now, it is a huge part of my life (Katherine).

I would rate my transitioning experience to parasport a 10/10. Also, it has just changed my life so much. It gave me a new sport. It gave me something to do. I was also with people who had a disability. That is not something I was looking for but just being able to play sports was great. Overall, I had a really good experience (Cynthia).

In conclusion, athletes experienced the acquisition of their impairment in a unique and personal way. They all acknowledged the positive impact that wheelchair basketball had on their personal and athletic lives. Based on the athletes' responses, it was clear that wheelchair basketball helped them build strong relationships while enhancing their overall well-being which in turn, contributed to their parasport experience. This was achieved through the help of the parasport community (teammates, parents, coaches).

### ***Coaching Behaviours***

This overarching theme presents parasport athletes' perspectives on coaching experiences that positively and negatively influenced their athletic development and level of enjoyment. This section included two themes: *positive coaching behaviours* and *negative coaching behaviours*.

**Positive Coaching Behaviours.** This theme presents coaching behaviours that positively influenced and supported the parasport athletes' experiences. Five athletes identified the importance of having coaches who supported them during their athletic career by providing emotional support and encouragement. In turn, athletes highlighted that these behaviours contributed to their level of satisfaction, well-being, and personal development:

My coach also helped me to grow personally. I do not have any specific moments in mind, but just kind of coming into my own as an athlete, feeling more comfortable, and getting to integrate this whole side of my life into my sense of who I am. That has been pretty enjoyable (Sebastien).

My coach just made my transition easier into parasport. He always made us feel good and reassured us that it was normal to not be good the first time. So, he reassured us and that made it easier to approach the parasport (Elizabeth).

Furthermore, four athletes highlighted coaching practices that facilitated athletes' transition into parasport, which partially included enhancing athletes' beliefs in their own abilities:

To build the confidence of an athlete entering parasport with an acquired disability, I think it is important to celebrate the victories... These small victories are different for each player because each one of them has different needs and therefore, different small victories. So, I think that is the best way to build up confidence (William).

My first two coaches were people who were not too mothering. It was not like, "Oh my god, we are going to take her by the hand." No, no, let's go. We throw ourselves in the fire and it will be fine. Personally, that is what I needed. I did not need to be too mothered at that time... Indeed, it went very well (Hannah).

The athletes also noted that their enhanced levels of self-confidence had a positive impact on the well-being of athletes. Indeed, athletes' level of self-confidence was translated into their everyday lives which was suggested to contribute to their quality of life:

I remember at the beginning, when I was going to my training, I was scared to fall. Then by the end of the first year, I was going everywhere by myself and I was not afraid of falling or getting stuck anymore. My A level coach helped me increase my confidence and made me stronger. Being stronger helps with your everyday life - the more you train, the stronger you become, and the higher your confidence is (Katherine).

In fact, four athletes highlighted the important influence that coaches had on developing their levels of independence. Athletes had to learn how to manoeuvre their wheelchair and self-transfer in different settings (e.g., restaurants, hotels). Thus, they mentioned the importance of having coaches who were understanding and taught them how to become independent in their personal lives. For instance, Hannah highlighted how her first coach helped her to realize what she was capable of doing by herself:

I think one of the big differences that my relationship with [coach name] brought to me is what I was able to do... At your place, they adapt everything to make it look beautiful, but when you go to a hotel room, it is not very suitable. Well, she said, "Put on a little wet towel. You will see, it will help you. It will be less slippery when you transfer yourself to the edge of the bath." These are little details, little camping stuff, but you have to know them.

In the training context, athletes highlighted the importance of having coaches who were patient, positive, and adapted to their impairment. These coaching behaviours positively influenced the athletes' parasport experiences as highlighted by Elizabeth, who stated: "I love

basketball the way I do now because of my first coach. He has always been there to support us, and he always sees the solutions and the positives.” Specific to the team environment, athletes benefited from having coaches who were inclusive by making new athletes feel welcome in the team, treating every athlete equally, and by promoting an environment conducive to learning.

My A level coach also treated everybody equal. No matter what the disability was. Even though an athlete could not do the same thing as the others, he would train the player differently but at the same level and same intensity. He would not be like, “Okay, you are not good at this drill, just have a break until we finish, and we will come back.” No, he would give exercises for everybody based on their disability (Katherine).

In fact, three athletes highlighted the importance of having structured practices, which involved having disciplined coaches who helped them become more responsible and committed to the team:

My national coach is from Italy and he has a coaching mindset that is different from everything I knew prior to him. If he is not happy or if we fuck up, he is really going to tell us... The coaching style of my national coach made me more accountable... I think it made us a more reliable team... We took the game a little bit more seriously and we were owning up to our mistakes (William).

In sum, parasport athletes reported higher levels of well-being, enjoyment, and satisfaction when coaches displayed positive coaching behaviours and practices (e.g., emotional support, inclusivity, discipline). Furthermore, athletes benefited from having coaches who were calm, knowledgeable, and helpful throughout their athletic career. Interestingly, the benefits of these behaviours went beyond athletic achievements as athletes reported higher levels of self-

confidence and autonomy in their everyday lives. However, athletes also described negative experiences with their coaches that impeded their parasport journey.

**Negative Coaching Behaviours.** This theme highlights coaching behaviours that were viewed as a detriment to the parasport athletes' experiences, including yelling, favouritism, and lack of support. Five athletes highlighted the harmful effects of having coaches who lost their temper and were yelling at them in practices, including Sebastien: "I have had coaches who kind of lost emotional control. They yelled, got angry, and upset in ways that was not helpful." As a result, athletes reported decreased levels of motivation, interest in wheelchair basketball, self-confidence, and performance. For instance, Katherine highlighted the damaging effect that yelling had on her own team:

Yelling does not make us play better - the more my coach yelled, the more frustrated we got. Then, our self-confidence would decrease and the worse we would play. I do not think it had a good impact on us.

Furthermore, athletes stressed the importance of having coaches who provided constructive and consistent feedback to every athlete on the team. Coaches who mainly focused on addressing athletes' mistakes by constantly picking on the same players had a negative effect on the team environment and the level of cooperation among the players:

You cannot only critique one person that rarely makes mistakes but then not say something to that other player, because if she gets mad, she will not play well. But she is the one making all the mistakes. Then, the whole team gets pissed off (Cynthia).

Players who were constantly criticized by the coach started taking the feedback personally which impeded their level of self-confidence. In fact, athletes suggested that this negative behaviour had a negative impact on their performances in practices and in games. Moreover, three athletes

expressed negative emotions (e.g., frustration, resentment, anger) and a decrease of interest for wheelchair basketball when coaches displayed favouritism for certain players on the team:

My current coach has his favourites. One time, he even said, “Yeah, well, this person plays better when she is not mad. If I sub her, she will be mad. So, it is better to leave her on the court.” I am still shocked about it. When it happened, I turned to the person next to me and I was like, “Did you hear this?” But that is why it makes it frustrating because it is like, “Okay, you admitted out loud how often you see her doing everything perfectly.” Then, it becomes hard (Cynthia).

In addition of displaying favouritism, five athletes experienced being in an environment where coaches demonstrated unsupportive behaviours including being late to practices and not including every athlete in practice drills. These behaviours had a detrimental effect not only on the athletes personal and athletic development, but also on the team environment:

During my career, I had bad experiences with some coaches. In this unhealthy environment, there were a lot of gossip on the team. Not everyone was included. At one point, it was the coach's girlfriend. So, you say to yourself, “Ouff, what is happening/being said behind the scenes?” The trusting relationship is gone. There are more quarrels. There is less complicity, and the team spirit is not really there anymore. It is more traumatizing than other things. It takes away a lot of self-confidence. No, it is not fun (Hannah).

One of my previous coaches would be like “You can come to practice”, but he would not let me play. After a couple times asking, I said I do not want to play AAA as long as he is coaching AAA. I am not going to bench. I quit other sports because of other coaches. I stopped wheelchair racing because the coach was not supporting me (Katherine).

In conclusion, yelling, favouritism, and lack of support have been identified as negative coaching behaviours that impeded parasport athletes' experiences. More specifically, these coaching behaviours affected the athletes on an individual (e.g., decreased enjoyment), athletic level (e.g., decreased performance), and team level (e.g., decreased cooperation). In sum, parasport coaching behaviours (both positive and negative) appeared to influence the athletes' sporting experiences, which in turn had an impact on their overall well-being.

### ***Coaching Preferences***

This overarching theme presents athletes preferences related to their coaches' style and practices that they felt contributed to their own athletic experiences and coach-athlete relationship. This section encompasses two themes: *coaching expertise* and *coach understanding and connection*.

**Coaching Expertise.** This theme encompasses coaches' knowledge related to the structural, technical, and tactical elements of wheelchair basketball and their ability to effectively communicate this information to athletes. Specific to the structure of practices, four athletes highlighted the importance of having a coach who pushed them out of their comfort zone:

I believe that coaches should bring a certain rigor at the same time with athletes with an acquired disability, so the athletes can develop athletically as well. It is like a balance.

This is not a summer camp where you just have fun and we do not care if you get better or not. You still want the coach to have a certain rigor while always prioritizing pleasure (William).

Coaches should avoid failing athletes with an acquired disability. I mean, you need to be like, "No, you can do it. No, try again! You can do it" ... You are just a kid and you are still learning. Yea, maybe you can do it. Maybe it sounds wrong because I am not saying,



“Try, and if you cannot do it, that is fine. We will move on to something else.” But, you just need to have that balance. Like, my first coach was really good with that balance.

She would know where the lines were and then, would go from there (Cynthia).

Athletes also highlighted the importance of having coaches who effectively communicated with them. More specifically, four athletes valued coaches who provided positive, constructive, and individualized feedback. They also explained the importance of the timing of feedback delivery:

If you try to coach me in the middle of the game while I am trying to do something, I am just not going to be nearly as receptive as if you call a timeout or in halftime and you say, “Look remember that time? We need to talk about this. Try to apply it.” Then, I will be like, “Okay yeah.” Then, I can kind of focus and absorb it and really apply it. Whereas other times, not so much... (Sebastien).

Furthermore, three athletes highlighted the importance of having coaches who provided them with a safe environment by communicating regularly, listening, caring, and helping them develop on a personal and athletic level. For instance, Elizabeth described feeling safe with her coach and the effect that it had on her athletic journey:

My coach has always been a coach who ensured the safety and well-being of his athletes. He is always there to help and to make sure that safety is there... We still learn every day with him. I feel safe with my coach because he knows where he is going. It keeps us, athletes, safe because we know where we are going too. For example, this summer with COVID-19, we did not know where we were going, but he was having meetings to tell us, “Right now, we cannot have a gym, but as soon as we have one, we will keep you informed.” [Coach name] would always check in on us... He cares about us.

Specific to the tactical aspects of wheelchair basketball, four athletes valued having coaches who taught them the tactical aspects of the game by adapting the practice drills to their impairments. In turn, athletes reported higher levels of self-confidence and satisfaction:

When the coach makes the training/practice, the coach tries to match up a player with a low and high classification together to teach them how to work together... They [the bigger players] see that the small players have a harder time to get the ball and to be balanced. These drills increase the team cohesion (Katherine).

Athletes also benefitted from having coaches who included sport psychology skills (e.g., visualization) and video analysis in practices as it contributed to their level of expertise. Furthermore, athletes enjoyed having coaches who created a game plan based on the strengths of their players:

We had this girl who was my sister's friend, and she was a really great shooter. So, my coach was able to create an offence where we would work together to get her open shots. I think he was good at identifying every player's ability instead of focusing on their weaknesses. He just focused on what we were good at and improved on it (William).

In addition to the tactical aspect of the game, five athletes described the importance of having coaches who taught them the technical components of wheelchair basketball. This included teaching them the basics, such as how to pass the ball, how to do a lay-up, and how to position themselves on defense. These athletes explained that they later benefitted from building a solid skill foundation:

When I started parasport, my coach gave me a really good base. I watch people around me who did not have good coaches at the beginning of their career... my base is stronger than the other athletes from the other regions (Elizabeth).

Furthermore, five athletes expressed the importance of having coaches who were knowledgeable and understood wheelchair basketball. More specifically, athletes valued coaches who had an impairment background as they were able to understand the realities that are associated with parasport:

My first coach was a parasport athlete and I think that it changes everything because he understands what we are going through. He understands when we are angry because we cannot do something. He knows what is going on because he is an athlete (Elizabeth).

I think that [coach name] was a holistic coach. He taught about the different aspects of the game, that is fair to say... He played for Team Quebec and had a lot of experience as a player as well...[Coach name] knows what it feels like to be a player, how, out of control, your emotions can get, and what it feels like to be motivated versus, you know, being tired and exhausted. He just sorts of understands, I think (Sebastien).

Finally, athletes highlighted the importance of their equipment and how their coaches were involved in the process of finding a good wheelchair for them. Four athletes explained how wheelchairs were an indispensable part of their sport:

For us, our wheelchair is really an integral part. It can make a difference in speed, it can make a difference in terms of pivot, height, etc.... At the beginning, the coaches help the new athletes who have an acquired disability with the technical aspects. But at the same time, on this side, at the level of the wheelchair, I think that for us, it is really crucial (Hannah).

The athletes explained that having the right equipment contributed to their successful skill execution and level of expertise on the court. Therefore, athletes highlighted the importance of having coaches who were able to provide assistance with their equipment:

You could have a very, very different experience as a one-point player if they sit you in the wrong chair and you do not have a strap. You just feel unbalanced and hopeless.

Whereas, if you sit in a chair that fits you and is appropriate, the coach can give you a little bit of advice on that front, it can go much, much better. It is actually a pretty big deal (Sebastien).

When I started, we did not really have sports wheelchair. So, I would play in my day chair. It was definitely not a good fit. One time, my coach brought her chair and let me sit in it. That really changed the game... She kind of found a chair, a used chair, that I was able to use before buying my own. Definitely, providing the correct equipment made it better because it is hard when you are not in the proper chair (Cynthia).

Taking together, parasport athletes discussed the importance of having coaches who were knowledgeable and understood wheelchair basketball. Athletes not only benefitted from having coaches who knew the technical, tactical, and structure of wheelchair basketball, but who were also able to provide support with the equipment's logistics and mechanics. Furthermore, athletes enjoyed having coaches who were able to communicate effectively while providing constructive feedback. Therefore, parasport athletes benefitted from parasport coaches who were dedicated to their development, welfare, and success.

**Coach Understanding and Connection.** This theme focuses on coaches' ability to connect with and develop strong connections with their parasport athletes. All athletes stated the significance of cultivating a personal relationship with their coaches throughout their athletic career. More specifically, athletes valued spending time with their coaches outside of the sporting context which provided an opportunity to socialize and get to know them. Athletes

explained that this personal relationship helped develop trust with their coaches and enhanced their feeling of belonging within the team:

My coach also had kind of presided over the team that I have felt the most kind of welcomed in. I kind of grown to become close, you know, friends and social events. You know, we have hung out before and after games, and he has invited us to his home. I have met his family and all of that. So, he has been really welcoming and great with that aspect as well (Sebastien).

Even if athletes valued sharing personal relationships with their coaches, four athletes also highlighted the importance of having coaches who behaved professionally with them. More specifically, athletes valued coaches who did not get involved into their personal lives. Two athletes believed that sharing a professional relationship with their coaches was necessary at the national level to increase the team's success:

I see my national team coach more strictly on the professional side. I try to keep him and my relationship with him more focused on basketball. He does not have time to be friends with all his players. I also think that keeping a professional relationship, where both coaches and athletes focus on winning and being the best, is how a coach-athlete relationship should be at this level (William).

There has to be a hierarchy when you are on the national team. You can get along with your coach, but you cannot talk to him every night. ... If it is not going well mentally, you have to tell him, but, do not share everything that is going on in your personal life with your coach... At the national level, I personally see it as there is a big boss, and then you have the athletes (Elizabeth).

Athletes believed that having coaches who behaved professionally by establishing barriers and limits had a positive effect on the team's environment (e.g., decrease of intra-team jealousy, increase of team performance). Additionally, four athletes valued coaches who communicated what their role was on the court and what it entailed. Knowing their roles helped the athletes understand the strengths and limitations of their impairments, facilitate their transition into parasport, and contribute to their learning development, while reducing their level of frustration:

If nobody tells you your role and you are a 1 point player, and somebody scores thirty points and you score two, you feel like you are a terrible basketball player. That is a really unhelpful approach to the game. Whereas later, when your coaches start to break it down for you and say like, "Look, you scored four points, but that is great. Do not worry about it. You have got this other job." That was helpful to learn about that role and about what was even possible... (Sebastien).

Furthermore, two athletes valued coaches who were understanding in practices by addressing individual differences and listening to the athletes' needs, while adapting their expectations to the athletes' level of functional abilities. In turn, these coaching behaviours had not only a positive impact on the athlete, but also on the team environment:

My coaches were always receptive and supportive with my teammates who had an acquired disability. They were always understanding. Like, if they had to take a break because they were out of breath, they would give it. They listened to the abilities of the disabled athletes. The fact that my coaches were receptive and supportive with my teammates who had an acquired disability created a good environment and good structure (Elizabeth).

In addition, four athletes valued coaches who understood their impairments and factored in their abilities when creating practices and organizing transportation and accessibility to public facilities. These athletes also valued coaches who treated them equally to others, recognized their capacities, and acknowledged the complexity of athletes' social network of support. For instance, Cynthia highlighted the approach that coaches should use with athletes who have an acquired impairment:

Coaches need patience with athletes with acquired disabilities. They need to understand the background of the person, where he/she comes from. They need to understand their disability and their life around/outside the sport because an acquired disability affects the whole family, not only the kid. So, kind of like, "Do they have support? Are their parents struggling?" I think, a good coach would help the parents like they did with my mom.

Also, two female athletes mentioned the importance of having coaches who understand the difference between coaching male and female athletes. Athletes valued coaches who adapted their communication style, were sensitive to their athlete's needs, and took into consideration their emotions and playing style:

In practice sometimes... well, most of the time... my coach coaches us like we are guys. That is a good thing in some cases, but in other cases, it is not. We are a women's team. There is drama in the team, and he cannot just ignore it. Like, this is not how a women's team works... Men would give themselves a pat in the back and be like, "Okay, we are good." Girls are not like this. So, if you ignore it every practice and we are together for a full summer, it explodes... (Cynthia).

I think that coaches should adapt their coaching practices to female athletes. Well, I think that girls are more sensitive. I believe that they are more affected by the way people talk

to them. For example, I had a coach who was yelling at his players all the time. Guys would not take it personal while girls would take it more personal (Katherine).

Moreover, four athletes reported having coaches who had an impairment had a better understanding of what they were going through:

My A level coach was a 1 point too. He knew what I was going through when I started playing and why I was getting frustrating. The big players were shooting 30 points a game and I was not touching the ball for 40 minutes. He was like “Do not focus on them, focus on you, on what you do for the big players because they are going to be the ones shooting.” I felt understood by my A level coach and I felt that he knew what he was talking about (Katherine).

My first coach had a disability and he played wheelchair basketball. Personally, I think that you have a way better understanding of the game when you played before... He really understood the game in a way that I could relate to on the court. It was not all theories, and it was really practical. He was really good with the technical part of the game. He would say like, “Oh, you have to put your chair a certain way because it is going to create XYZ”... You could really see that he had a good feel for the game. He understood every little intricate part of the game. (William).

Athletes also highlighted that coaches who had an impairment were easier to relate to and had more credibility compared to able-bodied coaches:

I could identify more myself with [name of coach] since she had a disability. It is unfortunate to say, but you are like, “Okay, that is more believable. She knows what she is talking about” ... It is sure that for me, at that time, at the age of 16 and all that, to see



someone who had also excelled in the sport, who had known several stages, it is certain that it helps (Hannah).

When it is an able-bodied who is coaching you, I am not saying they do not understand, but my first coach had a true understanding of what my disability was and of what my limitations were. If I said I was not able to do something, she would be like, “No, you can.” Most of the time, she was right like, “Yes, I can do it. I just did not think I could, but you told me I could, and you know I can.” Whereas, when it is an able-bodied, it is like, “Well, you do not know if I can do it or not” (Cynthia).

So, my first coach was one of the first people I knew who had a disability...He was one of the first people who really knew what it was to be a wheelchair basketball athlete...

Knowing that, I really took his advice seriously, and I knew I could trust him. I knew he had the experience. I knew he had a good feel for the game. So, from day one, when he started coaching us, I knew that he was somebody who knew what he was talking about. I also knew he had the experience prior to that. The trust was there from day one (William).

Two female athletes not only respected their coaches with impairments, but they also perceived them as role models. In fact, these athletes explained that having coaches to look up to provided them with a sense of purpose while allowing them to discover possibilities that were available to them despite having a new impairment:

My first coach was one of the first paraplegic women who had a bachelor's degree in physical education / kinesiology... Personally, I find her to be a model which allowed me to be like, “Well do you know what? I honestly can do anything I want with my life, including parasport and sport outside of basketball too. Beyond that, I can have a family

and make sure it goes well. I can travel, go camping, and name it.” It was a beautiful model I think for me (Hannah).

My coach was definitely a model for me because she acquired a disability. I was like, she is on the national team so I can make it to the national team. She can drive a car, so I can drive a car. She can do all these things, so I will be able to do all these things. My first coach was a really good player, so I was like, “I am going to listen to whatever she says because she is a good player, and she has the same disability as me” (Cynthia).

In conclusion, athletes reported sharing a personal relationship with their coaches when they transitioned into parasport and throughout their athletic career. Specific to coaching behaviours, athletes preferred coaches who were understanding, professional, adapted to their impairment, and effectively communicated their roles and expectations on the court. Athletes also highlighted that these coaching behaviours had more credibility when they were demonstrated by coaches who also had an impairment themselves. Taken together, the results demonstrate the impact that parasport coaches have on athletes by not only providing them with sport-related advice/guidance, but by also serving a role model for the development of these elite athletes.

## Chapter 5

### Discussion

The purpose of this study was to explore wheelchair basketball athletes' perceptions of their coach-athlete relationship. Six athletes with an acquired impairment described their relationship with their coaches and highlighted coaching characteristics, preferences, and behaviours that impacted this dyadic relationship. Using the 3+1 Cs model as a conceptual foundation (Jowett, 2007), this chapter will discuss the results of the current study by highlighting relevant sport/parasport literature and presenting the novel findings coming from the current study. Specifically, the discussion will be presented according to the four components of the 3+1 Cs model: closeness, complementarity, commitment, and co-orientation.

#### *Closeness*

Closeness is defined as “affective meanings that the athlete and coach ascribe to their relationship (e.g., trust, liking, respect)” (Jowett & Poczwardowski, 2007, p. 8). The able-bodied coaching literature has explored the construct of closeness of the 3+1 Cs model in-depth (Jowett & Carpenter, 2015; Jowett & Cockerill, 2003; Jowett & Frost, 2007; Jowett & Meek, 2000). Although this model (Jowett, 2007) accounts for the relationship between the coach and athlete, there are other important interpersonal considerations within the parasport environment, such as athlete-athlete relationships. In the current study, the results revealed that athletes with an acquired impairment defined their wheelchair basketball sporting environment as being a second family where athletes cared for one another, trusted each other, and enjoyed interacting with peers who also had an impairment. The importance of peer interaction has been previously acknowledged in the parasport literature as playing an important role in developing parasport athletes' knowledge and understanding of their impairment (Ashton-Shaeffer et al., 2001;

Crawford et al., 2014), influencing involvement in physical activity (Javorina et al., 2021), and enhancing athletes' feeling of trust and relatedness within their parasport community (Bates et al., 2019; Goodwin et al., 2009; Hammer et al., 2019; Tawse et al., 2012). For example, Goodwin et al. (2009) found that wheelchair rugby athletes identified with a shared sense of community that was highlighted by mutual trust and respect between team players. A similar result was found in our study, which is perhaps not surprising when you consider that people with acquired impairments may experience negative emotions following their trauma, including shock, anxiety, self-doubt, and post-traumatic stress (Day, 2013; Day & Wadey, 2016; Hammer et al., 2019; Popowich Sheldon et al., 2011). Interestingly, the current study suggests that being surrounded by their peers may serve as an important social support for new athletes who have an acquired impairment to manage their emotional distress. This may be due to the fact that athletes with shared impairment experiences might allow them to interact and understand one another better while discovering opportunities (e.g., having kids, travelling) available to them. Although the current parasport literature has highlighted the importance of peer support (Ashton-Shaeffer et al., 2001; Bates et al., 2019; Crawford et al., 2014; Goodwin et al., 2009; Hammer et al., 2019; Javorina et al., 2021; Lefebvre et al., 2021; Tawse et al., 2012), the findings extend this body of literature by suggesting that the development of a close relationship with teammates is highly important due to its positive impact on athletes' ability to overcome emotional hurdles, enhance level of enjoyment, and foster psychological well-being.

In addition to the athlete-athlete relationship, another factor that was highlighted by our participants was the importance of sharing a personal relationship with their coaches, which was characterized by mutual feelings of trust. Specific to the closeness component of the 3+1 Cs model, the able-bodied literature highlighted the importance of establishing a trusting

relationship as a key component for ensuring the quality and development of effective coach-athlete relationships (Jowett, 2007; Jowett & Cockerill, 2003; Trzaskoma-Bicsérdy et al., 2007). For example, Trzaskoma-Bicsérdy et al. (2007) demonstrated that elite Hungarian athletes valued sharing strong feelings of trust with their coaches as it positively affected their coach-athlete relationship, and in turn, their athletic experiences. Specific to the current study, the athletes believed that spending time outside the practice setting provided opportunities to (1) get to know their coaches on a personal level, (2) develop a trusting relationship with their coaches, and (3) enhance their feelings of relatedness to the team. Given that the sample of the current study all had an acquired impairment, this is particularly important when you take into consideration that the athletes had to learn the skills and social environment of the new sport while, at the same time, trying to adapt to their functional abilities (Crawford et al., 2014; Day, 2013; Day & Wadey, 2016; Hammer et al., 2019; Kampman & Hefferon, 2020). Despite these additional challenges, wheelchair basketball athletes who had an acquired impairment reported feeling accepted, appreciated, and welcomed to the team, which was highly influenced by the strong feelings of attachment they shared with their coaches. Therefore, wheelchair basketball coaches are encouraged to actively develop trusting relationships with their athletes who have an acquired impairment as it seems to play an important role in fostering athletes' satisfaction and feelings of belonging to the parasport community, while facilitating adjustment to their new environment.

Parasport athletes also valued coaches who developed a caring relationship with them as it contributed to the creation of a safe sporting environment, which can be characterized as feeling calm, focused, and comfortable in the parasport setting. The importance of developing a caring relationship has been explored in the able-bodied literature and conceptualized within the

closeness component of the 3+1 Cs model (Jowett & Carpenter, 2015; Jowett & Cockerill, 2003; Jowett & Frost, 2007; Jowett & Meek, 2000). The current results indicated that coaches were often at least partly responsible for creating a safe environment for their athletes by being attentive, good communicators, and active listeners. More specifically, coaches not only regularly reached out to athletes to assess individual needs, but also made sure that they were learning and developing athletically. As a result, athletes discussed feeling more comfortable and at ease in their environment, reported positive emotions (e.g., happiness, enjoyment), and perceived their coaches as being caring and attentive, which contributed to the development of a close relationship. The importance of creating a safe environment has been previously explored within the parasport literature and highlights the important influence of the team on athletes' personal and athletic development (e.g., Evans et al., 2018; Kampman & Hefferon, 2020). In fact, previous research has discussed the notion of a safe environment as being a judgment-free setting where athletes respected one another (Kampman & Hefferon, 2020). Evans et al. (2018) also defined a safe environment as being physically accessible for parasport athletes. The current findings extend the literature by pointing out the crucial role that coaches play in creating a safe environment by caring for their athletes on both a personal and athletic level, contributing to the development of a close relationship. Therefore, this study suggests that parasport coaches should invest time and effort in fostering a conducive environment where athletes' feel secure and comfortable to ensure their continuation in parasport and their athletic development.

### ***Complementarity***

Athletes highlighted the importance of having coaches who communicated their athletes' role, including what was expected of them on the court. These results are consistent with the construct of complementarity of the 3+1 Cs model, which highlights the behavioural component

(e.g., roles and tasks) contributing to a positive coach-athlete relationship (Jowett & Cockerill, 2003; Jowett & Meek, 2000; Philippe & Seiler, 2006; Trzaskoma-Bicsérdy et al., 2007). In the context of parasport, the literature has identified effective coaching behaviours that had a positive effect on athletes' well-being and athletic performance (Alexander et al., 2020; Banack et al., 2007; Cregan et al., 2007; Javorina et al., 2021; Santos et al., 2018; Tawse et al., 2012). However, there is little research that has looked specifically at the effect of communicating athletes' expectations on their personal and athletic development, which was highlighted in the current study. The results demonstrated the importance of explaining the role of each player based on their classification. More specifically, athletes expressed frustration surrounding role ambiguity and described instances where they experienced low self-efficacy because they were comparing themselves to athletes who had higher functional abilities. Role ambiguity has been studied in the able-bodied sport literature and has been associated with a decrease of task cohesion (Eys & Carron, 2001), athlete satisfaction (Eys et al., 2003) and motivation (Gillet et al., 2016). In the context of the current study, athletes emphasized the necessity for coaches to communicate the different expectations for each player as it directly impacted their self-confidence and understanding regarding their strengths and limitations as a parasport athlete. In turn, this contributed to athletes' levels of development, focus, and satisfaction on their team. It is worth noting that these results apply to our elite sample of parasport participants who competed at the provincial or national level. As such, there are contextual differences that need to be taken into consideration at varying competitive levels, including the years of experience, level of commitment, impairment age, and expertise in parasport (Allan et al., 2018; Dehghansai et al., 2020; Lepage et al., 2020). Considering that recreational sport is typically less structured and demanding for athletes (Dehghansai & Baker, 20; Evans et al., 2018), it would be interesting

to investigate how parasport coaches communicate their expectations to athletes at varying levels and how their expectations may differ.

In line with communication, athletes noted the positive effect (e.g., enhanced levels of responsiveness and focus) associated with coaches who provided constructive feedback at appropriate moments in competition. Although the construct of complementarity has mainly focused on coaching behaviours associated with roles, tasks, and support within the able-bodied coach-athlete relationship (Jowett & Meek, 2000; Jowett & Carpenter, 2015; Jowett & Cockerill, 2003), delivering constructive and positive feedback has had a positive effect for maintaining a positive coach-athlete relationship (Rhind & Jowett, 2010; Rhind & Jowett, 2012). The importance of effective communication has been highlighted within the parasport literature (Alexander et al., 2020; Cregan et al., 2007; McMaster et al., 2012; Taylor et al., 2014; Taylor et al., 2015) however, there is little research (e.g., Alexander et al., 2020) that has explored the effect of both positive *and* negative feedback on parasport athletes, which was highlighted in the current study. More specifically, athletes appreciated having coaches who provided constructive feedback and who were also able to identify the appropriate moment to deliver feedback, which had a positive effect on their concentration and performance. On the other hand, athletes disliked coaches who lost their temper in practices when they were making mistakes. In turn, this negative feedback not only affected athletes' level of confidence, motivation, and satisfaction, but also had a detrimental effect on the team environment (e.g., decrease of team cohesion, increase of frustration). Taking into consideration that wheelchair basketball can be a conducive environment for creating close relationships (e.g., Garci & Mandich, 2005), the current findings suggest that the nature of coach-athlete feedback (positive versus negative) has the potential to



influence the development of these relationships as it not only influences athletes' emotional and athletic level, but also the development of a unifying team.

Additionally, athletes enjoyed having coaches who adapted practice drills and game strategies based on the strengths and weaknesses of individual players. Although limited in the able-bodied coaching literature, a handful of studies have associated adaptability with the construct of complementarity of the 3+1 Cs model (Foulds et al., 2019; Jowett & Meek, 2000) and have demonstrated its positive effect on the coach-athlete dyad (e.g., Rhind & Jowett, 2010). Nevertheless, the importance of having adaptable coaches has been explored in the parasport literature and has been demonstrated as a key component of effective parasport coaching practices (Alexander et al., 2020; Cregan et al., 2007; Tawse et al., 2012; Taylor et al., 2015). Our results extend the body of literature by suggesting that adapting practice skills not only fosters athletic development, but also has a positive impact on the team environment. More specifically, athletes discussed that having coaches who adapted practice skills to their functional abilities while using their athletic strengths to develop tactical strategies enhanced levels of team cohesion, cooperation, and feeling of unity among team members. This is particularly important when you take into consideration the positive effects of team cohesion in parasport teams (e.g., enhanced level of competitive performance, feelings of inclusivity and collaboration; see Caron et al., 2016; Falcão et al., 2015). Specific to athletes who acquired an impairment, being part of a team who shares a high level of cohesion may play an essential role in helping these athletes combat and overcome negative emotions (e.g., anxiety, depression; Day, 2013; Day & Wadey, 2016) associated with their trauma. Therefore, based on our findings, coaches not only have the potential to develop their athletes on an individual level by adapting to the players'

impairment/functional abilities, but they can also have a positive effect on the team's ability to work together to reach their full performance success.

The importance of adaptability was also highlighted in the context of equipment. In fact, our participants valued coaches who helped them find a good wheelchair as well as those who had the proficiency to adapt and adjust the sports equipment to their individual needs. The importance of having coaches who were able to provide the appropriate equipment is particularly important in the context of parasport due to the varying functional abilities of every athlete (Jaasma et al., 2018). More specifically, the parasport literature has demonstrated the necessity for coaches to learn how to adapt specialized equipment to facilitate athletes' parasport experience (Jaasma et al., 2018; Taylor et al., 2014; Taylor et al., 2015). Similarly, the current study demonstrated the importance that athletes placed on having a good chair and valued coaches who were able to help them with this technicality. In turn, athletes reported feeling more balanced, efficient, and proactive in their chair and on the court, which positively influenced their athletic performance. Therefore, these findings demonstrate a clear need for coaches to be knowledgeable about specialized parasport equipment as it is often a central aspect of parasport performance. This poses a unique challenge for many coaches as the majority of parasport coaches are able-bodied (Bentzen et al., 2021; Douglas et al., 2018; Lepage et al., 2020) and rely on informal learning opportunities (Duarte & Culver, 2014; McMaster et al., 2012; Taylor et al., 2014). Among the few sports to offer formal parasport coach education in Canada, Wheelchair Basketball Canada provides formal coaching certification for their coaches. However, to date, these modules do not include information regarding the adjustment of wheelchairs and how to adapt them to athletes. Given the current findings, we suggest that parasport coaching

certification include learning content regarding the mechanical aspects of wheelchairs to foster personal and professional satisfaction of wheelchair basketball athletes across the country.

### ***Commitment***

Research has demonstrated that positive and negative coaching behaviours can influence parasport athletes' desire to commit to their relationship with their coaches (Alexander et al., 2020; Allan et al., 2021). In the context of the current study, athletes reported a decreased interest for wheelchair basketball, commitment to the sport and their coaches, and negative emotions (e.g., frustration) when coaches displayed favouritism and were unsupportive. More specifically, these results demonstrate emotional responses that may occur when coaches and athletes do not share the same level of commitment to their relationships, which aligns with the commitment construct of the 3+1Cs model (Jowett, 2007). This construct refers to the cognitive element of the coach-athlete dyad where coaches and athletes share the desire to maintain the relationship over time (Jowett, 2007; Jowett & Poczwardowski, 2007). The able-bodied literature has identified the positive effects of sharing a high level of commitment between coaches and athletes, including enhanced levels of collective efficacy (Hampson & Jowett, 2014), task cohesion (Jowett & Chaundy, 2004), and performance goals (Jowett & Carpenter, 2015). However, research has also identified that lack of commitment and negative coaching behaviours can negatively influence the coach-athlete relationship (e.g., Jowett, 2003; Jowett & Carpenter, 2015). For instance, Jowett and Carpenter (2015) identified that lack of commitment was a detrimental factor to the coach-athlete dyad as both coaches and athletes reported its negative effect on an interpersonal (e.g., increase of conflict) and athletic (e.g., decrease of motivation) level. In the current study, athletes identified negative coaching behaviours, including displaying favouritism toward certain players, gossiping, and not involving players in drills, as factors

affecting their desire to pursue their relationship with their coaches. More specifically, athletes felt discouraged, isolated, and angry due to these coaching behaviours which in turn, influenced their desire to commit to their coaches' instructions, game plan, and philosophy. As a result, athletes did not want to pursue their athletic career with these coaches, and some expressed the possibility of quitting wheelchair basketball. This is troublesome when you take into consideration the positive effects of sports participation on people who have an acquired impairment, such as facilitating community integration (Hanson et al., 2001), enhancing physical fitness (Martin Ginis et al., 2012), and decreasing anxiety and depression symptoms (Gioia et al., 2006). Therefore, the current findings suggest that coaches should highly emphasize the development of interpersonal dyads that are grounded in cooperation, dedication, and respect (e.g., Jowett & Carpenter, 2015). In turn, these committed relationships have the potential to influence athlete involvement in sport and therefore, have a positive influence on athlete psychological and physical well-being.

### ***Co-orientation***

In the able-bodied literature, co-orientation is defined as “the athlete’s and coach’s interpersonal perceptions and reflects the degree to which they have established a common ground in their relationship” (Jowett & Poczwardowski, 2007, p. 8). In fact, research has demonstrated the positive effect of sharing a high level of co-orientation on the coach-athlete relationship (Jowett, 2003; Jowett & Cockerill, 2003; Jowett & Meek, 2000; Philippe & Seiler, 2006). In the context of the present study, some athletes valued coaches who were supportive in their lives outside of sport, however, others highlighted the importance of maintaining a professional relationship with their coaches. Specifically at the national level, some athletes believed that establishing relational barriers with their coaches were necessary to reach the

common goals of coaches and athletes, which was often performance success. While a few parasport studies have explored the coach-athlete relationship (Alexander et al., 2020; Jooste et al., 2019; Santos et al., 2018), there is limited research that has looked at the establishment and maintenance of a professional relationship between coaches and athletes which has the potential to influence athletes' parasporting experiences. In the current study, athletes emphasized the importance of establishing professional barriers (e.g., avoiding sharing one's personal life with the coach, over-familiarity with the coach) to achieve common team goals, which were to perform and win at the national stage. Athletes believed that these relational barriers contributed to the creation of an effective environment where both coaches and athletes were focused on developing athletes professionally while building a successful team. It is worth noting that the current literature has identified the importance of establishing a close and supportive relationship with parasport athletes (Alexander et al., 2020; Javorina et al., 2021; Jooste et al., 2019; Santos et al., 2018) however, there is little research that has focused on the value and implications of establishing relational barriers with parasport coaches. Therefore, future research is needed to further explore the construct of co-orientation and identify both athletes' expectations and coaching preferences in regard to relational boundaries to facilitate athletic development and satisfaction.

Another factor that influenced the development of co-orientation was the credibility of the parasport coaches. More specifically, athletes mentioned that coaches who also had an impairment were more credible since they personally experienced the reality of living with an impairment. This notion of shared understanding has been identified in the able-bodied literature and associated with the construct of co-orientation of the 3+1Cs model as a contributing element of the coach-athlete relationship (Jowett & Cockerill, 2003; Jowett & Meek, 2000). From a

parasport perspective, a few researchers have highlighted the value of having coaches with an impairment (Allan et al., 2020; Douglas et al., 2018; McMaster et al., 2012; Tawse et al., 2012). For instance, Allan et al. (2020) found that athletes perceived their coaches as being more credible and relatable when they also had a personal history with an impairment, which contributed to their athletic development. In a related manner, Douglas et al. (2018) demonstrated that coaches with impairments had a good understanding of the competitive and training environments and were able to provide guidance from their own personal experiences to their athletes. In the context of the current study, athletes not only had appreciation and respect for their coaches with an impairment, but also felt that these coaches had a truer understanding of their own abilities, limitations, and skill level since they were personally living with an impairment. This understanding positively affected athletes' perceptions towards their coaches as they identified them to be credible and trustworthy in their coaching practices. As a result, athletes reported paying specific attention to coaches' advice, instructions, and directive, as well as executed movements and drills that they did not believe to be initially possible. Moreover, athletes reported the positive effect this had on both their athletic development as well as on the creation of a trusting coach-athlete dyad. Although research has demonstrated that only a small proportion of coaches had an impairment with an athletic background (e.g., Douglas et al., 2018; McMaster et al., 2012; Tawse et al., 2012), the current findings demonstrate the value of having coaches with impairments to enhance athlete development and highlights the need to perhaps purposefully recruit coaches who have personal experience with an impairment. This can be done through peer-to-peer mentoring and the establishment of formal coaching opportunities as it has the potential to foster the recruitment and development of parasport coaches (Douglas et al., 2018; Fairhurst et al., 2017; Lepage et al., 2020). Therefore, more effort should be implemented

in Canada to develop coaching certification in a variety of parasports (e.g., paraskiing, paraboxing, etc.) while creating mentoring programs for coaches to foster the development of parasport athletes across the country.

Athletes also perceived their coaches who had an impairment as life role models and a source of inspiration. More precisely, athletes explained that their coaches helped open their eyes on the number of opportunities available (e.g., travelling options, education), which in turn, motivated them to pursue their personal and athletic dreams. This aligns with the construct of co-orientation of the 3+1 Cs model as it refers to coaches and athletes who bond through mutual experiences and therefore, formed a stronger coach-athlete relationship (Jowett, 2007; Jowett & Cockerill, 2003; Jowett & Meek, 2000; Jowett & Poczwadowski, 2007). Although there is little research regarding the effect of role modeling on the parasport coach-athlete relationship (Alexander et al., 2020; Lefebvre et al., 2021; Santos et al., 2018), the able-bodied literature has demonstrated the positive effect that role models have on athletes' personal and athletic development (Lefebvre et al., 2021; Moran-Miller & Flores, 2011; Picariello & Waller, 2016; Ronkainen et al., 2019; Young et al., 2015). For instance, Picariello and Waller (2016) reported that elite basketball players admired and wanted to follow the example provided by their role model, coach Pat Summitt. In a similar way, the athletes in the current study explained how their coaches inspired them to pursue their personal goals, including school, travelling, getting their driver's license, and having a family, while also motivating them to develop athletically to reach an elite level. Some athletes also highlighted how they were inspired by their coaches who also acquired their impairment. They noted how these role models had a positive influence on their motivation and overall parasport experience. In other words, these coaches had a positive impact on athletes when they transitioned into parasport by providing them with a sense of purpose,

perseverance, and determination to reach their personal and athletic goals. As a result, these coaches were identified as a key resource for athletes to imagine a possible future for themselves. Therefore, this research extends the literature by suggesting that having coaches who have an impairment may inspire athletes to realize their athletic dreams while also leading by example to be successful on a personal level as well.

Finally, multiple female athletes valued having coaches who addressed gender differences by adapting their coaching practices and their communication style to female athletes. Interestingly, interpersonal communication has been highlighted within the construct of co-orientation in the 3+1Cs model (Jowett, 2007) and has been identified as a contributing factor to the coach-athlete dyad in the able-bodied literature (Jowett, 2003; Jowett & Cockerill, 2003; Jowett & Meek, 2000; Philippe & Seiler, 2006). Specific to gender differences, the able-bodied literature has highlighted the importance of adapting coaching practices and communication to females (de Hann & Sotiriadou, 2019; Kristiansen et al., 2012; Norman, 2015). However, this area of research is relatively new in parasport as only a few studies have included an entire sample of female participants or explored coaching preferences from the female athlete perspective (e.g., Alexander et al., 2020). Although the current sample of this study included both male and female athletes, multiple female athletes explained the necessity of having coaches who adapted their coaching practices by acknowledging their emotions and playing style. More specifically, female athletes discussed that having coaches who failed to address gender differences had a negative effect on team cohesion while also creating feelings of irritation, resentment, and dissatisfaction among the players. It is worth noting that failing to address gender differences has shown to have a negative effect on able-bodied athletes, including a decrease of motivation (Fasting & Pfister, 2000) and sport participation (Kristiansen et al.,



2012). Taking into consideration the lower participation rate in parasport for women compared to men (Houghton et al., 2017), the current findings demonstrate the importance for coaches to adapt their practices to meet the desires of female athletes. In fact, these coaching behaviours seem to strongly influence female athletes' level of satisfaction in their team which in turn, may influence their involvement and participation in parasports.

## Chapter 6

### Summary of the Study

Research has demonstrated the positive effect of physical activity on people who have an acquired impairment, including enhanced levels of feelings of belonging (Day, 2013), well-being (Day & Wadey, 2016), quality of life (Chemtob et al., 2019) and life satisfaction (Taran et al., 2018). One person who can influence the positive effects of physical activity through sport is the coach (Bentzen et al, 2021; Cregan et al., 2007; Falcão et al., 2019; Tawse et al., 2012). More specifically, the quality of the coach-athlete relationship has been shown to affect athletes' personal and athletic development from an able-bodied perspective (Jowett, 2003; Jowett & Cockerill, 2003; Jowett & Carpenter, 2015). However, only a handful of research studies have explored the coach-athlete relationship in the parasport context (e.g., Alexander et al., 2020; Jooste et al., 2019; Santos et al., 2018). Therefore, this study aimed to expand the parasport literature by exploring the coach-athlete relationship from the perspective of athletes' who have an acquired impairment.

Six elite wheelchair basketball athletes who had an acquired impairment were recruited to participate in this research study. They all acquired their impairment within seven to 28 years and were involved in parasport for at least one year (mean = 15 years). These participants were either current or retired wheelchair basketball athletes competing/competed at the provincial and/or national level. Each athlete was recruited via email to participate in two interviews. For the first interview, a timelining approach was used to ask questions regarding the acquisition of the athletes' impairment, their recovery process, the potential development of secondary conditions, and their involvement into parasport. Then, a semi-structured approach was used for the main interview where questions regarding their coach-athlete relationship were asked. Both

interviews were conducted based on an interview guide that was created by the research team, however, they were implemented by the primary researcher. Altogether, the interviews lasted 512 minutes in length, which included both the timelining and the main interview. Both interviews were audio recorded and transcribed verbatim. A thematic analysis was used to analyze the data and to identify common themes and patterns to enhance our understanding of the participants' lived experiences, views, and perspectives (Braun & Clarke, 2019).

The thematic analysis revealed three higher order themes called: (a) *athlete foundation*; (b) *coaching behaviours*; and (c) *coaching preferences*. *Athlete Foundation* referred to factors and experiences related to parasport athletes' environment (e.g., wheelchair basketball environment), personal life (e.g., rehabilitation process), and athletic development (e.g., sporting career). *Coaching behaviours* outlined positive (e.g., support) and negative (e.g., favouritism) interactions that affected athletes on a personal and athletic level. Lastly, *coaching preferences* encompassed coaching styles (e.g., professionalism) and practices (e.g., adaptability) that contributed to athletes' parasporting experience and the coach-athlete relationship.

Each athlete described their unique and lived experiences as a parasport athlete, and there were similarities between their responses. In fact, athletes identified coaching practices (e.g., being understanding) and behaviours (e.g., promoting inclusivity) that positively affected the creation of a strong coach-athlete dyad. Athletes also described coaching characteristics (e.g., coaches who have an impairment) that positively influenced their relationship with their coaches, and therefore, their parasporting experiences. On the other hand, athletes also mentioned behaviours (e.g., yelling, lack of support) that had a detrimental effect on their coach-athlete relationship. These experiences not only affected the quality of their coach-athlete relationship, but also their level of interest, commitment, and enjoyment in wheelchair basketball. Taken

together, the results of this study demonstrate the perception of athletes who have an acquired impairment regarding effective and ineffective parasport coaching practices that influence the coach-athlete relationship and therefore, the quality of athletes' sporting experiences.

***Conclusions:***

**Athlete Foundation.**

- Athletes provided details regarding the acquisition of their impairment, their recovery process, the acquisition of secondary conditions, and how they became involved into parasport.
- Athletes offered an overview of their athletic career (from the recreational to the elite level) and also provided insight regarding their athletic accomplishments as well as their goals for future sports events.
- Athletes described the wheelchair basketball environment as being a second family where they felt supported and understood, contributing not only to their feelings of belonging, but also enhanced levels of well-being and life satisfaction.

**Coaching Behaviours.**

- Multiple athletes highlighted the importance of having coaches who supported them on a personal and athletic level as it not only led to enhanced levels of enjoyment, self-confidence, and athletic performances, but also facilitated athletes' transition into parasport.
- The majority of athletes valued coaches who were understanding, but also helped them develop independence, which positively influenced their lives outside the sport setting.

- Although athletes benefitted from having coaches who were patient and inclusive in the practice context. Some athletes reported the importance of having coaches who implemented discipline and rigor in practices as it positively influenced the team environment.
- Athletes identified the negative impact of having coaches who lost their temper and were yelling at their players on their levels of motivation, self-confidence, and athletic performance.
- Some athletes also disliked having coaches who displayed favouritism toward certain team players as it led to feelings of frustration, resentment, and anger, while also having a detrimental effect on the team dynamic.
- The majority of athletes described instances where coaches were unsupportive throughout their athletic career, which had a negative effect on their coach-athlete relationship, athletes' performances, and team dynamic.

**Coaching Preferences.**

- Athletes believed in the importance of having coaches who communicated effectively while also providing rigor in practices to facilitate athletic development and learning experiences.
- Some athletes also valued coaches who provided them with a safe environment, which was characterized as listening, caring, and helping athletes not only in the sporting context, but also in their personal lives.
- The majority of athletes highlighted the importance of having coaches who understood the game, had a parasport background, and who also created a game plan

based on each player's strength and weaknesses contributing to individual and team success.

- Athletes valued coaches who helped them find a good wheelchair and who also assisted with the logistic and the mechanics of the equipment, which positively influenced athletes experience and success in sports.
- Although some athletes shared a personal relationship with their coaches, others preferred establishing relational barriers and maintaining a professional coach-athlete dyad to enhance personal and team performances.
- The majority of athletes benefitted from having coaches who explained to them their roles on the court when they first entered parasport as it positively influenced their transition into parasport and their athletic development.
- Some female athletes emphasized the importance of having coaches who addressed gender differences in their coaching practices as it not only influenced athletes' levels of satisfaction and motivation, but also team cohesion.
- Athletes perceived coaches who had an impairment as role models and described them as having more credibility than able-bodied coaches which in turn, positively influenced their athletic development as well as the coach-athlete dyad.

### ***Practical Implications***

This research is among the first to qualitatively examine the parasport coach-athlete relationship from the perspective of an entire sample of athletes who have an acquired impairment. The current findings provide practical implications for parasport coaches, disability sport organizations, and athletes with an impairment. These will be discussed in this section.

First, the findings highlight the value of parasport coaches who provide a welcoming and safe sporting environment for their athletes who have an acquired impairment in wheelchair basketball. Considering that wheelchair basketball was identified as a second family by the current participants, wheelchair basketball coaches should focus on developing trusting relationships with their athletes. This can be done through the organization of social events (e.g., team dinner), creating practices that are inclusive and enjoyable for athletes, and providing athletes with an organized and structured sporting context. This was particularly important for wheelchair basketball athletes who have an acquired impairment as it contributed to the development of a strong feeling of belonging to their team. Thus, wheelchair basketball coaches are encouraged to go beyond the traditional coaching expectations by building an inclusive environment where coaches communicate with their athletes, address their individual needs, while also spending time with them on a personal level. This will allow coaches and athletes to get to know each other on a personal level which in turn, will contribute to the development of a positive coach-athlete relationship.

Second, athletes highlighted the importance of having coaches who provided assistance with their equipment, especially their wheelchairs. In fact, they reported an enhanced level of skill execution when they had coaches who helped them to find and adjust a wheelchair to their physical abilities. Taken into consideration that formal parasport coaching opportunities in Quebec offers limited content regarding the logistics of equipment, the findings demonstrate the need for parasport organizations to provide learning material regarding parasport equipment for their coaches. This could be done by creating e-learning and/or in-person modules, classes, and workshops specifically dedicated to parasport equipment where parasport coaches would have chances to interact with colleagues and learn about the technicalities of wheelchairs.

Third, two female parasport athletes described instances where male coaches failed to address gender differences in their coaching practices. As a result, athletes reported feelings of resentment and anger which in turn, had a detrimental effect on team dynamics and the coach-athlete relationship. It is worth noting that this study is one of the first to highlight the importance of coaches addressing gender differences in the context of parasport. Considering the detrimental effect that it had on an individual and team level, it would be worth further exploring this avenue to identify negative parasport coaching practices that should be avoided with female athletes, as well as their repercussions on athletes' personal and athletic development.

Fourth, athletes highlighted that coaches who have an impairment were more credible to their athletes who felt they had a better understanding of the reality of living with an impairment. As a result, athletes reported the positive effect (e.g., enhanced level of trust and respect) on their coach-athlete dyad. Although having a personal experience with an impairment contributed to parasport athletes' sporting experiences, the majority of parasport coaches have reported to be able-bodied (Cregan et al., 2007; Douglas et al., 2018; Lepage et al., 2020). However, they can still deepen their parasport understanding through different avenues, such as trying out the sport and equipment for themselves (Allan et al., 2021), partaking in formal learning opportunities (e.g., *NCCP Coaching athlete with a Disability*; Coaching Association of Canada, 2017), and peer-to-peer mentoring opportunities (Douglas et al., 2018). Therefore, able-bodied coaches can also develop their expertise and knowledge through formal and informal learning opportunities however, coaches who have an impairment add an additional value as they share a personal understanding with their parasport athletes.

Lastly, two female athletes described being inspired by their female coaches who had an acquired impairment when they started wheelchair basketball at a young age (eight and 16 years



old). Athletes considered these coaches to be role models who inspired and motivated them to pursue their personal and athletic goals. It is worth noting that a recent scoping review identified that only 12.8% of parasport coaches were female (Bentzen et al., 2021). This is troublesome considering the importance of female role models in women's sports (Alexander et al., 2020). Therefore, parasport organizations and coaches should invest more time and effort recruiting female coaches. This could be achieved by recruiting female coaches when they are still actively involved in parasport, organizing women in sport panels for future female parasport coaches, and promoting the value and development of female parasport across the country. In fact, there have been a few female parasport events created in Canada for athletes in the past, including *Girls Enabled and Ready to Play* in Ontario (Ontario Para Network, 2020) and *Women's Only Wheelchair* in British-Columbia (BC Wheelchair Basketball, 2019). However, there are very limited opportunities available for female parasport coaches. Although there were a few female mentorship programs available for the able-bodied female coaches, including *The Female Mentorship Program* (Ontario Soccer, 2020) and *Changing the Game – Program Intake* (Coaches Association of Ontario, 2021) in Ontario, more effort should be invested for creating a long-lasting female parasport mentorship program to positively influence the development and involvement of future female coaches. By doing so, it would not only promote coaching diversity, but it would also benefit parasport athletes' by addressing their individual need and preferences.

### ***Limitations and Recommendations***

Although the current study is one of the first to provide insights regarding the parasport coach-athlete relationship, several limitations should be addressed. First, the current findings may only be applicable in a parasport team sport context (e.g., wheelchair rugby, sledge hockey,

etc.). Taking into consideration that the coach-athlete relationship differs depending on the context (e.g., individual versus team sports; Rhind et al., 2012), future research should explore the parasport coach-athlete dyad in individual sports. Second, our sample solely included wheelchair basketball athletes who have an acquired impairment. Thus, it would be interesting for future research to expand this sample to athletes from a variety of contexts (e.g., recreational athletes, esthetic sports, etc.). Third, the participants were all from a Caucasian background demonstrating the possibility for future research to explore the experiences of athletes with a different racial and/or ethnic background. This may contribute to creating a more inclusive environment as it would take into consideration social processes that may affect a specific population. Fourth, participants were all elite athletes who had participated in parasport for the past seven to 28 years. In other words, some athletes started parasport when they were children (e.g., nine years old) while others were teenagers (e.g., 16 years old) and adults (e.g., 24 years old). Therefore, future research should focus on a sample of participants that acquired their impairment at a similar age range to explore how differences in sporting level and parasport experience may impact the coach-athlete relationship. Fifth, both male and female athletes were included in the current study. It is worth noting that multiple female athletes articulated the importance of addressing gender differences in coaches' practices in this study. This highlights the importance for more research to explore the coach-athlete dyad from the female athletes' perspective to facilitate the development of positive relationships and therefore, enhancing athletic experience. Sixth, the athletes spoke about the importance of having a high functioning wheelchair to ensure a positive parasport experience and athletic success. Given that the average cost for an athletic wheelchair ranges between \$1,500 and \$8000 in Quebec, it would be interesting to explore the accessibility of the equipment and how the cost may affect parasport

participation and athlete's development. Finally, athletes identified negative coaching behaviours that had a detrimental effect on their personal and athletic development. However, more research is still needed in this area to ensure the creation of a safe and healthy environment for athletes and their long-term participation in parasports.

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## Appendix A

### Recruitment Script

Dear \_\_\_\_\_,

My name is Lara Pomerleau-Fontaine and I am currently working towards a Master of Arts degree in sport psychology under the supervision of Dr. Gordon Bloom in the Department of Kinesiology and Physical Education at McGill University. My supervisor and I would like to invite you to participate in our research study. The purpose of this study is to explore the perceptions of parasport athletes' regarding the coach-athlete relationship. You have been identified as a potential participant because you are playing elite wheelchair basketball and because you acquired your impairment over one year ago.

If you chose to participate in this study, you will be asked questions regarding your involvement in parasport, as well as the relationship you maintained with your coach during your athletic career. If you choose to participate, I will conduct two interviews within a week, each lasting approximately 60-75 minutes at a chosen time and location that is most convenient for you (either in person or virtually via electronic means).

This study has been reviewed and accepted by the McGill University Ethics Board, and **any information you provide during this study will remain confidential.** No identifying information will be used, ensuring your identity will remain anonymous. Only the lead investigator, Lara Pomerleau-Fontaine, and the faculty supervisor, Dr. Gordon Bloom, will have access to identifiable data.

**Should you have any questions concerning this study, please contact my supervisor or myself using the information provided at the bottom of the page.** The McGill Sport Psychology Research Laboratory has a history of producing influential research on concussions. Please visit our website if you would like to learn more about our research:  
<http://sportpsych.mcgill.ca>.

Thank you for considering participating in this research project, and I look forward to hearing from you!

Sincerely,  
Lara Pomerleau-Fontaine

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### **Appendix B**

#### **Informed Consent Form**

This study is in partial fulfilment of the requirements for the degree of Master of Arts for Lara Pomerleau-Fontaine, a graduate student in sport psychology in the Department of Kinesiology and Physical Education at McGill University. You are invited to participate in our research study titled, “Exploring the coach-athlete relationship of wheelchair basketball athletes who have an acquired impairment”. Should you choose to participate in this study, you will be requested, without payment, to partake in two 60-75 minutes audio recorded interviews within a week. During the interviews, you will be asked questions about your involvement into parasport, as well as the relationship you shared with you coach during your athletic career.

At the end of the interview, you will have to opportunity to clarify any statements made during the interview, offer additional insights and comments, or ask the interviewer (Lara Pomerleau-Fontaine) questions. You will also receive a typed transcript of the interviews, which may be edited at your discretion. Prior to publication, you will receive copies of the results and conclusions of the study. Your identity will remain confidential at all times. The principle investigator, Lara Pomerleau-Fontaine, and the faculty supervisor, Dr. Gordon Bloom, will be the only individuals to have access to identifiable data. All data, including the audio file of the recorded interview and the digital copy of the consent form, will be securely stored in an encrypted folder on a password-protected computer for a period of seven years. Any paper copies will be converted to digital files and, promptly, destroyed. Pseudonyms will be used to label all digital files. All data will be destroyed seven years after the study ends. The information disclosed during the interview will remain confidential and will be used for publication purposes and scholarly journals or for presentations at conferences. Your name and identity will not be revealed at any time. The McGill Research Ethics Board has reviewed this study for compliance with its ethical standards. Your participation in this study is completely voluntary and not mandatory. You are free to refuse to answer any questions or withdraw from participation at any time, without penalty, and all information gathered up to that point will be destroyed.

After reading the above statement and having had the directions verbally explained, it is now possible for you to provide consent and voluntarily agree to participate in this research project based on the terms outlined in this consent form. You will be provided with a signed copy of this consent form for your records. You will also be asked to reiterate your consent throughout the study to ensure you wish to continue. You may refuse to continue participation at any time, without penalty, and all information gathered will remain confidential. Please contact the Research Ethics Officer at 514-398-6831, or [lynda.mcneil@mcgill.ca](mailto:lynda.mcneil@mcgill.ca) if you have any questions or concerns regarding your rights and welfare as a participant in this research study. Please sign below if you agree to participate in this study.

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Signature

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Date

---

Researcher's Signature

---

Date

I agree (please check YES \_\_\_\_ or NO \_\_\_\_ and write your initials \_\_\_\_\_) to the audio recording of the interviews with the understanding that these recordings will be used solely for the purpose of transcribing these sessions.

Lara Pomerleau-Fontaine  
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## **Appendix C**

### **Interview Guide**

#### **Pre-Interview Routine**

- Introduction
- Consent Form

#### **Opening Questions**

1. Briefly describe your athletic accomplishments, including your wheelchair basketball career
  - a. How long have you been a part of this team and what would you consider your role to be?
  - b. What are your career goals in wheelchair basketball?

#### **Key Questions**

2. Who convinced you to become a wheelchair basketball player?
3. What role did your parasport coach play in regard to your transition into parasport?
  - a. Please provide examples how your coach helped you adjust to this environment?
  - b. How did these behaviours impact your integration into the team?
4. What type of relationship did you have with your coach when you first entered parasport?
  - a. What were the benefits and/or consequences of this relationship during your athletic career?
5. Today, what type of relationship do you share with your coach?
  - a. How did your relationship change since the first day you met your coach?
  - b. What impact did it have on your athletic career?
6. In your opinion, what are the key points that parasport coaches should implement in their coaching practices with athletes who have an acquired impairment?
  - a. Which coaching practices facilitate the transition of athletes with an acquired impairment into parasport? Why?
  - b. Which coaching practices should be avoided? Why?
7. Would you like that your coach change his/her coaching approach regarding athletes with an acquired impairment? If yes, why?
8. Can you talk about the relationships you have seen with your coach and your teammates who have an acquired impairment when they transitioned into parasport?
  - a. How did these relationships impact your teammates as well as the team?

**Summary Questions**

9. Suppose you have the possibility to provide recommendations for parasport coaches who are currently coaching athletes transitioning into parasport in a form of a list of do's and don'ts, what would your list include?
10. On a scale of 1 (negative experience) to 10 (positive experience), how would you rate your experience of transitioning into parasport? Why a *(number they say)* rather than a *(higher or lower number)*?

**Concluding Question**

11. Would you like to discuss anything that we did not cover today?
12. Do you have any final comments you would like to share? Any questions?

*Probes: Key phrases to stimulate reflection*

- Can you expand on that?
- Can you clarify that?
- That's interesting, tell me more about that.
- Could you please tell me more about this?