FEMALE PARALYMPIC ATHLETE PREFERENCES OF EFFECTIVE COACHING PRACTICES

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Abstract

According to the World Health Organization (World Health Organization, 2016), over one billion people, or 15% of the population, have some type of disability. In Canada, approximately 3.8 million people reported having a disability, and over three million adults (11%) reported having a *physical* disability (Statistics Canada, 2012a). People living with physical disabilities are at a higher risk of developing secondary physical and mental health conditions such as fatigue, obesity, and depression (Goodwin & Compton, 2004; Heron, Kee, Cupples, & Tully, 2015). The occurrence of secondary conditions has been associated with a lower quality of life and decreased independence for people with a physical disability (Motl & McAuley, 2014). Physical activity is one way to decrease the severity and prevalence of these secondary conditions (Goodwin & Compton, 2004). One type of physical activity is sport, which has been identified as a way of providing many psychological, physiological, and social benefits for people with a physical disability (Stephens, Neil, & Smith, 2012). The largest sporting competition for elite athletes with a physical disability is the Paralympic Games and despite the exponential growth of the Games, the same growth and development has not occurred with empirical literature in this context, for either the coaches or the athletes participating in this event. Additionally, most of the samples in elite disability sport have been male only or mixed gender, most attributable to the small proportion of female athletes competing as a Paralympian. Thus, the purpose of the current study was to explore female Paralympic athlete preferences of effective coaching practices. Individual semi-structured interviews were conducted with eight female Paralympic athletes who each attended multiple Paralympic Games and achieved an average of eight combined Paralympic and Para Pan American medals. Interviews were transcribed verbatim and organized into themes and subthemes using thematic analysis, which provided the reader with a comprehensive understanding of each participants' experience (Braun & Clarke, 2013; Sparkes & Smith, 2014). Results from the analysis revealed that athletes preferred coaches who were able to adapt to the various needs of the individual, were knowledgeable of their sport, engaged in effective communication, and challenged athletes to reach their potential. Athletes also described negative coaching experiences and described coaches who insulted them based on their gender and disability, and engaged in selfish or manipulative behaviours. The athletes felt the coaches' behaviours impacted their satisfaction and success on both a personal and professional level. These results add to the small body of coaching knowledge in disability sport, and is one of the first studies to include an all-female sample of Paralympic athletes.

Résumé

D'après l'Organisme Mondiale de la Santé (World Health Organization, 2016), plus d'un milliard de personnes, ou 15% de la population, vivent avec un certain handicap. Au Canada, approximativement 3,8 millions de personnes ont déclarées avoir un handicap, et plus de trois million d'adultes (11%) ont déclarées avoir un handicap physique (Statistics Canada, 2012a). Les personnes vivantes avec un handicap physique sont à plus grand risques de développer des conditions secondaires, physiques et/ou mental, tel qu'épuisement, obésité, et dépression (Goodwin & Compton, 2004 ; Heron, Kee, Cupples, & Tully, 2015). L'apparition de conditions secondaires a été associée à une baisse de qualité de vie et une diminution de l'indépendance chez les personnes avec un handicap physique (Molt & McAuley, 2014). L'activité physique est un moyen de diminuer la sévérité et la fréquence de ses conditions secondaires (Goodwin & Compton, 2014). L'un des types d'activité physique est le sport, qui fournit de nombreux bénéfices psychologique, physiologique, et social pour les personnes avec un handicap physique (Stephens, Neil, & Smith, 2012). Les Jeux Paralympiques sont la plus grande compétition sportive pour les athlètes atteint d'un handicap physique mais en dépit de la croissance exponentielle des Jeux, la même croissance n'a pas encore été observée pour la littérature empirique dans ce contexte, que ce soit pour les entraîneurs ou les athlètes participants à cet évènement. De plus, la majorité des échantillons ont été exclusivement masculins ou mixtes, en grande partie dû à la faible proportion d'athlètes Paralympique féminines. Par conséquent, l'objectif de cette étude était d'explorer les préférences de pratique d'entraînement efficace chez les athlètes Paralympique féminines. Des interviews individuelles semi-structurées ont été conduites avec huit athlètes Paralympique féminines qui ont chacune participées à de multiples Jeux Paralympiques et ont chacune obtenue une moyenne combinées de huit médailles Paralympique et Para panaméricaines. Les interviews furent retranscrite verbatim et organisées en thèmes et sous-thèmes en utilisant une analyse thématique, ce qui fournit au lecteur une compréhension complète de l'expérience de chaque participantes (Braun & Clarke, 2013 ; Sparkes & Smith, 2014). Les résultats de l'analyse révélèrent que les athlètes ont eu une préférence envers les entraîneurs qui furent capable de s'adapter aux différents besoins de l'individu, étaient bien informés sur leur sport, qui ont contribués à une communication efficace, et qui ont stimulés leurs athlètes à atteindre leur potentiel. Les athlètes ont également décrites des expériences d'entraînement négatives et décrites des entraîneurs qui les ont insultés à cause de leur genres ou handicap, et qui ont adoptés un comportement égoïste ou manipulateur. Les athlètes ont ressenties que le comportement de leurs entraîneurs influencé leur satisfaction et leur succès sur un plan à la fois personnel et professionnel. Ses résultats s'ajoutent à la petite quantité de connaissances existant sur l'entraînement en handisport, et est parmi les premières études à inclure un échantillon d'athlètes Paralympique exclusivement féminin.

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Chapter 1

Introduction

The Paralympic Games is the largest international competition in the world for elite athletes with a physical disability (International Paralympic Committee, 2014a). The Paralympic Games originated in 1960 with 400 athletes competing from 23 countries (International Paralympic Committee, 2014a). The event has expanded to include 547 athletes from 45 countries at the last Paralympic Games in Sochi, Russia in 2014 (International Paralympic Committee, 2014d). Despite the undeniable growth of the Games, there has been limited research focusing on the elite athletes with a disability participating in this event (Banack, Sabiston, & Bloom, 2011).

According to the World Health Organization (World Health Organization, 2016), over one billion people, or 15% of the population, reported having some type of disability. In Canada, over 3 million people reported having a disability, including over three million adults (11%) with a *physical* disability (Rick Hansen Foundation, 2017). People living with physical disabilities are at a higher risk of developing secondary physical and mental health conditions such as fatigue, obesity, and depression (Carlon, Taylor, Dodd, & Shields, 2013; Goodwin & Compton, 2004; Heron, Kee, Cupples, & Tully, 2015). The occurrence of secondary conditions has been associated with a lower quality of life and decreased independence for people with a physical disability (Kawanishi & Greguol, 2013; Motl & McAuley, 2014). Physical activity is one way to decrease the severity and prevalence of these secondary conditions (Goodwin & Compton, 2004; Rimmer, Riley, Wang, Rauworth, & Jurkowski, 2004). One type of physical activity is sport, which has been identified as a way of providing many psychological, physiological, and social benefits for people with a physical disability (Murphy & Carbone, 2008; Stephens, Neil, &

Smith, 2012; World Health Organization, 2003). Despite these health benefits, the majority of people living with a physical disability are not sufficiently active to retain health benefits, both in Canada and abroad (Carlon et al., 2013; Heron et al., 2015). For example, the United Kingdom Active People Survey (Sport England, 2014) measured sport and recreation levels in Europe for able bodied people, as well as those with a disability. Among the conclusions, only 17% of people with a disability 16 years or older reported playing a sport once a week in 2014 (Sport England, 2014).

Although the participation rates for sport and physical activity for people with a disability are low, research conducted on people that *are* physically active has revealed many promising results about their health and wellness (Arbour, Latimer, Martin Ginis, & Jung, 2007; Goodwin & Compton, 2004; Goodwin, Krohn, & Kuhnle, 2004). For example, Goodwin and Compton (2004) interviewed six physically active, aging women with a physical disability (i.e. cerebral palsy, acquired brain injury, spinal cord injury) and found that being physically active led to reduced pain, increased independence, and a higher sense of accomplishment. In a related study, Arbour et al. (2007) studied whether being classified as an "exerciser" led people to form more positive impressions of people with a physical disability. Able-bodied participants (226 women and 220 men) read a paragraph about a person with a spinal cord injury and described him/her as either an "exerciser", "non-exerciser", or "control" (Arbour et al., 2007). The participants then rated the person based on physical features (e.g., physically strong or physically weak, fit or unfit) and personality characteristics (e.g., intelligent or unintelligent, friendly or not friendly). The results revealed that people with a physical disability who were considered "exercisers" were rated more positively compared to the other two groups (Arbour et al., 2007). Due to this positive association, Arbour and colleagues proposed that participation in physical activity could

help reduce the negative stigma linked to people with a physical disability (Arbour et al., 2007). Overall, these two empirical studies suggested that physical activity may provide a positive atmosphere for people with a disability on both a personal (e.g., a stronger physical body, a higher sense of independence) and societal level (reducing stigma associated with physical disabilities).

Similar to the benefits of physical activity, one role of an effective coach is to foster a positive environment where athletes are able to grow both personally and athletically (Tawse, Bloom, Sabiston, & Reid, 2012; Vallée & Bloom, 2005). Côté and Gilbert (2009) referred to coaching effectiveness as the consistent application of coaches' knowledge to improve athlete outcomes dependent on particular coaching contexts. More specifically, coaches' knowledge refers to: (a) professional knowledge used for teaching sport-specific skills, such as technical and tactical skills, (b) interpersonal knowledge used to build relationships with their athletes, and (c) intrapersonal knowledge where coaches are able to review, reflect, and revise their coaching strategies and behaviours to fit the needs of their athletes (Côté & Gilbert, 2009). Athlete outcomes are measured via their feelings of sport-related competence, confidence, connection, and character/caring (Côté & Gilbert, 2009). Lastly, coaching context refers to unique settings (i.e., coaching athletes with a disability) that a coach adapts to in order to foster athlete outcomes (Bloom, Falcão, & Caron, 2014). According to Burkett (2013), an effective coach of an athlete with a physical disability must have a greater understanding of sport-specific knowledge, as well as focusing on what *can* be done compared to what *cannot* be done in training the athlete. In order to develop these skills, it is necessary to develop the interpersonal relationship between the coach and the athlete (Bloom et al., 2014; Côté & Gilbert, 2009; Gilbert & Côté, 2013).

Research on the coach-athlete relationship has been studied primarily in able-bodied sport contexts (e.g., Jowett & Cockerill, 2003; Jowett & Meek, 2000; Li, Dittmore, & Park, 2015). More specifically, Jowett and Ntoumanis (2004) defined the coach-athlete relationship as a reciprocal relationship based on mutual understanding of thoughts, behaviours, and values outlined through the constructs of closeness, commitment, co-orientation, and complementarity of the 3+1Cs model. *Closeness* refers to feelings of emotional and personal characteristics based on mutual trust and respect. *Commitment* involves the mutual belief that the relationship will be maintained and continued. *Co-orientation* signifies common goals, values, and beliefs. *Complementarity* is the ability to work successfully as a team towards a common goal (Jowett & Ntoumanis, 2004, Jowett & Timson-Katchis, 2005). Feelings of closeness, commitment, co-orientation, and complementarity are positively associated with the coach-athlete relationship (Jowett & Ntoumanis, 2004). Furthermore, the coach-athlete relationship has been positively linked to the athletes' satisfaction, self-esteem, and performance (Jowett & Clark-Carter, 2006; Jowett & Cockerill, 2003; Jowett & Nezlek, 2011), to foster the athletes' growth and development (Jowett & Meek, 2000; Jowett & Ntoumanis, 2004). While research has suggested a need to generate knowledge and understanding of the coach-athlete relationship (Jowett & Nezlek, 2011; Philippe & Seiler, 2006), this branch of effective coaching has received scant attention for elite athletes with a physical disability.

Looking at research conducted from the perspective of both the coach and the athlete in elite disability sport, most of the samples have been either mixed or male only (Banack et al., 2011; Cregan, Bloom, & Reid, 2007; Taylor, Werthner, & Culver, 2014). This is most attributable to the higher number of male athletes competing in the Paralympic Games compared to female athletes (e.g., two-thirds of the competitors were male in the 2012 London Paralympic

Games) (The Guardian, 2012). As a result, it would be interesting to examine coaching preferences from the perspective of the female athlete. Boardley, Kavussanu, and Ring (2008) have suggested that athlete perceptions play a critical role in understanding their coaches' behaviours and in turn, their perceived effectiveness, therefore, this study explored what female Paralympic athletes want from their coaches, using semi-structured interviews and a qualitative methodological approach.

Central Research Questions

The purpose of the study was to explore female Paralympic athletes' preferences of effective coaching practices. More specifically, the study focused on answering two questions. First, what strategies and behaviours do female Paralympic athletes find most important and desirable of an effective coach? Second, how does the coach-athlete relationship affect the performance and personal satisfaction of female Paralympic athletes?

Significance of the Study

One of the goals of sport psychology research is to examine ways to enhance athlete performance and satisfaction (Crocker, 2011). Results from this study provided knowledge of coaching effectiveness in disability sport and gained a better understanding of what female Paralympic athletes were looking for in an effective coach. This knowledge provided insight on the strategies and behaviours of the coach that the athlete considered valuable towards fostering her development on both a personal and professional level. In addition, the results of this study expanded our understanding of the coach-athlete relationship for a sample of elite female athletes. Considering that the coach-athlete relationship has been positively linked to athletic success (Jowett & Clark-Carter, 2006), a deeper comprehension of this relationship was useful both empirically in future research and practically for active athletes and coaches to create an

optimal working relationship. Lastly, a female sample was purposively chosen due to the higher proportion of women reporting having a physical disability and experiencing restricted movements compared to men in our country (Rick Hansen Foundation, 2017). In addition, women reported engaging in a lower amount of physical activity per week compared to men (Rick Hansen Foundation, 2017). To our knowledge, this was one of the first studies to include an all-female sample of Paralympic athletes and expanded the body of knowledge on this underdeveloped population.

Delimitations

For the purpose of this study, the following delimitations were identified:

1. Participants were female Paralympic athletes.
2. Participants were either currently active in competitive sport or recently retired.
3. Participants had competed in at least two Paralympic Games and won at least one Paralympic or Para Pan American Games medal
4. Participants competed in an individual sport.
5. Participants worked with the same coach for at least five years.

Limitations

These delimitations may have led to the following limitations:

1. Due to the qualitative nature of this study, results were not generalizable to the larger population but provided an in-depth understanding of the individual, elite, Canadian, female participant.
2. Results may be limited by the athletes' ability to recall events or experiences.
3. Results may be affected by participant's hesitation to disclose information about their coach due to potential implications for their future.

Chapter 2

Literature Review

This chapter will consist of four main sections. The first section will provide an understanding of sport for persons with a physical disability and an overview of the evolution of the Paralympic Games. The second section will outline the operational definition of coaching effectiveness. The third section will examine the literature on coaching disability sport, and finally, the fourth section will examine research on the coach-athlete relationship.

Sport for Persons with Physical Disabilities

Athletes with a physical disability have participated in sport for upwards of 100 years, beginning in 1888 with the creation of the Sports Club for the Deaf (International Paralympic Committee, 2014a). Interest in sport for persons with disabilities continued into the twentieth century as competitions emerged for athletes with a hearing impairment. Through the combined efforts of Antoine Dresse and the President of the French Deaf Sports Federation, Eugène Rubens-Alcais, the First International Silent Games were founded and held in Paris, France in 1924 (Ammons, 2008). The Games involved national teams from Belgium, Czechoslovakia, France, Great Britain, the Netherlands, and Poland (Gold & Gold, 2007). Directly following this event, national leaders from the Deaf sporting community founded the International Committee for Deaf Sports (CISS), and since then, the event has been held every four years with the exception of World War II (Bailey, 2008). The International Silent Games was considered the first competitive sporting event for athletes with any type of disability, yet only included athletes with a hearing impairment (Ammons, 2008). It was not until the work of Dr. Ludwig Guttmann that disability sport evolved to include athletes with a variety of physical disabilities.

Dr. Ludwig Guttmann was the director of the National Spinal Injuries Centre at the Stoke Mandeville Hospital in Buckinghamshire, England (Gold & Gold, 2007; Legg & Steadward, 2011). After the Second World War, the hospital received numerous patients with spinal cord injuries that resulted in paraplegia. At the time, paraplegia was not considered a priority in medicine, therefore Guttmann focused on the recovery of his patients using an unconventional method: competitive sport (Legg & Steadward, 2011). According to Guttmann, sport benefited patients with a physical disability on both a physiological (e.g. improving physical characteristics such as strength, co-ordination, speed, and endurance) and psychological level (e.g. providing patients with a sense of purpose and reinstating social interaction with others) (Gold & Gold, 2007). With this notion in mind, Guttmann hosted an archery competition for athletes in a wheelchair called the Stoke Mandeville Games in 1948 (DePauw & Gavron, 2005). The teams originally consisted of 16 male and female members of military from two nearby hospitals, yet a year later, the event expanded to include 60 athletes from five different hospitals (Gold & Gold, 2007). In 1952, the Netherlands joined the competition, classifying the Stoke Mandeville Games as an international sporting event; since then, the Stoke Mandeville Games have taken place every four years (Gold & Gold, 2007). As the Stoke Mandeville Games evolved, the name changed to the Paralympic Games in 1960. The word *Paralympic* is derived from the Greek preposition *para* meaning alongside or beside, and symbolized how the Paralympic Games existed in parallel to the Olympic Games in terms of location and timeline (Gold & Gold, 2007).

The Paralympic Games. The first Paralympic Games were held in Rome, Italy in 1960 where 400 athletes competed representing 23 countries (International Paralympic Committee, 2014a). The Games took place six days after the closing ceremony of the Olympics and involved eight summer sports including: Archery, IPC Athletics, Dartchery, Snooker, IPC Swimming,

Table Tennis, Wheelchair Fencing, and Wheelchair Basketball (International Paralympic Committee, 2014a). The host country achieved the top overall ranking with 80 medals, Great Britain ranked second with 55 medals, and Germany was third with 30 medals (International Paralympic Committee, 2014a). The first Winter Paralympic Games were introduced in Örnsköldsvik, Sweden in 1976 and only involved the winter sports of Alpine Skiing and Cross-Country Skiing (Gold & Gold, 2007). The number of sports now included in the Summer and Winter Paralympic Games have expanded to 24 Summer sports and six Winter Sports (International Paralympic Committee, 2014e). Para-canoeing and para-triathlon were also added to the sporting list for the Rio 2016 summer Paralympic Games (Canadian Paralympic Committee, 2013f).

The Paralympic Games involve athletes with spinal cord injuries, visual impairments, les autres (i.e. congenital limb deficiencies, limited muscle strength), and cerebral palsy (Burkett, 2013; Gold & Gold, 2007). Due to the number of disability types in the Paralympic Games, a classification system is used so that people compete against others with similar levels of functioning. This is done by placing athletes in categories based on their physical ability. For example, in para swimming, the athletes are categorized into sport classes, which involve a prefix “S” indicating freestyle, butterfly, and backstroke events or “SB” referring to breaststroke. The prefix is followed by a number from one to ten indicating the severity of the physical impairment, e.g., SB9 refers to swimmers competing in breaststroke with minimal physical impairments, such as a loss of a hand or minimal movement restriction, whereas S2 refers to swimmers in either freestyle, butterfly, and backstroke events with limited leg, arm, and trunk function (International Paralympic Committee, 2014f). Furthermore, a number of disability organizations were founded to help accommodate for the individual needs of each disability

group including the International Sports Organization for the Disabled (ISOD), the Cerebral Palsy International Sports and Recreation Association (CPISRA), International Blind Sports Federation (IBSA), and International Committee of Sport for the Deaf (CISS) (International Paralympic Committee, 2014b). As the Paralympic Games progressed, a greater need arose for an all-encompassing committee comprised of national representation from each disability group (International Paralympic Committee, 2014f). The International Paralympic Committee (IPC) was therefore founded on September 22, 1989, and has been responsible for the organization and coordination of the Paralympic Games to date (International Paralympic Committee, 2014g). The IPC, created in parallel with the International Olympic Committee (IOC), was a global, non-profit committee with the purpose of overseeing the development and production of the Summer and Winter Paralympic Games (International Paralympic Committee, 2014g). The IPC stated their primary values of courage, determination, inspiration, and equality in hopes of creating excitement and empowerment for athletes with a disability as well as fostering inclusivity in sport around the world (International Paralympic Committee, 2014g). The primary values of the IPC represent a shift from the medical model approach, where sport was originally seen as a rehabilitation technique, to a social model, where people with physical disabilities are not seen as ill or in need of a cure, but feel empowered and encouraged to achieve success in sport (Goodwin, 2016).

Similar to the IPC, the Canadian Federation of Sport Organizations for the Disabled (CFSOD) was founded in 1981, which was later renamed the Canadian Paralympic Committee in 1993 (Canadian Paralympic Committee, 2013c). The Canadian Paralympic Committee is a non-profit organization with 46 Member Sport Organizations designed to promote and inspire Canadian athletes with a disability (Canadian Paralympic Committee, 2013a). The Canadian

government has made direct efforts to support disability sport by granting funds to provide opportunities for athletes with a disability to train and compete (Canadian Paralympic Committee, 2013b). Due to this nation-wide support, Canada has become known as a leader in the Paralympic Movement (Canadian Paralympic Committee, 2013b). For example, the Steadward Center for Personal and Physical Achievement in Edmonton, Alberta has helped put Canada at the forefront of applied disability work (The Steadward Centre, 2016). Dr. Robert Steadward was the founding President of the International Paralympic Committee and was considered a world leader in disability sport (Canadian Paralympic Committee, 2013e). Opened in 1978, the Steadward Centre strives to support children, youth, and adults living with physical disabilities to be independent and active by providing an inclusive environment for people to grow and develop as people and athletes (University of Alberta, 2017; The Steadward Centre, 2016). Since the Paralympic Games were held in Toronto in 1976, Canada has consistently been ranked among the top competitors in medal standings and has achieved numerous top 10 overall rankings (Canadian Paralympic Committee, 2013b).

The Paralympic Games have grown exponentially since they began in 1960 and are currently the largest international competition in the world for athletes with a physical disability (International Paralympic Committee, 2014b). The most recent Summer Paralympics were held in 2016 in Rio de Janeiro, Brazil, where Team Canada sent 162 athletes to compete in 19 sporting events (Canadian Paralympic Committee, 2013d). Sequentially, the next Winter Paralympics will be located in PyeongChang, South Korea in 2018 (International Paralympic Committee, 2014c).

Coaching Effectiveness

Researchers have historically used words such as *experienced, elite,* or *great* to describe effective coaches, which has led to confusion about the proper way to operationally define this construct (Côté & Gilbert, 2009). Côté and Gilbert (2009) helped bridge this gap in the literature by defining coaching effectiveness as "the consistent application of integrated professional, interpersonal, and intrapersonal knowledge to improve athletes' competence, confidence, connection, and character in specific coaching contexts" (p. 316). The remainder of this section will break down this definition of coaching effectiveness by providing a brief explanation of each component.

Côté and Gilbert (2009) divided coaching knowledge into three main components: professional, interpersonal, and intrapersonal. Professional knowledge referred to tactical and technical sport-specific knowledge and skills, such as planning, problem solving, communication, and decision making (Gilbert & Côté, 2013). Coaching research has suggested that decision making, in particular, was a valuable component of coaching effectiveness in terms of the ability to analyze a situation, make sense of what was happening, and execute an effective decision (Gilbert & Côté, 2013). In addition, the coach was responsible for making decisions in collaboration with athletes, therefore an interpersonal component was necessary in defining an effective coach (Côté & Gilbert, 2009). Interpersonal coaching knowledge referred to the personal and professional interaction between the coach and athlete. Jowett and colleagues (Jowett & Cockerill, 2003; Jowett & Nezlek, 2011; Jowett & Ntoumanis, 2004) have suggested that the coach-athlete relationship was important for developing the athlete both within and outside of the sport. Lastly, intrapersonal knowledge referred to the coaches' ability to reflect on ones' own experiences and translate what was learned into appropriate knowledge and skills

(Côté & Gilbert, 2009). Gilbert and Trudel (2001) explored this concept by adopting a multiple case study approach on six youth coaches to identify how they learned through experience. The results revealed that the coaches engaged in reflection to develop and refine their coaching practices and strategies. Overall, each component of coaching knowledge contributed to the making of an effective coach. Along the same line, it was also important to consider how the athlete fared in the coaching process.

Athlete outcomes encompassed the second component of coaching effectiveness outlined by Côté and Gilbert (2009). This component involved four desirable outcomes (also known as the four C's) that an athlete would hope to attain from an effective coach: competence, confidence, connection, character/caring (Côté & Gilbert, 2009). The development of an athletes' competence was an important outcome derived from an effective coach, such that the athlete felt capable of achieving success both in and out of the sporting context. Examples of competence-related athlete outcomes included sport-specific skills, increased health, and the formation of effective training habits (Côté & Gilbert, 2009). Coaches also played an important role in fostering the athletes' perceived or actual confidence by influencing their self-esteem and satisfaction within the sport (Côté & Gilbert, 2009). Confidence-related athlete outcomes could involve an increased sense of self-worth or internal affirmation (Côté & Gilbert, 2009). Research has suggested that the coach-athlete relationship could positively influence the athletes' confidence (Côté & Gilbert, 2009; Ferrari, Bloom, Gilbert, & Caron, in press). The quality of the coach-athlete relationship has also played an important role in developing an athletes' feelings of connection or belonging within the sporting environment (Côté & Gilbert, 2009). Finally, developing a sense of character or caring within the athlete was seen as a desirable skill for an effective coach (Côté & Gilbert, 2009). Potential examples of character-related athlete outcomes

could include a respect for the sport, respect for other people involved in sport, a sense of integrity, and responsibility (Côté & Gilbert, 2009).

A final component to the definition of coaching effectiveness was the coaching context. The coaching context referred to the unique settings that the coach was required to adapt to in order to be successful, such as the competitive level or the athletes' ability (Côté & Gilbert, 2009). In terms of competitive level, Côté and Gilbert (2009) differentiated between two types of sport coaching: participation and performance. Participation coaching referred to working with athletes where enjoyment and health-related outcomes were emphasized, whereas performance coaching dealt with more intensive coaching strategies designed to improve technical and tactical sport-related skills for competition (Côté & Gilbert, 2009). The two types of coaching styles were differentiated to highlight the importance of meeting the needs of the individual athlete and promoting satisfaction within sport (Côté & Gilbert, 2009). An effective coach would understand the goals and ability level of the athlete and create a coaching practice to foster success. Overall, Côté and Gilbert (2009) proposed that an integration of coaching knowledge, athlete outcomes, and coaching context was necessary for a coach to be considered effective.

To date, empirical research has demonstrated common strategies and behaviours used by effective coaches to foster athlete success on both a personal and professional level (e.g., Becker, 2009; Boardley, Kavussanu, & Ring, 2008; Côté & Sedgwick, 2003; Gould, Guinan, Greenleaf, & Chung, 2002; Kavussanu, Boardley, Jutkiewicz, Vincent, & Ring, 2008). For example, Becker (2009), Côté and Sedgwick (2003), and Gould et al. (2002) suggested that effective coaches used coaching skills and strategies to foster confidence in their athletes, engaged in purposeful planning, created a positive training environment, and developed a strong coach-athlete relationship. In addition, coaches effectively taught sport-specific skills, recognized athletes'

individual differences, and properly communicated, motivated, and engaged in goal setting strategies with their athletes (Becker, 2009; Gould et al., 2002). Furthermore, Boardley et al. (2008) proposed that coaching effectiveness was related to an increased effort in training, commitment to sport, and character development, such as increased respect for others and the sport. Finally, Becker (2009) suggested that effective coaches helped athletes meet their needs by adapting their coaching behaviours to various antecedents such as level of competition, age, gender, and ability of their athletes (Becker, 2009). To date, the literature has provided a broad range of empirical research of coaching effectiveness on participants without disabilities. It is unclear whether these findings are transferable to the parasport population, as research in this domain has only recently started to garner empirical attention.

Disability Sport Coaching

Coaching research is limited for people with a physical disability compared to the able-bodied population (Bloom, Falcão, & Caron, 2014; Falcão, Bloom, & Loughead, 2015; McMaster, Culver, & Werthner, 2012; Taylor, Werthner, & Culver, 2014). To date, the limited coaching research in disability sport has identified both similarities and differences when coaching athletes with a disability and with the manner in which they acquired their knowledge and strategies to work with this population (Banack, Sabiston, & Bloom, 2011; Caron, Bloom, Loughead, & Hoffmann, 2016; Cregan, Bloom, & Reid, 2007; Taylor, Werthner, Culver, & Callary, 2015). This section will examine how coaches learn through formal, nonformal, and informal settings (Nelson, Cushion, & Potrac, 2009), to acquire professional, interpersonal, and intrapersonal knowledge (Cote & Gilbert, 2009) and effective strategies and behaviours used for coaching elite athletes with a disability.

Coach learning. Coaches have acquired their knowledge through a number of learning opportunities, including formal education, referred to as structured, large-scale learning opportunities, such as the National Coaching Certification Program (NCCP) in Canada, which is designed to help coaches attain knowledge and skills to increase their confidence in coaching (Duarte & Culver, 2014; Mallett, Trudel, Lyle, & Rynne, 2009; McMaster et al., 2012; Nelson et al., 2009; Taylor et al., 2014). NCCP courses provide coaches with professional knowledge by teaching them how to plan an effective practice. These courses also teach them how to communicate with their athletes (interpersonal knowledge) and encourage them to regularly reflect on their coaching practices (intrapersonal knowledge) (Coaching Association of Canada, 2016). In addition to the NCCP courses, various coaching manuals are available online such as the *Long-Term Athlete Development for Athletes with Disabilities* (Sport for Life, n.d.) and *Coaching Athletes with a Disability* (Coaching Association of Canada, 2017a). These manuals strive to provide disability sport coaches with examples and suggestions for coaching athletes with a physical disability, such as dealing with accessibility issues.

While disability sport coaches support the value of coach education, they often criticized the lack of disability sport-specific knowledge in the NCCP program (McMaster et al., 2012; Taylor et al., 2014). Furthermore, NCCP only provided sport-specific information for a limited number of disability sports (Coaching Association of Canada, 2016), leaving many coaches with a lack of available formal coach education programs specific to their context (Cregan et al., 2007; McMaster et al., 2012; Taylor et al., 2014). This often resulted in a lack of confidence required to effectively coach an athlete with a disability (Duarte & Culver, 2014; Martin, & Whalen, 2014; Stride, Fitzgerald, & May, 2016). Due to this, coaches have called for more

accessible formal education programs directed at disability sport-specific information (Cregan et al., 2007; McMaster et al., 2012; Taylor et al., 2014).

Another type of coach learning was through nonformal experiences, including clinics, workshops, conferences, apprenticeships, and training camps designed to provide coaches with alternative ways of learning outside of the formal context (Nelson et al., 2009). For example, The Football Association of England created a nonformal learning opportunity where coaches participated in workshops to better understand how to work with football players with a disability (Stride et al., 2016). This workshop allowed coaches to gain confidence in adapting their practices for athletes with a disability by providing them with a number of inclusion-promoting activities and the opportunity to experience them firsthand (Stride et al., 2016). More specifically, coaches participated in four types of games: *open games* where all players were able to participate without modification, such as warm ups, cool downs, and individual skill development drills; *modified games*, in which game changes were made, such as altering the amount of space the players were able to use to promote a sense of inclusion for all players to participate; *parallel games* in which all the players were participating but were separated into groups based on ability level to foster an appropriate amount of challenge and enjoyment for the players; and lastly, *disability football* during which people played football in disability groups, such as allocating players with a visual impairment to one group to account for safety reasons or ability level. This workshop encouraged disability sport coaches to foster a sense of inclusion in their practice and provided them with hands-on experience to apply their knowledge into real-life situations. Research has demonstrated that disability sport coaches value the opportunity to apply their theoretical knowledge into practical experience and expressed the importance of working alongside other coaches to develop a network of like-minded professionals in the field

(McMaster et al., 2012; Taylor et al., 2014). Developing a strong network of coaches has been suggested to be a valuable learning opportunity in the disability sport domain as coaches can constantly learn from one another and further develop their own practices (Duarte & Culver, 2014). While these learning opportunities were considered to be an important aspect of coach learning in disability sport, nonformal conferences and clinics have not always been offered or available, leaving coaches with little opportunity to participate and learn in this way (McMaster et al., 2012).

Due to the lack of formal and nonformal education opportunities for disability sport coaches, informal education methods such as mentorships or coach observation, learning from oneself through reflection on personal experiences, and accessing available resources such as the Internet, DVDs, and books seem to have been most used by individuals in this domain (Cregan et al., 2007; Fairhurst, Bloom, & Harvey, 2017; McMaster et al., 2012; Tawse, Bloom, Sabiston, & Reid, 2012). Coaches, however, have criticized the Internet for being too general or vague in relation to information on disability sport (McMaster et al., 2012). Consequently, coaches looked to other experts or mentors in the disability sport field to acquire sport-specific knowledge (Fairhurst et al., 2017; Taylor et al., 2014). For example, coaches have reported interacting with professors, colleagues, exercise physiologists, and athletes to gain interpersonal knowledge (Taylor et al., 2014). In a related manner, interactions between the coach and athlete was a valuable source of information, particularly if the coach was able-bodied and trying to learn about accessibility or equipment matters (Cregan et al., 2007; Dieffenbach & Statler, 2012; Fairhurst et al., 2017; McMaster et al., 2012). While learning from others was a valuable source of information, coaches have reported that there was also merit to learning through introspection or reflection of personal experiences (Duarte & Culver, 2014; Taylor et al., 2014; Taylor et al.,

2015). For example, Taylor et al. (2015) studied the role of reflection in the development and learning process of four parasport coaches. The results revealed that coaches often used what they knew from firsthand experiences or from other coaches or athletes and reflected on what they have learned. This reflection allowed them to brainstorm or create new ideas or strategies to change or adapt what they already knew and apply it to specific sporting situations (Taylor et al., 2015). Furthermore, Duarte and Culver (2014) discussed reflection in a broader sense, such that the coach felt it was a necessary tool as she became more experienced in the disability sport world. The coach stated that she used previous knowledge to help coaches learn further, such as implementing weekly meetings for coaches to work together and share their knowledge about disability sport with one another (Duarte & Culver, 2014). Evidently, research findings suggested that coaches relied on informal methods of learning to access coaching resources, to build a strong network of like-minded coaches, and used their own reflection or introspection skills to develop innovative and effective coaching practices in disability sport.

Effective coaching strategies and behaviours. While the previous section outlined ways in which disability sport coaches learned to coach, this section will provide examples of strategies and behaviours that coaches have reportedly used when working with athletes with a disability. The main strategies and behaviours that will be discussed include trial and error techniques, fostering autonomy, promoting independence, and developing a sense of community in a team environment.

Coaching research has highlighted the use of trial and error techniques for disability sport coaches (Hanrahan, 2007; Taylor et al., 2014). For instance, Hanrahan (2007) encouraged coaches to brainstorm new or innovative strategies for athlete development and test them in practice. If the strategies did not turn out to be effective or successful, the coaches and athletes

were urged to work together and experiment different strategies until success occurred. One disability sport coach reported "what works today may not work tomorrow" (p. 132), highlighting the importance of experimenting with coaching strategies to determine what would be most beneficial for the athlete at that particular time (Taylor et al., 2014). Being creative in this adaptation process was crucial for disability sport coaches as there may not have always been a handbook or a manual for how to coach an athlete with a disability (Cregan et al., 2007; McMaster et al., 2012). For example, a swimmer with cerebral palsy may have been prone to fatigue effects during a race, therefore a coach may have adapted his/her practices to incorporate lower intensity swimming at the beginning of the race and higher intensity at the end to help reduce fatigue (Burkett, 2013). Adapted strategies had the potential to maximize the athletes' strengths while helping to minimize their limitations.

Fostering a sense of autonomy was another common strategy found in the literature to help athletes maximize their strengths as an athlete and a person (Banack et al., 2011; Cheon, Reeve, Lee, & Lee, 2015; Tawse et al., 2012). For example, Banack et al. (2011) studied 113 Paralympic athletes to examine whether autonomy-supportive coaching behaviours were associated with an athlete's level of satisfaction, motivation, and stimulation in sport. The results suggested that athletes with perceived coach autonomy support experienced a higher sense of intrinsic motivation, which was linked to increased persistence, effort, and enjoyment in sport as well as decreased sense of boredom and a lower dropout rate (Banack et al., 2011). Similar results were found by Cheon et al. (2015), who surveyed 64 Korean Paralympic athletes to determine whether autonomy-supportive coaching styles were more conducive to performance and personal outcomes. The results suggested that athletes with coaches who portrayed

autonomy-supportive coaching behaviours had a maintained level of motivation, engagement, and performance compared to a decreased level found in the control group (Cheon et al., 2015).

Coaches also have the ability to influence athletes outside of the sport context (Tawse et al., 2012). More specifically, research has found that physical activity and disability sport could help develop an athlete as a person by fostering a sense of independence (Goodwin & Compton, 2004; Goodwin, Krohn, & Kuhnle, 2004; Tawse et al., 2012). For example, coaches created an environment where athletes felt comfortable exploring new possibilities for movement and autonomy, such as transferring from their chair (Tawse et al., 2012). Furthermore, people with a disability often have concerns or fears about mobility issues and their ability to care for themselves in the future (Goodwin et al., 2004). Consequently, Tawse and colleagues explained that coaches took on the role of promoting personal care education to their athletes, such as how to empty a leg bag or how to go to the washroom without assistance. The coaches believed these strategies were necessary to promote a sense of independence for their athletes.

Finally, disability sport had the ability to influence an athlete on an individual level (e.g., Banack et al., 2011; Cheon et al., 2015; Cregan et al., 2007), as well as on a team level by fostering a sense of community or team cohesion among athletes (Falcão et al., 2015; Goodwin, Johnston, Gustafson, Elliot, Thurmeier, & Kuttai, 2009; Goodwin, 2016). Falcão et al. (2015) explored Paralympic coaches' perceptions of team cohesion and how they felt it was necessary for an athlete with a disability to have a sense of social support within the sporting context. More specifically, the results demonstrated that disability sport athletes often faced additional challenges, such as transportation or personal care issues, therefore would turn to their teammates for both task completion and emotional encouragement (Falcão et al., 2015). Due to the perceived importance of team cohesion, the coaches reported organizing team building

activities, such as team dinners and movie nights to help develop and strengthen cohesion (Falcão et al., 2015). Coaches have reported that they often shared the role of organizing team building activities and events with the athletes (Falcão et al., 2015). Furthermore, athlete leaders have reported the importance of fostering a sense of team cohesion within disability sport to create a closeness or bond within the players, which was suggested to transfer positively into success on the field (Caron et al., 2016). Evidently, coaches and athlete leaders shared the perception that team cohesion was an important strategy to implement when coaching athletes with a disability for both the emotional growth of the person as well as performance success of the team (Caron et al., 2016; Falcão et al., 2015).

In conclusion, research in this section outlined ways in which coaches obtained their knowledge through formal, nonformal, and informal learning situations, as well as the strategies and behaviours that have commonly been discussed in the disability coaching literature. Given the unique context of disability sport coaching, it is surprising how little research has been conducted on what elite athletes with a disability perceived as an effective coach, presenting an interesting area for current research.

The 3+1Cs Model

The coach-athlete relationship has been defined as "a situation in which a coach's and an athlete's cognitions, feelings, and behaviours are mutually and causally interrelated" (Jowett & Poczwardowski, 2007, p. 4). This interpersonal relationship between the coach and the athlete has been extensively studied by Jowett and colleagues over the last two decades (e.g., Jowett & Clark-Carter, 2006; Jowett & Cockerill, 2003; Jowett & Meek, 2000; Jowett & Nezlek, 2011; Jowett & Ntoumanis, 2004, Jowett & Timson-Katchis, 2005). Jowett and colleagues have studied participants from a diverse age range and ability level, including Olympic athletes and coaches

(Jowett & Cockerill, 2003; Jowett & Timson-Katchis, 2005). Research from her work has been conceptualized around the 3Cs model that was originally made up of the constructs of closeness, commitment, and complementarity, and eventually morphed into the 3+1Cs model when the construct of co-orientation was added in 2007 (Jowett & Poczwardowski, 2007).

The 3+1Cs model encompasses the interpersonal nature of the coach-athlete relationship (Jowett, 2007). *Closeness* refers to the affective or emotional component of the model, which is comprised of feelings of mutual trust, liking, and respect (Jowett, 2007). *Commitment* outlines the cognitive element to the model and involves the long-term intention to maintain and continue the relationship in order to maximize any potential performance and/or personal outcomes (Jowett, 2007). *Complementarity* involves the behavioural component of the model, which includes interactions between the coach and the athlete, such as their attitudes towards each other (i.e. willingness to work together in a friendly manner) (Jowett, 2007). In addition, this construct involves dominance and submissive behaviours including how an athlete would react when a coach instructs them to perform a task (Jowett & Poczwardowski, 2007; Jowett, 2007). Finally, *co-orientation* refers to mutual beliefs, values, goals, and interests, which are often facilitated through a strong sense of communication between the coach and the athlete (Jowett & Cockerill, 2003; Philippe & Seiler, 2006). The four components of the 3+1Cs model measures the degree of interdependence between the coach and the athlete, such that high levels of closeness, commitment, complementarity, and co-orientation are associated with a higher level of interdependence in the relationship (Jowett, 2007). For example, if the coach and athlete experience high levels of trust and respect for one another, it is likely that these behaviours and feelings will lead to positive outcomes for both parties, such as a high level of satisfaction (Jowett, 2007).

Previous qualitative research has provided insight on the coach-athlete relationship from the perspective of the elite able-bodied athlete (Jowett & Cockerill, 2003; Philippe & Seiler, 2006; Stirling & Kerr, 2009). For example, Jowett and Cockerill (2003) and Philippe and Seiler (2006) both found the value of developing and maintaining a strong, positive coach-athlete relationship that occurred through open communication with a coach who listened, understood, and recognized the needs of individual athletes. Moreover, athletes discussed the importance of having an emotional component to the relationship, including mutual feelings of trust and respect, identified as essential components of an effective coach-athlete relationship (Jowett & Cockerill, 2003). A lack of these feelings often led to frustration and poorer performance in sport, suggesting that the coach-athlete relationship had the potential to affect the person both athletically in terms of sport performance as well as personally in terms of their psychological well-being (Jowett & Cockerill, 2003). In addition to this professional relationship, athletes also discussed the importance of developing a social relationship with their coach (Jowett & Cockerill, 2003; Philippe & Seiler, 2006). A social or humanistic relationship was depicted as the personal aspect of the coach-athlete relationship, where the athlete and coach were interested in the welfare of the other person and expressed a sense of friendship or love (Jowett & Cockerill, 2003; Philippe & Seiler, 2006). While love could be interpreted in a romantic context, the participants considered their coaches to be loved as a true friend or family member (Philippe & Seiler, 2006). Consistent with the concept of romance, Jowett and Carpenter (2015) explored the perceived characteristics and boundaries of the coach-athlete relationship. The athletes and coaches suggested that while romantic coach-athlete relationships do in fact exist, they felt this behaviour was inappropriate and that developing boundaries within this relationship could help maintain a sense of professionalism and prevent unnecessary conflict (Jowett & Carpenter,

2015). Furthermore, athletes have emphasized that the professional relationship should come first (Philippe & Seiler, 2006). In sum, the results of these studies have suggested that the coach-athlete relationship is complex in nature, where athletes have highlighted both a personal and professional component to the dyadic relationship.

In addition to obtaining information from the perspective of the athlete, researchers have also investigated the coach-athlete relationship from the perspective of the coach-athlete dyad (Jowett & Clark-Carter, 2006; Jowett & Meek, 2000; Jowett & Nezlek, 2011). Jowett and Clark-Carter (2006) examined the constructs of empathic accuracy and assumed similarity of the coach-athlete relationship by surveying 121 coach-athlete dyads. The researchers administered, collected, and analyzed the *Greek Coach-Athlete Relationship Questionnaire* and *The Athlete Satisfaction Questionnaire*, which was adapted to include both the athlete and coach perceptions of satisfaction in sport. The participants competed in individual sports and ranged in competition level from club level to international. The findings revealed that athletes had a greater sense of empathic accuracy compared to coaches, indicating that athletes were stronger at describing the emotional, affective feelings of their coaches compared to the other way around. Being able to accurately describe their coaches' feelings was suggested to lead to greater feelings of control, comfort, and confidence for the athlete in sport. Furthermore, empathic accuracy was found to be more prominent in the early stages of the relationship, indicating that the coaches and athletes placed a greater emphasis on getting to know each other at the beginning stages of their career. The results indicated that as the coach-athlete relationship progressed in length, there was less of a need to accurately infer the other person's emotions and a greater sense of assumed similarity emerged. In other words, the longer the coach and the athlete stayed together, the more they felt they were on the same page with one another and felt less of a need to try and understand what

the other was feeling (Jowett & Clark-Carter, 2006). Relationship length was further discussed by Jowett and Nezlek (2011) who found that interdependence and satisfaction in sport was stronger for longer coach-athlete relationships than shorter ones and for higher-level sport than lower-level. Therefore, it was evident that the type of sport (i.e., long versus short in length, competition level) have the ability to affect the nature of the coach-athlete relationship.

Consistent with the idea that the type of sport can affect the nature of the coach-athlete relationship, research has been conducted using the 3+1Cs model to determine whether differences arose between the perceptions of individual sport athletes compared to team sport athletes in regards to the quality of their coach-athlete relationship (Rhind, Jowett, & Yang, 2012). The researchers surveyed 500 individual sport athletes and 199 team sport athletes competing at regional, national, and international levels using the *Coach-Athlete Relationship Questionnaire*. The results revealed that while there were no significant differences between the complementarity aspect of the 3+1Cs model, individual sport athletes reported being closer and more committed to their coaches compared to team sport athletes (Rhind et al., 2012). Furthermore, athletes competing in an individual sport reported stronger feelings of trust, respect, and appreciation for their coaches, which the authors postulated was a result of spending a greater amount of one-on-one time with the coach in individual sports (Rhind et al., 2012). Overall, the researchers proposed that athletes competing in individual sports viewed their coach-athlete relationship as more positive than their counterpart, and highlighted that the quality of the relationship can be related to both performance (Jowett & Cockerill, 2003) and satisfaction (Jowett & Ntoumanis, 2004) in sport (Rhind et al., 2012).

In conclusion, the 3+1Cs model has been applied to a number of sporting domains and the research results have suggested that the quality of the coach-athlete relationship has the

ability to affect the personal and professional satisfaction of the parties involved. Research has suggested that coaching an elite athlete with a disability is often similar to that of an elite able-bodied athlete with the exception of contextual differences, such as equipment, accessibility, and transportation considerations (Cregan et al., 2007). Due to this similarity, the 3+1Cs model may be helpful in identifying various coaching practices that Paralympians find useful and effective.

Chapter 3

Method

The field of sport psychology was originally dominated by quantitative methods of research that set out to determine a generalizable truth to a phenomenon of interest (Martens, 1987). Martens (1987) was one of the first researchers to question whether this quantitative, orthodox approach filled with rules and assumptions was the only suitable method for studying people in the sporting context. Moreover, Martens recommended adopting a qualitative research approach to explore the *process* of events or ideas that individuals experience (Creswell, 2013; Taylor, Bogdan, & DeVault, 2016). As such, qualitative researchers often study their participants in natural settings, allowing participants to openly share their lived experiences in their own words (Creswell, 2013; Sparkes & Smith, 2014). While one of the limitations of qualitative research is that the findings are not generalizable to the greater population, one of the benefits of this approach is that the researcher is able to attain an in-depth look into each participant within the study and the unique perspectives they provide (Creswell, 2013). The current study adopted a qualitative approach to gain insight on effective coaching strategies and behaviours for athletes with a physical disability. This chapter will outline the qualitative philosophical assumptions and methodology, including information on the participants, procedure, data collection methods, data analysis, and validity components.

Philosophical Assumptions

Our research was guided by a social constructionist epistemology and a relativist ontology, which encompasses the notion that reality is co-constructed and interpreted based on social interactions (Daly, 2007; Guba & Lincoln, 1994). The rationale for this approach was to understand and interpret female Paralympic athlete preferences and experiences of effective

coaching practices within the social context. The researcher acknowledged the subjectivity of interpreting participant experiences and the multiple realities that coexist as a result (Daly, 2007).

Methodology

There are five main approaches to qualitative research including narrative research, phenomenology, grounded theory, ethnography, and case studies (Creswell, 2013). While each of these approaches can be used to study a particular phenomenon, the differences lie in terms of data collection and analysis (Sparkes & Smith, 2014). For example, case studies involve collecting *multiple sources of data*, such as interviews and documents, and have been widely used in a variety of domains including, but not limited to, psychology, medicine, law, and political science (Creswell, 2013; Sparkes & Smith, 2014). This approach is commonly used when a researcher is interested in attaining information on participants with identifiable qualities or characteristics, such as elite level athletes with a physical disability (Creswell, 2013). The researcher engages in purposeful sampling to determine a subset of participants that meet the criteria and would be considered ideal candidates to explain the issue or phenomenon being studied (Creswell, 2013). While some methods of research help answer the question of "how much" or "how many", case study methods strive to answer or explore the questions beginning with "how" or "why" (Sparkes & Smith, 2014). The current study adopted a case study approach to gain a greater understanding of how female Paralympic athletes perceived effective coaching practices in elite-level disability sport, as well as how and why the coach-athlete relationship was involved in the process.

More specifically, there are three main types of case studies: intrinsic, instrumental, and collective (Creswell, 2013; Stake, 2000). Intrinsic case studies are conducted when a researcher

is interested in gaining a deeper understanding of a single construct (Creswell, 2013; Stake, 2000). Instrumental case studies are similar to intrinsic case studies, where there is a single case being studied, however the reason for studying this case is often related to providing insight into a larger issue or problem (Creswell, 2013; Stake, 2000). A collective case study involves analyzing more than one case, which is designed to gain a better understanding of a larger subset of cases or an overarching issue or concept (Creswell, 2013). Taylor, Werthner, Culver, and Callary (2015) used a collective case study approach to study the reflective practices of four parasport coaches as part of a larger study on coach learning. The cases of this study were analyzed based on the reflective practices of coaches, yet the results were used to help illustrate the larger phenomenon of coach learning (Taylor et al., 2015). The collective case study approach allowed for researchers to hear from multiple perspectives providing them with the opportunity to identify common patterns or themes from the cases (Stake, 2000). The current study acquired a deeper understanding of what female Paralympic athletes considered as effective coaching practices and collective case studies illustrated the multiple perspectives of these athletes. Each case described the unique experience of individual athletes and provided the opportunity to gain insight on a population that has been widely understudied in the disability sport literature.

Participants

Qualitative researchers often recruit a smaller sample of participants compared to quantitative researchers (Braun & Clarke, 2013). More specifically, Braun and Clarke (2013) suggested that a small to moderate sample size was appropriate when researchers were interviewing participants on their individual experiences. The authors stated that the sample size should be large enough that one could make connections and identify patterns between

participants, yet small enough that the researcher could focus on the experience of the individual (Braun & Clarke, 2013). Furthermore, the number of participants often depends on reaching data saturation, which occurs when new information no longer is identified throughout the interviews (Smith & Sparkes, 2016). In the current study, this occurred after the seventh and eighth interviews.

Qualitative researchers often recruit participants using purposive sampling to obtain an in-depth comprehension of the phenomena under study (Creswell, 2013). A commonly used subtype of purposive sampling is criterion based (Sparkes & Smith, 2014). This branch of purposive sampling is used when the researcher has a predetermined set of criteria (e.g., physical characteristics, specific experiences of interest) (Sparkes & Smith, 2014). The participants in the current study were selected based on the following criteria: (a) active or retired, Canadian, female Paralympic athlete, (b) competed in an individual sport, (c) participated in at least two Paralympic Games, (d) had been with the same coach for at least five years, and (e) had won at least one Paralympic or Para Pan American Games medal. Finally, as Paralympic athletes had multiple coaches, the participants in this study typically described their experiences with their main coach.

Based on this criteria, the participants were purposively selected to form an *elite* sample of female Paralympic athletes who were highly successful in their careers. On average, the athletes in our sample competed in four Paralympic Games and won eight Paralympic or Para Pan American medals. Multiple athletes achieved over seven gold medals throughout their career and one athlete competed in both the summer and winter Paralympic Games. In addition, some of the athletes who were retired have been inducted in the Canadian and International Paralympic

Hall of Fame, whereas the athletes who are still active are training to compete in the Paralympic Games in Tokyo in 2020.

Procedure

Ethics approval was obtained from the McGill University Research Ethics Board in the summer of 2016. Participants were recruited by email through personal contacts of the research committee with an initial overview of the study and a brief description of the study (see Appendix A). Interested participants then received a detailed description of the data collection and an interview was scheduled within their geographic location. A consent form (see Appendix B) was provided and collected either in person or by email prior to the start of the interview. Interviews lasted between 55 to 140 minutes and were audio recorded and transcribed verbatim. Six interviews were conducted via Skype whereas the remaining two were carried out in person in the Fall of 2016. There were no differences in regards to quality of responses between interviews conducted over the internet compared to in person. Before the interviews began, the primary researcher engaged in one videotaped pilot interview to gain experience interviewing, and used this opportunity to refine the interview guide (Appendix C). The videotape was then analyzed by the research supervisor who had considerable experience in qualitative interviewing, which allowed for techniques or questions to be altered accordingly based on his suggested revisions. Revisions included adjustments related to the interviewing technique, such as allowing the participant time to fully finish their responses and asking open ended probing questions. Additional revisions were also provided to the interview guide itself, as questions were adjusted based on relevance or clarity.

Data Collection

The type of method chosen in qualitative research often depends on the purpose of the study, which can be found in the main research question(s) (Maxwell, 2013; Rubin & Rubin, 2012). Sport psychology researchers have often used interviewing as a main form of data collection to explore the unique experiences of individuals in their study (Smith, Caddick, & William, 2015). In fact, 78% of sport psychology journal articles from 2000 to 2009 used semi-structured interviews to obtain rich, in-depth information that qualitative methods offer (Smith et al., 2015). Smith and colleagues also stated that interviews were conducted as an effective way of grasping the experience from a variety of perspectives and contexts and allowed the participants to tell their story using the flexibility of their own words (Smith et al., 2015). Due to this rationale, the current study adopted semi-structured interviewing techniques as the method to help understand the unique experiences of individual athletes with a disability.

Semi-structured interviews. Semi-structured interviews are used with an interview guide that involve standardized questions given to all the participants, with the flexibility of allowing them to discuss relevant topics outside of the guide (Rubin & Rubin, 2012; Sparkes & Smith, 2014). This approach allows the researcher to obtain information on the topic of interest, while providing the participant with the opportunity to report further on their thoughts, feelings, and emotions (Smith & Sparkes, 2016; Sparkes & Smith, 2014). This provides the participant with greater control in the interview, potentially generating more meaningful responses, which leads the researcher to develop a deeper understanding of the topic (Smith & Sparkes, 2016; Sparkes & Smith, 2014). Furthermore, disability sport research has often used semi-structured interviews as a main method of data collection to obtain rich, in-depth responses from the perspective of both the coach and athlete (e.g., Caron, Bloom, Loughead, & Hoffmann, 2016;

Duarte & Culver, 2014; Falcão, Bloom, & Loughead, 2015; McMaster, Culver, & Werthner, 2012). In line with the philosophical assumptions discussed earlier, the current study used semi-structured interviews to obtain knowledge through the constant interplay between researcher and participant (Daly, 2007; Smith & Sparkes, 2016). The interviews were audio recorded and transcribed verbatim. The transcripts were then coded to ensure confidentiality of the participants by altering their names and personal information.

Interview guide. The researcher began the interview with a set of opening questions designed to provide a brief description of the participants' career, their disability, and their coach (see Appendix C). Sample items included, "Please describe your athletic career up to your current Paralympic status" and "Please provide an overview of your disability". The researcher then led into the key questions, where more in-depth responses from the participants were found. The key questions began with the athlete broadly describing their coach-athlete relationship, followed by offering insight on the coaching strategies and behaviours which they consider to be effective or ineffective. For example, the researcher asked, "What strategies or behaviours does your coach employ that you consider valuable or effective?" These questions were influenced by related disability sport research and the 3+1Cs model to gain a better understanding of the coach-athlete relationship. Due to the semi-structured nature of this interview, the researcher provided probes throughout the interview to receive more in-depth responses and to emphasize the conversational nature of the process (Rubin & Rubin, 2012). For example, when asked whether the participants valued having a personal component to the coach-athlete relationship, the researcher asked for specific *examples* of how their relationship did or did not involve this component. This offered the researcher a deeper understanding of the individuals' experience and provided greater insight into the coach-athlete relationship. The researcher then asked the

summary questions, which dealt with ideal coaching strategies and behaviours and how the coach-athlete relationship was significant to the athlete as a person and as a competitor. Finally, the concluding questions were included to allow the participant the opportunity to add anything they felt was missing from the interview and to answer any additional questions they had.

Documents. One of the main features of a case study is that it involves multiple approaches to data collection (Creswell, 2013). In addition to observations, interviews, and audiovisual materials, documents are considered to be one of the four main types or forms of qualitative data (Creswell, 2013). Documents can include approaches such as examining biographies or autobiographies, reviewing medical records, having the participants keep a journal throughout the study, and collecting personal documents from the participants such as letters, photographs, or videotapes (Creswell, 2013). This approach to data collection was adopted by Duarte and Culver (2014) who collected 70 pages of personal documents from their participant including emails, reports, surveys, guides, and adaptive sailing documents to help the researchers gain a better understanding of the disability sport context in which the participant lived. In addition to collecting personal documents, the researchers also gathered data using participant made time-lines, online interviews, and semi-structured in-depth interviews (Duarte & Culver, 2014). The personal documents provided the researchers with a better understanding of the participant herself and allowed them to create additional questions for the in-depth interviews to gain deeper, richer responses (Duarte & Culver, 2014). This approach was adopted in the current study by collecting documents including athlete biographies, previous regional, national, and international athletic records, as well as results from the most recent summer and winter Paralympic Games. These personal documents provided the researcher with insight on the person themselves, including an overview of their disability and their Paralympic journey, as

well as athletic records both within and outside of the Paralympic Games, such as the Para Pan American Games. This insight allowed for a greater comprehension of the participant experiences and responses, which led to a deeper understanding of the relationship between the coach and athlete in elite level disability sport.

Data Analysis

Thematic analysis is used to identify patterns or themes within and across a dataset and is considered to be one of the most widely used data analysis methods in qualitative research (Braun & Clarke, 2013; Braun, Clarke, & Weate, 2016; Smith & Sparkes, 2016). Previous research on disability sport have used thematic analysis as a main approach to analyzing interview responses (e.g., Duarte & Culver, 2014; Falcão et al., 2015; McMaster et al., 2012; Taylor et al., 2015). One of the strengths of thematic analysis is the flexibility in which it can be used to provide insight on a variety of topics. For example, Braun et al., (2016) described how thematic analysis can be useful when the aim of the study is to attain a descriptive account of a construct or phenomenon. The current study used this analytic approach to explore the descriptive experiences of female, Paralympic athletes and their perceptions of effective coaching practices in disability sport. Thematic analysis is also commonly used with multiple or collective cases studies (Creswell, 2013).

Once the interviews were conducted, the analysis phase commenced by transcribing the interviews verbatim. The researcher then familiarized herself with the transcripts by reading them over multiple times and identified broad statements of interest. After this, the researcher engaged in complete coding, which is defined as identifying any aspects or areas of the data set that is relevant to the research questions that are often in the form of words or brief phrases called codes. Furthermore, complete coding, compared to selective coding, involves identifying

areas of interest throughout the *entire data set* as opposed to seeking out particular instances of relevance. Once the coding was complete, the researcher then analyzed the data to identify larger patterns or themes within the data. A theme captures something meaningful within the data in relation to the research questions and helps to explain why and how the themes are incorporated within or across the dataset. The researcher then reviewed the themes to ensure that they fit well with the coded data and had a direct link to the research questions. Finally, the researcher named and defined the themes to capture the overarching essence of each individual theme. When done correctly, thematic analysis provides the reader with a comprehensive story of the interpretations and experiences of the individuals under study (Braun & Clarke, 2013; Sparkes & Smith, 2014).

Validity

Validity is concerned with the amount of confidence the researcher has in their results being an accurate representation of the phenomena of interest (Braun & Clarke, 2013; Sparkes & Smith, 2014). Where quantitative methods to research are concerned with generalizing to the greater population, qualitative research aims to purposively sample a smaller participant pool to gain a focused, in-depth look at the particular individuals chosen for study or the *process* of research (Creswell, 2013). Validity has been considered a messy aspect of qualitative research and has been a topic of debate as to what is meant by *good* qualitative research (Sparkes & Smith, 2014). As a result, there have been many proposed validation techniques and criteria set out in qualitative research, yet little consensus on what methods are best (Smith, Sparkes, & Caddick, 2014). Some researchers have suggested that a universal approach to validation criteria is not appropriate for qualitative research as it disregards the context of the study (Smith & McGannon, 2017; Sparkes & Smith, 2014). Researchers should therefore identify "characterizing traits or values" that have the ability to influence our judgments in the research

process (Sparkes & Smith, 2014, p. 196). These traits and values can be constantly re-evaluated, added, retracted, and re-interpreted throughout the process of the study to add a sense of reflexivity within the researcher (Smith et al., 2014; Sparkes & Smith, 2014; Sparkes & Smith, 2009).

Researcher bias is an undeniable aspect of research, therefore the aim was not to deny the existence of bias or suppress it, but to acknowledge it and identify any pre-existing perspectives on the phenomenon of study that could influence the interpretation, analysis, or reporting of results (Sparkes & Smith, 2014). The primary researcher in the current study is a former international performer, who also has experience working with athletes with a physical disability. In order to acknowledge potential bias, the primary researcher attempted to ensure *sincerity*, which is defined as reflecting on personal values, biases, and dispositions towards the phenomenon under study to attain a sense of transparency within the research process (Smith et al., 2014). This was achieved by completing a reflexive journal before, during, and after the interview process (Tufford & Newman, 2010). This journal included assumptions of coaching practices in disability sport held by the primary researcher as well as previous experience of the primary researcher working with athletes with a physical disability. This included university coursework, placements, volunteer work, coaching experience, and assumptions regarding age, race, sex, and disability (Tufford & Newman, 2010).

The use of a *critical friend* is another approach to increase reflexivity and reduce bias in research (Sparkes & Smith, 2014). Sparkes and Smith (2014) defined a critical friend as someone outside of the research study who can work to challenge the researcher by providing alternative interpretations of analyses, by challenging assumptions or explanations posed by the researcher, and by encouraging a sense of reflection. As a result, a critical friend was involved in the current

study to provide the primary researcher with an outside perspective throughout the research process, which allowed for a deeper, impartial understanding of the phenomenon of interest to occur.

Finally, in order to achieve *substantive contribution* and *width*, the participants in the study were purposively recruited to ensure a truly elite sample of participants was collected (Smith et al., 2014). This was to provide insight on what elite female Paralympic athletes were looking for in a coach and to shed light on their previous or current experiences in high level disability sport. Furthermore, multiple quotations were provided throughout the results section to allow the reader to judge or interpret the responses for themselves, including context from the questions asked by the researcher (Smith et al., 2014; Smith & Sparkes, 2016). Providing quotations allowed for a non-biased approach to telling the story of the participants, such that the readers were given the opportunity to assess the quality of the interpretations and findings of the study.

Chapter 4

Results

This chapter will outline the results from the individual athlete interviews. In total, the interviews lasted 613 minutes, averaged 77 minutes, and ranged from 55 to 140 minutes. Reasoning behind the discrepancy in time length was due to the semi-structured nature of the interview process. The athletes were encouraged to expand on their individual experiences and each interview was unique in regards to the amount of discussion created. Once transcribed, the interviews produced 104 pages of text with 70,259 words between the researcher and participant. Following the analysis, four main themes were identified from the athlete responses including: *personal characteristics of the athlete, athlete: Paralympic experiences, the coach: behaviours, and coaching preferences*. Furthermore, four subthemes were created including positive and negative coaching behaviours, as well as professional and personal preferences. The following will provide descriptions and supporting quotations from the athlete interviews (i.e., A1… A8), to illustrate the themes in more detail.

Personal Characteristics of the Athlete

This theme encompassed the descriptive characteristics that depicted the athlete, including their physical disabilities and how it influenced their integration into sport. In regards to their disabilities, three athletes referred to themselves as paraplegic, three were visually impaired, one had cerebral palsy, and one had a leg amputation. Additionally, six out of eight participants reported having an acquired disability, while two reported a congenital disability.

When asked to describe their Paralympic journey, athletes discussed their experiences growing up with a physical disability, including how sport played a role in their development as

a person and athlete. Some athletes did not consider their disability to be a defining feature of their identities:

> Growing up I never really saw myself as someone with a disability. My parents basically raised me as being able to do anything I wanted to do. I played every sport under the sun whether it involved having good vision or not. I was a catcher of a baseball team and a goalie of a soccer team. I played everything that you would think you need vision for (A6).

> My sister is a year older than me. She is able-bodied and I just wanted to be like her when I was a kid. She was enrolled in sport and I thought, "That's what I want to do!". I mean, I was five years old, I didn't think I was different or disabled. I just thought I'm like everybody else (A1).

Athletes also discussed how sport was used as a form of rehabilitation to help manage their disability:

> I was born with cerebral palsy. In my case, it affects the muscle coordination and balance in my lower body… Due to my disability, I started skiing as a form of physiotherapy (A1).

> When I had my accident, I started swimming as a suggestion from a physical education teacher. He really convinced me that this would be a good idea. At the time, I think it was mostly for independence and integration reasons. It really helped me figure out my potential and also helped me be independent in my wheelchair (A5).

Overall, athletes reported valuing sport participation as it allowed them to physically grow and develop, personally by increasing their independence, and socially by integrating with others.

Their positive youth sport experiences led these athletes to pursue athletics at the Paralympic level. Each athlete was successful while representing Canada at the Paralympic or Para Pan American Games and most were multiple medal winners. All athletes competed in multiple Games displaying dedication, hard work, and excellence as a Paralympic athlete. As the athletes looked back on their success, they described their journey as a challenging, yet rewarding experience:

> The Paralympic journey has been a long process and looking back I am super proud of my accomplishments and my team. Our performance at all the competitions that led to the Paralympic events have been an unbelievable experience. It is something I never dreamed I would be able to do as an athlete with a disability (A8).
>
> I've been to four Paralympic Games, five World Games, and over 50 international competitions. Each Paralympic Games is different… It's an experience that you train for and as you are getting closer and the stress is building you start to wonder why you are doing this. Then when you get there you think oh wow, because it is something that most people do not get to experience (A4).

Overall, the athletes discussed how their disability played a role in their sporting lives and influenced their subsequent athletic careers. From there, all athletes became successful in their respective sports and gained elite status as a Paralympic athlete.

Athlete: Paralympic Experiences

This theme referred to the athletes' perceptions of their own behaviours and experiences of being a Paralympic athlete on the Canadian national team. Each athlete described unique elements of their Paralympic journey, the challenges they faced, and the strategies used to overcome these obstacles.

As the researcher prompted athletes to talk about their Paralympic career, some athletes discussed their experiences *prior* to the Paralympic Games, including their decision to compete as a Paralympian:

> My Paralympic journey has been a 10-year journey. I wanted to know if I could qualify to the Canadian team and be able to compete for Canada. Did I have the physical and mental capability including the skills and the commitment to be able to be a top performer in four years? (A8).

Athletes also described how their lives changed once they were involved in the Paralympic Games, including planning in four-year time periods and dedicating an increased amount of time to training and competing. For example, one athlete stated, "Prior to the Paralympics, I used to think a season at a time. I started living in four year chunks" (A3).

Additionally, athletes described aspects of their Paralympic experiences that led to both satisfaction and dissatisfaction:

> I've been privileged with five Paralympic Games with not too many injuries. It's been a nice path. Highly decorated, but also a good journey and always getting better. That's the one thing I am proud of as an individual. I didn't plateau, I didn't come down, but I stopped at the top. (A5).

> I went to the Paralympics quite ready, quite arrogant, quite selfish, and the first three races were spectacular, but I had problems with people on the team. I was first in the world leading into the fourth race. I was very close to a world record, but I didn't do well. I froze because people were catching up to me in the race and I completely lost it. I remember so vividly. It wasn't a terrible race but I came third. Not that bad. But I didn't break the world record like I had wanted to. I wasn't first… I didn't sleep that night. I

> cried all night, I refused to see my parents, I yelled at them. I'm more upset about my reaction then. Anyways, this event changed my Paralympic journey (A2).

The athletes also discussed some of the challenges they faced throughout their careers, including feeling pressure to win and having high expectations of themselves at the Paralympic Games. For example, one athlete stated, "Over time I started putting more and more pressure on myself so I had an expectation that I was going to be disappointed if I didn't win at a certain point" (A3). In addition to feeling pressure from the Games, another common challenge was experiencing injuries throughout their career:

> When I had my back injury, I had the best surgeons on my side. Everyone was working towards getting me to be better because I had World Championships in a year and the Paralympic Games in two more years after that. They all told me that my career was going to be over and that I wouldn't be able to perform at the level I once did… It was pretty devastating (A6).

Finally, the athletes discussed experiencing difficulty balancing multiple commitments as an elite athlete. For example, some athletes were student-athletes at university during their career and experienced competing demands with school and training schedules. When prompted to expand on these experiences, one athlete stated, "The national team training camp was right during final exams in my first year at university, so there was no way I was going to put my academic career in jeopardy for a national team training camp" (A1). Another athlete discussed working a full-time job, having young children, and training as an elite athlete:

> Four years of dedication [to training] and I was working 40 hours a week at the hospital with two young kids, who were one and a half and five years old. I was working 40 hours at work and then anywhere from eight hours a week to 20 hours a week of training (A8).

In order to deal with these challenges, athletes discussed common strategies used to overcome the barriers, such as depending on coaches, teammates, and integrated support staff for support. Athletes suggested relying on coaches was an effective way to deal with challenges, conflict, or problems:

> Having that extra bit of emotional support with a coach is important. You don't always have a sport psychologist there to talk you through things. You don't necessarily get along with your sport psychologist enough to get emotional support from them. You don't necessarily have close relationships with your teammates. I did at certain times. I had a couple teammates I was very close with but outside of that, I was far closer with the staff members than the athletes (A3).

While some athletes looked to their coaches for support, others turned to their teammates and support staff as resources during difficult times:

> If I didn't make certain times in swimming, then I would stay late in practice until I did make them. So many times I would be in the pool just trying to make repeats and I would miss it by a second or half a second. The team would stay behind and support me through the set, which is pretty awesome. There were so many times that I would see the practice and just be so mad because there is no way I thought I could make that time, and then you end up leaving the pool that day and you made it, you did it (A6).

> I felt that I would never have gotten there without our sport psychologist… I felt that those people deserved that medal along with the physiotherapists. A lot of people think coaches, coaches, coaches, and that relationship, but it wasn't the best. There were other relationships with the support staff that supported me more (A1).

In sum, while the athletes experienced challenges throughout their careers, they also discussed strategies to overcome them that involved their coaches and members of the support staff.

The Coach: Behaviours

This theme referred to behaviours of the coaches that athletes either appreciated and felt enhanced their experience as a Paralympic athlete or considered detrimental to their overall success and well-being. This theme will be divided into two components: positive and negative coaching behaviours.

Positive coaching behaviours. Within this subtheme, athletes discussed having coaches who communicated effectively, supported them professionally and personally, and exhibited knowledge of both the athlete and their sport.

When the athletes were asked to describe valuable coaching behaviours, the majority highlighted engaging in effective communication. This included the coach clearly providing instruction and feedback and a willingness to communicate on topics outside of the sporting context:

> My coach had a good way of communicating and getting you to the point. She'll explain things 10 different ways until you find one that you get. Other coaches could only explain it one or two ways and then they would give up (A3).
>
> If I told my coach that I needed to talk, he was going to be there. If I call or write anything, he'll answer, and my god, that was so true then as well as now. Anything I had… I would call him first and he would keep calling to make sure everything was okay. It was nice, he was very good for that (A2).

Athletes also talked about situations where their coaches displayed supportive behaviour on a professional level, both in practice and in competitive settings:

> My first coach was pretty amazing and he coached me until I was 15 years old. He was extremely supportive the whole time. When I made my first Paralympics, he actually came into the pool every single day with me to help me train more (A6).

> There is something to say about dreaming big…Believing in yourself. My coach had a big thing with Rocky Balboa. He was obsessed with Eye of the Tiger. One time I was complaining and he asked, "Why are you swimming? Why are you here? Find your Eye of the Tiger". I came up with a narrative for myself as to why I was swimming, why I was here, and why I kept doing it. That stuck, that really stuck, the whole super tacky song, but it kind of worked (A2).

In addition to the professional context, athletes also discussed coaches who were supportive on a personal level by acting as a mentor and teaching transferable life skills:

> What I get from my coach is confidence, knowledge, and independence. All of those things that I need. She will pin point things where she thinks "This is where you're falling down" or "This is what you need". She's always paying attention. She is not just a coach; she is also a mentor A7).

> While teaching the sport, my coach taught me some very important life skills and self awareness. He taught me to push the limits and gave me the confidence to know what I could and could not do. It's super important especially because I was a young teenager just after a life-changing drama. They can take you at the most vulnerable time of your life and have an amazing impact. They are life-changing (A5).

Finally, the athletes described coaches who helped improve their performance through the transmission of important knowledge and ideas:

> My coach is very much into the science behind coaching. There are so many electronic components now whereas years ago it was pretty basic. Now the training systems and the trainers we use are very technical with a lot of computer based systems. With my coach, that is his forte. He has a lot of schooling in a university background in kinesiology and high performance sciences. (A8).

> My coach narrowed in on the details. In Canadian championships and international competitions, we had video footage so he had everything down, such as the stroke rate for every portion of the race. Everything was calculated so we knew exactly where the weaknesses were and where I could improve. We did a lot of training in response to that (A2).

In conclusion, athletes described coaches who engaged in many positive coaching behaviours, such as communicating effectively, engaging in supportive behaviours, and demonstrating knowledge of their sport and its context. Despite this, not all of the coaching behaviours were positive.

Negative coaching behaviours. All of the athletes discussed aspects of their coaches that they did not like. More specifically, some highlighted experiences that were particularly troublesome, including the use of manipulative and selfish behaviours, as well as inappropriate comments and behaviours regarding their disability and gender.

When asked to describe negative or detrimental coaching behaviours, a few athletes alluded to the use of manipulative behaviours from their primary coaches. These behaviours led to feelings of inferiority for the athlete and destroyed their trust and respect with their coach:

> If you went into his office to express your opinions about something or to ask questions about what or why he was doing something, you would leave his office crying. He would make you think you were wrong and make you question why you would ever come into his office to ask these things. It was unreal. I don't think there was one time I didn't leave his office crying and felt that I was wrong, even though I was right (A6).
>
> There have been some coaches who have been undermining or don't agree with me, then they try to convince me to do something in a backwards way. It's that kind of stuff that really bothers me and is really upsetting when someone manipulates the situation or manipulates you into doing something that you don't want to do. For me, the trust issue on that is big. (A4).
>
> I had a coach who pretty much just lied. I don't know how to say that but he's a little bit of a male chauvinist. He falsified stuff to make one athlete happy and falsified it for someone else. He changed stories to make himself look good and to make an athlete feel better. It wasn't black and white, he always had stories and you were never sure if you believed it or not. You couldn't trust him (A8).

Additionally, some athletes addressed this question by discussing coaches who engaged in selfish behaviours by putting their own wants and desires ahead of their athlete:

> My coach would say things like, "Oh, win this for me". I wasn't seeded first in the world at that point. Maybe I could come up with it, and I did. I did win. I won by 9/100 of a second but anyways. Just the last thing he says, win this for me. It gives you an idea of how selfish he was (A2).
>
> My coach told me that if I had done everything I could do to be the best that he would never miss being at the Paralympics… Over the next two years, I devoted everything I

> had knowing I could potentially get to experience the Games with him, who had been by my side for four years at that point. I did everything right, I went above and beyond, I was doing extra practices that he didn't even ask me to do. In between the heat and the final of my best event, he decided to tell me that even if he gets selected to come to the Paralympics, he wasn't going to come with me because he got selected to go to the Olympics as the able-bodied open manager and that was more of a learning experience for him. I was pretty devastated by it, and still am, obviously (A6).

Finally, some athletes discussed experiences with their male coaches whom they felt inappropriately addressed their disability and gender. Athletes further explained how these behaviours influenced their perceptions of themselves as a Paralympian:

> We were at our staging camp in our last training before the Paralympics. It was cold and in skiing you wear layers that you take off progressively. Different people had stripped down to different extents and we were all standing there and one of the coaches comes down… This is just before the Paralympics and he was upset that not enough people had stripped enough and he said without thinking: "Well the *real* World Cup strips". We were all so shocked. No one said anything afterwards and I still think about it to this day and how I wish I had said, "Oh, I'm sorry. Are we not real? Are we a figment of your imagination? So if we aren't real, then you are not a real World Cup coach either." Are you kidding me? These things came out and how are you supposed to feel as an athlete when your coach thinks that you are not real because you are disabled. (A1).

> One of the reasons I quit swimming was because of the Paralympic head coach. He was very difficult in a group. The way he addressed Paralympic athletes was appalling. It's like, don't forget to brush your teeth at night, don't forget to shower because you're

> rooming with someone and you might stink. He treated us like babies in a very not-endearing way. It wasn't nice at all (A2).
>
> Sometimes what happens, especially with people with disabilities, is that the coaches often treat people with disabilities like we have a brain damage as well. They sometimes don't see us as adults so they take on a caregiving role. A lot of athletes with disabilities feel that the coaches treat us like children, even though I am a 39 year-old adult and if I want a beer, I am going to have a beer. When they try to organize you or treat you as a child it can be very frustrating (A4).

These experiences led the athletes to feel frustrated with their coaches' ability to properly address their disability and treat them as elite performers. As a result, this influenced their satisfaction as an athlete and a person. Likewise, athletes reported experiencing similar feelings when their coaches made inappropriate comments in relation to their gender. For example, when describing negative experiences with coaches, some athletes reported being sexually harassed by their male coaches while training for the Paralympic Games:

> My coach commented on our body and slapped my ass and stuff like that all the time. It's a lot like that in swimming. He was not tactful about talking about weight, and saying you're shaped like a pear. Things you don't want to hear at 17. So he fed me to that crazy mentality (A2).
>
> I lost 30 pounds leading into the Paralympics. I didn't do anything unhealthy in any capacity other than training a lot, but he always stressed with me that I needed to lose weight. I was never the swimmer body type; I was always a little bigger. I was never going to be 130 pounds. I remember being 14 years old and I was 148 pounds, I was always just a stockier, sturdier swimmer. When I came home from the Paralympics, my

> coach picked me up from the airport, saw my medals, and the first thing he said to me was that if I had lost another 30 pounds, I would have made the national able-bodied team. I just thought, was this not enough? (A6).

In sum, these experiences the athletes faced with their coaches negatively influenced their opinion of their coaches, their athletic career, and in some cases, their self-worth. In many ways these positive and negative experiences with their coaches shaped their perceptions of their Paralympic journey and what they considered to be an ideal coach.

Coaching Preferences

Preferred coaching practices were identified from the athlete interviews regarding their perceptions of an effective disability sport coach. These preferences were broken down into two main subthemes: professional and personal preferences.

Professional preferences. Within the interviews, the researcher asked the athletes to describe their perceptions of an ideal coach. Responses suggested athletes desired coaches who adapted to their specific needs, were knowledgeable of their sporting context, engaged in positive communications, and challenged them to reach their potential as an elite athlete. These coaching practices were suggested to enhance their development as a professional *athlete*.

Some athletes suggested there was a difference between coaching para athletes compared to able-bodied athletes. When prompted about this, the athletes highlighted the importance of their coaches being willing and able to adapt to their various needs. Furthermore, athletes desired coaches who were open minded, creative, and able to think outside of the box when modifying techniques or working with equipment.

> I think having the ability to be open minded is the difference between coaching an able-bodied athlete and one with a physical disability. I think you have to be open minded in

> accepting who that disabled person is because we come from different backgrounds…
>
> My coach was constantly trying to help me when I was struggling with my foot. My ankle only moved so much, it didn't plantar or dorsi flex. Therefore, it didn't do things unless I moved it, but then it would affect my walking. We had to play with the foot, but anyways, she was very open to those challenges (A7).
>
> The biggest thing for me is looking for instructors and coaches that are willing to think outside the box, especially for Paralympic athletes. There are some coaches that do not want to think outside the box, some that aren't willing to, or some that just don't know how to. Then there are the ones that say okay great, let's figure this out (A4).

Athletes also discussed valuing coaches who were knowledgeable and understanding of their disability. More specifically, athletes wanted coaches who were able to transfer and apply their able-bodied knowledge to the disability sport context:

> For me, this is really simple, but this applies in the para world more than you would think. Number one thing I find valuable in a coach: be an actual expert in your sport. Sometimes in para sport you get random coaches. I think it's less the case now, but I want someone who is an expert and skiing is a very specific sport (A1).
>
> My coaches hadn't been involved in the para side as long as I had. Most had come from the able bodied side. As a result, some of them took a while to kind of figure out how to apply knowledge to the para side. The coaches would come in and they wouldn't necessarily understand our body, our limitations, and the way that we moved. It was difficult to do what they were saying (A3).

In addition, athletes also expressed the desire for coaches to treat them as elite performers:

> Although my coach did so much development, he is really non-disability oriented. For him, he doesn't care. He will see your disability and he will figure it out in order to position you properly in a racing chair and that kind of thing, but everything else that has to do with it is not relevant to him. It's a high performance sport (A5).

Finally, athletes sought coaches who engaged in positive communication and challenged them to reach their athletic potential:

> I want coaches who are positive. I don't want someone to give me negative criticism, but positive feedback. There are coaches that coach in the style of kicking you down. Maybe it works for some people when you punch them in the face with information, but I like being stroked in a positive way. That affects me, so positive feedback is important (A7).
>
> A lot of times, of course coaches are going to very hard on you and push you to your limit and that is the purpose of the coach. You can't push yourself as much as you would like to on your own so you need someone there to be able to do it. I love that ability for a coach to be able to push you through a limit that you don't think you can get to. They make you see beyond what you can see in yourself, because they see something better in you. Any really great coach has the capacity to do that and they're not just going to stand on the sidelines and let you get away with things. I think that is really important (A6).

Personal preferences. While describing their ideal coach, athletes also discussed coaching practices that enhanced their development as a *person*. This included the desire to fully trust their coaches and to consider them a role model within and outside of sport. Furthermore, athletes discussed the value of having a personal component to the coach-athlete relationship and special considerations when coaching female athletes with a disability.

Athletes were passionate about wanting a coach who valued mutual trust in their relationship. More specifically, athletes highlighted the importance of trusting their coaches' honesty and ability to lead them to success:

> The coach athlete relationship is very special and you have to have trust. I think that is the main thing. I have to trust my coach. I don't have to have a personal relationship with them, but I have to know that they are there for me from the perspective that I can trust them. You don't have to agree with me, but be honest when you don't agree with me. The moment that you disagree with me but you share your disagreement with another coach or someone else but not me, we've lost that trust and that dialogue. That's a big problem for me (A4).

> I had the confidence to know that I trusted my coach. I knew that if I listened to him, even if it was very drastic, it would bring me the results that I wanted. In the end, that was my only priority. I had tunnel vision as an athlete, I knew that he was the best person to take me there (A5).

Athletes also highlighted the importance of coaches acting as role models for their athletes by displaying leadership behaviours and balancing their life outside of sport:

> I think you need a coach who is a leader. Not just in terms of "I am the head coach, therefore I am your leader" but in terms of their behaviour. I think it comes from being what you expect. So if you want respect, be respectful. If you want punctuality, be punctual. If you want hard work, work hard. Model the behaviours that you are asking from your athletes (A1).

> I think an ideal coach is someone who is a role model in life. It's tough being a coach and having a family. I think sometimes I was upset at my coach because he wouldn't go to

> meets with me, but he would generally try to find someone else to go with me because he prioritized his family… I think it is important to find that balance of someone who is very devoted when you're there, but they also have more outside of sport (A2).

All athletes were asked about the personal side to their coach-athlete relationship outside of the sporting context. Some athletes stressed the importance of considering their coach as a friend, particularly as a Paralympic athlete:

> I think it is very important to have a personal component with your coach as an athlete and I know a lot of people think it's not important. I am someone who is super close to my mentors and that has become an important variable of my life with all the aspects that I am doing… So much of your life is affecting your sport. You really have to be honest. I often felt alone when I was swimming. I was a Paralympic athlete, meaning I was always the only Paralympic athlete training in my group. I never trained with another Paralympic athlete in my entire career. People don't understand Paralympics, they don't know what disability I have and my competition schedule was different. So they would go to a swim meet and I would go to another one. It was always a little bit different. Different enough that I was always a little bit left out. Having my coach is what helped, and I think that's why he became my best friend (A2).

> When you think about coaching from the disability aspect, our coaches are usually doing far more for us than the regular coach. They are helping us and quite often we have incidents or accidents in regards to our injuries and it can get very personal. There's that personal side that is important (A4).

In addition, some athletes believed a personal component to the coach-athlete relationship was necessary as long as it revolved around the sporting context:

> I think that when you are an active athlete, you need to have a minimum amount of a personal aspect with your coach. It's a very intimate relationship and you give so much trust to a person that will help you achieve your dream. So it is a personal relationship, but it is a personal relationship that is oriented to sport (A5).

Finally, other athletes did not believe it was necessary to have a personal relationship with coaches outside of the sporting context:

> My coach and I became very close friends when I retired because he always kept the professional relationship of, I am the coach and you are the athlete, with a bit of authority. I believe in that though and I bought into that from the beginning (A5).

The final section of this theme discusses preferences regarding coaching female athletes. Some athletes working with male coaches expressed the desire to have female coaches on the national team. For example, one athlete stated, "The problem in swimming is that a lot of women coaches are like boys, they are part of the boy's club. Sometimes you actually just need to talk to a woman" (A2). Another athlete reiterated:

> For me, it was invaluable to have my coach as a friend. It's nice to have someone you can have girl-talk conversations with, especially because there are a limited number of girls. There were a couple seasons where I was literally the only girl on the team so as much fun as it is hanging out with teenaged boys, it gets old after a while. I think they would always try to have a female physiotherapist at the time. Same thing, I would be hanging out with them in the evenings rather than the athletes (A3).

Athletes also discussed the perceived difference between coaching female athletes compared to male athletes. When asked to expand on this point, the athletes stated:

> I think what I discovered in my second go around was that it is also something else to

> coach women. It's not just physical, it's mental, and about the differences between girls and boys, young women and young men and coaching them. I really think that that was missing. There was a hard, militaristic approach, and there were a lot of women on the team. It was hard on us (A1).
>
> Physiologically, there is a difference between training men and women. The structure of the training session and strength and conditioning is different. So with my coach, I was doing the same training as the boys. As if I could do 30 chin ups? Never. Not even in the peak of my life, come on. The intensity and power was very difficult (A2).

Moreover, athletes expressed concern as to how male coaches interacted with female athletes when addressing their weight:

> The way my coach was approaching me was often like a guy. I'm used to being treated like a boy all the time, but I had an eating disorder and depression. I just didn't know how to deal with this, and he didn't know how to deal with this clearly. Sometimes there was this awkwardness because he didn't know how to deal with women. (A2).
>
> I think a coach really has the ability to impact how you see yourself and your body. Depending on how they handle that can change you forever. I don't know if a lot of male coaches are educated properly on how to handle that properly. I think it can be addressed in a healthy way so that women do have that healthy mindset of their body and who they are. I think it can be approached in a way that is professional and not in a way that is saying they are fat or they need to drop weight to be an athlete or to be the best. It's about being healthy (A6).

Finally, some athletes suggested that female coaches could act as a role model for female Paralympic athletes:

> I think having someone in your life who is a woman, who has gone through experiences like you could have been a positive experience. Swimming coaches often used to be swimmers. Someone who has been through the same kind of experiences and probably been through the same kind of pressures as you with weight would be helpful. They know hand in hand because they have gone through it themselves. My coach spoke to the woman's team very differently than he spoke to the men's team. If I had a woman coach, it would be like having a role model that you can look up to that's your own gender. It's someone you aspire to be.

While some athletes may have preferred to work with female coaches, most of them suggested it was unrealistic due to the limited number of female coaches in elite disability sport. For example, one athlete explained that, "In high performance sport, I think less than 10% of coaches are female. In reality, they just aren't there, even if you want them (A5)". Another athlete stated:

> I have had all male coaches in my career and that is unfortunate. I've never really had any issues with the male side of coaching myself, however. I've never had a female coach available to me; there has never really been an option (A8).

In conclusion, athletes preferred coaches who valued mutual trust, acted as role models, and in some cases, had a personal component to the coach-athlete relationship. Furthermore, athletes highlighted the importance of understanding the difference between coaching male versus female athletes, as well as athletes with and without a disability. Overall, athletes described both professional and personal coaching preferences that provided insight as to what elite, female Paralympic athletes were looking for in an effective disability sport coach.

Summary of Results

Four main themes were identified from the data analysis with eight female Paralympic athletes. They help explain the athletes' preferences of an effective Paralympic coach. More specifically, the four themes were labelled: (a) personal characteristics of the athlete, (b) athlete: Paralympic experiences, (c) the coach: behaviours, and (d) coaching preferences.

Personal characteristics of coach and athlete included the personal make-up of the athlete with respect to their disability and sporting careers. All of the athletes discussed the influence their disability had on their integration into sport and how it shaped their overall athletic career. Furthermore, while not all athletes considered their disability to be a defining feature of their identity, all athletes expressed the desire to be treated as elite performers. These early experiences led the athletes on the path to success as a female Paralympic athlete. Overall, the personal characteristics provided a clearer picture of the athlete and their experiences.

Athlete: Paralympic experiences referred to being a Paralympic athlete on the Canadian national team, including their time before, during, and after the Games. Athletes discussed perceptions of their ability and expectations, as well as intrapersonal and interpersonal challenges that arose throughout the process. This process, or Paralympic journey, was individualized by each athlete and encompassed elements such as their decision to compete as a Paralympian, training and competition experiences, as well as particular challenges they faced. Athletes described specific challenges, such as having high expectations of themselves, feeling pressured to win, dealing with injuries, and balancing multiple commitments. As a result, athletes discussed common strategies to cope with these challenges including relying on coaches, teammates, and integrated support staff for support. This environment led the athletes to discuss

qualities or behaviours of their coaches in particular, that were considered to be valuable or non-valuable towards their perceptions of an ideal coach.

The coach: behaviours included athletes' interactions and experiences with their coaches, both positive and negative, that either helped or hindered their overall success and well-being. In relation to positive coaching behaviours, athletes described experiences with coaches who communicated positively, were supportive of the athlete, and knowledgeable in their domain. Furthermore, negative coaching behaviours were also discussed, where coaches engaged in manipulative behaviour, acted selfishly, or disrespected the athlete based on their disability or gender. With respect to the negative coaching behaviours, it is important to note that all athletes had multiple coaches throughout their Paralympic journey and each athlete had at least one positive experience with a coach throughout this process. As a result, these positive and negative coaching behaviours influenced their coaching preferences.

Based on what the athletes reported about themselves, their coaches, and their experiences as Paralympians, they were able to articulate their ideal *coaching preferences*, which was subdivided into two components: professional and personal preferences. In terms of the professional component, athletes preferred coaching practices that enhanced their athletic development. For example, athletes desired coaches who pushed them to their physical limits while being knowledgeable of their disability and sport. Moreover, athletes preferred coaches who adapted to their unique needs and who communicated frequently, clearly, and in a concise manner. In addition to the professional domain, athletes also discussed coaching practices that were more holistic and developed them as a *person*. In particular, the majority of athletes reported valuing coaches who they could trust and who provided support and guidance throughout their career. Athletes discussed coaches who developed a partnership or friendship, as

opposed to an authority focused relationship, and those who acted as a role model for their athletes (i.e., leading by example). These behaviours allowed the athletes to consider their coaches as more than simply an instructor, but also as a mentor, friend, or partner, which was preferred by most, but not all, of the athletes. There were mixed findings as to whether connecting with the coach on a personal level outside of sport was necessary. While some athletes reported having minimal personal connection with their coach, others felt that having a personal relationship enhanced their athletic success. Overall, each athlete discussed different experiences throughout their career, including what they liked and disliked from their coaches, which ultimately helped explain what they considered to be an effective Paralympic coach.

Chapter 5

Discussion

The purpose of this study was to explore female Paralympic athlete preferences of effective coaching practices. During the interviews, athletes described their perceptions and experiences of both effective and ineffective coaching strategies and behaviours and offered insight as to how these experiences affected them on a personal and professional level. The following section will discuss athletes' perceptions of effective coaching practices in relation to previous able-bodied and disability sport literature, and will be followed by a section on negative coaching behaviours.

Effective Coaching Practices

Results from the current study revealed athletes valued coaches who engaged in effective communication, which involved providing constructive feedback in a clear and concise manner and the willingness to converse about topics outside of the sport setting. This finding is consistent with previous disability sport coaching literature, which has highlighted the importance for coaches to communicate effectively with their athletes to enhance satisfaction within and outside of sport (Cregan, Bloom, & Reid, 2007; Falcão, Bloom, & Loughead, 2015; Tawse, Bloom, Sabiston, & Reid, 2012). For example, Falcão and colleagues (2015) interviewed seven Paralympic head coaches on their perceptions of ways to enhance team cohesion. The results indicated that the coaches communicated with their athletes in a variety of ways, from finding places that were accessible for their athletes, to sport-related topics relating to goal setting and commitment, as well as personal conversations, where coaches expressed an interest in their athletes as individuals outside of the sporting context (Falcão et al., 2015). In conjunction with results from the current study, these findings are positively associated with the *co*-

orientation and *closeness* components of the 3+1Cs model (Jowett, 2007). For example, the athletes from the current study who had frequent and constructive communications about athletic objectives with their coaches were believed to share common goals, values, and beliefs in sport, which appeared to lead to increased *co-orientation*. Furthermore, athletes who were able to openly share feelings and opinions with their coaches were more likely to trust and respect them and to consider them a friend, which is directly relatable to the *closeness* or affective component of the model (Jowett, 2007). Effective communication has been suggested to lead to positive coach-athlete relationships in elite able-bodied sport (Jowett & Cockerill, 2003; Jowett & Meek, 2000; Morales, Bloom, & Caron, 2017; Philippe & Seiler, 2006), therefore the current study adds to the small body of research on the coach-athlete relationship in the Paralympic context. While the majority of coaching research in disability sport has focused on the perspectives of the coach, the current study was among the first to gain insight on the coach-athlete relationship from the perspective of the Paralympic athlete. Findings from the current study are in agreement with previous able-bodied and disability sport coaching literature in regards to the importance of effective communication to enhance the success of the coach-athlete relationship, and in turn, their athletic and personal satisfaction.

Athletes also valued coaches who were knowledgeable of their sport, their athletes, and their respective disabilities. This finding is consistent with Cregan and colleagues (2007) who interviewed six elite-level coaches of swimmers with a physical disability and found that coaches highlighted the importance of being knowledgeable of the athlete as a person, including their background and athletic goals, to determine how to effectively coach that athlete. Furthermore, due to the lack of formal education in disability sport (Fairhurst, Bloom, & Harvey, 2017, Taylor, Werthner, & Culver, 2014), coaches are forced to rely more heavily on informal

educational methods, such as conversing with athletes when learning about disabilities, equipment, and accessibility issues (Cregan et al., 2007; Dieffenbach & Statler, 2012; McMaster, Culver, & Werthner, 2012). While informal methods of learning have been suggested as a valuable learning opportunity for disability sport coaches, athletes from the current study have particularly called for coaches to be knowledgeable experts in their sport. This is related to the *professional knowledge* component outlined by Côté and Gilbert (2009) in their definition of coaching effectiveness, which refers to knowledge in the sport sciences as well as sport-specific technical and tactical knowledge. In fact, multiple athletes stressed the importance of having coaches who are well-informed and up to date with the sport sciences; this suggests the importance of disability sport coaches continuing to attend educational courses through clinics, seminars, and workshops specifically geared to the elite parasport context. One such program is the *The Disability Sports Coach*, which offers in-class and online courses in Adapted Sport and Disability Awareness in Sport (Disability Sports Coach, 2017). The goal of these introductory courses is to teach coaches how to adapt and modify activities for athletes of varying ability levels and to provide coaches with the confidence to effectively coach adapted or Paralympic sport. Future research is encouraged to explore the association between coaching knowledge and Paralympic athlete outcomes to gain a better understanding of coaching effectiveness in disability sport.

Results from the current study suggested athletes valued coaches who were willing and able to adapt to their individual needs by being open-minded, creative, and able to think outside of the box. This finding is consistent with previous disability sport coaching research that highlights the need for coaches to adapt their coaching practices to optimize the personal and professional satisfaction of each athlete (Banack, Bloom, & Reid, 2011; Burkett, 2013; Cregan et

al., 2007; Tawse et al., 2012). For example, Burkett (2013) suggested that coaches need to be open to new ideas regarding equipment when working with athletes with a disability, as their movement patterns, and therefore performance, often differed from able-bodied athletes. Additionally, Cregan and colleagues (2007) found that coaches modified their training practices based on athlete goals and abilities, (i.e., varying distances, intervals, and type of training) to meet the needs of their athletes and emphasized the importance of creativity in their coaching practices. The findings of the current study are in agreement with previous research as multiple athletes suggested the ability and willingness to adapt their coaching practices was the most important quality differentiating coaching able-bodied athletes from athletes with a disability in the elite sport context. All athletes in the current study had been successful on the Paralympic or Para Pan American podium winning at least one medal throughout their careers. It would therefore be interesting to study athletes who had *not* been successful in achieving a Paralympic medal, as this population might provide insight into the coaching strategies and behaviours that were not considered effective in achieving athletic success. Future research should explore this avenue to provide a better understanding of effective coaching behaviours in disability sport.

Finally, the majority of athletes expressed the desire to work with coaches who displayed supportive behaviours on a professional and personal level. Professionally, athletes discussed working with coaches who supported them, both in training by physically joining them in the pool, as well as in competition when they engaged in effective motivational speeches prior to their performance. Consistent with findings from the current study, previous research on Paralympic athletes highlighted the effectiveness of autonomy-supportive coaching behaviours to foster an athletes' level of satisfaction, engagement, and motivation in sport (Banack et al., 2011; Cheon, Reeve, Reeve, & Lee, 2015). The current study extends previous quantitative

research by providing one of the first qualitative accounts of Paralympic athlete coaching preferences allowing athletes to describe their own experiences and perceptions in their own words and to express reasons *why* autonomy-supportive behaviours were effective in training and competition. For example, athletes suggested these behaviours led to creating and maintaining a supportive training atmosphere, which allowed them to feel comfortable and valued in the coach-athlete relationship. Considering the beneficial impact of autonomy-supportive coaching behaviours for athletes, it is surprising not all coaches engaged in this coaching style. Lafrenière, Jowett, Vallerand, and Carbonneau (2011) explored this concept further by administering questionnaires to 103 able-bodied coach-athlete dyads in several types of sport (i.e., gymnastics, football, and volleyball) and levels (i.e., club, university, national, and international) to assess coaching passion, coaching behaviours, perceptions of the coach-athlete relationship, and athlete happiness. Results revealed that a harmonious passion for coaching (i.e., coaching based on intrinsic motivation) resulted in the use of autonomy-supportive behaviours, which was associated with a positively perceived coach-athlete relationship and increased happiness. Future research should explore coaching passion in Paralympic coaches to gain a better understanding of the motivation behind coaching behaviours in disability sport and to shed light on how these behaviours positively or negatively impact athlete satisfaction in sport.

Athletes also discussed coaches who supported them on a personal level by teaching transferable life skills, such as confidence, knowledge, self-awareness, and independence. In particular, coaches have been suggested to play an influential role in developing their athletes outside of sport by fostering independence (Goodwin & Compton, 2004; Goodwin, Krohn, & Kuhnle, 2004; Tawse et al., 2012). For example, Tawse et al. (2012) interviewed four wheelchair rugby coaches on their experiences working with athletes with an acquired disability and

revealed that coaches emphasized promoting a sense of independence for their athletes, (i.e., personal care education, autonomously transferring out of their chair). Athletes from the current study who reported being supported on a personal level demonstrated a greater interpersonal liking, trust, and respect for their coaches, which is directly relatable to the *closeness* component of the 3+1Cs model (Jowett, 2007). Closeness has been linked to the humanistic aspect of coaching, where athletes and coaches are interested in the personal well-being of the other person, which often creates a more conducive psychological training climate (i.e., less anxiety, more creativity, and increased cooperation between coach and athlete) (Bloom, Durant-Bush, Schinke, & Salmela, 1998; Jowett & Cockerill, 2003). In fact, multiple athletes from the current study discussed the importance of considering their coach as a friend and highlighted the importance of the personal aspect to the coach-athlete relationship in Paralympic sport. For example, one athlete described feeling left out in practice being the only Paralympic athlete on the varsity team, therefore valued the personal relationship she had with her coach and considered him a best friend. This personal relationship enhanced feelings of closeness between the coach and athlete, which positively influenced her perceptions of support and the quality of the coach-athlete relationship as a result. Future research is encouraged to explore the long term effects of supportive and non-supportive coaches of Paralympic athletes to determine the influence coaches have on their athletes' psychological and personal well-being over time (i.e., one year after retirement, five years, 10 years, etc.). While the current study interviewed retired athletes at one time point, it would be interesting for researchers to conduct follow up interviews with retired athletes to determine the long-term effects of coaching behaviours in disability sport.

In sum, athletes discussed perceptions of effective coaching by describing strategies and behaviours that were suggested to enhance their personal and professional satisfaction as a

Paralympic athlete. Athletes described coaches who communicated effectively, were knowledgeable, able to adapt their coaching practices, and were supportive both within and outside of sport. These coaching practices positively influenced athlete perceptions of their coaches, their coach-athlete relationship, and their overall Paralympic journey. Athletes also alluded to a number of negative experiences or conflicts with their coaches that they felt were detrimental to their personal and professional well-being. While the coaching conflicts varied with each athlete, they typically focused on insulting remarks from the coach based on the athletes' disability or gender as well as selfish or manipulative behaviours. The next section will discuss these negative coaching behaviours while comparing and contrasting previous coaching literature in both able-bodied and disability sport.

Negative Coaching Behaviours

Results revealed the female Paralympic athletes experienced various forms of inappropriate behaviours from their male coaches that included having their buttocks slapped and their weight addressed in front of others. This finding is consistent with Tomlinson and Yorganci (1997) who completed a mixed method study of the male coach / female athlete relationship for female track and field athletes, competing from the regional to international level. Quantitative results indicated that 17% of athletes experienced inappropriate behaviours from their coaches, such as tickling or slapping on the behind, while 59% of athletes reported that their coach had an influence on their diet and weight. In a comparable study, Fraser-Thomas and Côté (2009) interviewed 22 adolescent, competitive swimmers without a disability on their sporting experiences and found examples where male coaches inappropriately commented on a 14-year-old female athletes' weight (Fraser-Thomas & Côté, 2009). Consequently, these findings indicate that male coaches behave inappropriately with female athletes in a variety of contexts, with

differing ages, and for those with and without a disability. The current results are particularly troublesome towards our sample of athletes when you consider that people with a disability are approximately four times more likely to be mistreated (i.e., harassed, abused, victimized) compared to people without a disability (Kirby, Demers, & Parent, 2008). Furthermore, females are more susceptible to experiencing discrimination, exclusion, or harassment (Kirby et al., 2008; Tomlinson & Yorganci, 1997; Wachsmuth et al., 2016), and more likely to experience body image issues compared to their male counterparts (Sands & Wettenhall, 2000). Athletes in the current study expressed the desire to work with female coaches as they felt more comfortable confiding in someone who may have a better understanding of weight and body image issues. This is troubling when you consider that only 2% of coaches were female in the Paralympic Games in London 2012 (Coaching Association of Canada, 2013). Therefore, our current results combined with previous research on female athletes clearly calls for the inclusion of more female Paralympic coaches as a way to help reduce or eliminate inappropriate coach-athlete relations in disability sport.

Responses from athletes in the current study clearly indicated the hurt and disdain that they felt on both a personal and professional level. Their emotions ranged from violation, insecurity, to being upset with their coaches, themselves, and the sporting environment. These feelings continued to affect some of the retired athletes between four to eight years later, where they engaged in sarcasm within the interview, became increasingly frustrated, and in one case, was brought to tears. Interestingly, after describing negative behaviours from their coaches that included disclosing personal information about the athlete or making inappropriate comments about their gender, some of the athletes still defended their coaches' behaviours by suggesting the coaches were not fully aware of how their actions were affecting them. These findings were

consistent with Fraser-Thomas and Côté (2009) who found that male and female athletes experienced negative encounters with their coaches, yet rarely expressed resentment or animosity towards their coaches. In a similar manner, Tomlinson and Yorganci (1997) observed male coaches engaging in sexual harassment towards their female athletes (i.e., pressing their bodies against the athletes), yet athletes rarely appeared to address these incidents with their coaches. Taken together, these findings demonstrate the prevalence of harassment in sport and the disturbing realization that female athletes are not likely to report coaches when inappropriate incidents occur (Kirby, Greaves, Hankivsky, 2000). Considering the magnitude and influence of the coach-athlete relationship for both athletes with a disability (Banack et al., 2011; Cheon et al., 2015; Cregan et al., 2007; Tawse et al., 2012), and athletes without a disability (Jowett & Cockerill, 2003; Jowett & Nezlek, 2011; Philippe & Seiler, 2006), the low report rate for coach misconduct is not surprising. While research on negative coaching behaviours in disability sport is slim, research on athletes without a disability suggest they often fear being called a liar, being labeled as promiscuous, being punished, and/or losing their spot on the team (Kirby et al., 2008). Specific to disability sport, the International Paralympic Committee (IPC) has attempted to address these issues through an online brochure aimed at educating athletes on identifying signs of harassment and abuse, and providing services for athletes to reach out to if misconduct has occurred (International Paralympic Committee, 2016). As a result, female athletes with and without a disability would benefit from harassment prevention programs to educate athletes on acceptable versus inappropriate behaviours in the sporting context, as well as intervention programs to assist athletes who have been harassed or abused.

Athletes also discussed coaches who engaged in selfish behaviours, such as being uninvolved or uninterested in practices, being preoccupied with the social status and

compensation, and dismissing their athletes' desires in sport. Previous research by Jowett and Cockerill (2003) found similar findings, where Olympic athletes discussed coaches who were only interested in personal affairs and social events, and displayed a lack of consideration towards their athletes, which resulted in feelings of anger and frustration. In a similar manner, competitive youth sport athletes discussed experiences where coaches skipped practices and provided minimal effort towards their athletes' training, which led athletes to feel frustrated and question the reasoning behind their coaches' actions (Fraser-Thomas & Côté, 2009). In conjunction with the current study, these findings are directly relatable to the *co-orientation* component of the 3+1Cs model (Jowett, 2007), highlighting the importance of mutual goals, values, and beliefs in the coach-athlete relationship, fostered by open communication. A lack of co-orientation between the coach and athlete has been known to cause relationship deterioration or even termination (Wachsmuth, Jowett, & Harwood, 2016), which occurred in the current study where one athlete switched coaches as a result of negative experiences she went through. The majority of research on selfish coaching behaviours has been conducted on athletes without a disability, therefore the current study extends coaching literature by exploring perceptions of athletes in the Paralympic context. Specific to disability sport, research has suggested that coaches do not always intend to coach disability sport (Cregan et al., 2007), therefore it is essential for athletes to find coaches who are genuinely interested in coaching Paralympic sport and not simply looking for an alternative coaching career (i.e., transition to Olympic coach). In order to accomplish this, it is recommended that athletes and coaches communicate frequently and constructively about their needs, desires, and goals to ensure they are both equally involved and invested in the partnership (Cregan et al., 2007).

Finally, athletes in the current study discussed coaches who engaged in manipulative behaviours, such as lying to their athletes, fabricating information, or undermining thoughts and ideas, which led to feelings of frustration, inferiority, and in some cases, a diminished self-worth. Previous research has highlighted the prevalence of manipulative behaviours towards elite athletes without a disability, where they discussed feeling used by their coaches or talked about experiences where coaches lied about their performance times in practice (Fasting & Pfister, 2000; Jowett & Cockerill, 2003). While the current results support these previous empirical findings, they further highlight the inverse association between manipulative coaching behaviours and the *closeness* component of the 3+1Cs model (Jowett, 2007). More specifically, athletes in the current study suggested manipulative coaching behaviours led to a decreased trust and respect for their coaches, which has been suggested to lead to interpersonal conflict (Jowett, 2003; Wachsmuth et al., 2016), and impairs athletes' perceptions of a safe and comfortable training environment (Jowett, Kanakoglou, & Passmore, 2012). While communication has been considered an effective conflict resolution strategy for coaches and athletes (Wachsmuth et al., 2016), Jowett (2003) cautions this recommendation when there is an absence of mutual trust and respect, as sharing personal feelings has the potential to lead to feelings of vulnerability, which can be taken advantage of by members of the relationship. Considering the detrimental effects of manipulative behaviours in sport, disability sport coaches are recommended to engage in autonomy-supportive behaviours where athletes receive constructive feedback, are provided with choice, as well as the opportunity to act independently, which is associated with enhanced motivation, satisfaction, and performance (Banack et al., 2011; Cheon et al., 2015). In particular, the Coaching Association of Canada (CAC) is launching a Responsible Coaching Movement to better train and inform youth sport coaches as well as to protect athletes by ensuring coaches

complete background checks, enroll in ethical training, and are certified with the National Coaching Certification Program (NCCP) (Coaching Association of Canada, 2017). This movement has been in reaction to the amount of mistreatment, harassment, and abuse in sport at all levels to increase awareness and education and reduce negative incidences from occurring in the future. Future coach education programs are needed in the disability sport community to ensure the same principles and recommendations are met for coaches in the Paralympic context and to educate coaches on the consequences associated with negative behaviours on athlete satisfaction and performance (Jowett & Cockerill, 2003; Wachsmuth et al., 2016). The current study extends previous literature by providing insight on manipulative coaching behaviours in Paralympic sport, yet future research is needed to determine the prevalence and significance of these behaviours on the personal and psychological well-being of both active and retired athletes. In conclusion, when describing experiences with their coaches, multiple athletes in the current study discussed negative coaching behaviours that included inappropriate interactions regarding their athletes' disability or gender, and engaging in selfish or manipulative behaviours towards the athletes. These behaviours have been suggested to affect the athletes on a personal and professional level, therefore it is imperative that coaches become aware of their behaviours and the special considerations of coaching female athletes with and without a disability. In order to accomplish this goal, there is a strong need for research, educational programs, and workplace policies to be created to educate coaches on proper practices in order for athletes to feel comfortable and safe within their training environment (Kirby et al., 2008). The current study contributes to the small body of research on negative coaching behaviours towards female athletes, while extending the literature by gaining a closer look at the coach-athlete relationship in elite disability sport.

Chapter 6

Summary of Study

In general, sport can benefit athletes with or without a physical disability on psychological, physiological, and social levels (Murphy & Carbone, 2008; Stephens, Neil, & Smith, 2012; World Health Organization, 2003), with the coach being someone who greatly influences these health benefits (Tawse, Bloom, Sabiston, & Reid, 2012; Vallée & Bloom, 2005). Research on the coach-athlete relationship has primarily focused on male athletes without a disability, therefore the current study aimed to expand the coaching science literature by focusing on female Paralympic athlete preferences of effective coaching practices.

Upon receiving approval from the McGill Research Ethics Board, eight Canadian female Paralympic athletes were recruited to participate in the study. On average, the participants competed at four Paralympic Games, achieved eight Paralympic or Para Pan American medals throughout their careers, with multiple athletes inducted into the Canadian and International Paralympic Hall of Fame. Furthermore, athletes were both active and retired, competed in individual and co-acting sports, and had been with their respective coaches for at least five years. All athletes were recruited via email to participate in one semi-structured interview based on an interview guide created by the research team. Interviews were conducted by the primary researcher, ranged from 55 to 140 minutes in length, and were audio recorded and transcribed verbatim. Data was analyzed using thematic analysis, which identified themes and patterns within the data and provided the reader with a comprehensive understanding of the participants' experiences (Braun & Clarke, 2013).

Data analysis resulted in four higher order themes, which were called: *(a) personal characteristics of the athlete; (b) athlete: Paralympic experiences; (c) the coach: behaviours;*

and (d) coaching preferences. *Personal characteristics of the athlete* referred to descriptive characteristics of the athlete, including their experiences living with a physical disability and how it influenced their life and sporting experiences. *Athlete: Paralympic experiences* outlined athlete perceptions of being on the national team, including barriers and facilitators experienced throughout their Paralympic journey. *The coach: behaviours* discussed experiences with their coaches which they felt enhanced or hindered their personal and athletic satisfaction, and finally, *coaching preferences* referred to strategies and behaviours athletes considered most valuable or effective in an elite disability sport coach.

Although each athlete had a different Paralympic journey, similarities remained between their responses. For example, the majority of athletes highlighted the importance of effective communication between the coach and athlete, for the coach to display supportive behaviours (i.e., acting as a mentor, role model, or teaching transferable life skills), and to be knowledgeable of the disability sport context. Some athletes discussed negative experiences where coaches insulted their gender and disability, engaged in selfish behaviours, or acted manipulatively. These experiences influenced their perceptions of an effective disability sport coach, where the majority of athletes expressed the desire for coaches to treat them as elite performers, be knowledgeable and understanding of their disability, and to value mutual trust and respect within the relationship. In sum, results from the current study add to the disability sport coaching literature by providing one of the first qualitative accounts of female Paralympic athletes' coaching preferences where participants were able to explain their experiences in their own words, thus allowing the research team to gain an in-depth understanding of their coaching perceptions and experiences.

Conclusions:

Personal Characteristics of the Athlete

- Athletes described their physical disability and how it influenced their integration to sport as well as to their Paralympic career.
- Athletes discussed their Paralympic journey to be a challenging, yet rewarding experience where they excelled as elite athletes with a disability through dedication, hard work, and perseverance.

Athlete: Paralympic Experiences

- Athletes described experiences prior to the Paralympic Games, including their decision to compete as a Paralympian and their sporting experiences leading up to the Paralympic Games.
- Multiple athletes discussed their experiences during the Paralympic Games, such as increased training and competition schedules, as well as performances that led to both satisfaction and dissatisfaction.
- Athletes discussed challenges they faced throughout their Paralympic careers, including pressure to perform, the physical and psychological impact of injuries, and difficulty balancing multiple commitments, such as university, work, and family.
- To overcome challenges throughout their career, athletes relied on coaches, teammates, and integrated support staff for emotional support during difficult times.

The Coach: Behaviours

- All athletes discussed both positive and negative experiences with their coaches that either enhanced or hindered their personal and professional well-being.
- Athletes discussed coaches who engaged in effective communication by providing frequent, concise, and constructive feedback, those who were supportive of the athlete both within and outside of the sporting context, and coaches who were knowledgeable in their field.
- Multiple athletes mentioned coaches who taught them transferable life skills, such as self-awareness, independence, confidence, and knowledge, and described coaches who challenged them to reach their potential as an elite athlete.
- Athletes also discussed coaches who were manipulative (i.e., lied to them or fabricated information), as well as those who acted in a selfish manner by putting their own needs and desires ahead of the needs of the athletes.
- Some athletes discussed coaches who addressed them in an inappropriate manner regarding their disability and gender, which often led to feelings of hurt, frustration, and anger.
- Coaching behaviours, both positive and negative, affected athletes on a personal and professional level and shaped their perceptions of an effective disability sport coach.

Coaching Preferences

- The majority of athletes expressed a desire for coaches who adapted their practices to meet their individual needs, and who were creative and open minded to alternative coaching strategies.

- Athletes valued coaches who transferred their pre-existing coaching knowledge to disability sport, engaged in positive communication, and pushed them to maximize their athletic performance.
- Athletes spoke about the value of having mutual trust, respect, and honesty within the coach-athlete relationship to foster an optimal training environment where they felt safe and comfortable.
- While some athletes valued having a personal component to the coach-athlete relationship, others did not consider it necessary or in some cases, even appropriate. One athlete discussed the importance of a personal component as long as it revolved around sport.
- Some athletes commented on the low prevalence of female coaches in elite disability sport, as well as a desire to work with female coaches.

Practical Implications

The current study is among the first to explore female Paralympic athlete preferences of effective coaching practices. This study offers a number of practical implications for coaches, athletes, and the Paralympic community, which will be discussed throughout this section.

Results of the current study outlined coaching practices that female Paralympic athletes considered valuable in fostering athletic and personal satisfaction, such as being knowledgeable, adaptive, supportive, and engaging in effective communication. These practices are directly relatable to the three main components of coaching knowledge and effectiveness (professional, interpersonal, and intrapersonal) outlined by Côté and Gilbert (2009). Firstly, in regards to *professional knowledge* (Côté & Gilbert, 2009), athletes expressed the desire for coaches to be experts in their respective sports by being up to date with sport science information, engaging in

continued coach education, and being knowledgeable of their sport. A few coaching manuals currently exist for disability sport coaches, including *Coaching Athletes with a Disability* (Coaching Association of Canada, 2017a) and the *Long-Term Athlete Development for Athletes with Disabilities* (Sport for Life, n.d.). While these manuals are valuable for coaches who are new to disability sport, athletes in the current study highlighted the high level of knowledge that they expect of a Paralympic coach. Consequently, aspiring Paralympic coaches are encouraged to seek out educational opportunities (i.e., participating in clinics, workshops, and courses related to disability sport), to gain a better understanding of the effective coaching practices that are specific to elite athletes with physical disabilities.

Secondly, the athletes discussed strategies and behaviours that enhanced the quality of the coach-athlete relationship. This is related to the *interpersonal* component of the definition, which refers to professional and personal interactions between the coach and athlete and relies on effective communication and knowledge of the athlete as a person. The coach-athlete relationship has been extensively reviewed by Jowett and colleagues (Jowett & Clark-Carter, 2006; Jowett & Cockerill, 2003; Jowett & Meek, 2000; Jowett & Nezlek, 2011; Jowett & Ntoumanis, 2004) for athletes without a disability, yet this is among the first studies to explore the coach-athlete relationship for a sample of (female) athletes with a disability. The findings are in agreement with previous research and highlights the importance for coaches to understand their athletes as an individual (i.e., ability level, disability, background experiences, coaching preferences). Coaches are encouraged to have frequent discussions with their athletes as a way to strengthen the nature of the coach-athlete relationship, and foster overall success.

Results from the current study are also applicable to building and maintaining effective relationships outside of the coaching context (Adams, Laursen, & Wilder, 2001; Chua, 2012;

Laursen & Bukowski, 1997; Wentzel, 2003) For example, research has demonstrated that children who formed effective relationships with their teachers experienced more positive affect than children without high quality teacher-student relationships (Pianta, Steinberg, & Rollins, 1995; Wentzel, 2003). Similarly, athletes from the current study reported positive emotions, feelings, and thoughts towards effective coaching relationships where athletic and personal success were fostered. Finally, demonstrating and maintaining mutual trust were identified in this study and aligns with relationships between business partners (Chua, 2012; Ulaga & Eggert, 2004), friendships (Berndt, 2002; Rawlins & Holl, 1987), and romantic relationships (Adams et al., 2001; Simpson, 1990). The current study extends the body of literature on effective relationships and contributes commonalities between multiple types of relationships outside of the sporting context.

The final component of the coaching effectiveness definition is *intrapersonal knowledge*, which refers to the coaches' ability to introspect or reflect on their own practices and experiences (Taylor, Werthner, Culver, & Callary, 2015). Using the coaching preferences outlined by athletes in the current study, disability sport coaches are encouraged to reflect on their own practices to help develop and refine their strategies, behaviours, and interactions in sport (Gilbert & Trudel, 2001). Furthermore, results from the current study suggest that coaches should place a particular emphasis on reflecting about coaching female athletes with a disability, as it appears coaches are unaware or ignorant of the impact inappropriate comments or behaviours can have on their female athletes, both during and after their careers are over. Overall, these results add to the existing coaching literature by deepening our understanding of coaching effectiveness in disability sport and providing insight to the strategies and behaviours female Paralympic athletes consider effective in fostering personal and professional satisfaction.

Results from the current study also highlighted negative coaching behaviours in disability sport, particularly related to the male-coach female-athlete power dynamic. More specifically, athletes described coaches who were insulting and disrespectful towards their disabilities and gender, and discussed issues related to sexual harassment from their male coaches. The International Paralympic Committee (IPC) released a Position Statement on Sexual Harassment and Abuse in Sport in 2008, which specified that sexual harassment and abuse are not permitted in this community in any way. The report also provided examples of harassment and abuse, as well as recommendations for responding to inappropriate behaviours (International Paralympic Committee, 2008). Additionally, the IPC released a brochure on the Prevention of Harassment and Abuse in Paralympic Sport, which outlined similar principles to the position statement and offered information that was easily accessible and comprehensive (International Paralympic Committee, 2016). The IPC could benefit from the results of our study by including quotes of athletes describing their experiences working with male coaches who engaged in inappropriate behaviours. Real life accounts from our study could provide current athletes with the realization they are not alone in experiencing sexual harassment or abuse.

Additionally, many athletes in the current study experienced working with coaches of both genders throughout their careers. While some athletes commented on a preference towards female coaches for a stronger emotional connection, other athletes stated the gender of the coach was not an issue as long as they were qualified and skilled. Contradictory to this finding, the Women's Sport and Fitness Foundation provided a factsheet on coaching high performance female athletes and stated that many female athletes preferred male coaches as they associated masculine traits (i.e., dominant, controlling, respect) with success (Sports Coach UK, n.d.). This may be attributable to the lack of female coaches in sport and the subsequent lack of role models

for female athletes with and without a disability. Results from the current study highlight the importance of female coaches in Paralympic sport and warrant the need for women to pursue a career in coaching disability sport. In line with these objectives, the IPC created the *Women in Sport Leadership Toolkit* in 2008, designed to educate individuals and organizations on the promotion of women in Paralympic sport and leadership positions (International Paralympic Committee, 2010). One recommendation was to create mentorship programs where women in sport act as role models to support, guide, and educate younger female athletes in sport. In fact, the Canadian Association for the Advancement of Women and Sport and Physical Activity (CAAWS) and the Coaching Association of Canada (CAC) is in the process of implementing a Female Coach Mentorship module, where young female coaches are paired with an experienced female mentor to support and encourage their career progression (Canadian Association for the Advancement of Women and Sport and Physical Activity, 2013). Specific to disability sport, the IPC created the WoMentoring Program for the past three years to encourage mentoring in Paralympic sport and increase the number of females in coaching, official, and leadership roles (Agitos Foundation, 2014). Consistent with these objectives, the current study may help promote parasport, empower female athletes to participate in elite sport, and encourage the attainment of decision making roles in Paralympic sport. Additionally, the current study adds to empirical disability sport research by obtaining the perspectives of an underrepresented population while providing insight on the special considerations of coaching elite female athletes with a physical disability.

Limitations and Recommendations

While the current study offers some insightful coaching strategies and recommendations, a number of limitations should be addressed. First, our sample was selected based on a specific set

of criteria, including active or retired Canadian female Paralympic athletes who had been to at least two Paralympic Games, won at least one Paralympic or Para Pan American medal, and had been with their coach for at least five years. While these criteria provide a homogenous sample of elite athletes, the combination of the small sample size (N=8) and the strict set of criteria restricts the generalizability of our findings to a wider population. Future research should expand this sample to include female athletes from a variety of contexts, such as athletes who have not experienced success on the Paralympic or Para Pan American podium, female athletes competing in sports where the dress code differs (i.e., swimming compared to sledge hockey), or female athletes coached by both male and female coaches simultaneously. These avenues of research will expand our understanding of coaching female athletes with a disability and ultimately gain further insight on coaching behaviours and athlete outcomes in disability sport. Additionally, the current study focused solely on athlete perspectives, therefore it would be useful to study coach-athlete dyads to gain insight on differing perspectives and provide a more comprehensive understanding of their experiences. For example, while a successful athlete may perceive their coaches' behaviour to be overly controlling, the coach may associate their athletes' success with his/her authoritarian styles of coaching. Finally, the aim of the current study was to explore the perceptions and experiences of athletes competing in an individual or co-acting sport, therefore it would be interesting to expand this sample to include athletes in team sports, as research has revealed differences in the nature and quality of the coach-athlete relationship in team versus individual sports (Rhind, Jowett, & Yang, 2012).

The current study explored the coaching preferences of female Paralympic athletes through the use of retrospective interviews. This may have impacted the data in that some athletes who were retired from sport for five to ten years experienced difficulty recalling specific

experiences or examples with their coaches. Future research is encouraged to implement studies where information is gathered through reflexive journals at the time of the events (i.e., after practices, competitions, and Paralympic Games), or to conduct interviews at multiple points over time. Furthermore, research has suggested that people often underreport negative experiences (Jowett & Cockerill, 2003), therefore athletes who experienced negative coaching encounters may be less likely to discuss them due to feelings of discomfort, embarrassment, fear that their identities will be revealed, and fear of losing their spot on the national team (Kirby, Demers, & Parent, 2008). As a result, the prevalence of negative coaching behaviours in the current study should be interpreted with caution. There is a need for future researchers to ensure a safe and comfortable environment is created for participants discussing negative or uncomfortable experiences and for respect to be provided when interpreting and publishing results (i.e., participant identities remain confidential).

In conclusion, this is among the first study to explore female Paralympic athlete preferences of the practices of their coaches. The current study expanded our understanding of the coach-athlete relationship in the Paralympic context, particularly related to the male-coach female-athlete dynamic, and while the current study expands coaching literature in elite disability sport, much remains to be explored concerning ideal coaching preferences for Paralympic athletes. Despite the low prevalence of female Paralympians in sport, future research is encouraged to continue studying female athletes with a disability as research can help empower young women to attain the physical, psychological, and social benefits of participating in sport and encourage women to become future coaches, administrators, and leaders in Paralympic sport.

References

Adams, R. E., Laursen, B., & Wilder, D. (2001). Characteristics of closeness in adolescent romantic relationships. *Journal of Adolescence, 24*, 353-363. doi: 10.1006/jado.2000.0402

Agitos Foundation. (2014). *Agitos foundation launches WoMentoring.* Retrieved from https://www.paralympic.org/news/agitos-foundation-launches-womentoring

Ammons, D. K. (2008). *Deaf sports and Deaflympics*. Retrieved from https://www.jfd.or.jp/deaflympics/resources/presrep-e.pdf

Arbour, K. P., Latimer, A. E., Martin Ginis, K. A., & Jung, M. E. (2007). Moving beyond the stigma: The impression formation benefits of exercise for individuals with a physical disability. *Adapted Physical Activity Quarterly, 24*, 144-159. doi:10.1123/apaq.24.2.144

Bailey, S. (2008). *Athlete first: A history of the Paralympic movement* (pp. 7-8). Chichester, England: John Wiley.

Banack, H. R., Sabiston, C. M., & Bloom, G. A. (2011). Coach autonomy support, basic need satisfaction, and intrinsic motivation of Paralympic athletes. *Research Quarterly for Exercise and Sport, 82*, 722-730. doi:10.1080/02701367.2011.10599809

Becker, A. (2009). It's not what they do, it's how they do it: Athlete experiences of great coaching. *International Journal of Sports Science and Coaching, 4*, 93-119. doi: 10.1260/1747-9541.4.1.93

Berndt, T. J. (2002). Friendship quality and social development. *Current Directions in Psychological Science, 11*, 7-10. doi: 10.1111/1467-8721.00157

Bloom, G. A., Durant-Bush, N., Schinke, R. J., & Salmela, J. H. (1998). The importance of mentoring in the development of coaches and athletes. *International Journal of Sport Psychology, 29*, 267–281.

Bloom, G. A., Falcão, W. R., & Caron, J. G. (2014). Coaching high performance athletes: Implications for coach training. In A. R. Gomes, R. Resende, & A. Albuquerque (Eds.), *Positive human functioning from a multidimensional perspective* (pp. 107-131). New York: Nova Science.

Boardley, I. D., Kavussanu, M., & Ring, C. (2008). Athletes' perceptions of coaching effectiveness and athlete-related outcomes in rugby union: An investigation based on the coaching efficacy model. *The Sport Psychologist, 22*, 269-287. doi:10.1123/tsp.22.3.269

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners.* Thousand Oaks, CA: Sage.

Braun, V., Clarke, V., & Weate, P. (2016). Using thematic analysis in sport and exercise research. In B. Smith & A. Sparkes (Eds.), *Routledge handbook of qualitative research in sport and exercise* (pp. 191-205). Oxon: Routledge.

Burkett, B. (2013). Coaching athletes with a disability. In P. Potrac, W. Gilbert, & J. Denison (Eds.), *Routledge handbook of sports coaching* (pp. 196-209). New York: Routledge.

Canadian Association for the Advancement of Women and Sport and Physical Activity (2013). *Female coach mentorship.* Retrieved from http://www.caaws.ca/programs/female-coach-mentorship-module/

Canadian Paralympic Committee. (2013a). *About us.* Retrieved from http://paralympic.ca/about-us

Canadian Paralympic Committee. (2013b). *Canada's Paralympic history*. Retrieved from http://paralympic.ca/canada's-paralympic-history

Canadian Paralympic Committee. (2013c). *Our history.* Retrieved from http://paralympic.ca/our-history

Canadian Paralympic Committee. (2013d). *Rio 2016*. Retrieved from http://paralympic.ca/rio2016

Canadian Paralympic Committee. (2013e). *Robert Steadward, builder*. Retrieved from http://paralympic.ca/canadian-paralympic-hall-fame/inductees/robert-steadward-builder

Canadian Paralympic Committee. (2013f). *The Canadian Paralympic committee welcomes para-canoe and para-triathlon onto the Rio 2016 Paralympic summer games programme.* Retrieved from http://paralympic.ca/news-and-events/press-releases/canadian-paralympic-committee-welcomes-para-canoe-and-para-triathlon

Carlon, S. L., Taylor, N. F., Dodd, K. J., & Shields, N. (2013). Differences in habitual physical activity levels of young people with cerebral palsy and their typically developing peers: A systematic review. *Disability and Rehabilitation, 35*, 647-655. doi:10.3109/09638288.2012.715721

Caron, J. G., Bloom, G. A., Loughead, T. M., & Hoffmann, M. (2016). Paralympic athlete leaders' perceptions of leadership and cohesion. *Journal of Sport Behavior, 39*, 219-238.

Cheon, S. H., Reeve, J., Lee, J., & Lee, Y. (2015). Giving and receiving autonomy support in a high-stakes sport context: A field-based experiment during the 2012 London Paralympic Games. *Psychology of Sport and Exercise, 19*, 59-69. doi:10.1016/j.psychsport.2015.02.007

Chua, R. Y. J. (2012). Building effective business relationships in china. *MIT Sloan Management Review, 53*, 1-7.

Coaching Association of Canada. (2013). *Where are the female coaches?* Retrieved from http://www.coach.ca/files/CJWC_FEB2013_EN.pdf

Coaching Association of Canada. (2016). *Get coaching!* Retrieved from http://coach.ca/get-coaching--s16572

Coaching Association of Canada. (2017a). *Coaching athletes with a disability.* Retrieved from http://www.coach.ca/files/Coaching_Athletes_Disability_update2016.pdf

Coaching Association of Canada. (2017b). *Responsible coaching movement.* Retrieved from http://www.coach.ca/for-coaches-who-work-with-children-in-sport-p160718

Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science and Coaching, 4*, 307-323. doi:10.1260/174795409789623892

Côté, J., & Sedgwick, W. (2003). Effective behaviors of expert rowing coaches: A qualitative investigation of Canadian athletes and coaches. *International Sports Journal, 7*, 62-77.

Cregan, K., Bloom, G. A., & Reid, G. (2007). Career evolution and knowledge of elite coaches of swimmers with a physical disability. *Research Quarterly for Exercise and Sport, 78*, 339-350. doi:10.1080/02701367.2007.10599431

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks, CA: Sage.

Crocker, P. R. E. (2011). *Sport and exercise psychology: A Canadian perspective*. Toronto, ON: Pearson.

Daly, K. J. (2007). *Qualitative methods for family studies and human development*. Thousand Oaks, CA: Sage.

DePauw, K. P., & Gavron, S. J. (2005). *Disability sport* (2nd ed.). Champaign, Il: Human Kinetics.

Dieffenbach, K. D., & Statler, T. A. (2012). More similar than different: The psychological environment of Paralympic sport. *Journal of Sport Psychology in Action, 3*, 109-118. doi:10.1080/21520704.2012.683322

Disability Sports Coach. (2017). *Adapted Sports Course*. Retrieved from http://disabilitysportscoach.co.uk/training-workshops/adapted-sports-course/

Duarte, T., & Culver, D. M. (2014). Becoming a coach in developmental adaptive sailing: A lifelong learning perspective. *Journal of Applied Sport Psychology, 26*, 441-456. doi:10.1080/10413200.2014.920935

Fairhurst, K., Bloom, G. A., & Harvey, W. J. (2017). The learning and mentoring experiences of Paralympic coaches. *Disability and Health Journal, 10*, 240-246. doi:10.1016/j.dhjo.2016.10.007

Falcão, W. R., Bloom, G. A. & Loughead, T. M. (2015). Coaches' perceptions of team cohesion in Paralympic sports. *Adapted Physical Activity Quarterly, 32*, 206-222. doi:10.1123/APAQ.2014-0122

Fasting, K., & Pfister, G. (2000). Female and male coaches in the eyes of female elite soccer players. *European Physical Education Review, 6*, 91-110.

Ferrari, G., Bloom, G.A., Gilbert, W.D., & Caron, J.G. (in press). Experiences of competitive masters swimmers: Desired coaching characteristics and perceived benefits. *International Journal of Sport and Exercise Psychology,* 1-14. doi:10.1080/1612197X.2015.1114504

Fraser-Thomas, J., & Côté, J. (2009). Understanding adolescents' positive and negative developmental experiences in sport. *The Sport Psychologist, 23*, 3-23. doi:10.1123/tsp.23.1.3

Gilbert, W., & Côté, J. (2013). Defining coaching effectiveness: A focus on coaches' knowledge. In P. Potrac, W. Gilbert, & J. Denison (Eds.), *Routledge handbook of sports coaching* (pp. 147-159). New York, NY: Routledge.

Gilbert, W. D., & Trudel, P. (2001). Learning to coach through experiences: Reflection in model youth sport coaches. *Journal of Teaching in Physical Education, 21*, 16-34. doi:10.1123/jtpe.21.1.16

Gold, J. R., & Gold, M. M. (2007). Access for all: The rise of the Paralympic Games. *The Journal of the Royal Society for the Promotion of Health, 127*, 133-141. doi:10.1177/1466424007077348

Goodwin, D. (2016). Youth sport and dis/ability. In K. Green, & A. Smith (Eds.), *Routledge handbook of youth sport* (pp. 308-320). New York: Routledge.

Goodwin, D. L., & Compton, S. G. (2004). Physical activity experiences of women aging with disabilities. *Adapted Physical Activity Quarterly, 21*, 122-138. doi:10.1123/apaq.21.2.122

Goodwin, D., Johnston, K., Gustafson, P., Elliott, M., Thurmeier, R., & Kuttai, H. (2009). It's okay to be a quad: Wheelchair rugby players' sense of community. *Adapted Physical Activity Quarterly, 26*, 102-117. doi: 10.1123/apaq.26.2.102

Goodwin, D. L., Krohn, J., & Kuhnle, A. (2004). Beyond the wheelchair: The experience of dance. *Adapted Physical Activity Quarterly, 21*, 229–247. doi:10.1123/apaq.21.3.229

Gould, D., Guinan, D., Greenleaf, C., & Chung, Y. (2002). A survey of U.S. Olympic coaches: variables perceived to have influenced athlete performances and coach effectiveness. *The Sport Psychologist, 16*, 229-250. doi: 10.1123/tsp.16.3.229

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks, CA: Sage.

Hanrahan, S. J. (2007). Athletes with disabilities. In G. Tenenbaum & R. E. Eklund (Eds.), *Handbook of sport psychology* (3rd ed., pp. 845–858). Hoboken, NJ: John Wiley.

Heron, N., Kee, F., Cupples, M. E., & Tully, M. A. (2015). Correlates of sport participation in adults with long-standing illness or disability. *British Journal of Sports Medicine, 1*, 1-9. doi:10.1136/bmjsem-2015-000003

International Paralympic Committee. (2008). *Chapter 4.2: Position statement on sexual harassment and abuse in sport.* Retrieved from https://www.paralympic.org/sites/default/files/document/141113170402987_2014_10_13+Sec+ii+chapter+4_2_Position+Statement+on+Sexual+Harassment.pdf

International Paralympic Committee. (2010). *IPC women in sport leadership toolkit: Increasing opportunities for women in Paralympic sport.* Retrieved from https://www.paralympic.org/sites/default/files/document/130130154714620_2010_10_01%2B%2BIPC%2BWomen%2Bin%2BSport%2BLeadership%2BToolkit.pdf

International Paralympic Committee. (2014a). *Official website of the Paralympic movement*. Retrieved from http://www.paralympic.org/rome-1960

International Paralympic Committee. (2014b). *Paralympic Games*. Retrieved from http://www.paralympic.org/the-ipc/history-of-the-movement

International Paralympic Committee. (2014c). *Pyeongchang 2018*. Retrieved from http://www.paralympic.org/pyeongchang-2018/about-us

International Paralympic Committee. (2014d) *Sochi 2014 Paralympic Games*. Retrieved from http://www.paralympic.org/sochi-2014

International Paralympic Committee. (2014e). *Sports*. Retrieved from http://www.paralympic.org/sports/winter

International Paralympic Committee. (2014f). *Swimming classification.* Retrieved from https://www.paralympic.org/swimming/classification

International Paralympic Committee. (2014g). *The IPC: Who we are*. Retrieved from http://www.paralympic.org/the-ipc/about-us

International Paralympic Committee. (2016). *Prevention of harassment and abuse in Paralympic sport*. Retrieved from https://www.paralympic.org/sites/default/files/document/161013094825484_Slides11_Tuakli.pdf

Jowett, S. (2003). When the "honeymoon" is over: A case study of a coach-athlete dyad in crisis. *The Sport Psychologist, 17*, 444-460. doi: 10.1123/tsp.17.4.444

Jowett, S. (2007). Interdependence analysis and the 3+1Cs in the coach-athlete relationship. In S. Jowett & D. Lavallee (Eds.), *Social psychology in sport* (pp. 15-27). Champaign, IL: Human Kinetics.

Jowett, S., & Carpenter, P. (2015). The concept of rules in the coach-athlete relationship. *Sport Coaching Review, 4*, 1-23. doi:10.1080/21640629.2015.1106145

Jowett, S., & Cockerill, I. M. (2003). Olympic medalists' perspective of the athlete–coach relationship. *Psychology of Sport and Exercise, 4*, 313–331. doi:10.1016/S1469-0292(02)00011-0

Jowett, S., & Clark-Carter, D. (2006). Perceptions of empathic accuracy and assumed similarity in the coach-athlete relationship. *British Journal of Social Psychology, 45*, 617-637. doi:10.1348/014466605X58609

Jowett, S., Kanakoglou, K., & Passmore, J. (2012). The application of the 3+ 1Cs relationship model in executive coaching. *Consulting Psychology Journal: Practice and Research, 64*, 183.

Jowett, S., & Meek, G. A. (2000). The coach-athlete relationship in married couples: An exploratory content analysis. *The Sport Psychologist, 14*, 157-175. doi:10.1123/tsp.14.2.157

Jowett, S., & Nezlek, J. (2011). Relationship interdependence and satisfaction with important outcomes in coach-athlete dyads. *Journal of Social and Personal Relationships, 29*, 287-301. doi:10.1177/0265407511420980

Jowett, S., & Ntoumanis, N. (2004). The coach-athlete relationship questionnaire (CART-Q): Development and initial validation. *Scandinavian Journal of Medicine and Science in Sports, 14*, 245-257. doi:10.1111/j.1600-0838.2003.00338.x

Jowett, S., & Poczwardowski, A. (2007). Understanding the coach-athlete relationship. In S. Jowett & D. Lavallee (Eds.), *Social psychology in sport* (pp. 15-27). Champaign, IL: Human Kinetics.

Jowett, S., & Timson-Katchis, M. (2005). Social networks in sport: Parental influence on the coach-athlete relationship. *The Sport Psychologist, 19*, 267-287. doi:10.1123/tsp.19.3.267

Kavussanu, M., Boardley, I. D., Jutkiewicz, N., Vincent, S., & Ring, C. (2008). Coaching efficacy and coaching effectiveness: Examining their predictors and comparing coaches' and athletes' reports. *The Sport Psychologist, 22*, 383-404.

Kawanishi, C. Y., & Greguol, M. (2013). Physical activity, quality of life, and functional autonomy of adults with spinal cord injuries. *Adapted Physical Activity Quarterly, 30*, 317-337. doi:10.1123/tsp.22.4.383

Kirby, S. L., Demers, G., & Parent, S. (2008). Vulnerability/prevention: Considering the needs of disabled and gay athletes in the context of sexual harassment and abuse. *International Journal of Sport and Exercise Psychology, 6*, 407-426. doi:10.1080/1612197X.2008.9671882

Lafrenière, M. K., Jowett, S., Vallerand, R. J., & Carbonneau, N. (2011). Passion for coaching and the quality of the coach-athlete relationship: The mediating role of coaching behaviors. *Psychology of Sport and Exercise. 12*, 144-152. doi: 10.1016/j.psychsport.2010.08.002

Legg, D., & Steadward, R. (2011). The Paralympic Games and 60 years of change (1948-2008): Unification and restructuring from a disability and medical model to sport-based competition. *Sport in Society: Cultures, Commerce, Media, Politics, 14*, 1099-1115. doi:10.1080/17430437.2011.614767

Li, B., Dittmore, S. W., & Park, J. (2015). Exploring different perceptions of coach-athlete relationship: The case of Chinese Olympians. *International Journal of Coaching Science, 9*, 59-76.

Mallett, C. J., Trudel, P., Lyle, J., & Rynne, S. B. (2009). Formal vs. informal coach education. *International Journal of Sports Science and Coaching, 4*, 325-364. doi:10.1260/174795409789623883

Martens, R. (1987). Science, knowledge, and sport psychology. *The Sport Psychologist, 1*, 29-55.

Martin, J. J., & Whalen, L. (2014). Effective practices of coaching disability sport. *European Journal of Adapted Physical Activity, 7*, 13-23.

Maxwell, J. A. (2013). *Qualitative research design: An interactive approach.* Thousand Oaks, CA: Sage.

McMaster, S., Culver, D., & Werthner, P. (2012). Coaches of athletes with a physical disability: A look at their learning experiences. *Qualitative Research in Sport, Exercise and Health, 4*, 226-243. doi:10.1080/2159676X.2012.686060

Motl, R. W., & McAuley, E. (2014). Physical activity and health-related quality of life over time in adults with multiple sclerosis. *Rehabilitation Psychology, 59*, 415-421. doi:10.1037/a0037739

Morales, D.D., Bloom, G.A., & Caron, J.G. (2017). Canadian University coaches' perceptions on the importance of effective planning and communication skills. *CienciAmérica, 6*, 1-6.

Murphy, N. A., & Carbone, P. S. (2008). Promoting the participation of children with disabilities in sports, recreations, and physical activities. *Pediatrics: Official Journal of the American Academy of Pediatrics, 121*, 1057-1061. doi:10.1542/peds.2008-0566

Nelson, L., Cushion, C., & Potrac, P. (2009). Formal, nonformal and informal coach learning: A holistic conceptualization. *International Journal of Sports Science and Coaching, 1*, 247-259. doi:10.1260/174795406778604627

Philippe, R. A., & Seiler, R. (2006). Closeness, co-orientation and complementarity in coach-athlete relationships: What male swimmers say about their male coaches. *Psychology of Sport and Exercise, 7*, 159-171. doi:10.1016/j.psychsport.2005.08.004

Pianta, R. C., Steinberg, M. S., & Rollins, K. B. (1995). The first two years of school: Teacher-child relationships and deflections in children's classroom adjustment. *Development and Psychopathology, 7*, 295-312. doi: 10.1017/S0954579400006519

Rawlins, W. K., & Holl, M. (1987). The communicative achievement of friendship during adolescence: Predicaments of trust and violation. *The Western Journal of Speech Communication, 51*, 345-363. doi: 10.1080/10570318709374278

Rhind, D. J. A., Jowett, S., & Yang, S. X. (2012). A comparison of athletes' perceptions of the coach-athlete relationship in team and individual sports. *Journal of Sport Behavior, 35*, 433-452.

Rick Hansen Foundation. (2017). *Disability in Canada and around the world*. Retrieved from https://www.rickhansen.com/About-Us/About-the-Foundation/Disability-In-Canada-and-Around-the-World

Rimmer, J. H., Riley, B., Wang, E., Rauworth, A., Jurkowski, J. (2004). Physical activity participation among persons with disabilities: Barriers and facilitators. *American Journal of Preventive Medicine, 26*, 419-425. doi:10.1016/j.amepre.2004.02.002

Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage.

Sands, R. T., & Wettenhall, R. S. (2000). Female wheelchair athletes and changes to body image. *International Journal of Disability, Development and Education, 47*, 413-426. doi: 10.1080/713671149

Simpson, J. A. (1990). Influence of attachment styles of romantic relationships. *Journal of Personality and Social Psychology, 59*, 971-980. doi: 10.1037/0022-3514.59.5.971

Smith, B., Caddick, N., & Williams, T. (2015). Qualitative methods and conceptual advances in sport psychology. In S. D. Mellalieu & S. Hanton (Eds.), *Contemporary advances in sport psychology* (pp. 202). New York: Routledge.

Smith, B., & McGannon, K. R. (2017). Developing rigor in qualitative research: Problems and opportunities within sport and exercise psychology. *International Review of Sport and Exercise Psychology.* Advanced Online Publication. 1-21. doi:10.1080/1750984X.2017.1317357

Smith, B., & Sparkes, A., (2016). Interviews. In B. Smith & A. Sparkes (Eds), *Routledge handbook of qualitative research in sport and exercise* (103-123). Oxon: Routledge.

Smith, B., Sparkes, A., & Caddick, N. (2014). Judging qualitative research. In L. Nelson, R. Groom, & P. Potrac (Eds.), *Research methods in sports coaching* (pp. 192-201). New York: Routledge.

Sparkes, A. C., & Smith, B. (2009). Judging the quality of qualitative inquiry: Criteriology and relativism in action. *Psychology of Sport and Exercise, 10*, 491-497. doi:10.1080/19398440902908928

Sparkes, A. C., & Smith, B. (2014). *Qualitative research methods in sport, exercise and health: From process to product.* New York: Routledge.

Sport England. (2014). *Active People Survey.* Retrieved from https://www.sportengland.org/media/3783/1x30_overall_factsheet_aps9v2.pdf

Sport for Life. (n.d.). *No accidental champions: LTAD for athletes with a disability (2nd edition).* Retrieved from http://canadiansportforlife.ca/resources/no-accidental-champions-ltad-athletes-disability-2nd-edition

Sports Coach UK. (n.d.). *Coaching women: Coaching female high-performance athletes.* Retrieved from https://www.sportscoachuk.org/sites/default/files/Coaching%20Female%20High-Performance%20Athletes%20(FINAL)_0.pdf

Stake, R. E. (2000). Case studies. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed.). Thousand Oaks, CA: Sage.

Statistics Canada. (2014). *Findings.* Retrieved from http://www.statcan.gc.ca/pub/82-003-x/2006008/article/phys/10307-eng.htm

Stephens, C., Neil, R., & Smith, P. (2012). The perceived benefits and barriers of sport in spinal cord injured individuals: A qualitative study. *Disability and Rehabilitation, 34*, 2061-2070. doi:10.3109/09638288.2012.669020

Stirling, A. E., & Kerr, G. A. (2009). Abused athletes' perceptions of the coach-athlete relationship. *Sport in Society, 12*, 227-239. doi:10.1080/17430430802591019

Stride, A., Fitzgerald, H., & May, E. (2016). Coaching disabled footballer: A study of the coach journey. In W. Allison, A. Abraham, & A. Cale (Eds.), *Advances in coach education and Development: From research to practice* (p. 124-136). New York: Routledge.

Tawse, H., Bloom, G. A., Sabiston, C. M., & Reid, G. (2012). The role of coaches of wheelchair rugby in the development of athletes with a spinal cord injury. *Qualitative Research in Sport, Exercise and Health, 4*, 206-225. doi:10.1080/2159676X.2012.685104

Taylor, S. J., Bogdan, R., & DeVault, M. (2016). *Introduction to qualitative research methods: A guidebook and resource.* Hoboken, NJ: John Wiley.

Taylor, S. L., Werthner, P., & Culver, D. (2014). A case study of a parasport coach and a life of learning. *International Sport Coaching Journal, 1*, 127-138. doi:10.1123/iscj.2013-0005

Taylor, S., Werthner, P., Culver, D., & Callary, B. (2015). The importance of reflection for coaches in parasport. *Reflexive Practice, 16*, 269-284. doi:10.1080/14623943.2015.1023274

The Guardian. (2012). *London 2012 Paralympics: Every team in numbers.* Retrieved from http://www.theguardian.com/news/datablog/2012/aug/30/paralympic-teams-athlete-numbers-gender-data

The Steadward Centre for Personal and Physical Achievement. (2016). *About us.* Retrieved from http://www.steadwardcentre.ualberta.ca/AboutUs.aspx

Tomlinson, A., & Yorganci, I. (1997). Male coach/female athlete relations: Gender and power relations in competitive sport. *Journal of Sport and Social Issues, 21*, 134-155.

Tufford, L., & Newman, P. (2010). Bracketing in qualitative research. *Qualitative Social Work, 11*, 80-96. doi:10.1177/1473325010368316

Ulaga, W., & Eggert, A. (2004). Relationship value and relationship quality: Broadening the nomological network of business-to-business relationships. *European Journal of Marketing, 40*, 311-327.

University of Alberta. (2017). *Grand opening of The Steadward Centre: Bridging research, academia and community engagement.* Retrieved from https://www.ualberta.ca/physical-education-recreation/news/2016/october/grand-opening-of-the-steadward-centre-bridging-research-academia-and-community-engagement

Vallée, C. N., Bloom, G. A. (2005). Building a successful university program: Key and common elements of expert coaches. *Journal of Applied Sport Psychology, 17*, 179-196. doi:10.1080/10413200591010021

Wachsmuth, S., Jowett, S., & Harwood, C. G. (2017). Conflict among athletes and their coaches: what is the theory and research so far? *International Review of Sport and Exercise Psychology, 10*, 84-107. doi: 10.1080/1750984X.2016.1184698

Wentzel, K. R. (2003). Motivating students to behave in socially competent ways. *Theory into Practice, 42*, 319-326. doi: 10.1207/s15430421tip4204_9

World Health Organization. (2003). *Health and development through physical activity and sport.* Retrieved from http://apps.who.int/iris/bitstream/10665/67796/1/WHO_NMH_NPH_PAH_03.2.pdf

World Health Organization. (2016). *Disability and health.* Retrieved from http://www.who.int/mediacentre/factsheets/fs352/en/

Appendix A
Recruitment Script

Dear _____,

My name is Danielle Alexander and I am currently working towards a Master of Arts degree in sport psychology at McGill University under the supervision of Dr. Gordon Bloom. We would like to invite you to participate in our study examining effective coaching practices in Paralympic sport. We are contacting you based on a set of criteria highlighting your success and achievement in Paralympic sport.

If you choose to participate in this study, you will be asked to partake in one face-to-face interview that would last approximately one hour in a location of your choice. If more information is required, a follow up interview may occur. The questions would revolve around your experiences with your coach. All of the information provided will be confidential and the responses will only be analyzed by myself, my supervisor Dr. Gordon Bloom, and the research team. The interpretations and results will be sent back to you after the interview to ensure for accuracy and to allow you the opportunity to clarify any of your answers.

The study has been reviewed by the McGill University Ethics Board (REB # _____). If you have any questions or concerns regarding ethics, please feel free to contact deanna.collin@mcgill.ca or by phone at 514-398-2267. If you have any questions regarding the nature of the study itself, feel free to contact myself or my supervisor using the information at the bottom of the page. Finally, if you are interested in learning more about the research conducted in our Sport Psychology Lab at McGill University, please visit our website for more information: http://sportpsych.mcgill.ca/gpsp.html.

Thank you for considering to take part in our study. I look forward to hearing from you soon!

Sincerely,

Danielle Alexander

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Appendix B
Informed Consent Form

This study is in partial fulfillment of the requirements for the degree of Master of Arts for Danielle Alexander, a current graduate student in sport psychology in the Department of Kinesiology and Physical Education at McGill University. You are invited to participate in the research study entitled: "Female Paralympic athlete preferences of effective coaching practices". If you choose to participate in this study, you will be asked to partake in one 60 minute, audio recorded interview, without compensation. If more information is required, an additional follow-up interview may be requested either in person, over the telephone, or virtually over Skype. During the interview you will be asked questions regarding current and ideal coaching behaviours and strategies with your coach.

At the end of the interview, you will have the opportunity to ask any questions or make any additional comments that were not discussed throughout the interview. You will receive a typed transcript of the interview, where you may edit it at your own discretion. You will also receive a copy of the results and conclusions of the study prior to publication. Your identity will **remain confidential at all times** and the primary researcher, Danielle Alexander, and the faculty supervisor, Dr. Gordon Bloom, will be the only individuals with access to a copy of the responses. All of the data, including the audio recorded copy of the interview and the consent form will be stored in an encrypted folder on a password-protected computer for seven years. Any paper copies of notes will be converted into digital files and destroyed at the end of the study. The information gathered from the study will be used solely for conference presentations and journal article publications and your confidentiality will be maintained and respected throughout the entirety of the process. **Your participation in this study is voluntary and not mandatory, therefore you have the ability to refuse to answer any questions without penalty and if you choose to withdraw from the study, all information attained up until that point will be destroyed.**

After reading the above statements you can now provide consent to voluntarily agree to participate in this research study based on the terms outlined in this consent form. You will be provided with a signed copy of this consent form. If you have any addition questions regarding ethical considerations including your rights and welfare as a participant in a research study, please feel free to contact deanna.collin@mcgill.ca or at 514-398-2267. Please sign below if you agree to participate:

_____ _____
Signature Date

_____ _____
Researcher's Signature Date

I agree **(CHECK YES □ OR NO □)** to the audio recording of the interviews with the understanding that these recordings will be used solely for the purpose of transcribing these sessions.

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Appendix C
Semi-Structured Interview Guide

Opening Questions (brief answers)

1. Please describe your athletic career up to your current Paralympic status.

2. Please provide an overview of your disability.
    a. *How do you discuss your disability with your coach?*
    b. *Classification?*

3. Please describe your history with your current coach, including the length of time together, as well as an example of a memorable moment(s) you have had with him/her.

Key Questions

4. What strategies or behaviours does your coach employ that you consider valuable or effective?
    a. *Please provide an example(s) of when your coach implemented these strategies or behaviours?*
    b. *In practice? In off-season? In competition?*

5. Are there any strategies or behaviours that your coach uses that you do **not** find valuable or effective? If so, please explain.

6. Are there any strategies or behaviours that your coach does **not** use that you wish he/she did? If so, please explain.

7. Please explain the importance of goal setting in your career.
    a. *How is your coach involved in the process?*
    b. *How do you and your coach typically agree on goals and objectives?*

8. How does your relationship with your coach play a role in your athletic career and personal life?

9. Tell me about the value of a personal/social component in your relationship with your coach
    a. *Please provide an example(s) of how the relationship with your coach involves a personal component.*

Concluding Questions

10. Is there anything you would like to add that we have not discussed today?

11. Do you have any comments or questions?

* Please feel free to contact me following this interview if you would like to add any information from what we have discussed today