# University of Alberta

Reflections on Youth Sport Experiences by Individuals with Attention Deficit/Hyperactivity Disorder

by

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## Abstract

The purpose of this study was to explore the youth sport experiences of individuals with attention deficit/hyperactivity disorder (AD/HD). Six males (age range = 17 – 26 years) with a self-reported diagnosis of AD/HD who had played three or more seasons of team sport(s) in their youth were purposefully sampled. Participants each completed two semi-structured interviews. Data analysis using Interpretive Phenomenological Analysis (Smith, Flowers, & Larkin, 2009) revealed that sport could be enjoyable and beneficial for participants. However, AD/HD symptoms negatively influenced their performance and relationships with coaches and teammates. Having supportive coaches and ways to cope with their AD/HD symptoms helped to mitigate the negative influence of AD/HD in their sport experiences. Practical applications arising from these findings include increasing coaches' and athletes' understanding of how to manage AD/HD, and provision of constructive feedback and supportive behaviours to these athletes.

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# Chapter 1: Introduction

Approximately 55% of Canadian children (aged 5-12 years) and adolescents (aged 12-18 years) participate in organized sport (Clark, 2008), making it the most popular extracurricular activity in Canada. In addition to physical activity benefits, sport participation has been linked to psychosocial benefits such as the development of initiative, emotional regulation, and teamwork skills (Larson, Hansen, & Moneta, 2006). Given the potential benefits of sport, one of the primary goals of the Canadian Sport Policy (Canadian Heritage, 2012) is that "Sport programs are accessible and equitable and reflect the full breadth of interests, motivations, objectives, abilities, and the diversity of Canadian society" (p. 2). One such 'diversity' of society is individuals with attention deficit/hyperactivity disorder (AD/HD). Despite the potential to reduce symptoms and secondary harm of AD/HD through physical activity and sport participation (Gapin, Labban, & Etnier, 2011; Kiluk, Weden, & Culotta, 2009), individuals with AD/HD may face challenges that undermine their sport experiences. The current study responds to calls for more research with individuals with AD/HD to enable them to "express their own feelings and perceptions about their movement and sport behaviors" (Harvey & Reid, 2005, p. 15).

AD/HD affects approximately 5.8% to 8.9% of children and adolescents in Canada (Faraone, Sergeant, Gillberg, & Biederman, 2003). A review estimates that this condition is more prevalent in boys than girls by a ratio of 2:1 to 9:1, with boys more represented in clinically referred samples, more likely to be rated

as hyperactive, and girls more likely to be rated as inattentive than boys (Rucklidge, 2010). According to the fourth edition of the Diagnostic and Statistical Manual of Mental disorders (DSM-IV), AD/HD is a behaviour disorder characterized by a "persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently displayed and more severe than is typically observed in individuals at a comparable level of development" (American Psychiatric Association [APA], 2000, p. 85). Symptoms include difficulty staying focused and paying attention, difficulty controlling behaviour, and overactivity (APA, 2000). Symptoms may persist into adolescence and even adulthood for 80% of children diagnosed (Faraone et al., 2003). The DSM-IV identifies three subtypes of AD/HD: 1) predominantly hyperactive-impulsive, 2) predominantly inattentive, and 3) combined hyperactive-impulsive and inattentive. In the first and second subtype, the majority of symptoms (six or more) are in the category that the subtype is named under, although symptoms from the non-dominant category may still be present to a certain degree (fewer than six). The third subtype is characterized by the presence of six or more symptoms from both the hyperactive-impulsive and inattentive categories. Furthermore, an estimated 65% of children with AD/HD may have one or more comorbid condition in the form of conduct disorders, mood disorder, bipolar disorder, learning disorders, and oppositional defiant disorder (Goldman, Genel, Bezman, & Slanetz, 1998).

Youth (the 'umbrella' term used in the current study to refer to children and adolescents) with AD/HD may face problems in many contexts such as school, home, friendship, and physical activity settings as a result of the AD/HD

symptoms they experience (Harvey et al., 2009; Shattell, Bartlett, & Rowe, 2008). Further there is consensus among AD/HD researchers that individuals with AD/HD are more at risk than individuals without AD/HD for school dropout, not complete colleague, have few friends, underperform at work, engage in antisocial activities, use tobacco or illicit drugs more than normal, experience teen pregnancy and sexually transmitted diseases, speed excessively and have multiple car accidents, experience depression and personality disorders (Barkley et al., 2002

Currently available interventions focus on management of AD/HD symptoms and reduction of secondary harm as no intervention has been found to cure this disorder (Barkley, 2011). Existing interventions with some proven efficacy for the management of AD/HD include medications, psychosocial treatments (e.g., behavioural parent training, behavioural classroom management, behavioural peer interventions), and a combination of the two approaches (Goldman et al., 1998; Pelham & Fabiano, 2008). In general stimulant medication with methylphenidate or dexamphetamine is the most common treatment option for individuals with AD/HD (Goldman et al., 1998). Goldman et al. reported that common side effects associated with stimulant medication use are insomnia, appetite disturbance, stomachache, headache, and dizziness. A clinical study with 579 children demonstrated a combined approach (i.e., medication plus intensive behavioural treatment) was superior for the management of AD/HD symptoms and the improvement in other functioning domains (i.e., social skills, academics, parent-child relations, oppositional behaviour, anxiety/depression) than

medication or behavioural intervention alone (Jensen et al., 2001). Barkley (2011) argued that a combination of the two approaches is optimal as it may result in the need for less intense behavioural interventions or lower doses of medication than if either intervention were used alone.

There is evidence to suggest that physical activity can improve the cognitive performance and reduce the AD/HD behavioural symptoms of individuals with AD/HD (Gapin et al., 2011). For example, participation in physical activity has been associated with improved executive functions (Gapin & Etnier, 2010), reduced impulsive and inattentive symptoms (Medina et al., 2010), and more positive behavioural scores as reported by parents and teachers (Verret, Guay, Berthiaume, Gardiner, & Béliveau, 2012). Gapin and Etnier (2010) tested the relationship between physical activity and a number of executive functions tasks with eighteen boys (*M* age = 10.61 years) with AD/HD. They found that greater moderate-to-vigorous intensity physical activity was a significant predictor of better planning performance. The specific planning task used in their study (the Tower of London task) requires the participants to copy a modeled pattern of three colour beads in as few moves as possible. Performance in this task is an indication of the ability to plan and choose appropriate responses while inhibiting task irrelevant responses. The researchers suggested that this was an important benefit of physical activity as planning is one of the more consistent executive function impairments for individuals with AD/HD. Also, the inability to inhibit behaviour is a trademark symptom of AD/HD (Barkley, 1997).

Sport may benefit individuals with AD/HD beyond the aforementioned physical activity benefits. In Canada, sport refers to "regulated form of physical activity organized as a contest between two or more participants for the purpose of determining a winner by fair and ethical means" (Sport Canada, 2009). The potential for sport to be beneficial for individuals with AD/HD is supported by child psychiatrists' reports (Conant-Norville, 2005 as cited in Conant-Norville & Tofler, 2005). Conant-Norville surveyed twenty-two child psychiatrists and found that 86% reported that youths with AD/HD either 'always' or 'often' benefited from organized youth sport participation. Although the child psychiatrists offered a positive perspective toward AD/HD and sport participation, the perspectives of the sport participants with AD/HD were not obtained. Further, the survey study did not probe for what those benefits might be.

Kiluk et al. (2009) compared parents' reports of anxiety and depression scores of 65 youth (age range = 6 – 14 years) with AD/HD to their sport participation level. They found that youth with AD/HD who played more than three sports displayed fewer symptoms of anxiety or depression than those who played a fewer number of sports. While this study showed that parents thought there were benefits of sport participation, it was limited by the fact that (a) the actual experiences of youth with AD/HD were not examined and (b) only number of sports played were assessed, rather than the qualities and types of sport experiences that may be important.

Despite the potential benefits of sport participation for individuals with AD/HD some may face challenges that undermine their sport experience. Johnson

and Rosen (2000) compared the sport involvement and behaviour of youth with and without AD/HD. Parents of 26 boys with AD/HD (age range = 6 – 17, *M* age =12.22 years) and 41 boys without AD/HD (age range = 6 – 16) completed the Sports Behavior Checklist (SBC). The SBC assesses the child's involvement in individual and team sports, the length of the involvement, the types of sports that the child participated in, and the frequency of aggression, injury, disqualification, emotional reactivity, rule adherence, and sportsman-like conduct. They found that the parents of boys with AD/HD reported significantly higher scores in aggression, reactivity, and disqualification measures than the parents of boys without AD/HD. These results indicated that sport participants with AD/HD were more likely to experience difficulties in the form of emotional reactivity, aggression, and disqualification across sports settings when compared to their non-AD/HD peers. In terms of length and type of sport involvement, parents reported that the boys with AD/HD were involved with team sports for a significantly shorter period of time than boys without AD/HD. The researchers postulated that participants with AD/HD might be dropping out of team sports due to the increased likelihood of difficulties they may face in team sport settings. However, participants' experiences in sport were not examined because parents' reports were used so it is unclear what difficulties (or benefits) they may have in sport.

In a study which provides a methodological foundation for the current research, Shattell et al. (2008) interviewed 16 college aged young adults (age range = 18-25 years) with a self-reported history of AD/HD about their

experience of AD/HD in the context of home, school, and friendships when they were in their youth. The researchers recruited the participants from an office of disability services at an American university. The sample consisted of three males and thirteen females. The researchers chose young adults because they argued that children might be poor reporters and interpreters of their experiences of AD/HD. During the interviews, the researchers asked participants to tell stories about having AD/HD at home, at school, and when interacting with friends. Analysis revealed that AD/HD symptoms such as distractibility and hyperactivity negatively affected these young adults during their youth. At home, conflicts with parents often stemmed from participants' difficulties in completing tasks or chores. At school, their distractibility hindered their ability to learn and perform as well as their peers. Symptoms also challenged their communications with friends. Interestingly, some findings revealed that AD/HD symptoms affected participants' experiences in sport. For example, one participant recalled "a coach who called him stupid because he could not understand the instructions the first time they were given" (Shattell et al., 2008, p. 53). However, this area was not explored further because it was not the focus of their study. The current study was designed to build on the work of Shattell et al. by adopting a similar research design (i.e., retrospective interviews with college-aged young adults with AD/HD) but specifically focused on their sport experiences.

Thus, gaps exist in the literature in terms of the influence of AD/HD on individuals' youth sport experiences. Indeed, as Conant-Norville and Tofler (2005) suggested "although there is often much speculation on the effect that

AD/HD plays on a child's participation in sporting activities, there is very little published research in this area" (p. 833). Further, another review stated that it is important to enable individuals with AD/HD to "express their own feelings and perceptions about their movement and sport behaviors" (Harvey & Reid, 2005, p. 15). It seems that individuals with AD/HD have been given limited opportunity to speak about their perceptions of their involvement in sport (Harvey et al., 2009).

A study by Harvey et al. (2009) attempted to redress some of the gaps in the literature by examining the physical activity experiences of 12 boys with and without AD/HD (six in each group; age range = 9 – 12 years). The boys were part of a larger clinical investigation at a hospital. As such the researchers were able to use rigorous measures (i.e., diagnosis by child psychiatrist and other diagnostic measures) to select their participants. Initially, the researchers planned to use an open-ended interview approach to collect data. However, they found it difficult to elicit detailed and specific responses from their young participants. Therefore, they changed their interview guide to become more structured and based the questions on the Physical Activity Monitor Questionnaire (PAMQ; Craig, Cameron, Russell, & Beaulieu, 2000). The questions were then reviewed and commented on by three experts in physical education. Finally, they assessed the children's movement skill using the Test of Gross Motor Development-2 (Ulrich, 2000) to obtain descriptive information about skill performance levels.

Using this two-step approach, Harvey et al. (2009) found that most of the boys with AD/HD lagged behind their peers without AD/HD in terms of developmentally appropriate movement performance. The two groups differed in

their physical activity experiences. While both groups of boys reported enjoying physical activities, boys with AD/HD made twice as many statements indicating negative feelings about physical activity than their counterparts. Often times, negative feelings were attributed to personal feelings of being singled out because of their poor skill proficiency. These findings were generally consistent with previous studies that have shown individuals with AD/HD demonstrated less physical competency than their peers without AD/HD (Harvey & Reid, 1997; Pitcher, Piek, & Hay, 2003).

Although the Harvey et al. (2009) study focused broadly on physical activity (rather than more specifically on sport), the findings suggested another potential challenge for youth with AD/HD who participate in sport. Not being able to move and execute sport skills proficiently may result in less peer acceptance in children with AD/HD (Lopez-Williams et al., 2005). As youth with AD/HD have poor peer relations (Bagwell, Molina, Pelham, & Hoza, 2001; Melnick & Hinshaw, 1996**)**, poor sport skills may exacerbate this impact for youth involved in sport. However, information on the impact of AD/HD on their sport experiences remained limited for the following reasons. First, the general focus on physical activity left aspects of sport participation unexplored. Further, even when the participants talked about their sport experiences, the depth and scope of the findings might be compromised by the structured interview approach (Smith, 1995). Finally, the experiences might not be explored in enough detail because the young participants had difficulties expressing specific examples. The current study was designed to address these methodological issues in hope of

revealing more information of the sport experiences of individuals with AD/HD. Understanding their experiences may reveal ways to extend and enhance their sport involvement.

**Purpose Statement**

The overall purpose of this study was to explore the youth sport experiences of individuals with AD/HD. More specifically, the research questions were:

1. What are the recalled youth sport experiences of young adults with AD/HD?
2. What are the positive and negative aspects of participants' youth sport experiences?
3. In what ways did participants' youth sport experiences influence other areas of their lives?

# Chapter 2: Method

## Methodology

Interpretive Phenomenological Analysis (IPA; Smith & Osborn, 2003) was used given the purpose of this study was to explore the sport *experiences* of individuals with AD/HD. IPA is a qualitative methodology designed to examine how individuals make sense of their life experiences (Smith et al., 2009). IPA is particularly "useful when one is concerned with complexity, process, or novelty" (Smith & Osborn, 2003, p. 53). Given that the sport experiences of individuals with AD/HD were explored in this study, IPA was a suitable methodology to guide the investigation because it facilitated a focus on personal experiences within the social world. Using this methodology also fit in with suggestions to employ in-depth qualitative approaches to study the sport experiences of individuals with AD/HD (Harvey & Reid, 2005).

## Philosophical Framework

The interpretive philosophical paradigm is the stance most consistent with IPA (Smith & Osborn, 2003). Adapting this interpretive stance, I approached this study with the internal-idealist ontological view that reality is multiple and exists as the product of individual's cognition (Sparkes, 1992). Epistemologically, I took the subjectivist position and used an idiographic approach to data collection (Sparkes, 1992).

## Researcher as Instrument

In qualitative work the researcher is the 'research instrument' (Sparkes, 1992). More specifically, as IPA involves thorough examination of the

participants' personal and social worlds, it is concerned with understanding the meaning and significance of those events to the participants. The researcher has an active role in interpreting how the participants make sense of their personal and social world. Thus, hermeneutics, or the theory of interpretation, is an important aspect of IPA. Specifically, a double hermeneutic is involved in IPA whereby the participants are trying to make sense of their world. At the same time the researcher is trying to make sense of the participants trying to make sense of their world (Smith & Osborn, 2003).

IPA is therefore necessarily interpretative (Smith et al., 2009). However, interpretation requires, yet is complicated by, one's fore-conception (i.e., prior experiences, assumptions, preconceptions). Fore-conception is always present. In other words, a researcher using IPA must be aware of his/her prior experiences, assumptions, and preconceptions as they may influence the research. In IPA the technique of bracketing (i.e., putting to one side one's assumptions) is recommended. Pre-existing concerns need to take a back seat and the focus is shifted to the participants as they have experiential expertise. Smith et al. (2009) suggested that "By focusing on attending closely to [the] participant's words, [you] are more likely to park or bracket your own pre-existing concerns, hunches and theoretical hobby horses" (p. 64). That said, bracketing the researcher's preconceptions and assumptions is a cyclical process and can only be partially achieved.

I reflected on my fore-conception with individuals with AD/HD in sport in order to help me focus on participants' words during the interviews. By reflecting

on my preconceptions, for example, I recognized them during interviews and paid close attention to the participants' words. At the point of data collection, the most relevant personal assumption I had was the fact that I had prior experience coaching an individual with AD/HD. It was my first time coaching an organized sport (swimming). Prior to the first practice I had learned that the swimmer was on medication for AD/HD from the team's medical information. During practices, my lack of coaching experience showed when I could not effectively engage this particular swimmer's attention. After a week of unsuccessful one-on-one teaching and diminishing patience, I stopped paying as much attention to him and shifted my focus to the rest of the team. This particular swimmer stopped coming to practices and I never heard back from him again. This experience got me wondering how I could have improved his sport experience. In fact, this personal experience was one of the major reasons why I pursued this topic for my thesis.

Through the process of bracketing, I became aware of my preconceptions and used it to help me probe during the interviews. I was attentive to the participants' words and asked probing questions that were based on what the participants said. This might have helped to reveal new dimensions and different nuances of the phenomenon of interest (i.e., their youth sport experiences). Further, I maintained a reflexive journal throughout the research process. I wrote in this journal on a regular basis about my preconceptions, emerging ideas, and how they influenced the research.

**Participant Sampling**

Six participants were purposefully sampled. IPA studies are generally conducted on small sample sizes because of the lengthy detailed idiographic analysis of individual transcripts (Smith & Osborn, 2003). The sample size for this study was consistent with IPA recommendation of "five or six as a reasonable sample size… [As] this provides enough cases to examine similarities and differences between participants but not so many that one is in danger of being overwhelmed by the amount of data generated" (Smith & Osborn, 2003, pp. 54-55).

Purposeful sampling involves selecting individuals for study because they can provide 'information-rich' cases that enable the researcher to address the research problem and central phenomenon in the study (Creswell, 2007). Given the purpose of this study, the first selection criteria was to recruit male young adults (age range = 18 – 25 years) with a self-reported history of AD/HD. Second, to be eligible for this study, participants must have participated in three or more seasons in a team sport(s). Sport Canada's (2009) definition of sport was used. Thus, team sport referred to any sport that involves competition between teams of players. Examples of team sport are hockey, baseball, basketball, and soccer. Young adults with AD/HD were selected for this study because this population could describe their youth experiences with AD/HD in previous study (Shattell et al., 2008). A decision *not* to sample children or adolescents was made because "children's accounts of their experiences and the meaning they make of them may not be as expansive, detailed or complex as those produced by adult" (Smith &

Dunworth, 2003, p. 618). Furthermore, because IPA has a focus on meaning exploration and sense-making by both the participant and researcher (Smith & Osborn, 2003), and the fact that meaning can be added to experience upon reflection, sampling young adults and asking them to reflect on their childhood/adolescent experiences in organized sport might yield richer data in response to the research purpose/questions than sampling children or adolescents. Males were selected because AD/HD is more prevalent in boys than girls (Rucklidge, 2010). Criterion on the length of involvement was based on speculation that individuals with less than three years of experience might have limited sport experiences to reflect on and to share. Finally, past team sport participants were selected because past study suggested that individuals with AD/HD might have more difficulties and shorter length of involvement in team sports than in individual sports (Johnson & Rosen, 2000). Thus, understanding these individuals' experiences might better reveal the influence of AD/HD on sport participation.

**Participant Recruitment**

The University of Alberta's Research Ethics Board approved the study protocol. Five participation recruitment strategies were used. First, I approached the Specialized Support and Disability Services (SSDS) at the University of Alberta. SSDS offers academic support to students and staff with disabilities that affect mobility, vision, hearing, learning, and physical or mental health. I met with and explained the study to the SSDS Student Advisor to seek permission to recruit from the SSDS. Upon approval, the SSDS Student Advisor emailed the study's

information letter (see Appendix A) to SSDS-registered students with AD/HD. The information letter provided an overview of the study, described what would be required and provided further instructions for those wishing to participate. The email with the information letter attachment was sent out in April 2012.

Second, I approached the AD/HD Association of Greater Edmonton and sought permission to include the information letter in the electronic newsletter sent out to their members. The AD/HD Association of Greater Edmonton is a registered non-profit society whose objective is to improve the lives of those living with AD/HD. The society accepted the request and attached the information letter to its electronic newsletter in May 2012.

Third, recruitment posters (see Appendix B) were posted at various locations around campus from October 2011 to June 2012. The same posters were attached to electronic newsletters that were sent out to undergraduate and graduate students from the Faculty of Physical Education and Recreation from March 2012 to June 2012. The posters explained the purpose of the study and included contact information.

Fourth, announcements were made to students in three undergraduate level Physical Education and Recreation classes at the University of Alberta at the beginning of the summer semester of 2012 (i.e., July). Finally, recruitment happened by word of mouth. I asked friends and friends of friends if they knew anyone who fit the sampling criteria.

Before their inclusion in the study, potential participants were screened by asking them if they had been diagnosed with AD/HD by a health care professional

as well as their sport participation history. Prior to the start of the interview, signed consent forms (see Appendix C) were obtained from all participants. Participants were informed that all information would be kept confidential. They were also reminded of the voluntary nature of participation, their right to withdraw from the study at any point without any consequences, and that they did not have to answer questions they did not want to. The interview started after the participants were given the opportunity to ask any questions.

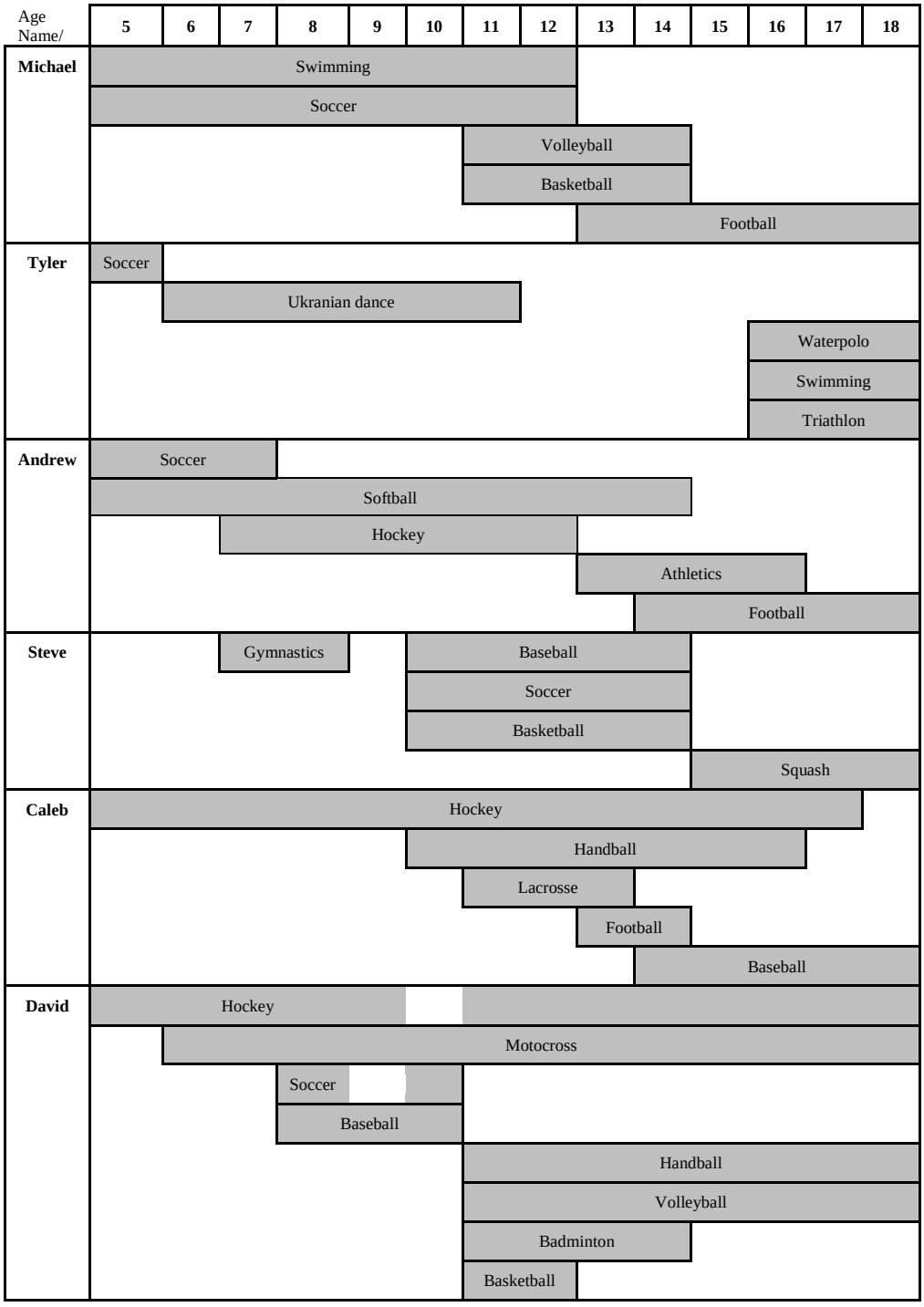
**Participants**

The sample consisted of 6 male young adults (age range = 17 – 26 years). One participant was three months from his 18th birthday and therefore a decision was made to include him in the study because he met the other sampling criteria and it was deemed his age would have no detrimental effect on the study. Nevertheless, steps were taken to ensure his participation in the study was ethical. Information of the study (i.e., purpose, risk and benefits, procedures, confidentiality, freedom to withdraw) was explained to both him and his mother at the first meeting. Following this, a verbal consent to his participation in the study from his mother and a written consent from him were obtained. The average age of the participants was 22.7 years (SD = 3.2). All of the participants were Caucasian.

Table 1 illustrates their sport involvement history. Participants played a range of different sports throughout childhood and adolescence. All of the participants fit the sampling criteria of having played at least three seasons in team sport(s). Four of the six participants were also in individual sports (e.g.,

swimming, motocross, squash, and athletics). Four of the six participants' sport involvement pattern resembled an extended version of the sampling years in the developmental model of sport participation (DMSP) by Côté and Fraser-Thomas (2007). In the sampling years in the DMSP, sport participants engage in high amount of deliberate play, low amount of deliberate practice, and involvement in several sports in their childhood. Four participants in the current study continued to sample several sports in childhood and in adolescence. The other two participants (Michael and Tyler) sampled several sports in their childhood and adolescence but focused on one sport in their late adolescence. This pattern is similar to the specializing years in the DMSP when sport participants reduce involvement in several sports in their adolescence. The extended sampling years might reflect a frequent pattern of starting but dropping out of a sport, then starting another sport again. Between the six participants, they experienced 34 episodes of starting a new sport but 23 episodes of dropping out of a sport.

**Table 1 Participants' sport involvement history by age**



## Data Collection

Consistent with IPA, individual semi-structured interviews were conducted (Smith & Osborn, 2003). Each participant was interviewed twice. Both interviews were held in a research office located at the Child and Adolescent Sport and Activity Lab at the University of Alberta. All interviews were audio-recorded.

IPA interview usually starts with the most general question possible, and probing questions or prompts may be used to facilitate discussion of interesting or important issues (Smith & Osborn, 2003). Hence, the researcher has a set of guiding questions but approaches the interview in a flexible manner to ensure the respondent is open to introduce an issue the researcher had not thought of in advance (Smith & Osborn, 2003). By probing interesting and important areas that arise, the researcher enables participants to discuss their most important experiences (Creswell, 2007).

### First Interview

The interview questions for the first interview were based on semi-structured interviewing procedures described in Smith et al. (2009), questions used in the study by Shattell et al. (2008), and questions created in brainstorming sessions between the researcher and the supervisor. The questions were tested in a pilot interview with a 17-year-old male with AD/HD who met the rest of the sampling criteria. These data were not included in the analysis/results but the pilot interview helped inform the interview guide for the first interview (see Appendix D).

Following an initial rapport-building conversation (about the participant's sport participation involvement and history of AD/HD diagnosis), the researcher and participant collaborated in building a sport involvement time line table (see Table 1). This table recorded the participant's sport participation history in his youth. This step was designed to prompt participants to think about their sport experiences.

Next, in accordance with IPA, the first question was very general (i.e., "tell me a story about having AD/HD in sport"). Other general follow up questions included "tell me a story about having AD/HD when interacting with people in sport," "what was your best memory of sport participation," "what was your worst memory of sport participation," "can you tell me what you might have learned/gained from participating in sport," "has sport participation changed you, or pattern in your life, in any way," and "what contributed to your decision to drop out of or stay in certain sport?" Probing questions were used to elicit more specific information (Smith & Osborn, 2003). Example probes were, "Can you elaborate on that?" "What did you mean by that?" "How did that make you feel?" (Patton, 2002). The first interview lasted on average approximately one hour. Data from the first interview were analyzed and initial themes and interpretations were developed.

**Second Interview**

Each participant completed a second interview within a month of the first interview (guide provided in Appendix E). The participants were given a summary of the findings from the first interview and asked to provide feedback on

the accuracy of the themes and whether the interpretations made sense to them (Lincoln & Guba, 1985; Mayan, 2009). Thus, the second interview helped to clarify questions from the first interview, provided opportunities for the participants to provide further details and insights, and served a member checking function. The second interview lasted on average approximately one hour.

**Data Analysis**

Audio recordings of the interviews were transcribed verbatim. All identifying information (i.e., participants' names) was removed. Participants were given pseudonyms to ensure anonymity. The following analytical steps, based on IPA methodology (Smith et al., 2009), were taken:

1. Analysis was completed on one participant's transcript before moving onto the next. First, a participant's transcript was read and re-read. This provided a holistic perspective so that future interpretations remained grounded within the participant's accounts.
2. Notes were taken on the left hand margins on the first read through. These notes were attempts at summarizing or paraphrasing, making associations or connections, or preliminary interpretations. During this exploratory notes taking process, Smith et al. (2009) noted that "it is important to engage in analytic dialogue with each line of transcript, asking questions of what the word, phrase, sentence means to [you], and attempting to check what it means for the participant." (p. 84). This type of thinking helped to move the later analysis beyond the superficial and purely

descriptive. This is in line with IPA as long as the interpretation was inspired by the data.

3. On the third read through, emerging theme titles were documented on the other margin. Through this process initial notes were transformed into themes to capture the essential quality of what was found in the text. This step was necessarily interpretative, as the themes reflected the participants' words and thoughts as well as the analyst's interpretation.
4. A table of emergent themes was created at the end. Themes were then clustered or grouped under super-ordinate themes. A list of super-ordinate themes and emergent themes was developed.

The first interview of one participant was analyzed following these steps. Themes were developed and helped to inform the second interview with that participant. The second interview from each participant was analyzed following the same steps. Keeping in line with the idiographic approach, ideas from the previous analysis were bracketed so the next case could be treated on its own terms.

Once both of the interviews from all of the participants were analyzed, the next step involved looking for patterns across the cases. Shared themes were identified and translated to a write-up and final statement outlining the meanings inherent in the participants' experience. A narrative account was created that incorporated the final themes whereby they were explained, illustrated and nuanced. Verbatim extracts from the transcripts were used to support the interpretations I put forward (Smith & Osborn, 2003).

It is important to note how the hermeneutic approach of IPA influences how the researcher uses extent theory to interpret data. IPA combines a hermeneutics of empathy with a hermeneutics of 'questioning' (Smith et al. 2009). As such, the researcher is trying to gain an 'insider's perspective' or stand in the participant's shoes. At the same time, the IPA researcher is standing alongside the participants and asking questions about they are saying and why they are saying it. Thus, rather than use theory to guide analysis, I linked concepts identified in participants' accounts back to the literature in the discussion.

**Methodological Rigor**

Smith et al. (2009) and Yardley (2000) presented four principles that can be used to assess the quality of an IPA study: Sensitivity to context, commitment and rigor, transparency and coherence and impact and importance. The first principle is sensitivity to context. Smith et al. suggested that IPA researchers could demonstrate sensitivity to context throughout the data collection and analysis process. They recommend IPA researchers to become aware of the interview process as well as practice what it takes to produce a good interview. Obtaining good data is important because IPA analysis is only as good as the data it is derived from. Steps were taken to improve the quality of the interview. The interview questions were discussed and refined with my supervisor prior to data collection. Further, a pilot interview was conducted and used to refine the interview guide. During the interview, recommendations for conducting semi-structured interviews were followed such as establish rapport early, show empathy, ask one question at a time, ask open-ended questions, be especially

attentive to what the participants have to say as they are the experiential expert, take the role of an active listener, and use open-ended probes and prompts to clarify meanings. My supervisor and I reviewed the first interview and the interviewing techniques before conducting the other interviews. During the reporting of the data, sensitivity to data was shown by using a considerable number of verbatim extracts from the interviews to support the arguments and interpretations.

The second principle, commitment and rigor, was demonstrated in this study by the commitment in conducting good interviews. I took a qualitative research methodology course in my graduate studies. As well I conducted interviews as part of the data collection process in other qualitative research projects as a research assistant. Throughout the course of this study, I met with my supervisor on a regular basis to discuss its progress. During the reporting of the findings, I committed to moving beyond simple descriptions to interpretations of the shared themes.

The third principle, transparency and coherence, was enhanced in the write-up of this study. Transparency is achieved by thorough description of the sampling process, interview schedule, interview process, and the analytical steps taken. The write-up showed coherence through the use of appropriate IPA terms and methods.

The final principle is impact and importance. Findings from this study revealed ways to enhance the sport experiences for individuals with AD/HD. This is an important matter as one of the goals of Sport Canada Policies (Canadian

Heritage, 2012) is to provide equitable sport activities for the diverse population of Canada..

In addition to adhering to these principles, several additional techniques were used to enhance rigor. First, a reflexive journal was kept to record the methodological decisions and the reasons for them (Smith et al. 2009). Second, I engaged in early evaluation of interview techniques by listening back to the interviews. Doing so helped monitor and enhance interview technique – after all, an IPA analysis is only as good as its data (Smith et al. 2009). Third, the second interview also served a member checking function, which helped obtain further insights and obtain participants' views about the emerging interpretations (Lincoln & Guba, 1985). This step ensured that the interpretations of the data represented the participants' sport experiences. Finally, an audit trail that included the initial notes on the research questions, the research proposal, the interview schedule, audio tapes, annotated transcripts, tables of themes, draft reports, and the final report were kept. My supervisor acted as an independent audit to check the credibility of the study.

**Ethical Considerations**

Prior to conducting this study I was aware that asking participants to reflect on how the AD/HD symptoms affected their lives may conjure negative memories or emotional reactions. Participants might experience distress as a result. Participants were reminded of this risk at the beginning of the study and that they did not have to answer any questions that they did not want to. Contact information of the Student Counseling Services at the University of Alberta was

included in the information letter. The Student Counseling Services offer professional psychological service to students to improve their personal, social, and academic wellbeing. None of the participants requested to stop during the interviews.

# Chapter 3: Results

## Hits and Misses

The participants' sport experiences were a series of 'hits and misses.' This term was used to capture the positive and negative elements of their sport experiences. On one hand, they found that sport could have many benefits and could be enjoyable. On the other hand, perhaps hampered by their AD/HD, they could have performance issues and negative interactions with coaches and teammates that resulted in undesired feelings and negative experiences. Hence, their experiences were complex, perhaps even contradictory, and likely exacerbated by their symptoms. Having good coaches and coping strategies for AD/HD symptoms and associated behaviours seemed to make significant differences in their sport experiences.

### "The Good" – Positive Aspect of Sport Experiences.

Despite the negative experiences that are reported later, participants felt that sport could be enjoyable and beneficial. Tyler said:

> I think of sport just in general… I feel good. Good feelings for it. Well as I said before negative aspects of it. But as a general feeling I feel good. I feel lots of good has come from it. … on the whole it would be good experiences. I would definitely recommend it. (second interview)

At times sport was exhilarating. Tyler continued, "It's just something I enjoy doing. … you get like your heart races. You just feel, feel like you are invincible" (second interview). Caleb said, "I get like a huge rush from [it]… Like the, the feeling that like I get when uh like when you win or you do something really

good. Like it just gives you all that release and I guess like that's the big reason why I play" (first interview). Others found sport attractive for different reasons. David said, "nothing uh actually well yeah nothing outside of sport could hold my attention and that was kind of one of the reasons that I kind of got into sport" (first interview). Andrew shared, "… with sport there's always something new, something to engage you" (first interview). In addition to these general positive reactions, participants perceived more specific benefits from playing sport. The most commonly mentioned benefits were social benefits, stress and energy release, and improved self-perception.

**Social Benefits.** Sport provided participants with opportunities to socialize and form close relationships with other people. Andrew said that sport "brought people into [his] life, friendship, and relationship" (first interview). Steve described:

> I have met so many [people] just so many just socially just through sport. So many of my friends are through that. And that um I have met some really amazing people through sport so it's profoundly impacted my life. (first interview)

And Caleb shared that he and some of his teammates, "…become closer than friends. It's almost like we're brothers…" (first interview).

From participants' recollections it seemed that sport facilitated the relationship building process. Specifically, having similar goals and interests, the prolonged interactions from playing together, and the need to work together as a team helped participants make friends in sport. Tyler said:

> You immediately have something in common in sport. You know, if you are on the swim team, 'oh what stroke do you do? I do this stroke.' You have something in common… is really a conversation starter. I find it's easier to build relationships. … having something in common made it a little bit easier. (second interview)

Caleb also shared that playing sport was helpful in building relationship as others on his team "were all welcoming because you're interested in the same stuff as they were whereas when you go to other schools it's kind of like you have to figure out which group you kind of will mesh with and stuff" (first interview). It seemed that being on a sport team "broke the ice" for participants and their teammates. Caleb continued:

> … for most of these guys I spend 11½ months with them almost every day of the year so you get to know them really well …we have our arguments and stuff like that ... but for the most part I think we get along pretty well together because we're with each other so much. … there is obviously people you come into like 'oh I don't like him' but eventually you have to accept them because you don't want to be, you don't want to be like disliking someone for 6 months. It's just not, you'd rather just get over your problems and continue on and just have a good time because you uh, you need to have a, 'cause when you ice it, it helps with winning. And when you're winning you have a close relationship with your team because it's kind of team bonding and then it just kind of feeds off of all that stuff. (first interview)

These social benefits seemed to be particularly valuable for participants who experienced social difficulties. In some cases, these social difficulties might have arisen from having AD/HD. Michael said, "you lose a lot of confidence… [from people] calling you out for things you were doing, like blurting out, the random like topic changes. Things that people kind of notice, kind of poke fun at" (first interview). As a result, he "was not very talkative," and described himself as "really timid before [he] really playing a lot of sport" (first interview) - attributes that contributed to his social difficulties. However, through playing sport, he connected with people on the teams that "got used to the way [he] was" and would let the verbal outbursts "roll off [his] back." But it was not simply a case of playing sport and him 'automatically' connecting with his teammates. In fact, he recalled:

> People I made friends with, got along with… either really liked me, or really hated me kind of thing. Just because you either got, the guys on the team, either got used to the way I was. Like really sort of just random sometimes. Or you would be like really annoyed by it. So it was really like we were pretty good friends or you really thought I was annoying. (first interview)

Nevertheless, the prolonged interactions from being on the same team and playing together seemed to help him to gain the acceptance of others.

Tyler also shared Michael's difficulties in social situations. He said, "I felt I was safer, and better off on my own than around people that constantly judge me" (first interview). As a result, he might have "avoided team sport because of

the social situation" (first interview) and preferred individual sports like swimming, running, and triathlon. However, he later joined a water polo team due to his interest in swimming and the knowledge that some of his teammates from swimming joined. He recalled that being on this team:

> Force[d] me to be with people. I as long as I am on that team, I like that sport, I enjoy doing the sport, but as long as I enjoy doing the sport, I was forced to be with people. So it forces me to socialize. So which I think it's good. Even though at first, at first like month or so was really awkward, at least I found. Then after that it sort of eased out. Then I start to make friends. And I, you know, so on and so forth. So yes, it helped me to socialize and make friends. (first interview)

So even though Tyler initially avoided team sport, joining a team subsequently expanded his social opportunities. He said:

> Team sports, they allow me to socialize although I do [still] avoid the social situations. Even today I still avoid social situations. [Team sports] help me to socialize. They help me to talk to people. Be contributing member of human society. That's what I find they help me to do. I can I can make friends out of that. I can talk to people. I can, you know, understand people and not be so awkward in a group. And that's something it does more than just the whole physical activity aspect of it. They allow me to socialize even though I avoid it. They still allow me to socialize. (first interview)

Similar to Caleb's experience with conflict resolution to help team's achievement, the idea of being 'forced' to socialize in a team setting could reflect the need to work with teammates to accomplish goals. In other words, Tyler had to learn ways to interact with others to be a successful member of a team. Perhaps this was a unique feature of sport that he did not encounter in other social situations.

**Stress and energy release.** Participants also viewed sport as an outlet of stress and energy. This release was often associated with mood and focus improvement. Michael said:

> Sport was a huge like stress relief for me too. So like even if I was having a really bad day I go whenever it is whether it is like right now I work out whenever I can, or when I was playing football, I go and I just lay it out there and I feel a lot better after… As I said, like when I am sitting in class, when I am not, when I am sitting in class, studying, kind of everyday life, I am really like hav[ing] the leg shaking, I am constantly moving things around, I am playing with something, like crumpling a paper, like whatever, just like hyperactivity, that is really what it is… Just be able to exercise and kind of get it out of your system until you are just, wasted all that energy, it kind of really calms you down, you are able to kind of think again. (first interview)

Participants also felt that they benefited in other domains due to the calming effect and improved focus. Caleb shared, "it helped a lot just with like my marks going up, concentrating in class because burning that extra energy, even like when I take my pill [i.e., AD/HD medication], burning that extra energy

just helps" (first interview). Tyler also said, "doing the sport, or doing the physical activity, [I] ended focusing better in school, in daily life, so on and so forth" (first interview). He described how playing sport helped him with his focus on tasks in other life domains:

> Sports, um they tire me out. They tire me out and then I don't tend to lose focus you know as much. So after it's all done… I become dead tired. And from what I understand, whether it actually happens or not, just like the brain is like 'I am so tired. You know I am not going to screw with you anymore, so whatever'… The effects after I find that um… I am able to focus better… And I find that if I need to I can go home, I can write emails, I can write letters, I can focus, I can focus on something if I need to. And you now what it's awesome. (first interview)

Steve also said:

> [Sport] gives me that outlet of being able to kind of whether it's nervousness or that kind of energy whatever it is, I find that I can use sport or whatever it is as an outlet for that, and then once I do that, I find it easier to kind of it's almost like I get that off my mind, I can do it, I feel good. And then I can you focus a little bit more for whatever else I have to do, whether it's something in my personal life, or studying, or at home, any of those stuff. (first interview)

In addition to sport offering an opportunity to burn off energy, there was also an idea that the excess energy participants possessed could be an attribute in sport. For example, in contrast to his experiences in school, Andrew felt that

"having a lot of energy in a sport considered a good thing" (first interview). This perception improved his enjoyment of sport because he did not have to worry about how others judged his hyperactive and impulsive behaviours:

> I guess just feeling more at home during sport events than out in the real world. I uh I feel less like judged for sure during sporting event cause you can, I can go out there and just be me and have the attention deficit and not worry about that. And not have that at the forefront of my mind. And while in like social context like some of the things that are associated with attention deficit like a little bit of impulsivity or hyperactivity, ha, might be negatively viewed by certain people. (second interview)

**Self-perception improvement.** Participants felt their self-perception improved because of sport. Michael described that playing sports helped his confidence:

> The confidence you need in sport um just it like practicing it, exerting it, really kind of transfer over to life where um if you even if something you do have a slip up, you are able to kind of recover from it easier. And you are able to be like 'okay, I said something stupid. Sorry about that. What I meant was' and you are just more confident in your conversation. (first interview)

He elaborated on the benefit to his self-perception:

> Once I was really confident I was confident to the point where I was okay with who I was. I know I slip up. I laugh at it. I know I can laugh at it cause I mean some of the things I do say are pretty silly. … Like before I

> got the confidence I got in sport, if I like would slip up and say something stupid, I would feel really really dumb, and I kind of stop talking, and just feel like I am a big loser, and just really kind of give up. But once I got the confidence, and I mean I say a lot of it was from sport, I am able to kind of laugh it off and just kind of play it up and be like 'ah man' just laugh up my silly mistakes and just keep going on with whatever conversation I was having. Not feel stupid. (first interview)

For Tyler, his self-perception improved when he discovered that he could be successful in sport:

> [Sport] help me to understand I am capable of more than I thought I was…I always I knew I sucked with um coordination. Um I have trouble catching a football, I have, I trip over the ball in soccer. I can't run and kick the ball at the same time. It's brutal. Everybody always makes fun of me that I can't. But when it comes down to something along the line of cardio, I find that if something is straight cardiovascular endurance, I find that given time I can succeed with that much quicker than doing something with coordination. So I felt that uh sport or, yeah, it would be sport, would show me that I am capable of more than I thought I was. (first interview)

Steve gained the opportunities to experience success and feel competent in sport. This was especially worthwhile to him because he struggled in other contexts such as school:

> You have got just general pressures of academic… it came down to that kind of sustained focus and you know things like test rating um were definitely challenging… those are definitely sources of anxiety and challenge because of the sustained focus and output that's required. So sport was something I would look forward to because I felt much more competent and I can like easily excel at a sport situation… and those feelings of self-validation. It was a positive thing I would look forward to because… I feel like just being successful in. So I would go into let's say a sport activity and I would not have those feelings of self doubt… not being sure of yourself that you are going to kind of perform… if I just only focused on school and then didn't have sport in my life, I think I would have quite a high stress level and overall anxiety. (second interview)

**"The Bad" – Negative aspect of sport experiences**

Despite, or perhaps in addition to, the positive feelings and benefits that sport provided, participants felt that their sport performances and relationships with teammates and coaches were hampered by AD/HD. Negative consequences and undesired feeling ensued to undermine their sport experiences. Thus, it might seem that contradictions exist within their sport experiences. Revealing the complex nature of their sport experience and the different factors that could influence it.

**AD/HD symptoms in sport.** Participants recalled having challenges with inattention in sport, which included difficulty with sustaining attention, control over their focus, and being easily distracted. Steve said, "I find it [sustaining

attention] almost very exhausting. I almost have difficulty just focusing on one thing" (first interview). They recalled that their focus frequently drifted off to details in their surroundings. Steve described focusing on extraneous details when he played squash:

> I find it's very easy to notice little details. Like this person got a new pair of shoes, they have new racquet or new strings, new glasses or something different. I think those things very easy to recognize… structural things of like each court is slightly different. And I find I can focus on that… There are lots of little kind of factors that I find myself noticing. (first interview)

Participants had difficulties with ignoring the distractions once their attention was drawn. Michael described, "irrelevant stuff really just starts jumping in and [I] will start following it" (second interview). Tyler recalled, "on more than one occasion… multiple times. And it's, it's common. Yeah, I tend to get distracted a lot" (first interview). Similarly, Steve said, "[getting distracted] would be something reoccurring. To be honest, it's something that would happen very often. Even just when I am playing, it probably happens, 5, 6, times per game…" (first interview). He added that it was difficult to ignore the distractions:

> Oh it's so easy [to be distracted], and especially with squash is that you have got glass backcourt… you see the people in the crowd, maybe it's your parents, maybe it's a girlfriend, you got your coach, you got your friends, there are lots of people watching you know, there is people walking by, and that to me is distracting. And I find like even when I am playing, if I hear somebody walk in or see something walk in, it's really

> difficult for me to want to just look and see what's happening. (first interview)

Andrew remembered this when he played youth soccer:

> But definitely when I was younger like I would get distracted by the most minute things you know like, colour of the outfield, I felt like my parents weren't paying attention to me, I would focus on that more than anything. (first interview)

Instead of playing soccer, he remembered:

> You know the quirky little not paying attention, kicking the grass, more so than most of the other players… Especially when you are younger they say that the bees to the ball, they all chase the ball, I ha I would be out running at centre field at absolutely nothing but uh you know like playing goalie kind of just lay there. I just would walk around and do whatever. (first interview)

Another common situation that participants recalled having difficulty with inattention was when coaches gave instructions. Steve remembered, "I would definitely get lost in the explanation. And if they were too drawn out and longwinded I would just stop focusing" (first interview). Michael recalled similar challenges:

> Sometimes when the coaches were talking I would be thinking about my day, like my day in class or anything like that. Just it could be absolutely anything… Your mind kind of drifting around, you are thinking about a lot of stuff… You kind of jump from paying attention to what you were doing

> to looking at what the other guys are doing. Just noticing things about your environments like lot of like distractions that… pull you away from what you are actually supposed to be doing. (second interview)

Tyler summarized the impact of AD/HD on his attention by saying, "[if] my attention can be drawn to something else, it will be drawn to something else" (first interview).

Beside inattention, participants felt AD/HD contributed to their impulsive behaviour in sport. They had difficulties with inhibition such as when they blurt out random or inappropriate thoughts to others. Michael said "… I kind of blurt out things that sometimes really that sounds kind of stupid or like not really well thought out" (first interview). Tyler recalled, "I was known for blurting out stupid stuff… just wouldn't be the right time for it" (second interview). Andrew said, "[I] sometimes just not being able to hold in what I am thinking… very impulsive". (second interview)

Verbal outbursts might strain participants' relationships with teammates. Tyler recalled, "I have this rush of ideas, and like 'ya this fits this fits. Ya I can say something'. And then I say what I have to say. And it's horribly wrong. Either it's completely awkward and everyone is weirded out going 'Oh, that's a conversation killer'" (second interview). Verbal outbursts might be especially damaging if the comments were viewed as rude by teammates. Michael recalled an episode where he blurted out as he witnessed his teammate getting a head injury in a football practice:

> I blurt out a comment… I said something about him like just getting stupider and stupider. And I stopped and I was like 'that was like why would I say that?' That was it was like really rude at the time and not the right time to say it. But it was kind of like the joke I was thinking in my head. And like instead of like 'okay, not the time. He's got like a concussion right now'. I kind of blurted it out. And I kind of got like pretty bad stares from my other teammates. (first interview)

Andrew recalled a situation when he reacted to his teammates following a lost:

> I just I just felt the need to tell my team at what I thought they sucked and um that I was ha kind of disappointed in them and uh that didn't go over very well with everybody. (first interview)

The above examples illustrated that participants might lack the control to inhibit responses that strain their relationships with others. This might make making friends more challenging for participants as teammates might avoid or dislike interactions with them.

**Consequences of AD/HD symptoms.** Participants' sport experiences seemed to be hampered by AD/HD when it influenced their sport performances and relationships with others. A number of negative consequences and undesired feelings ensued. Earlier, it was mentioned that their verbal outburst could strain their relationships with others. Inattention seemed to limit their ability to stay on task in both match and practice situations. Their performance would suffer when that happened. They recalled many situations where they failed to perform or

made mistakes because they were distracted. Steve remembered when he played squash:

> Usually it will be things like tactics where I want to execute a certain strategy… it's almost like it just kind of jumps out of my head… And and when I start getting away from those, very often the result speaks for themselves. (first interview)

It was not that participants could not perform or do well in sport. Rather it was that their sport performances were very 'hit or miss'. In other words, they were inconsistent. Andrew said, "… I feel like I have a greater range of play. Like level of play where when I play really well, I play really well. But when I play poorly I play really, really bad because of my lack of focus…" (first interview).

Participants seemed to feel limited by their AD/HD. Andrew said, "I could do so much better if I just was like didn't have the attention deficit" (first interview). Michael felt, "Like if you didn't have ADD, you would catch on" (first interview). They often felt frustrated by this. Steve said, "… I also get frustrated because I am not doing the things I know I need to do" (first interview). Andrew shared, "It's not about knowing what to do. It's about not doing what one knows because of focus issues" (first interview). He elaborated, "I have all these skills in the world but I can't really put it into use because at times I am doing things I shouldn't be doing on the field because of my lack of focus" (first interview).

These episodes of poor performances or mistakes could severely undermine participants' perceived competence. Tyler said:

> You are putting in a lot of effort and you don't always see the results of the effort you are putting in. So you may put in 110% but you are only seeing 40% out. And then you become very um stressed out over things. I become very um how would I say almost I would say almost destined to fail. (second interview)

Recalling his most negative sport experience, Michael said:

> I mean the most I remember was this I was talking about that passing drill. Uh I felt like uh like I just couldn't get it. … I felt so dumb because it was such a simple thing. But I couldn't catch on right away… And it was something that I knew I should have been able to get but like it really singled me out and I just felt … like an idiot because everyone notices like those little things like that. That I couldn't catch on to the easiest drill. (first interview)

In addition to undermining his perceived competence, Michael elaborated that his enjoyment of sport would decrease as a result of poor performances:

> … when I really screw up with that and get all embarrassed um I would get frustrated… Like I get really frustrated with it, I wouldn't like it anymore. Just because I made that little mistake, I feel dumb about it. Just because I couldn't remember which pattern… And when I felt stupid like that uh it would kind of I mean I felt stupid, kind of discouraged from playing. You just don't you just don't want to play as much, not as positive of an experience kind of thing. (first interview)

Participants were also commonly on the receiving end of coaches' and teammates' criticisms following their poor performances or mistakes. This was especially prevalent in team sport settings where individual's actions could often impact the team's outcome. Tyler recalled his mistake at a team dance competition:

> I just got caught up and saw how many judges there were, where they were sitting, what they can see, what they couldn't see. And then the next thing I know, everybody was all over there. And I was still standing where I left or where I was …And that just made us look really, really bad. …that ended up actually losing us a championship. And I was blamed for that. (first interview)

Negative feeling tended to follow the realization of the mistake. Andrew said:

> Something big like that, any a big mistake, a very noticeable mistake, uh because of a lack of attention on the field of play or in the outfield, then it's really negative. Like I feel like it's almost like you are guilty… It's not pleasant having to you know, know that it was you that caused that because you had a lapse in your attention. (first interview)

Coaches or teammates' criticisms could compound the negative feelings and make the situation worse for the participants. Tyler elaborated on his teammates' reactions toward his mistake at the dance competition:

> …the other girls on the team that told me that something along the lines of 'thanks for losing it for us. Why were you here?'… And then that's when I

> told my parents 'I am not coming back'… I sort of had a bad taste in my mouth about sport. (first interview)

David recalled an episode where his coach reprimanded the whole team because he made a mistake:

> And nobody's very happy with you at that point in time. Nobody likes doing uh, doing your dirty work when you, when you screw things up. Uh just that there was a lot of people pissed off at me. And uh a couple were swearing me at you know, that I was a fucking idiot or something like that or something, something to that extent. And being that we were pretty young that was pretty graphic. I felt like the whole team hated me… . (first interview)

Criticisms from coaches were also common following mistakes. Andrew said, "… really not pleasurable going back to the five line and have your coach rim you out because of the episode" (first interview). Tyler recalled his coach's typical response to his mistakes, "The classic… 'what are you doing!'" (first interview).

Beside verbal criticisms, coaches might limit participants' playing time. Andrew recalled being consistently benched by his coach, "I wasn't engaged in the game all that much. He just kept me on the bench all the time" (first interview). In Tyler's case, he remembered his coach yelling from the sideline:

> There's been a few times that he pulled me out and he says, 'What the hell are you doing? Get out!' and throw somebody else in. I am like that's not only negative reinforcement, however that's also almost like belittling. (first interview)

Even if nothing was explicitly said or done, participants still might feel singled out by the coaches and teammates. Tyler said:

> I always felt that … the way she gave instruction to me was more like she had to deal with me and work with everybody else… I was sort of the anchor hanging off the back of uh back of the car… I was just the dead weight that she couldn't cut. (second interview)

Andrew shared his experience with his past coaches, "… it was almost like… your coach didn't know how to coach you. You were just a problem child. You just were out there filling up space" (first interview). Michael explained, "… just the way that um the team and like my friends would kind of know me as. A little bit in the clouds… just because sometimes like it wasn't catching on… you kind of get the impression that like I am a bit of an airhead…" (first interview). He recalled numerous occasions " in practices and I kind of just be off track little bit and the coach would be like 'you are up in the clouds again'" (first interview). David said, "I was what they called a drill killer" (first interview), referring to his frequent mistakes in drills when he did not pay attention to coaches' instructions.

Reflecting on these experiences, participants shared that undesired feelings also came from the notion that their failure to perform or mistakes were not intentional. Andrew said:

> They are not pleasant definitely. … I don't like to make mistakes in general. And then when you make a mistake because the condition it's really frustrating. You want to have control over that but sometimes it's

> just the way your brain works. Sometimes you just can't focus for the life of you. (first interview)

This notion of unintentional mistakes interacted with coaches' and teammates' criticisms to undermine participants' sport experiences. Tyler said,

> Just happens is a very poor explanation but it's that's the only way I can describe it. It just, it happens. You don't even know and then it's there. You are like 'oh crap' you know it's over and done with. By the time you notice it's too late. And then you get the reaction from you know coach ... the classic 'what are you doing!' well obviously would make somebody feels terrible especially on a semi-regular basis as like myself. … when somebody is is reacting to you in such a way that almost it as if you are doing it on purpose or as if you just do not care enough that you are just like distracted by something because you don't care, because if you care you wouldn't be distracted. It makes you feel absolutely terrible… And then it's just sort of a vicious circle. You try you fail you try you fail. And you have the negative influence on the outside saying 'what are you doing?' What do you do?! Don't do this! Come on come on. You are bad at this. Care care care'. And in the end you really do care. But it's just very I say spinning your wheels almost. It becomes very frustrating. It becomes very stressful. It becomes very you start to lose, I would say you start to lose confidence in yourself, your own ability… (second interview)

Here, participants' stories indicated the significance of feeling competent and connected to coaches and teammates in their sport experiences. Their

recollections illustrated the detrimental effects when either one undermined. Their reasons for sport enjoyment and sport selection further support this claim. Upon reflection, Andrew said, "I stuck with [baseball] for a long time. I felt that that was, like my best sport basically. Like the one that I had the most us [pause] uh like the best outcome, the best outcome at…" (first interview). David reflected, "I think the reason I stayed in a good majority of them is because I was very confident in, in, in those sports… and I just enjoyed them more because I, like I had more fun because I, like I was very confident that I could do it" (first interview). He went on:

> You're always a part of something. I, I really like that part of it and even, even in the individual sports it was still kind of the same thing, like you're still part of a bigger family like regardless of whether you're racing against people, like those are still the majority of your friends and it's still like a huge social aspect. (first interview)

Michael said:

> I was lucky enough to have really good coaches in football. And a good group that I was with too like guys that were really um I had a lot of friends on the team so I mean the guys that got me, they were good friends of mine. It was a good experience overall. (first interview)

Overall, participants' recollections suggested that AD/HD could interfere with their opportunities to experience the feeling of being competent and connected to others. In other words, they felt that AD/HD might have made them 'miss' more often than 'hit'.

**The Difference Maker – Coaches and AD/HD Coping Strategies**

The findings reported to this point showed sports were complex for the participants and they negotiated some contradictory experiences. For example, on one hand they derived social benefits from playing sport but on the other hand faced challenges in terms of their relationship with teammates and coaches. Whereas sport could contribute to improved self-perceptions, participants felt frustrated and had their competence undermined when they made mistakes. These findings pointed to factors that 'made a difference' in their sporting experiences. The major factors in participants' sport experiences that contributed to more 'hits' and less 'misses' were their coaches and AD/HD coping strategies.

**Difference making coaches.** Participants had more positive sport experiences from coaches who were socially supportive and who focused on learning and improvement. Michael remembered:

> My football coach, he was really good. He really took the time, like personally, to like work through what were were screwing up like individual to each player. And that was really helpful cause like if there's something I was doing wrong, he didn't make me feel dumb for it. He helped me adjust it instead of being like 'you screwed up, do it again' kind of thing. So that was, I mean that was probably the most helpful. (first interview)

His sport experiences benefited from having a coach who addressed performance issues with constructive feedback rather than just criticizing without offering any

support. This was important to him because he felt motivated by this type of coaching behaviour. He said:

> Comparatively there was the basketball, volleyball coach. Um he was the kind of guy who got angry, he like got like angry and frustrated if you kind of screwed up. Like it wasn't the same like fired up, pumped about the game. It was almost like he was almost angry that people were screwing up. … But like just the way like he was, I am sure he was a good coach but it wasn't really good for me. Because when he would get really frustrated, I would think I was screwing up, and then I just wouldn't play well, and I wouldn't want to play anymore kind of thing. (first interview)

Tyler also enjoyed his coaches who supported him with constructive feedback. He compared the 'bad' coach to the 'good' coach he had and said:

> …I took it personally as in he was criticizing me as a person. Not criticizing me the way the way I did something. He is not criticizing the action, or I guess lack of action. He is criticizing me as a person and doing it in a very poor manner. Whereas with swimming it was more of a like you know point something out and I do all the rest myself. Just like, 'hey yo, look over here' 'oh crap I got to go.' That's really about it. Once again, one was presented, one criticism, or one way of telling me 'hey you know you made a mistake' was presented as a negative, as almost an attack in one way or another. Whereas the other one, the other way was presented more as constructive. You know, 'hey, this is what happened. Do something about it.' It was very, I like that. I I perform much better that

> way. I guess it's constructive criticism would be what I am looking for. (second interview)

This coaching behaviour influenced participants' sport enjoyment and their perceptions of mistakes. Reflecting on his experience with the coach who provided constructive feedback, Tyler said, "I was never afraid to screw up. I knew I made mistakes" (first interview). Whereas with the coach that focused on criticism, he said, "I mean you are more motivated by I want to say by fear than by trying to do a good job" (first interview). Participants seemed to enjoy sport more and be more motivated to participate when mistakes were associated with opportunity to learn rather than with punishment. David said:

> I remember that I hadn't done one [drill] correctly and that was an issue for him and he humiliated me pretty well. … practices were always tougher for me and sometimes I did loathe going to practices just for those reasons cause you just, you didn't wanna, like I wasn't looking at it the right way. I was looking at it like you know like it's not a, it's not an opportunity, to to improve on yourself and to and to screw up. It was like if I screw up I'm gonna look bad. (first interview)

Participants also recalled that the good coaches cared and helped them feel supported. Caleb said:

> But uh yeah like I guess yeah the coaches that get through are just the ones that show you respect, who instead of getting angry will um talk to you about it and stuff like that and actually explain so you understand like what you did wrong and even if you do know it, you did wrong just going

> through other stuff and just building that relationship with the player like instead of having just a like a coach uh player relationship, … maybe like a father and a son like where they care enough about you to like ask if everything's OK. (first interview)

Likewise, Tyler reflected on his relationship with his 'good' coach and said,

> It was more of more like a friend. More somebody I could talk to if something is bothering me. … He was um if something was bothering me or something was going on with me, he would seem to pick up on it and understand it or at least attempt to understand it. Um yeah he would listen if if there's a problem. (first interview)

Steve said this about his coach,

> … he really made sure to take the time to to let you as an athlete know that you were important … by kind of building that relationship and rapport between the athlete and coach. I think that really endears the athlete to uh just to put out more. (second interview)

The above examples illustrated that coaches were influential in participants' sport experiences. This perhaps reflected the significant role coaches have in shaping the sport environment and their athletes' experiences.

**Personal Coping Strategies.** Another difference making factor in participants' sport experiences was how they coped with their AD/HD symptoms. Their collective experiences showcased the importance of understanding and dealing with the condition, and their attempts to enhance their focus, all the while trying to minimize distractions when they play.

The importance of understanding the condition and its influences was illustrated in Tyler's sport experience. He was diagnosed with AD/HD in his adulthood so he never understood his inconsistent performances in his youth sport days. He said, "I, at that time I didn't know what it was so I just figure I was just stupid. I am just an idiot" (first interview). When he understood what might have caused his inconsistent performances, he reflected and said, "Knowing, knowing what it was helps me to cope with it because my attention gets drawn, and then I am like 'oh oh it's the ADD kicking in'" (first interview). Knowledge of the source of his performance issues allowed him to attribute them to the condition rather than his character.

On the other hand, Andrew was aware of having the condition in his youth. Like Tyler, he also shared that knowledge of the condition gave him "[an] explanation for why I do a lot of things that I do" (first interview). Beyond being self aware, he raised his coaches' and teammates' awareness of his condition, "I am very verbal about it, having the problem. I let people know definitely because if you don't let them know they are just going to be on you" (first interview). His rationale being, "If they have some type of understanding or perception of what it is, ... it allows them to be more compassionate about you making a mistake or you doing what you do out there" (first interview).

Despite the potential gains from informing others, some participants were reserved at utilizing this strategy. Steve felt that:

> [Having AD/HD] was something I was almost embarrassed about so um I didn't really actively kind of pursue and I didn't feel really all that

> comfortable kind of pursuing just because I almost felt as if it was … a personal downfall. (first interview)

Informing others about having the condition was difficult even for Andrew who had experienced positive outcomes from it. He said:

> There was a factor of like having to reiterate myself multiple times. … Kind of it's it's demeaning to a point. … it's like bringing it to the forefront of your conscience. … it's just like you for a second you think well there is something wrong with me. … And having to constantly bring it to the forefront is just, that's how it is a demeaning process. (second interview)

However he felt that it was essential to inform others because:

> if they don't know that then they don't have the information to correctly evaluate you as a person or you as a sport person. … [telling others is] like a small inconvenience at the time for a better understanding of [AD/HD] and a better overall social um acceptance of the symptom in sport. (second interview)

This was supported by Steve who upon reflection said that he would change how he dealt with AD/HD, "I should have been … accepting of the kind of resources that were presented to me and around me. And I should be more utilize them a little bit more" (second interview). Taken together, their experiences indicated the importance of understanding the condition and accepting the limitations of having AD/HD before participants and others could deal with it.

Participants' sport performance improved when they had strategies to improve their focus and minimize their distractibility in sport. Medication was the most effective option for those that had access to it. Caleb described his in game experiences while he was on medication:

> … when I was on Adderall during the game… the distractions were completely gone… especially in baseball like it made me extremely focused so that I could see the ball better when I was batting… it slows down… you've got all your attention on it and it's like your whole body is focused on it and your whole mind is focused so it's way easier, like you have no distractions… it's just you and the ball and the pitcher. (first interview)

Michael, upon reflection of his most negative sport experience when he failed to catch on to the basketball drill due to his inattention, said, "Like now on medication it would take me like one try… I would probably hope that I was on medication cause that would probably made enough difference that I would have done a lot better" (first interview).

Though medications had obvious focus benefit, participants noted some consequences of using them. Michael recalled:

> When I am not on [medication], I am able to kind of see everything really quickly and darting. I am looking back and forth. I am a lot more energetic. I do have a lot more almost lot more physical energy when I am not on it. … I got that hyperactivity almost like kind of boosting me, making me a a little bit a better athlete. (first interview)

Similarly, Caleb said, "… I don't think I am the smartest player when I am off it [medication] but I know like I give, it feels like I have more energy and more effort to put in…" (first interview). Perhaps as a result, they were selective in its use. Caleb said, "… for the big games like for semi-finals or finals I would rather be as high energy as I can during those games … So I would rather be doing as much as I can in a game than kind of just mellow…" (first interview).

Participants also used other strategies to improve focus and minimize distractions. David found success using physical reminders. He said, "On my hockey glove I used to write 'focus' … like constant reminders written on my hand or tape on my glove and all sorts of different stuff to try and bring me back in" (first interview). Andrew said:

> Try to have a routine definitely helps… everything you do it's always in an order and nothing changes. And that way you are never focusing on something else. … It takes something out of it you don't have to focus on. … If you have it organized, you do this this this and this, then there is less stress going out on to the field. … when I am stressed I have a harder time of focusing. (first interview)

He would also sometimes avoid talking to distracting teammates:

> I always find that there is always on any team that I ever had, there is always a couple guys where if you start talking to them you just lose your focus completely. If you remove yourself from a distracting stimulus you have a higher chance of keeping your focus. That definitely helps me. (first interview)

Others tried to minimize their distractibility by making responses become automatic. Andrew said, “Definitely had to know the game better. Had to study it more so it wasn’t a cognitive process, it was just recall” (first interview). David practiced a similar strategy. He said, “I would try to do imagery before the game and I found that in a way by just, by just thinking about it over and over again there would be certain things within the game that would just almost become instantaneous. So just happens for me so I wouldn’t have to think about it because if I did sometimes it just wouldn’t happen” (first interview).

## Chapter 4: Discussion

The purpose of this study was to explore the youth sport experiences of individuals with AD/HD. Participants found that sport could be enjoyable and beneficial but at times they encountered situations that undermined their experiences. Hence, their youth sport experiences were characterized by a series of hits and misses, and likely exacerbated by their AD/HD symptoms. Their sport experiences were also complex and sometimes contradictory. For example, participants highlighted that social benefits of sport revolved around making friends but they also had social problems in sport. In other cases sport improved their self-perception but they had negative interactions and performance issues that undermined their perception of competence. Two factors helped balance the negative effect of AD/HD in their experiences: 1) having supportive coaches, and 2) having coping strategies for their AD/HD symptoms.

Positive experiences in sport were related to having fun and excitement, feeling connected to teammates and coaches, and experiencing or displaying physical competence. In contrast, their negative experiences were related to making mistakes, and having negative interactions with coaches and teammates. They also perceived a role of AD/HD in these negative sport experiences. Consequences of these negative experiences included perception of peer rejection (i.e., not feeling liked by the group), low perceived competence, lack of fun, discouragement from playing, and sport dropout.

In general, results are consistent with previous research that revealed three common reasons for young people's participation in sport: (1) to develop and

display physical competence; (2) to gain social acceptance and approval from peers and adults; and (3) to have enjoyable experiences (Weiss & Williams, 2004). In contrast, not having fun, not feeling liked by the group, and not feeling competent are common reasons for sport dropout (Weiss & Williams, 2004). Previous research based on parents' reports (Johnson & Rosen, 2000) suggested that youth with AD/HD had more difficulties in sport and might be experiencing earlier sport dropout as a result. Findings from the current study add to the literature by revealing the perceived role of AD/HD in some of the difficulties and the reasons individuals with AD/HD have for dropping out of sport based on their own accounts.

Participants recalled benefits of sport and sport participation. These benefits included social benefits, stress and energy release, and self-perception improvement. Consequences of these benefits included making friends, mood enhancement, focus and academic performance improvement, and improved confidence and competence. Of interest is that the reported benefits might help manage AD/HD symptoms and reduce secondary harm.

Participants perceived improvement to their inattention and hyperactivity as a result of the stress and energy release from sport. These findings are consistent with previous research that found that physical activity could have behavioural benefits for children with AD/HD (Gapin et al., 2011; Verret et al., 2012). Participants from the current study also reported that these benefits carried over to school and improved their academic performance. Individuals with AD/HD have problems at school where they are expected to sit still, pay attention,

and grasp concepts quickly, all of which can be difficult for them (Shattell et al., 2008). Further, AD/HD is associated with greater risks for poor school performance and low academic achievement (Barkley, 1997). The findings from the current study provide some evidence that sport may be beneficial for youth with AD/HD to be more successful at school.

Participants also reported social benefit. The findings were consistent with research showing that participation in youth sport can provide opportunities for youth (who do not have AD/HD) to expand their social networks, form meaningful friendships, and develop social skills to work with other people (Holt, Tamminen, Tink, & Black, 2009). Youth with AD/HD have poor peer relations and few friends (Bagwell et al., 2001). Despite participants at times experiencing peer rejection in sport, the fact that they recalled forming friendship and having positive social experiences that still carried meaning into their adulthood suggest that sport has the potential to reduce AD/HD secondary harm in the social realm.

Youth sport is a context that can foster competence and self-esteem in youth (Fraser-Thomas, Côté, & Deakin, 2005). Participants in the current study recalled self-perception improvement from sport participation. These benefits are of interest to youth with AD/HD because they have low self-perception as a result of their struggles in school, and feeling isolated and different for their AD/HD symptoms (Shattell et al., 2008). Athletic and scholastic competences are important contributors to youth's global self-perception (Horn, 2004). Some participants perceived that they gained confidence and physical competence that carried over to other contexts of their lives. Thus, the findings suggest sport

provided a context where these individuals may gain confidence and competence that develops their global self-perception.

However, results showed that while participants could have positive sport experiences that resulted in social benefits and self-perception improvements, they also had negative sport experiences that undermined their perceptions of peer acceptance and perceived competence. Participants' complex and seemingly contradictory experiences might reflect the argument that "merely participating in sport does not necessarily produce positive outcomes; rather the developmental benefits of sport participation are contingent on social contextual factors" such as parents, coaches, and peers (Holt & Neely, 2011, p. 303). Consistent with this view, coaches were mentioned by participants in the current study as one of the difference makers in their sport experiences.

Coaches influenced participants' sport experiences in positive and negative ways. Specifically, the provision of constructive feedback rather than punishment following mistakes positively influenced participants' sport experiences. Further, supportive coaches helped participants feel connected and improved their sport performance and enjoyment. These findings are consistent with previous research that found that children enjoyed sport more when they played for coaches who engaged in high levels of reinforcement, responded to mistakes with encouragement and technical instruction, and used less punishment (Smith, Smoll, & Curtis, 1978). Moreover, in the study by Shattell et al. (2008), they found that youth with AD/HD could benefit by having compassionate and knowledgeable adults in their lives. They found that teachers who spent extra time

to help participants with their schoolwork helped balance some of the negative effects of AD/HD such as academic performance and negative self-perception at school. Another study with 16 young adults with AD/HD found that teachers or coaches who fail to notice or take action to help, or misunderstand and ridicule their struggles with AD/HD exacerbated these individuals' experiences (Bartlett, Rowe, & Shattell, 2010). On the other hand, Bartlett et al. found that helpful others were those who accepted the individuals as they were, and did not focus on their problems but, rather, found ways to help them learn and adapt. Findings from the literature and the current study suggest the coach has a crucial role in the sport experiences and involvement of these individuals.

There are potentially some theoretical explanations for coaches' influence on participants' sport experiences in the current study. Competence motivation theory (Harter, 1978, 1981) highlights the influence of significant others in shaping individual's self-perceptions, affect, and motivational orientation. Within the physical domain, coaches can significantly affect perceptions of competence, affect, and motivation by how they respond to participants' performance (Weiss & Amorose, 2007). Levels of perceived competence in turn influence achievement behaviours such as effort, persistence, continued involvement, and level, frequency, and duration of physical activity (Weiss & Amorose, 2007). Findings of the current study related to coaches' feedback and sport experiences are consistent with the literature that, in general, contingent praise following successful performance and informational feedback following errors are related to higher perceived competence in youth (Weiss & Amorose, 2007).

The influence of social support provided by the coaches on participants' sport experiences might be further explained by theoretical work in the area of social support. Social support has been defined as "an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient" (Shumaker & Brownell, 1984, p. 13). According to the stress-buffering model of social support, high levels of social support protect a person from the harmful effects of stress (Cohen & Wills, 1985). Furthermore, Rees (2007) identified specific types of social support and defined emotional support as "being there for comfort and security, leading to a person feeling loved and cared for" (p. 228) and informational support as "providing advice or guidance" (p. 228). In the current study, the support provided by the difference-making coaches in times of stress for participants resembled emotional and informational support. Not surprisingly, participants recalled that their 'good' coaches cared about their problems, built a relationship with them, and helped them correct mistakes.

Having coping strategies for their AD/HD symptoms was another difference maker in participants' sport experiences. Similar to the individuals in the study by Shattell et al. (2008), an awareness of the condition helped as it gave participants in the current study a reason for their behaviours. Participants also reported dealing with the condition with medications and strategies related to focusing and minimizing distractions. They perceived that medications were effective at improving their attention. A study with 17 boys (age range = 7.8 – 9.9) in baseball (Pelham et al., 1990) also showed that medication had beneficial

effects on attending to the game (i.e., on task in the ready position) but no effect on skill performance (i.e., batting percentages and batting judgments) during the game. Though medication may not improve the skill performance per se, these findings still might have relevance to individuals with AD/HD because participants in the current study revealed negative interactions with coaches and teammates who criticized or humiliated them for mistakes from being distracted. Reducing mistakes due to distraction might reduce the peer rejection and humiliation experienced by these individuals in sport (Pelham et al., 1990). In addition to personal coping strategies this again highlights the important role coaches may play in providing feedback and support to individuals with AD/HD.

Although medications had attention benefits, some of the participants who used them in the current study perceived side effects relating to decrease in energy and the ability to pick out stimuli and react quickly during games. Conant-Norville (2005) suggested that common side effects from stimulant medication might differ between the athletic population and the general population. The effect of AD/HD medication on sport participation is an area that warrants further investigation.

Alternative or complementary to medication, participants learned and used strategies to manage their AD/HD symptoms and behaviours. Participants reported benefits to their focus and sport performance from practicing these strategies. Some of the strategies mentioned have similarity to recommendations that might be conveyed to teachers dealing with individuals with AD/HD (Barkley, 2011). For example, the use of physical reminders (e.g., written cue

words) might fall under the broad recommendation of ‘make rules external.’ Avoid talking to teammates in game is in line with the recommendation of ‘eliminate high appeal distractors.’ These strategies might be of interest to coaches and athletes as they are relatively easy to learn and utilize. Future research is needed to explore the effectiveness of some of these strategies within the sport setting.

**Practical Implications**

The potential for sport to be beneficial for individuals with AD/HD is consistent with clinicians’ and researchers’ recommendation of sports for this population (Conant-Norville, 2005; Corrigan, 2003). However, results from this study showed that these individuals might have negative experiences in sport due to their AD/HD symptoms and negative interactions with their coaches and teammates. Thus creating a sport environment where these individuals are motivated to stay involved may be means of promoting involvement for these individuals so they can reap the potential benefits of sport. Findings revealed practical implications that might be useful for coaches with athletes with AD/HD as well as the athletes themselves.

First, promote coaches’ understanding of AD/HD. Understanding that mistakes and poor performances by these individuals might be caused by AD/HD can help coaches support these athletes. Knowing that some of their behaviours are symptoms of AD/HD and uncontrollable, rather than willful disobedience might change coach’s attitudes and behaviours toward these athletes. As one participant discussed in this study, informing his coach of his condition influenced

the feedback given to him. Thus, it is important for the coaches to understand the challenges of AD/HD if they have an athlete with the condition on the team. This might change their behaviours toward the athlete. Leading the athlete to feel more understood and supported.

Second, coaches can be more supportive. Supportive behaviour like spending extra time teaching skills, correcting mistakes, and demonstrating care about the athletes both in and beyond the sport context were positively perceived by the participants.

Third, coaches can use more reinforcement, constructive feedback, and less punishment following mistakes. Some participants discussed that criticisms without corrective instructions were associated with lower perceptions of competence and sport enjoyment, whereas corrective instructions following undesirable performances were associated with higher levels of perceived competence and sport enjoyment. The coaching literatures also support the use of praise, encouragement, corrective and technical instructions, and less punishment to promote youth athletes' perceptions of competence and interest in and enjoyment of their sport (Weiss & Williams, 2004).

Fourth, athletes might benefit from using medications and behavioural strategies to manage with their AD/HD symptoms. Medication has been shown to be effective at reducing core symptoms of hyperactivity, impulsivity, and inattentiveness (Goldman et al., 1998). Further, medication has been found to improve attention during a game (Pelham et al., 1990). However, the greatest benefits may be produced by combining medication with other behavioral

strategies (Jensen et al., 2001). In general, the strategies are associated with limiting the influence of distractibility. The strategies are separated into two types: 1) those that can be utilized by the athletes, 2) and those that can be utilized by the coaches.

Athletes may benefit by rehearsing plays and skills so that their responses become automatic. They can use physical reminders by having cue words in view to help them focus. They may also try to eliminate known distractors and avoid highly distracting situations.

Coaches of athletes with AD/HD can keep their instructions short and succinct as participants reported losing focus in lengthy instructions. Coaches may also give more frequent breaks or use more frequent but shorter work periods as athletes have trouble with sustained attention. Furthermore since physical reminders seem to help participants' focus, coaches may place cue words, rules, and instructions in the athletes' views.

Some of these strategies are similar to treatment suggestions for classroom and parent behavior management of children and adolescents with AD/HD - specifically, those suggestions that are related to decrease work load to fit child's attentional capacity, and make rules external (Barkley, 2011). Further, the current AD/HD literature view on treatment recommends treatments for AD/HD to "assist with the performance of a particular behaviour at the point of performance in the natural environments where and when such behaviour should be performed" (Barkley, 2011, p. 3). Thus, although the effectiveness of these specific strategies were not evaluated in this study, they are substantiated by the participants'

accounts, similar to strategies recommended to teachers and parents, at the point of performance, and in the natural sport environment.

The findings of this study should be judged in light of certain limitations. Findings may have limited generalizability to individuals who do not share similar characteristics. Further, sample consisted of all male young adults so the findings cannot be generalized to female youth sport participants. Study by Weiss and Smith (2002) has shown that the relationship between friendship quality and motivation related variables (e.g., sport enjoyment and commitment) is higher for female than male youth in sport, which suggests that female participants might value social factors more in their sport participation. Thus, speculatively, more information about the social influences of AD/HD in sport might surface by interviewing female sport participants. Future research may wish to explore the sport experiences of females with AD/HD.

Accurate recollection of past experiences might also be difficult. Though this is offset by the concern of the IPA methodology, which is with how people make sense of their lived experiences (Smith et al., 2009). Consistent with the Thomas' theorem, which states if people define situations as real then they are real in their consequences (Thomas & Thomas, 1928), what matters to IPA is how people perceive their experiences rather than the accuracy of the recalled events. Finally, though this study revealed the youth sport experiences of individuals with AD/HD, it could not fully capture the effect of AD/HD on these their sport participation. Future study may employ data triangulation technique by including

parents, coaches, teammates of these individuals to gain further understanding of how AD/HD effect sport participation.

These limitations were balanced by a number of strengths of the study, which included the rigorous approach to the development of the interview guide, the use of multiple interviews for data collection, and the engagement of all six participants in a member-checking protocol.

**Conclusion**

Youth with AD/HD can gain many benefits from participation in sport but they also face challenging and sometimes contradictory experiences. Getting them to stay involved is complicated by AD/HD and depended on supportive coaches. Finding ways to mitigate the influences of AD/HD in sport is important to their sport involvement. By providing enjoyable sport experiences, these individuals are more likely to stay in sport and reap the benefits of sport.

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# Appendix

## Appendix A: Information Letter

UNIVERSITY OF ALBERTA

Faculty of Physical Education and Recreation
E488 Van Vliet Centre
Edmonton, Alberta, Canada T6G 2H9

### INFORMATION LETTER

*Study Title:* **Youth Sport Experiences of Individuals with ADHD**



| Research Investigator | Supervisor |
|---|---|
| Homan Lee<br>Master of Arts Student<br>Faculty of Physical Education and Recreation<br>University of Alberta<br>Tel (780)708-4947<br>E-mail : homan@ualberta.ca | Dr. Nicholas L. Holt<br>Associate Professor<br>Faculty of Physical Education and Recreation<br>University of Alberta<br>Tel (780) 492-7386<br>E-mail: nick.holt@ualberta.ca |



Dear Participant,

I am conducting a study to explore the youth sport experiences of individuals with ADHD. **I want to find out your memories and experiences of participating in sport when you were a child or adolescent, what you liked and disliked about your sport experiences, and how your ADHD symptoms affected your sport experiences.** The results of this study will be used to support my thesis.

If you agree to participate in this study you will complete two interviews. The first interview will be conducted in an office at the University of Alberta. You will be asked about your experiences of sport participation as a child/adolescent. The interview will be audio-recorded and will take no more than 60 minutes.

I will invite you to a second interview once I have a summary of the analysis of your first interview. You can comment on the accuracy of my analysis, add any additional information, or remove any information if you wish. Again, the interview will be audio-recorded and will take no more than 30 minutes. Therefore, the total time commitment is a maximum of **90 minutes.**

***Benefits***

The information you provide may be useful for helping coaches and sport administrators alike to provide better sport opportunities for individuals with

ADHD. You will not benefit from being in this study.

***Risks***

Asking you to recall memories/experiences of sport participation may bring up unpleasant memories or lead to discussions of those experiences. To address this, here is the contact information of the Clinical Services located at the University of Alberta. The Clinical Services offers counseling services for adults. If you need their services, you may contact them by phone at (780) 492-3746.

***Anonymity and Confidentiality***

When the audio files from the interviews are transcribed I will remove your name (and assign you a pseudonym) and remove any personal information. Any information that you provide remains confidential. Furthermore, all information will be stored in a locked file cabinet in a locked office at the University of Alberta. Only members of the research team will have access to this information. The audiotapes will be kept for five years after the publication of the thesis, after which they will be destroyed.

***Freedom to Withdraw***

Your participation in this study is voluntary. This means that you do not have to participate in the study. There will be no negative consequences if you do not want to participate. Your information will be removed from the study with no consequences if you decide later that you do not want to participate. If you wish to withdraw, please contact me within six weeks from the day you completed the second interview.

If you have concerns about this study, you may contact Dr. Kelvin Jones, who is the Chair of the Research Ethics Committee for the Faculty of Physical Education and Recreation at the University of Alberta (Tel: 780 492 0302), Email: kelvin.jones@ualberta.ca). Dr. Jones has no direct involvement in the study.

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Sincerely,

Homan Lee

**Appendix B: Recruitment Poster**

UNIVERSITY OF ALBERTA
Faculty of Physical Education and Recreation
E488 Van Vliet Centre
Edmonton, Alberta, Canada T6G 2H9

CASA
Children and Adolescent Sport and Activity Lab

# Research Participants Needed!

## For a study on youth sport experiences of individuals with ADHD

- **Are you a male between 18 and 25 years of age?**
- **Have you been diagnosed with Attention Deficit/Hyperactivity Disorder?**
- **Did you play team sport(s) for 3 or more seasons as a child or adolescent?**

**If you answered YES to these questions, you may be eligible to participate in this interview study.**

**The purpose of this study is to understand sport experiences of individual with ADHD and how ADHD symptoms affect sport participation.**

*Please call Homan Lee at (780)708-4947 or email homan@ualberta.ca for more information*

## Appendix C: Informed Consent Form

### INFORMED CONSENT FORM

UNIVERSITY OF ALBERTA

Faculty of Physical Education and Recreation
E488 Van Vliet Centre
Edmonton, Alberta, Canada T6G 2H9

*Study Title:* **Youth Sport Experiences of Individuals with ADHD**



| **Research Investigator** | **Supervisor** |
|---|---|
| Homan Lee<br>Master of Arts Student<br>Faculty of Physical Education and Recreation<br>University of Alberta<br>Tel (780)708-4947<br>E-mail : homan@ualberta.ca | Dr. Nicholas L. Holt<br>Associate Professor<br>Faculty of Physical Education and Recreation<br>University of Alberta<br>Tel (780) 492-7386<br>E-mail: nick.holt@ualberta.ca |



| | | |
|---|---|---|
| Do you understand that you have been asked to be in a research study? | Yes | No |
| Have you read and received a copy of the attached Information Sheet? | Yes | No |
| Do you understand the benefits and risks involved in taking part in this research study? | Yes | No |
| Have you had an opportunity to ask questions and discuss this study? | Yes | No |
| Do you understand that you are free to refuse to participate, or to withdraw from the study at any time, without consequence, and that your information will be withdrawn at your request? | Yes | No |
| Has the issue of confidentiality been explained to you? Do you understand who will have access to your information? | Yes | No |

I agree to take part in this study:

_____ _____

Signature of Research Participant Date

**Appendix D: Interview Guide for First Interview**

Thank you for participating in this study about childhood sport experiences and ADHD. I am interested in your perceptions of how ADHD affected your sport participation experiences. There are no right or wrong answers. I am purely interested in your perceptions and experiences. Everything that is discussed will be kept confidential and your name will be replaced by a pseudonym to ensure anonymity. As well, I understand that asking you to look back on certain experiences might bring back unpleasant memories. You do not have to talk about anything that you do not want to. Findings from this study may shed light on the sport experiences of individuals with ADHD and inform coaches and programmers alike on how to provide better sport participation experience for the individuals with ADHD. Is it okay if I record our conversation today? We can begin if you do not have any further question.

Do you remember when you were diagnosed with ADHD? Who diagnosed you? How were you diagnosed? Do you remember what was done about your ADHD following diagnosis? Do you remember being diagnosed for any other condition on top of ADHD?

1. Can I get you to draw on a piece of paper your sport participation history? I am interested in all the different sports you did as well as the length of each involvement.
2. Can you tell me a story about having ADHD in sport?
*Probing questions: Would you elaborate on that? How did it make you feel?*
3. Can you tell me a story about having ADHD and interacting with people in sports?
*Probing questions: Would you elaborate on that? How did it make you feel?*
*Probing questions: with your coach? With your teammates? With your opponents?*
4. Can you tell me what was your best memory of sport participation?
*Probing questions: Would you elaborate on that? What happened? Where? Who with? When? What made it the best memory? How did it make you feel?*
5. Can you tell me what was your worst memory of sport participation?
*Probing questions: Would you elaborate on that? What happened? Where? Who with? When? What made it so bad? How did it make you feel?*
6. Can you tell me what you might have learned through your sport participation?
*Probing questions: What did you mean by that? Would you elaborate on that?*
7. Do you think that participating in sport affected your life in other contexts such as school, home, with friends?
*Probing questions: What did you mean by that? Would you elaborate on that?*
8. Looking back at that chart, can you tell me what contributed to your decision to drop out/stay with certain sport?
*Probing questions: Would you elaborate on that? How did it make you feel?*
*9.* Now we've talked about all this, do you think ADHD affected your sport experiences? In what way do you think it has affected you? Can you give me an example of this?

9. Before we conclude, is there anything that you would like to comment on that I haven't asked?

Thank you for participating in this interview with me. Once I have a summary of the finding from this interview I will contact you to set up the second interview. During this interview, I will ask you to look at the summary of findings and provide feedback on whether they captured your experience. Also, it can be an opportunity to elaborate on the discussions we had today.

**Appendix E: Interview Guide for Second Interview**

Thank you for participating in this second interview with me. I have prepared a summary of the findings from our first interview for you to look over. Please take a moment to read it thoroughly. I would like to ask you some questions about your thoughts on the analysis after you are finished.

1. Have I captured the essentials of how ADHD affected your sport experiences in this summary?
2. How representative/accurate is this summary of your sport participation experience?
3. Would you like to add or remove parts of the summary to improve it?
4. Do you recall other instances where ADHD affected your sport participation?