Abstract

The extent to which athletes from various sports and competition levels overcome adversity has been a topic of interest in sport psychology for some time. In recognizing the theoretical and practical implications derived from this line of inquiry, the current study sought to further our understanding by investigating a sample of elite athletes who were expected to share long-term objectives, and who had experienced a common adversity. Semi-structured interviews were conducted with 12 professional athletes ($M_{\text{age}} = 27.25; SD = 3.28$) who had reached the National Hockey League (NHL; i.e., long-term objective) despite not being selected in the annual NHL Amateur Entry Draft (i.e., common adversity). As a general summary, four higher-order themes were gleaned from participant responses, including information pertaining to experienced adversities and stressors (e.g., organizational stressors), long-term objectives of playing in the NHL, psychological attributes (e.g., passion, focus) and mechanisms for goal attainment (e.g., deliberate practice, perceived social support). Interestingly, contextually relevant information emerged pertaining to the developmental stream that participants had taken (i.e., NCAA vs. Major Junior). Overall, our findings are in concert with previous literature that suggests the influence of various psychosocial factors for goal achievement when faced with adversity (e.g., Howells & Fletcher, 2015; Tamminen, Holt, & Neely, 2013). Additionally, our findings indicate that an athletes’ ability to identify and address weaknesses following adversity is a main contributor to their subsequent success. Although undrafted NHL players were recruited because of their shared adversity, participants shared similar experiences as other elite athletes in describing a variety of adversities that contributed to their eventual achievement (e.g., Sarkar & Fletcher, 2014a). Future research could benefit from a longitudinal approach building from this study’s design, whereby athletes are interviewed prior to, during, and following the draft process, to gain insight into the timing and implementation of the factors and experiences that facilitate achievement despite adversity.
Co-Authorship

The included manuscript titled, “Achievement despite adversity: A qualitative investigation of undrafted National Hockey League players” is a collaboration between myself (Jordan D. Herbison) and Drs. Luc Martin (Supervisor) and Mustafa Sarkar. My position as lead author on this manuscript accurately represents my contributions to this research. The idea for the project was conceived prior to enrolling in the Master’s program at the University of Lethbridge. I was responsible for designing the study, completing the required ethics applications, developing the semi-structured interview guide, participant recruitment, data analysis, and writing each section of the manuscript.

Dr. Martin’s position as second author represents his supervisory role in this project. Upon completion of each facet of this project, Dr. Martin would be the first to review and provide feedback on the documents. Dr. Martin and I met on a regular basis to discuss the study’s progress and he provided advice or feedback when necessary.

Dr. Sarkar’s position as third author represents his consultation role on this project. He provided valuable feedback at four key stages of the study: (a) prior to data collection; (b) following the fourth participant interview; (c) following the final participant interview, and; (d) upon completion of the first draft of the manuscript. Dr. Sarkar’s expertise in qualitative methodologies and his interest in adversity-related research in sport were instrumental in developing and refining the components that make up the final manuscript.
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Prologue

The inception of this project originated from a personal interest in the sport of hockey and elite athletes who reach the highest level despite facing adversity. My hockey-related experience includes participation as a youth (up to the age of 15 years old) and as an administrator following the completion of my undergraduate degree. Having worked as an administrator for a team that competes in one of Canada’s top developmental leagues, I have witnessed elite hockey players’ preparation for and reactions to NHL Amateur Entry Draft. In addition, as they pertain to the current thesis, my experience helped to (a) access the target population (i.e., undrafted NHL players); (b) develop the format and content of the semi-structured interview guide (see Appendix E); (c) build rapport with participants, and; (d) more clearly understand and contextualize participants’ responses. However, these strengths should be taken in light of the fact that I do not have elite level playing experience in the sport of hockey. My familiarity with the developmental process is the result of research and previous interactions with individuals who have first hand experience with elite hockey teams and personnel (i.e., administrators, coaches, athletes). I believe the experiences of undrafted NHL players to be an important topic to investigate because of the sport’s cultural influence in Canada, its lack of exposure of the general adversity research, and the potential for practical applications that can serve to benefit athlete experiences in hockey.
Chapter 1

Introduction

Adverse experiences are considered to be an inevitable part of human life (Bonanno, Galea, Bucciarelli, & Vlahov, 2007). Traditionally, adversity research has involved participants who have experience isolated, negative events, known as potentially traumatic events. This line of inquiry has largely focused on the consequences of such events, and the factors that predispose someone to success or failure in the face of adversity (Tedeschi & Calhoun, 2004). As this body of literature has grown, researchers have identified additional sources of adversity (i.e., ongoing daily stressors, positive life events; Luhmann, Hofmann, Eid, & Lucas, 2012), factors that help to prevent or buffer negative consequences (e.g., psychological resilience; Luthar & Cicchetti, 2000), and the potential for personal growth following adverse experiences (Tedeschi & Calhoun, 2004). Adversity can cause devastating consequences under certain circumstances; however, its inevitability and potential to catalyze adaptive personal and social development has spurred continued research interest.

Sport is one domain where the opportunities to study adversity are bountiful. This can be attributed to the fact that the development and maintenance of elite sport performance is effortful, time consuming, and highly competitive (Rees et al., 2016). For aspiring athletes committed to reaching elite levels of sport, successful engagement with adversity is considered a prerequisite (Fletcher, Hanton, Mellalieu, & Neil, 2012; Fletcher & Sarkar, 2012; Sarkar & Fletcher, 2014). Additionally, the adversities identified by elite athletes are highly variable in terms of frequency, duration, and intensity (Sarkar & Fletcher, 2014). Indeed, research indicates that elite athletes experience ongoing demands or stressors from their personal lives, competition, and sport organizations (Fletcher, Hanton, & Mellalieu, 2006; Hanton, Fletcher, & Coughlan, 2005; Mellalieu, Neil, Hanton, & Fletcher, 2009; Sarkar & Fletcher,
2014). As such, sport psychology researchers are motivated to understand the factors that help individuals succeed when faced with a broad spectrum of adversities.

Achievement despite adversity has been attributed to a number of demographic (e.g., socioeconomic status; Bonanno et al., 2007), intrapersonal (e.g., psychological resilience; Condly, 2006; Seery, 2011), and interpersonal (e.g., social support; Langford, Bowsher, Maloney, & Lillis, 1997) factors. In the context of sport, researchers have approached this topic by investigating athletes’ experiences through the lens of specific psychosocial constructs (e.g., psychological resilience, hardiness, mental toughness, grit; Fletcher & Sarkar, 2012; Hanton, Evans, & Neil, 2003; Jones, Hanton, & Connaughton, 2002; Martin, Byrd, Watts, & Dent, 2015). Although a wealth of information has been generated, in considering the variability in the adversities that athletes face, a more holistic perspective in relation to the influential factors that have contributed to athlete achievement, while contextualizing responses in relation to a specific adversity was deemed a worthy endeavor.

Elite ice hockey is a sport where experiences of adversity are not well understood, and this is somewhat surprising given the cultural emphasis of the sport in Canada. Notably, 27% of Canadian adults (i.e., ages 18-64 years; Canadian Fitness and Lifestyle Research Institute, 2010) and 74% of youth (i.e., ages 5-17 years; Canadian Lifestyle and Fitness Research Institute, 2013) participate in organized sport. Of these individuals, 28% of adults (Canadian Fitness and Lifestyle Research Institute, 2010) and 24% of youth (Canadian Lifestyle and Fitness Research Institute, 2013) play organized ice hockey. At the professional level, Canada is also the most well represented nationality (47.5% of players) at the world’s highest level of competition, the National Hockey League (NHL; Quanthockey.com, 2017). For top amateur players in Canada, the most direct developmental path to the NHL requires athletes to demonstrate their abilities in the Canadian Hockey League (CHL). Entry into the CHL often involves drastic changes to the lives of 15 to 16 year old youth, involving relocation from social support networks...
(e.g., moving in with a billet family, transferring to a new high school) and immersion into a competitive schedule similar to that of professional leagues (e.g., travel, large audiences, evaluation by professional scouts). If amateur players perform well and demonstrate the potential sought by NHL organizations, they are likely to be selected in the NHL Amateur Entry Draft (NHL Draft) when they are 18 years of age. As such, the NHL Draft represents a significant event where an aspiring amateur ice hockey player’s potential to play professional hockey can be confirmed or denied. Interestingly, and of particular importance to the current thesis, despite the low odds of being an undrafted NHL player (108 of 690 players were undrafted at the time of participant recruitment), some overcome this adversity and achieve successful NHL careers. Therefore, the purpose of this study is to explore the factors that contributed to this elite sample’s (i.e., undrafted NHL players) ability to overcome a common adversity (i.e., not being selected in the NHL Draft) on the path to achieving their long-term objectives of playing in the NHL.

The following chapters contextualize this investigation through a review of the pertinent literature (Chapter 2); present the findings of this research in manuscript format (Chapter 3), and; highlight the key findings and future directions stemming from this Master’s Thesis (Chapter 4). In electing to use the manuscript format for this Master’s Thesis, I understand that examiners may find sections of the manuscript to overlap with other sections, and I appreciate their understanding of this limitation.
References


Chapter 2

Literature Review

Sport participation provides opportunities for individuals to accumulate physical activity and acquire a number of psychosocial benefits (e.g., Vella, Cliff, Okely, Scully, & Morley, 2013). Importantly, despite such benefits, athletes are also expected to experience numerous adverse events (e.g., Rees et al., 2016). Whereby this might seem detrimental to eventual athlete healthy development, research with elite level athletes has outlined benefits that can result from successful engagement with adverse experiences (Sarkar & Fletcher, 2014). For example, overcoming adversity has led athletes to develop stronger social networks and enhanced psychological attributes (e.g., confidence, motivation; Galli & Reel, 2012). It is understood that the path to elite performance can be highly effortful and time consuming for aspiring athletes (Rees et al., 2016), and the ability to manage and overcome adversity is considered to be a prerequisite to reaching the highest levels of sport (Fletcher, Hanton, Mellalieu, & Neil, 2012; Fletcher & Sarkar, 2012; Sarkar & Fletcher, 2014a). In recognizing that a great deal is yet to be understood regarding the beneficial outcomes of adversity for sport participants, this section will review the pertinent literature across psychology to synthesize the current understanding of the contributions to sport performance made through engagement with adversity.

The experience of adversity at some point during an individual’s lifespan is considered to be an inevitable occurrence (Bonanno, Galea, Bucciarelli, & Vlahov, 2007). Traditionally, inquiries into the psychological effects of adversity focused predominantly on potentially traumatic events and the psychiatric problems stemming from such events (Bonanno et al., 2007; Condly, 2006). Interestingly, despite the tendency to view adversity as solely resulting in debilitative outcomes, research has also demonstrated the potential for positive outcomes to occur. When individuals engage with adversity, we
must consider the associations between various demographic (e.g., socioeconomic status; Bonanno et al., 2007), intrapersonal (e.g., psychological resilience; Condly, 2006; Seery, 2011), and interpersonal (e.g., social support; Langford, Bowsher, Maloney, & Lillis, 1997) factors in relation to the likelihood of experiencing facilitative or debilitative outcomes. In addition, the context in which the adversity is experienced must also be considered. As one example, sport is a performance context where successful engagement with adversity is believed to be a prerequisite to world-class achievement (Fletcher, Hanton, Mellalieu, & Neil, 2012; Fletcher & Sarkar, 2012; Sarkar & Fletcher, 2014a). This is widely attributed to the fact that the attainment of sport expertise or elite performance are time consuming, effortful, and competitive (Durand-Bush & Salmela, 2002; Rees et al., 2016). As a consequence, the topic of adversity and the factors that contribute to positive or adaptive outcomes has garnered the attention of researchers interested in optimal sport performance. Prior to speaking to the implications for elite sport however, the following sections will describe the conceptualization of adversity, introduce potential benefits associated with experiencing adversity, and discuss the factors most often investigated in relation to successfully dealing with adversity.

**Defining Adversity**

Adversity is a popular psychological term that has largely been used in reference to a single, contained, negative event (i.e., potentially traumatic event). This is attributable to the origins of the research on the topic, which was predominately conducted with individuals who had experienced a significant potentially traumatic event, and had entered the medical system due to the presence of psychological difficulties (Tedeschi & Calhoun, 2004). Along these lines, Luthar and Cicchetti (2000) define adversity as “the negative life circumstances that are known to be statistically associated with adjustment difficulties” (p. 858). It is important to note, that these “adjustment difficulties” can range from temporary symptoms such as difficulty sleeping or cognitive rumination of the event (Shalev, 2002),
to the precocious development of neural pathways and permanent changes in the neuroendocrine system (i.e., physiological response to stress; Cowan, Callaghan, Kan, & Richardson, 2016). Clearly, when the term adversity is used to reference events with such problematic consequences, the “negative” connotation is certainly appropriate.

Interestingly, a growing body of literature demonstrates that ostensibly positive life events (e.g., childbirth, new employment) can also have detrimental effects on individuals (for a review, see Luhmann, Hofmann, Eid, & Lucas, 2012). For example, new employment has been shown to coincide with decreases in cognitive and overall subjective well-being, suggesting that the novel demands or characteristics of a new work environment may be unanticipated by a reemployed individual, resulting in a negative response (Luhmann et al., 2012). In the context of sport, researchers have proposed that athletes may experience similar effects following success (e.g., winning a championship), which creates a more challenging competitive environment for subsequent performances (Gucciardi, 2010; Sarkar & Fletcher, 2014a). Consequently, although sport research supports the tendency for athletes to experience debilitative outcomes emanating from events that could generally be classified as negative (e.g., injury; Mellalieu, Neil, Hanton, & Fletcher, 2009), adversity has also been experienced as a result of positive instances (e.g., winning a championship; Sarkar & Fletcher, 2014a).

Whereas continued investigations pertaining to the implications for singular events such as potentially traumatic events and positive life events are worthwhile, one major impediment is their unpredictability. For this reason, sport-related studies that have investigated the effects of potentially traumatic events typically afford participants the flexibility of selecting the specific events or experiences that they would like to discuss (e.g., Fletcher & Sarkar, 2012; Galli & Reel, 2012; Galli & Vealey, 2008). This design has led researchers to draw conclusions about how athletes engage with adversity based on a variety of circumstances and experiences. However, our understanding of how athletes handle adversity
could benefit from the investigation of a common adversity among a group of athletes within a specific context. This is not to say that previous designs have not made important contributions to our understanding, as allowing athletes to define the experiences they perceive as adversities has highlighted the impact of ongoing stressors in relation to athletic performance (e.g., Hanton, Fletcher, & Coughlan, 2005; Mellalieu et al., 2009). Importantly, investigations involving the effects of ongoing stressors has enabled researchers to study adversity that would not otherwise be easily accessible due to the unpredictability of potentially traumatic events (Luhmann et al., 2012). Notably, athletes who strive to reach elite levels of performance engage with adversity during training and competition as a means of self-improvement (Fletcher & Sarkar, 2012); however, these athletes are also susceptible to the everyday stressors experienced by the general population. As such, it is important to understand other potential sources of ongoing stress when investigating athletes’ engagement with adversity.

Compared with other careers, elite athletes must constantly compete with themselves, their teammates, and opponents to realize the limits of their ability. This process explicitly involves competitive stressors, which are defined as, “the environmental demands associated primarily and directly with competitive performance” (Mellalieu, Hanton, and Fletcher, 2006, p. 3). Such stressors are not limited to what happens during competition, but also include demands preceding and following the events (i.e., during warm-ups for a competition; Mellalieu et al., 2009). Although there are numerous examples of what constitutes a competitive stressor (e.g., injuries, preparation, self-presentation, rivalry; Sarkar & Fletcher, 2014a), such perceptions appear to vary for athletes competing at different levels. For example, elite athletes commonly cite the beginning of a competition and the risk of injury (Hanton et al., 2005), whereas non-elite athletes tend to reference nutritional issues and a shortened or rushed warm-up as their most prevalent competitive stressors (Mellalieu et al., 2009). The purpose of these examples is simply to
reiterate that athletes are likely to experience different stressors, and the extent to which they attribute them as stressors is dependent on contextual factors such as competitive level.

Considering that a significant proportion of the adversity in sport literature has been oriented toward elite level athletes, general themes in relation to the types of stressors that they experience have been advanced (Sarkar & Fletcher, 2014a). The first of these involves the stressors related to the broader sport organization, defined as “the environmental demands associated primarily and directly with the sport organization within which an individual is operating” (Fletcher, Hanton, Mellalieu, 2006, p. 359). Findings related to this category provide insight into organizational role dynamics (e.g., athlete-media relations), their influence on athletes’ performance, and ways in which they can evolve over time (e.g., growing influence of social media; Fletcher et al., 2012). Notably, multiple studies highlight the increases in experiencing organizational stressors for elite athletes in comparison to the more general competitive stressors (e.g., Fletcher et al., 2012; Hanton et al., 2005). Indeed, whereas athletes have experienced competitive stressors for the better part of their careers, it is not until the elite levels that the sociocultural, political, and economic factors inherent in elite sport (e.g., contract negotiations) become a central focus. For example, athletes competing at elite levels garner more media and public attention, typically earn higher incomes, and are required to travel more frequently and to farther destinations for their competitions (Fletcher et al., 2012). Consequently, this exposes them to different organizational stressors than are experienced earlier in their careers and by their non-elite counterparts.

Another type of stressor that has garnered research interest in elite sport populations is more personal in nature. Studies investigating personal stressors indicate that this category is influenced by experiences and relationships outside of sport that are valued by the athlete. As one example, collegiate athletes often cite difficulties balancing their academic, athletic, and personal roles and their social relationships (Galli & Reel, 2012). Comparatively, athletes competing on the international stage have
discussed family-related issues (e.g., parental responsibilities, missing family), and for those elite athletes who must also have careers outside of sport (e.g., Olympians), finding a work-life balance has been described as particularly difficult (Sarkar & Fletcher, 2014a). To be clear however, whereas there are certainly idiosyncrasies pertaining to the personal stressors experienced by elite athletes that might not be prevalent in other populations, these individuals nonetheless report adverse experiences that transcend involvement in sport (e.g., the death of a family member or close friend; Sarkar & Fletcher, 2014a).

Therefore, and as a general summary, the inherent competitiveness of elite sport puts those involved in a position to constantly either experience unanticipated and singular events (both negative and positive) or more frequent stressors. However, these need not be automatically problematic or deleterious, which will be discussed in greater detail in the following section.

**Potential Benefits Derived from Experiences of Adversity**

Despite the detrimental effects associated with adversity, a growing body of literature indicates that adverse experiences can lead to developmental or growth-related benefits. Seery (2011) found that people who experienced moderate amounts of adversity reported better mental health and well-being than those who reported either no and high amounts of lifetime adversity. This general sentiment is supported by research with elite sport performers (i.e., Olympians; World Champions), who stated that their athletic successes would never have occurred were it not for their experiences with adversity (Fletcher & Sarkar, 2012; Galli & Reel, 2012; Galli & Vealey, 2008). Furthermore, engagement with adversity has been shown to improve individuals’ capabilities to handle future occurrences through both enhanced social support networks and an acquired sense of mastery and an ability to control and manage adverse situations (Seery, 2011). Similarly, elite athletes discuss other important implications, such as facilitating change in their life philosophies and recognizing the important role that sport plays in their lives (Galli & Reel, 2012; Tamminen, Holt, & Neely, 2013). The notion that adaptive responses and opportunities for
personal development can emerge through adversity has been referred to as posttraumatic growth (Tedeschi & Calhoun, 2004), and although it is widely recognized that not all adverse instances can provide such opportunities, it is important to understanding what makes growth more or less likely to occur.

Posttraumatic growth refers to positive outcomes that result from adequately handling adversity (Calhoun, Cann, & Tedeschi, 2010; Tedeschi & Calhoun, 2004), and the idea of personal growth through suffering has been observed during some of history’s most challenging times (e.g., Frankl, 1963). Although there are various factors that influence one’s perception of personal growth (e.g., protective factors, cultural and social norms, social support; Calhoun et al., 2010), the process generally includes several key stages. First, to initiate the posttraumatic growth process, the adversity must disrupt an individual’s assumptive beliefs. Assumptive beliefs are our developed expectations about reason, and how we should behave in the world (Tedeschi & Calhoun, 2004). Disruption of these assumptions causes emotional distress and raises questions about our goals and established schemas about the world (Calhoun et al., 2010). Shortly after this disruption, an individual is expected to experience both intrusive and deliberate rumination of the event and its associated effects. This rumination represents the cognitive work that is required to rebuild one’s worldly assumptions (Calhoun et al., 2010). Mechanisms identified as aiding the rumination process are self-disclosure and social support, as these are believed to encourage the development of new assumptive beliefs and to strengthen protective factors (Calhoun et al., 2010; Tedeschi & Calhoun, 2004). As we have previously alluded to, sport is a context where elite performance and long-term achievement are often sought. Not surprisingly then, a large body of literature exists pertaining to specific factors (over and above the identified mechanisms) that not only facilitate personal growth, but also help buffer the disruptive effects of adversity. These factors will be discussed in greater detail in the following section.
An Overview of Protective Factors Typically Investigated in Sport

Many sport and performance psychologists are interested in factors that have been shown to help manage adverse experiences and protect athletes from negative consequences. As a general summary of the literature, the most prominent psychological constructs (i.e., factors) associated with achievement despite adversity include psychological resilience, hardiness, grit, and mental toughness. Although, psychological resilience, hardiness, and grit generally originated in other sub-disciplines of psychology, they have all received research attention in sport (e.g., Fletcher & Sarkar, 2012; Larkin, O'Connor, & Williams, 2016; Sheard & Golby, 2010). Similarly, mental toughness has likely received the most sport specific research attention, with coaches, athletes, and spectators alike commenting on its importance in this domain (Connaughton, Hanton, & Jones, 2010). We acknowledge that there is a long list of factors that could have been introduced in this section (e.g., confidence, motivation, passion, etc.), yet the four selected are viewed as “higher-order” constructs as their conceptualizations incorporate a variety of these more specific factors, and all have received previous attention in sport.

Psychological resilience. In the athletic context, the conceptualization of psychological resilience proposes that the ability to turn adversities and stressors into facilitative responses is contingent upon an individual’s meta-cognitions (i.e., the knowledge of and control over one’s thoughts) and appraisal of the experience as a surmountable challenge (Fletcher & Sarkar, 2012). Additionally, this framework proposes that several psychosocial factors (i.e., positive personality, focus, motivation, confidence, perceived social support) influence the effectiveness of these meta-cognitions and challenge appraisals (Fletcher & Sarkar, 2012). An important implication of resilience is that it does not reflect personal growth in the wake of adversity, but rather, represents the demonstrated ability to maintain normal functioning when encountering such experiences (Fletcher & Sarkar, 2013).
Despite its somewhat recent emergence in the sport setting, research involving resilience has been instrumental in informing our understanding of how athletes can achieve through adversity. For example, retrospective interviews with Olympic champions highlighted their innate abilities to handle both the initial exposure to adversity (reflective of trait resilience) as well as their capacities to adapt and change when inadvertent adversities emerged (reflective of posttraumatic growth and state resilience; Fletcher & Sarkar, 2012; Sarkar & Fletcher, 2014a, 2014b). Although athletes are believed to have a threshold for agitation (in relation to the constant stressors) and that the duration and intensity of the distress is likely to initiate a response the longer it persists (e.g., Galli & Vealey, 2008), it is clear that factors such as an athletes’ experienced social support, their confidence, and motivation to succeed all influence their ability to withstand the adversity (Fletcher & Sarkar, 2012). As a summary, increased levels of psychological resilience are associated with improved psychological well-being, athletic achievement, sport engagement, and overall quality of life (Martin, Byrd, Watts, & Dent, 2015; Nezhad & Besharat, 2010).

**Hardiness.** Hardiness is a well-established construct in psychology, and is proposed to represent an existential courage to pursue what is most important to an individual (e.g., Maddi, 2004; Maddi et al., 2013; Maddi, Matthews, Kelly, Villarreal, & White, 2012). Conceptually, hardiness is determined by perceptions of commitment, control, and challenge (Kobasa, 1979). According to Maddi (2004), hardy individuals (a) remain committed to the behaviours and relationships that are perceived as important to goal attainment, (b) perceive a level of control in realizing their goals, and (c) view obstacles as challenges that can be overcome. Furthermore, Maddi (2004) proposed that hardiness is the courage to heed what is happening in the present, and change paths if doing so is more advantageous and growth orientated. Individuals who are considered hardy believe stressful situations should not be avoided because resolutions exist, and these will result in personal development (Kobasa, 1979).
In sport, numerous studies have demonstrated associations between hardiness and performance. For example, elite athletes exhibit higher levels of hardiness in comparison with less elite counterparts (Golby & Sheard, 2004; Sheard & Golby, 2010), which is perhaps not surprising as hardy athletes demonstrate better peripheral vision (Rogers, Alderman, & Landers, 2003), interpret anxiety as facilitative rather than debilitative (Hanton, Evans, & Neil, 2003), and have a tendency to miss less time due to injury (Ford, Eklund, & Gordon, 2000). From a more general perspective, hardy athletes expressed greater psychological well-being and were rated more favourably in athletic achievement by their coaches (Nezhad & Besharat, 2010; Ramzi & Besharat, 2010). Accordingly, findings in the sport setting indicate the benefits of hardiness in relation to achieving a long-term objective, and largely attribute this to an athlete’s attentiveness to his/her control over a situation, their commitment level, and their perception of challenge rather than adversity.

**Grit.** Grit is conceptualized as representing an individual’s interest and sustained perseverance for the achievement of long-term objectives (Duckworth, Peterson, Matthews, & Kelly, 2007), and it is the most recent of these psychological constructs to be investigated in the context of sport (e.g., Larkin et al., 2016; Martin et al., 2015). Generally, grit is believed to influence an individual’s ability to stay the course (maintain motivation and persistence of effort) through adversity and obstacles, regardless of the presence or absence of positive reinforcement (Duckworth et al., 2007). In understanding the high demands of elite sport performance (Rees et al., 2016), evidence of grit’s positive influence in similar challenging environments is promising.

Grit is composed of two distinct but synergistic dimensions: Perseverance of Effort (i.e., perseverance) and Consistency of Interest (i.e., passion; Duckworth et al., 2007; Duckworth & Quinn, 2009). Together, these dimensions consistently influence achievement in varying contexts, and while they are related, the relation differs sufficiently as to indicate distinction (Duckworth et al., 2007). As an
example, Perseverance of Effort was a better predictor of increased Grade Point Average (GPA), participation in extracurricular activities, and decreased television viewing among adolescents (Duckworth et al., 2007). Conversely, Consistency of Interest negatively predicted the number of career changes among adults, and positively predicted achievement at the National Spelling Bee competition (Duckworth & Quinn, 2009). Interestingly, despite this distinction, it appears as though success in the most challenging of situations requires the presence of both dimensions (Duckworth & Quinn, 2009). To be clear, total grit score (i.e., the combination of both dimensions) was the strongest predictor of reaching the final round at the National Spelling Bee, as well as retention among West Point cadets than either factor alone (Duckworth & Quinn, 2009).

In addition to predicting achievement in challenging and competitive environments, grit has been found to buffer the psychological disruption caused by negative life events (Blalock, Young, & Kleiman, 2015). Importantly however, although sport research has shown grit to be positively associated with sport engagement (Larkin et al., 2016; Martin et al., 2015) and cognitive-perceptual expertise (Larkin et al., 2015), there is a lack of targeted investigations pertaining to overcoming adverse events and experiencing personal growth or achievement in this setting.

**Mental toughness.** Researchers interested in elite athletes have long recognized mental toughness as an important contributor to optimal sport performance (e.g., Gould, Dieffenbach, & Moffett, 2002; Gould, Hodge, Peterson, & Petlichkoff, 1987). In fact, international level athletes speak to mental toughness as indicative of their abilities to cope with the many demands of sport involvement (e.g., competition, training, lifestyle), and to outperform opponents in relation to determination, focus, confidence, and arousal regulation (Jones, Hanton, & Connaughton, 2002). Additionally, in confirming the earlier definition advanced for mental toughness with Olympic level coaches, athletes, and sport psychology consultants, Jones, Hanton, and Connaughton (2007) outlined a framework comprising 30
attributes of a mentally tough competitor. Attributes were organized within the four general dimensions of “Attitude/Mindset” (e.g., belief, focus), “Training” (e.g., using long-term goals as the source of motivation, controlling the environment, pushing yourself to the limit), “Competition” (e.g., regulating performance, handling pressure, awareness and control of thoughts and feelings), and “Post-Competition” (e.g., handling failure, handling success; Jones et al., 2007).

Ongoing research on the topic of mental toughness has focused on understanding how it is developed and maintained by elite level athletes in a variety of sports. From their study of top English cricketers, Bull, Shambrock, James, and Brooks (2005) developed The Mental Toughness Pyramid that explains how the environment, an individual’s personality, their attitudes, and their cognitions can influence the development of mental toughness. Together, investigations advancing the conceptualization of mental toughness indicate that a wide range of personal, social, and environmental factors influence an athletes’ ability to handle adversity and experience facilitative responses following such instances.

Summary of the Extant Literature and Purpose of the Thesis

Whereas an extensive amount of research attention has been dedicated to investigating athletic achievement in sport, the extant literature has (a) predominantly identified a specific psychological construct as a lens of choice (e.g., psychological resilience, hardiness, grit, mental toughness), (b) investigated perceptions from a wide range of athletes (e.g., level of competition, type of sport), (c) allowed athletes to identify the adversities that were most salient to them, and finally, (d) focused on either competitive, organizational, or personal stressors. As such, taking a more holistic perspective in relation to what factors contributed to athlete achievement could provide additional insight into the dynamic process of experiencing adversity. Specifically, identifying a population that objectively achieved excellence, while overcoming a common major adverse event, and subsequent competitive and organizational stressors, could provide additional generalizations that could have both theoretical and
practical applications. Therefore, the following section will provide context for the population selected in the current thesis.

**Relating Adversity to Elite Ice Hockey.** In consideration of the many athletes who have retrospectively emphasized the value of engaging with adversity for personal development (e.g., Fletcher et al., 2012; Fletcher & Sarkar, 2012; Sarkar & Fletcher, 2014a), gathering knowledge from various sports is meaningful to ensuring our understanding is comprehensive and accurate. Professional ice hockey represents one sport where the demands of competing at the highest level are not well understood.

Ice hockey is considered a cornerstone of contemporary Canadian culture. This is evidenced by its popularity among Canadian citizens, its presence in the media, and the success of Canadians competing at the professional level. Among sport participants in Canada, 28% of adults (Canadian Fitness and Lifestyle Research Institute, 2010) and 24% of youth (i.e., ages 5-17 years; Canadian Lifestyle and Fitness Research Institute, 2013) play organized ice hockey. Additionally, professional ice hockey is heavily marketed on sport-specialty channels (i.e., The Sports Network, Sportsnet) by two of Canada’s most prosperous telecommunication companies (i.e., BCE, Rogers; The Globe and Mail, 2016).

Why might these companies invest so heavily in broadcasting professional hockey? Based on the history of the National Hockey League (NHL), Canadians have composed anywhere between 47.5% (2016-17) to 96.8% (1957-58) of all rostered players for a given year (Quanthockey.com, 2017). Together, the interest, exposure, and success of Canadians in ice hockey has come to define the culture of the sport, and by extension, has led to pressure for all involved to ensure that Canada’s success is maintained.

The overt exposure and culture of hockey in Canada leads many athletes to become involved at a young age, and many aspire to a career in the NHL. These aspirations, in combination with the nation’s aims for international success, have led to a performance-based model for athlete development focused on sport-specific training and competition beginning at a young age. This model utilizes selection processes
to identify and recruit athletes to participate in costly programs (Mirtle, 2013), and once athletes reach the age of 15 (all provinces and territories west of Manitoba and Northwest Territories) or 16 (all other provinces and territories) they are eligible for another selection process whereby Canadian Hockey League (CHL) teams may identify and recruit them to relocate to a team’s city. Should a player choose to accept an invitation to join a team, they enter amateur organizations that are highly professionalized (e.g., athletes are asked to leave home, spend large amounts of time in training and competition, compete in front of thousands of spectators, and are recruited by professional organizations). These organizations are motivated to perform well so as to generate revenue, but also to develop professional-caliber athletes which will contribute to the prestige of the organization.

Recently, media has drawn attention to the increasing presence of professional sport organizations and apparel companies in relation to talent identification and recruitment in amateur sport (Dohrmann, 2010). This can be attributed to professional organizations’ perception of a competitive edge that is gained from the ability to identify, develop, and retain talented individuals at younger ages (Vaeyens, Lenoir, Williams, & Philippaerts, 2008). However, the attempt to project a child’s future sport performance is problematic because development is a complex and dynamic process (Goncalves, Rama, & Figueiredo, 2012). This complexity is evidenced by a study of 33,000 registered Ontario Minor Hockey Association amateur athletes, whereby only 48 (0.15%) were selected in the NHL Draft, and of those, only 32 (0.09%) played in one NHL game (Parcels, 2002). Considering the odds of becoming a professional athlete, subjecting youth to environments geared toward such pursuits is likely misguided. Regardless of the low odds of being selected in the NHL Draft, thousands of youth make sacrifices in the hopes of pursuing their hockey related aspirations. Often, CHL players are living away from their established social network of family and friends, attempting to balance an education and with a demanding ice hockey schedule, all while being expected to travel and perform in front of fans and
professional recruiters. While these young athletes are subjected to the competitive environment previously introduced, and with the eventual aim of playing in the NHL, the first pinnacle objective is to be selected in the NHL Draft. Although it is not an automatic prerequisite to playing in the NHL, being selecting in the draft represents a significant advantage considering that almost 85% (582 of 690 players) of NHL players were drafted (National Hockey League, 2017). Socialization into Canadian junior hockey culture instills the notion that attaining professional status defines a successful junior hockey career. Consequently, being unselected in the NHL Draft represents a significant adversity for elite ice hockey players—both perceived and real. Therefore, the purpose of this thesis is to explore the factors that helped undrafted NHL players overcome this common adversity of not being selected in the NHL Draft, and go on to achieve their long-term objective of playing in the NHL.
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Chapter 3

Achievement Despite Adversity: A Qualitative Investigation of Undrafted National Hockey League Players

Human achievement and the antecedents to success and failure have long been topics of interest in academia. In fact, as early as the late 1800’s, researchers advocated for the study of contributing factors beyond those of innate ability and circumstantial privilege (e.g., Galton, 1869). Subsequently, achievement outcomes have been attributed to a number of factors, ranging from genetics (e.g., Sawczuk, Maciejewska, Cięszczyk, & Eider, 2011), physiology (e.g., Kerr et al., 2007), psychology (e.g., Gould, Dieffenbach, & Moffett, 2002), to the surrounding environment (e.g., Côté, Macdonald, Baker, & Abernethy, 2006). Importantly, the degree to which these factors influence an individual’s achievement depends on the characteristics and demands associated with the performance context.

Aside from a greater understanding of the intrapersonal and social factors contributing to one’s success, research has also recognized the influence of adverse experiences. Within the context of the human lifespan, adversities are considered to be an inevitable human experience (Bonanno, Galea, Bucciarelli, & Vlahov, 2007), and studies have traditionally targeted populations who have experienced a traumatic event resulting in negative consequences and adjustment difficulties (Luthar & Cicchetti, 2000). Recently, however, definitions of adversity have diverted from this single instance, traumatic perspective to include the accumulation of ongoing stressors and positive life events (Luhmann, Hofmann, Eid, & Lucas, 2012; Mellalieu, Neil, Hanton, & Fletcher, 2009). Experiencing adversity then, appears to occur when the amount of distress caused by a single event, or the accumulation of events, exceeds the immediate protective capabilities of an individual.

Despite the negative consequences emanating from adverse experiences, a growing body of literature suggests the potential to experience valuable psychosocial benefits. As one example, people
with a history of experiencing adversity are reported as having better mental health and well-being in comparison to those who have not (Seery, 2011). In addition, positive appraisals of adverse experiences are generally attributed to improvements in psychosocial attributes (e.g., motivation, confidence), improved or newly formed social support networks, and/or changes in life philosophy (Seery, 2011; Tedeschi & Calhoun, 2004). Given the support for adversity as a potential promoter of psychosocial development, it is perhaps not surprising that researchers are beginning to inquire about the applicability of such experiences for sport (e.g., Galli & Reel, 2012; Howells & Fletcher, 2015).

Sport is a domain where experiences of adversity are entrenched, and in fact, are considered a prerequisite to high-level achievement (Fletcher & Sarkar, 2012). Indeed, the attainment of sport expertise and elite performance is time consuming, effortful, and competitive (Durand-Bush & Salmela, 2002; Rees et al., 2016). Whereas the inevitability of experiencing adversity might seem problematic, elite athletes generally perceive such occurrences as important contributors to their sporting success (Galli & Reel, 2012; Galli & Vealey, 2008; Sarkar, Fletcher, & Brown, 2015). Through engaging with adversity, athletes recognize similar benefits as those documented in other populations (i.e., changes in life philosophies, psychological attributes, social support networks; Galli & Reel, 2012; Tamminen et al., 2013). Indeed, researchers have called for the exploration of critical incidents (i.e., adversity) in relation to experience (Côté, Baker, & Abernethy, 2003). Alongside these findings, researchers have also investigated the characteristics of individuals who are able to withstand and grow from such experiences (e.g., Howells & Fletcher, 2015).

It is clear that determining specific traits and characteristics most likely to result in facilitative rather than debilitative responses has both theoretical and practical implications. Within the sport psychology literature, several psychological constructs associated with achievement have been investigated in sport settings to better understand their application—namely, mental toughness (e.g.,
Gould et al., 2002; Jones, Hanton, & Connaughton, 2002), psychological resilience (e.g., Galli & Vealey, 2008; Martin-Krumm, Sarrazin, Peterson, & Famose, 2003), hardiness (e.g., Ramzi & Besharat, 2010; Sheard & Golby, 2010), and grit (e.g., Larkin, O'Connor, & Williams, 2016; Martin, Byrd, Watts, & Dent, 2015). Through these lenses, researchers have gained a better understanding of how elite athletes buffer and/or positively adapt to the effects of the adverse experiences they encounter (Sarkar & Fletcher, 2014a).

Mental toughness (e.g., Connaughton, Hanton, & Jones, 2010; Gucciardi, Gordon, & Dimmock, 2008) and psychological resilience (e.g., Fletcher & Sarkar, 2012; Sarkar et al., 2015) are conceptualizations of how personal characteristics and processes work together as mechanisms aiding elite performance in the face of adversity. Mentally tough athletes tend to demonstrate greater consistency in their determination, focus, confidence, and control under pressure (Jones et al., 2002), which not only buffers the effects of adverse experiences, but also promotes positive adaptations (e.g., Gucciardi, Gordon, & Dimmock, 2008). On the other hand, resilient athletes leverage specific psychosocial characteristics (e.g., positive personality, motivation, confidence, focus, and social support) to take control of their thoughts and appraise the moment as an opportunity for development and growth (Sarkar & Fletcher, 2014a). Additionally, these constructs work in concert with more dispositional traits to help elite athletes perform on the world stage.

Hardiness (e.g., Kobasa, 1979) and grit (e.g., Duckworth, Peterson, Matthews, & Kelly, 2007) are two dispositional traits that influence an individual’s aspirations, and by extension, enable elite performers to succeed in challenging environments. Hardy individuals generally view adversity as an opportunity for positive growth (i.e., challenge), believe they can influence the eventual outcome (i.e., control), and are dedicated to remaining involved as a means of understanding and achieving meaningful objectives (i.e., commitment; Maddi, 2004). In sport, elite athletes exhibit higher levels of hardiness in
comparison to their less elite counterparts (Golby & Sheard, 2004; Sheard & Golby, 2010), which is perhaps not surprising as hardy athletes demonstrate better peripheral vision (Rogers, Alderman, & Landers, 2003), interpret anxiety as facilitative rather than debilitating (Hanton, Evans, & Neil, 2003), and have a tendency to miss less time due to injury (Ford, Eklund, & Gordon, 2000). Alternatively, grit has been shown to buffer the psychological disruption caused by negative life events (Blalock, Young, & Kleiman, 2015), and is positively associated with sport engagement (Larkin et al., 2015; Martin et al., 2015) and sport-specific decision-making, known as cognitive-perceptual expertise (Larkin et al., 2015). Together, these dispositional traits represent more stable characteristics that support the pursuit of elite athletic performance and achievement of long-term objectives.

Undoubtedly, elite athletes face high volumes of stressors and adversities due to the demands of their training and competition environments (Rees et al., 2016). Much of this understanding can be gleaned from research on elite athlete development (Howells & Fletcher, 2015; Rees et al., 2016; Sarkar et al., 2015) and the descriptive investigations of established constructs (e.g., mental toughness, psychological resilience, etc.), where the adversities experienced by athletes have been variable (Galli & Vealey, 2008; Sarkar & Fletcher, 2014a). Fortunately, there is a growing body of literature that shows that adverse experiences can benefit psychosocial development (Galli & Reel, 2012; Tamminen et al., 2013). As such, the purpose of the present study was to employ an exploratory approach in the investigation of the factors that helped a group of elite athletes overcome a common adversity (i.e., going undrafted in the NHL Amateur Entry Draft [NHL Draft]) on the path to achieving their long-term objective of playing in the NHL.

Method

Qualitative Methodology
Considering that we were interested in the lived experiences of undrafted professional athletes, our approach was guided by a social constructivist orientation (e.g., Schwandt, 1994). The objective of this subject-centered approach was to understand the NHL’s selection process from the perspective of unsuccessful prospects, who attained the NHL. Importantly, we understood that participant perspectives would be their interpretation of their unique experience leading up to, during, and following the NHL Draft. Indeed, all participants went undrafted at the ages of 17 or 18 years, providing a sample to evaluate the meaningful factors that contributed to their eventual achievement. In recognizing this general objective, we adopted analytical and methodological processes (e.g., thematic analysis; qualitative guidelines; Braun, Clarke, & Weate, 2017; Hill, Thompson, & Williams, 1997; Patton, 2002) that are described in greater detail throughout the method section. In addition, due to the geographical distance separating the research team, our collaboration was enhanced through consensual qualitative research (Hill et al., 1997). Working as a team was consistently at the forefront, as ongoing online journaling and frequent meetings were utilized throughout.

**Participants**

Based on guidelines for theoretical sampling (e.g., Corbin & Strauss, 2008), undrafted NHL athletes were specifically recruited as they had overcome a common adversity (i.e., not being selected in the NHL Draft) in relation to the achievement of a long-term objective (i.e., competing in the NHL). After several interviews, we questioned whether perceived experiences differed based on the developmental path. For example, whereas the NHL Draft is often portrayed as the pinnacle for athletes competing in the Canadian Hockey League (CHL), it may not be as proximal for those competing in the National Collegiate Athletic Association (NCAA). Consequently, we sought to interview undrafted athletes who had progressed through the NCAA route, in addition to those who had varying amounts of playing experience at the NHL level.
In total, 12 undrafted male athletes ($M_{age} = 27.25; SD = 3.28$) were recruited, representing both CHL ($n = 7$) and NCAA ($n = 5$) developmental streams, with NHL playing experiences ranging from 6 to 304 competitions ($M = 152.67; SD = 111.10$). At the time of recruitment, undrafted athletes represented approximately 15.65% (108 out of 690) of the total NHL population, and our sample represented 11.11% (12 out of 108) of the potential participant pool.

**Data Collection**

**Procedure.** After obtaining institutional research ethics approval, athlete representatives (i.e., sport agents) were contacted by telephone to invite their clients to participate in the study. Once interested athletes contacted the first author to arrange a time to conduct the interview, they were informed of the scope of the project, and were sent a copy of the information letter. All interviews were conducted over the phone by the first author, and although there are limitations inherent with telephone interviewing (e.g., sound quality, participant distractions), they were necessary due to the geographical location of the participants. In addition, such a methodology can facilitate participant comfort and anonymity (e.g., Novick, 2008), and has been shown to provide a similar level of detail as in-person interviews (Cachia & Millward, 2011). On average, interviews were 37:09 minutes in length ($SD = 5:00$) and were audio recorded and digitally transcribed verbatim (yielding 129 single-spaced pages).

**Semi-structured interviews.** Interviews were informed by a semi-structured guide\(^1\), which provided direction, while also maintaining a level of flexibility to allow for participants to tell their own story. This approach was selected to gather descriptive information about participants’ development as ice hockey players, and the factors that influenced their career progression. The guide was organized

\(^{1}\) A copy of the interview guide can be obtained by contacting the first author.

\(^{2}\) Athletes’ quotes are followed by a participant number and developmental stream (e.g.,}
chronologically, beginning with a series of questions pertaining to childhood and adolescent sport experiences (e.g., “Can you share with me why you decided to pursue hockey over other activities?”). The second series of questions was directed toward participants’ Junior, collegiate, and professional hockey careers (e.g., “Can you tell me about any sacrifices that you made during your Junior/college hockey career?”). The concluding series of questions related to experienced adversities over the course of their careers (e.g., “Can you give me any examples from your life where you overcame adversity or obstacles that could have prevented you from reaching the NHL?”). Finally, the use of frequent follow-up probes enabled the thorough description and elaboration of important participant experiences (Patton, 2002). Although the guide was developed prior to data collection, questions and probes were refined based on themes identified by the research team during analysis (e.g., additional probe regarding social support following adversity; Burgess-Limerick & Burgess-Limerick, 1998; Karnilowicz, Lütfiye, & Phillimore, 2014).

Analysis

Based on the guidelines proposed by Braun and colleagues (2017), a thematic analysis was applied, whereby the development of themes resulted from the evaluation and collation of initial codes. Consistent with our research aim and epistemological approach, the goal of analysis was to better understand athletes’ experiences overcoming a common adversity in pursuit of a long-term objective. In the first stage of analysis, interviews were transcribed verbatim and re-read by the first author, concurrent with ongoing data collection. Following this stage, a reflective component was integrated, whereby initial impressions of the data and dialectic relationship (i.e., between interviewer and interviewee) were recorded in the left-hand margin. Transcripts were then re-read, and NVivo software was utilized to identify meaning units (Tesch, 1990). The research team met following the analysis of the fourth transcript to discuss initial codes, which led to the collation of codes into themes that would inform
subsequent interviews (Braun et al., 2017; Sarkar & Fletcher, 2014b). Once themes became clear and well defined, and further interviews were providing limited additional information, data collection ceased. At this time, the first author reviewed the themes, checking them against the data extracts and entire data set, resulting in the final identification of themes, and sub-themes (Braun et al., 2017). A final meeting with the research team was established to further discuss and refine the specifics of each theme, and extracts were selected to relate the themes back to the research question and the literature (Braun et al., 2017).

**Methodological Rigor**

Several methods were employed to ensure rigor in the current project. First, the authors use of reflexivity and transparency contributed to the alignment of our epistemological perspective, stated purpose, and selected methodology (e.g., Tracy, 2010). In particular, the first and second authors have personal experience with hockey as athletes, coaches, and managers. Through these experiences, the research team established an understanding of athlete development within hockey that informed study design and facilitated recruitment, participant-interviewee rapport, and the interpretation of participant responses. However, researchers acknowledge that this understanding is based on amateur experience and second-hand accounts (e.g., media) of the plight of professional hockey players. As previously alluded to, the involvement of all members of the research team during the research design, analysis, and writing stages contributed to reflexivity and the consistency of our approach throughout the project (e.g., Tobin & Begley, 2004). Finally, member checks were provided whereby all athletes were given the opportunity to review their transcriptions to omit or clarify any information. Although it is unclear how many participants reviewed their transcripts, no issues were raised.

**Results**
Generally, athletes discussed a range of factors that contributed to the achievement of their long-term objectives. Expectantly, commonalities were identified within the sample, and responses\(^2\) were broadly categorized within the overarching themes of experienced adversities and stressors, long-term objective of playing in the NHL, psychological attributes, and mechanisms for goal attainment. In addition, as the results are representative of the experiences described by the participants, contextualizing their responses within the specific developmental paths that they had taken over the course of their careers (i.e., CHL vs. NCAA) was an important consideration.

**Experienced Adversities and Stressors**

The athletes discussed numerous stressors and adverse events, and these were largely attributed to organizational (e.g., intra-team competition, role rejection), competitive (e.g., injuries, expectations), and personal (e.g., death of a family member, physical disability) factors. In relation to organizational stressors for example, participants cited intra-team competition as something that occurred frequently:

> In the NHL, you root for your teammates only to help you, because you’re competing against them, really. Whether it be for ice time, money… the team only has so much money for salaries. You want them to do well, but you want them to do well so the team does well, so you do better. You don’t really care how they’re doing, it’s a tough dog eat dog world in the NHL. It’s tough, but you have to take care of yourself. (P.3.NCAA)

In addition, although participants’ status as undrafted athletes was expressed as a significant hockey-related adversity, different reasons were discussed contingent on an athlete’s developmental stream. For those from the CHL stream, not being selected in the NHL Draft was considered an important missed milestone. The disappointment and negative affect for this group was succinctly expressed by two athletes: “Not being drafted can do a number on you mentally” (P.2.NCAA), and “Probably the biggest

\(^2\) Athletes’ quotes are followed by a participant number and developmental stream (e.g., P.1.NCAA).
low of my hockey career” (P.4.CHL). Interestingly, not being selected in the Draft was not described as an overt adversity for athletes from the NCAA path. As one athlete explains, the extra developmental time afforded by playing college hockey was deemed appropriate for this group, “If I would have been drafted, I’m not sure it would have worked out either. I was late to mature and I think that I definitely needed the extra time to go to college and develop physically and mentally” (P.2.NCAA). It is important to note however, that all participants acknowledged the difficulties for undrafted athletes to ascend the levels of professional hockey:

One thing that I had to overcome was the feeling that I would never get a shot because I was nobody’s guy, nobody cared. I was nobody’s draft pick. No General Manager [GM] picked me and was like, “Hey, give this guy a chance. Hey, pick this guy.” A lot of GM’s bring guys up because they draft them, even though there could be a better free agent. He’s not going to get that opportunity because [the GM] isn’t invested in him like the guys who got picked. (P.7.CHL)

Participants were also affected by a variety of non-hockey related personal stressors and adversities, including the death of a family member, physical disabilities, and perceived sacrifice of social opportunities. For one athlete, the death of his father at the age of 15 complicated the decision to remain at home or relocate to a different city: “My dad passed away in the summer going into Junior… I didn’t want to leave my family here, but ultimately, in my head I think my dad wanted me to go and wanted me to pursue hockey, so I decided to leave” (P.2.CHL). Importantly, the majority of athletes who discussed these stressors and adversities viewed them as assets leveraged for success during later adverse situations.

**Long-term Objective of Playing in the NHL**

Generally, playing in the NHL was a central long-term objective for all participants. Athletes recalled expressing their “dream” of one day playing in the NHL through rehearsal (e.g., imitating NHL players during practice and play) and school assignments (e.g., creative writing, art projects) throughout
their youth. It was a goal that participants acknowledged a level of naivety toward it becoming a reality: “I always talked about it and would think about it, but you never know that it’s going to happen at that time, or in the future” (P.4.NCAA). These athletes did however maintain confidence in their ability to fulfill their objectives as they all spoke to discussions where they indicated such to key social agents (i.e., parents, teachers) in their formative years.

Interestingly, as participants’ careers progressed, these objectives became more tangible. Although the path to the NHL varied for each individual, that common long-term goal influenced subsequent behaviors throughout their development:

I remember in school, every project always had something to do with hockey. If I ever had to write a story or something, it was just about trying to make it to the NHL. But, it never became a real possibility until I was in college. It was a dream and I just wanted to play and be as good as I could be. Eventually, pieces started falling into place and that’s when I kind of made the final push to get there. I mean, it was always a goal and it was always a dream and I wouldn’t let anybody tell me it couldn’t happen. But, you know, I just went on my way and had fun playing at the levels I was at. (P.1.NCAA)

Possessing this long-term goal of playing in the NHL was a mild, yet consistent motivator for participants throughout their hockey careers. It was an objective that was distant when measured against time and ability, but one that drew closer and more realistic as participants developed their skills and determination.

**Psychological Attributes**

The athletes spoke to a number of psychological attributes that they perceived as contributors to their success in hockey, in addition to their general athletic experiences and quality of life. Notably, these
involved their competitiveness, confidence, motivation, perseverance, ability to focus, and their passion for the sport.

**Competitiveness.** From an early age, these athletes recognized an intrinsic competitive drive to succeed and outperform others in a variety of contexts (e.g., practice drills; competition; deliberate play). This drive was discussed as an asset, leveraged to propel them past other prospects, “I feel like I’m prepared to go to greater lengths to sacrifice, to make sacrifices in order to keep playing and to play against the best, and to live out my dream” (P.1.NCAA). In fact, constant references involving wanting to “be the best” and “reach the next level” were made across the sample. Interestingly, as athletes progressed toward higher levels of competition, so too did their levels of competitiveness, “I’ll always remember my first pro game. It was within the first period or the first couple of shifts of the game that I realized this was men playing to put food on the table for a family” (P.4.CHL). At the professional level, where job security and salaries become contingent on performance, expectations dictate a need for consistency in athletes’ competitiveness on a daily basis.

**Confidence.** Participants considered confidence to be a stable and enduring factor that influenced their performance throughout their careers. For example, one goaltender echoed the beliefs of other participants by stating, “You’d be lying if you said there wasn’t tough times, and maybe you doubt yourself a little bit. But, I’ve always thought that I could play at the NHL level and, you go through tough stretches here and there, but I always believed in myself” (P.6.CHL). Indeed, it was reasonable to expect confidence to be an important prerequisite to elite sport performance, yet participants revealed specific events and experiences that contributed to these beliefs. For instance, several athletes eluded to their preparation and subsequent success against NHL-caliber competition in training scenarios as such a promoter.
**Focus.** The ability to direct attention toward objectives and concerns within one’s control was quite salient among these athletes. Considering the nature of elite sport, frequent distractions compete for athletes’ attention, and participants discussed the necessity to focus on the “right things.” For example, the inherent tendency for social comparison at this level (e.g., point totals; teammates’ fitness levels) often resulted in critical self-evaluation in areas that were out of an athletes’ control. Additionally, the social environment presented opportunities (e.g., social gatherings) that required management because they detracted from athletes’ progress. In addition to acknowledging how this could lead to insecurities, participants recognized that getting overly distracted would have an adverse effect on their performance. One participant discussed the recruitment efforts of Canadian University coaches during his final year of CHL eligibility:

> During my overage season, [Canadian] schools came to talk to me. I just shut them out. I wasn’t ready to focus on life after hockey. You just want to finish your overage year strong, and hopefully get a contract offer from the NHL and make the most of it. There were times I thought, “What if I have to go to school next year and the dream is over?” But I put that in the back of my head. It was always my focus to stay positive and not lose focus of my dream. (P.3.CHL)

Notably, these athletes emphasized the significance of being able to prioritize and focus on objectives within their control, and how this realization helped to advance their development.

**Motivation.** This group of athletes possessed a high level of motivation dating back to their childhood and adolescence. They dedicated a great amount of time to hockey, largely attributing it to their enjoyment of the sport. One participant provided the following anecdote:

> Practice would finish, some of us would head to the gym, and others would be like, “What are you doing? Why are you going in there? We just finished the hard work.” The odd day, you’d feel like not doing it. It could be a lot easier to just head over to Subway and hang out and go home.
and play video games. Instead, I would dedicate 20-30 minutes to get this workout in, which in the long run made me better. (P.4.CHL)

Participants also recognized external sources of motivation that significantly contributed to the direction and intensity of their efforts. For example, one participant described the effect his father’s unexpected death had on him, “Knowing that this is what he wanted me to do, it kind of pushed me forward, made me want to work a lot harder. I wanted to make him proud” (P.2.CHL).

**Passion.** The desire to play hockey was described as a central component to every participants’ life. Whether it was practice, competition, or informal play, athletes expressed feelings of enjoyment and appreciation for what hockey has contributed to their lives. One athlete said, “It doesn’t matter what’s going on with your life, you always have the sport that you love to play. You can go out there and have fun and forget everything else” (P.2.CHL).

Passion was also an important prerequisite to athlete development. For instance, one participant spoke to this when he stated, “If you don’t have passion for [hockey], you’re not going to enjoy going to the rink every day to get better” (P.3.CHL). This passion seemed to facilitate the training and development that helped each player reach the next level. Interestingly, participants communicated varying abilities to separate their hockey-related thoughts and emotions from their everyday responsibilities (e.g., spending time with family). It was apparent that this ability to disconnect from the sport helped intensify their passion:

One of the things that helped me was to know that there’s more to life than just hockey. Knowing that hockey isn’t everything helped me get away from the game, so when I was home with my family, I wasn’t thinking about hockey, I was thinking about them. Then, when I got to the rink, my passion was even more so because it’s not like my life every day was consumed by hockey. (P.7.CHL)
In contrast, other participants had more difficulty finding this balance, “I have a hard time letting things go, letting things just roll off my back I guess... I think that definitely hurts my enjoyment of life in general” (P.3.NCAA). Overall, passion for the sport appeared to contribute to the necessary dedication, yet certain athletes were better able to control this passion than others.

**Perseverance.** Participants described points in their careers where they successfully engaged with challenges that could have hindered their progress to the NHL. Many of the CHL athletes highlighted their experience going undrafted as a key opportunity to demonstrate perseverance. This subgroup of participants took being passed over in the Draft as a slight, and they used the experience to enhance their training: “I thought, ‘Let’s prove these guys wrong.’ I started to work on things I needed to improve and had a great year the next year. I wanted to prove everyone wrong and make it the long way” (P.2.CHLL).

The economics and politics of professional hockey were also identified as realities that required this group of athletes to demonstrate perseverance. As stated by one veteran athlete, “I’m nobody’s draft pick… I never had a guy pick me and believe in me… You feel like you’ve got to prove to everybody that they should call you up” (P.7.CHLL). This perception that the road to the NHL was longer and more difficult for undrafted players was reinforced by a number of participants.

**Mechanisms for Goal Attainment**

**Perceived Social Support.** Family members, teammates, coaches, and sports agents all contributed to participants’ perceptions of social support, especially during experiences with adversity and stressors. Parents played a particularly important role in this regard, as they were the most stable and enduring source of social support throughout participants’ careers. A number of athletes specified the autonomy support they had received from their parents, which was exemplified in the following quote from one participant: “They always gave me the freedom to make choices and learn. They’re always
there in the background for support” (P.1.NCAA). As participants transitioned from amateur to professional hockey, veteran teammates became role models and mentors who led by example: “He’s [veteran player] won two Olympic Gold Medals, a World Junior Championship, a Stanley Cup. He’s a winner, and yet he still shows up to the rink every day and he’s always trying to get better” (P.1.CH). Furthermore, participants reported receiving informational, instrumental, appraisal, and emotional support from these sources throughout their hockey careers. For one athlete in particular, not being drafted left him emotionally unable to face his peers because of an overwhelming shame for not having achieved his goal of being drafted. As was the case for many of the participants, this athlete’s parent’s emotional support helped him move past the difficult experience and return to the pursuit of his goals: “My mom asked, ‘What’s wrong?’ And I mumbled to her, ‘Well I didn’t get drafted.’… She said, ‘You have to remember this feeling and know that you never want to feel that again’ (P.4.CH).

Appraisal support from credible hockey figures (e.g., coaches; sport agents; scouts) in the form of positive reinforcement regarding athletes’ potential and ability was a key source of enhanced robust confidence for participants. For one athlete, this interaction occurred with a scout from an NHL organization who told him that he was on track to play professionally: “That meant the world to me. I couldn’t believe it, I was like, ‘If someone who works in it thinks that, then…’ It wasn’t a random person saying it. It carried weight and I decided to go for it” (P.1.CH). Clearly, inspirational feedback from key social agents communicated at impressionable times (e.g., following a disappointment) enhanced athletes’ beliefs in their own abilities.

**Goal-setting.** Participants referred to goal-setting as an informal, introspective practice. Goals were often ego-oriented (e.g., point totals) and driven by social comparison with peers; however, participants reported detrimental occurrences when too much emphasis was placed on outcomes. An adjustment to more task-oriented goals often occurred once players gained perspective as to why they had
failed to attain certain objectives, “As things moved on, it was always a goal to be drafted to the NHL, but when that didn’t happen, I turned back to getting better every year. Improving on the things that scouts or external sources told me needed improvement” (P.3.CH). This ability to accept feedback from key social agents and integrate this information into action was an important step in future professional hockey opportunities.

**Deliberate practice.** Based on athlete responses, it was clear that they did not believe elite skill and hockey knowledge to be innate. Rather, practice habits specific to improving weaknesses were viewed as a necessity to reaching the NHL: “My first few goalie camps… That’s where I figured out what real practice habits were… deliberate practice, attention to detail, you know, making sure you are trying to get better every single practice” (P.6.CH). Again, key social agents played an important role in facilitating deliberate practice habits among participants. Self-regulating practice habits and learning to identify and address specific weaknesses was a characteristic that helped participants break into professional hockey and advance to higher levels within their organizations.

**Discussion**

The purpose of the present study was to explore the factors contributing to elite athletes’ abilities to overcome a common adversity (i.e., not being selected in the NHL Draft) and achieve their long-term objective (i.e., playing in the NHL). Interviews with participants revealed several themes that were described as integral to their success, and these are broadly represented as (1) experienced adversities and stressors, (2) long-term objective of playing in the NHL, (3) psychological attributes, and (4) mechanisms for goal attainment. Considering the information gleaned from these athletes, the following will involve a discussion pertaining to the main themes that were identified, and discourse related to limitations and future directions.
It is important to reiterate the difficulty of progressing to the NHL as an undrafted athlete, as these athletes represent 15.65% (108 of 690 NHL players at time of recruitment) of the NHL population. During this investigation, however, it was clear that perceptions pertaining to the adversities experienced throughout their careers were somewhat dependent upon a participant’s developmental stream (i.e., CHL, NCAA). In turn, subtle experiential differences were recognized in participants’ descriptions of the NHL Draft experience. For example, participants who developed in the CHL, experienced a competitive environment similar to professional hockey (e.g., extensive travel, playing in front of large audiences, publication of statistics, presence of professional scouts and management), which led to their appraisal of being drafted as a key milestone affirming a player’s ability and potential. Alternatively, participants who developed in the NCAA did not identify themselves as professional hockey prospects until the end of their college careers (i.e., 22-24 years of age). Notwithstanding the significance placed on this event, athletes consistently identified their adopted status as “undrafted” to be an obstacle that resurfaced throughout their careers.

Participants described numerous competitive and organizational stressors experienced during their careers, many of which appeared to result from or be associated with their status as undrafted players. As one example, athletes spoke to the tendency for their drafted teammates to be given greater opportunities to advance, largely attributing this as a means for management to corroborate their draft and athlete development strategies. Position competition is common in elite team sports that rely on intra-team cooperation (e.g., basketball, ice hockey) and where two or more athletes compete for playing time (Harenberg, Riemer, Karreman, & Dorsch, 2016). Participants’ evaluation that drafted players receive more opportunities is a perception of positional competition and is likely influenced by individual factors such as competitiveness and goal-setting (Harenberg et al., 2016). Similarly, these athletes also felt at a disadvantage when for example, they were injured, as job security or their position on the team seemed to
be quite precarious. These experiences in and of themselves would likely not meet the threshold-dependent criteria often associated with adversity (Luthar & Cicchetti, 2000), yet recent research has argued that the consistent day to day stressors that athletes face should also be considered (Fletcher & Sarkar, 2013). Clearly, these undrafted athletes felt that they were at a disadvantage even once they had attained this highest level of competition, and this was largely attributed to the lack of control that they felt within the sport organization (e.g., Hanton, Wagstaff, & Fletcher, 2012).

Interestingly, whereas these experiences of competitive and organizational stressors align with those identified in previous research (Sarkar & Fletcher, 2014a), participants also highlighted non-hockey related personal adversities and stressors (e.g., the death of a loved one, physical disability) that they had to overcome. Indeed, while reflecting, individuals saw these as critical learning experiences for handling adversity, and this is consistent with research that supports adaptations from personal stressors are transferrable to elite sport (Galli & Vealey, 2008; Sarkar & Fletcher, 2014a). Although adverse life events and stressful situations have traditionally been associated with negative consequences such as adjustment difficulties (Luthar & Cicchetti, 2000) and decreases in SWB (Luhmann et al., 2012), recent research has indicated that these events may yield key psychosocial benefits that contribute to, rather than hinder success (e.g., improved coping strategies, realization of social support; Galli & Reel, 2012; Galli & Vealey, 2008; Seery, 2011; Tamminen et al., 2013). Considering the favorable manner in which participants discussed their adversities from both hockey and non-hockey contexts, eliciting perceptions from undrafted athletes who were unsuccessful at attaining their long-term objectives is worthwhile. Would these individuals also speak to the benefits of experiencing such adversity?

The second broad theme revolved around participants’ long-term aspirations. All of the participants expressed a life-long aspiration of playing in the NHL, and this appeared to be a product of their exposure to NHL hockey through media and first hand experiences during childhood (e.g., attending
professional games). These aspirations were further cultivated through a mutual affinity for hockey shared with family members and peers as demonstrated by childhood hockey experiences in both unstructured and structured settings. The influence of social agents identified in this population is similar to that proposed by Hidi and Renninger (2006) in the four-phase model of interest development. Specifically, support from an individual’s environment plays an important role in the development and maintenance of an newly formed interest (Hidi & Renninger, 2006). Additionally, Bateman and Barry (2012) propose that persistence for long-term goals is inspired by an individual’s projections of how goal accomplishment would shape their “possible futures” (i.e., potential societal contributions or outcomes beyond personal gain) and “possible selves” (i.e., potential personal or professional states of existence). For this group of athletes, the impact of their early exposure to professional hockey and the reinforcement from their social network was influential in developing their aspirations to accomplish their long-term objective of playing in the NHL.

The third larger topic worthy of discussion involves the psychological attributes that athletes felt to be most pertinent to their eventual achievement of long-term objectives. Across our sample, several psychological factors were consistently discussed, and these included competitiveness, confidence, focus, motivation, passion, and perseverance. These responses were consistent with what has been previously identified as contributing factors to elite sport performance (Durand-Bush & Salmela, 2002; Gould et al., 2002; Thomas, Lane, & Kingston, 2011; Vallerand et al., 2008). For example, Durand-Bush and Salmela (2002) identified competitiveness, confidence, focus, motivation, passion and perseverance as important characteristics influencing the investment and maintenance years of expert athlete performance. In order to further contextualize these findings, athletes accentuated the pervasiveness of confidence and passion in their experiences with adversity and achievement, and as such, these attributes warrant further discussion.
Self-confidence has previously been described as one of the most important psychological characteristics of elite sport performers Durand-Bush and Salmela (2002). Furthermore, recent research has drawn attention to a specific type of “resilient” or “robust” form of sport-specific self-confidence (e.g., Galli & Vealey, 2008; Jones et al., 2002). According to Thomas and colleagues (2011), robust sport-confidence represents an enduring form of sport-confidence that is multidimensional, malleable, durable, developed, protective, and strong in its belief. From a young age, this sample of athletes held a strong belief that they possessed the potential to play in the NHL. Although participants faced various adversities and stressors that caused fluctuations in confidence at times, they were still convinced that if they were strategic and persistent with their effort, reaching the NHL would be realistic. Previous research suggests that robust sport-confidence affects how elite athletes respond to demanding circumstances, thus acting as a buffer to decreases in overall confidence (Thomas et al., 2011). Present findings support this conceptualization, as robust confidence played an important role in participants’ efforts to overcome obstacles and advance their careers.

Passionate individuals are said to possess a strong desire to participate in the activities for which they invest time and effort (Vallerand et al., 2003). For passionate athletes, their love of sport is often demonstrated by their commitment to achievement, regardless of the demands or adversities that they may be required to overcome (Vallerand et al., 2008). This sample of undrafted NHL players discussed their passion for hockey as a driving force for the efforts and sacrifices they made during their careers. In this respect, athletes described varying abilities to separate their thoughts and emotions about their careers from other aspects of their lives. According to Vallerand et al.’s (2003) Dualistic Model of Passion, two types of passion (i.e., harmonious and obsessive) can be ascertained based on how the activity is internalized into one’s identity (Ryan & Deci, 2000; Vallerand et al., 2003). Harmonious passion is proposed to be the result of more autonomous integration, whereas obsessive passion is the result of more
controlled integration that results from egocentric processes (Vallerand et al., 2003; Vallerand et al., 2006). Previous research has implicated both types of passion as mediators of mastery-oriented goal-setting and engagement in deliberate practice (Vallerand et al., 2008), both of which became important mechanisms for goal attainment for this group of athletes.

The final topic athletes discussed was the evolution of perceived social support, goal-setting, and training practices (i.e., mechanisms for goal attainment) that contributed to their arrival in the NHL. First, athlete perceived social support evolved from the constant support they experienced from family and friends, to include key social agents (i.e., coaches, sports agents). Consistent with previous findings (e.g., Sarkar & Fletcher, 2014b), social support was described as multidimensional, in that participants reported emotional, instrumental, informational, and appraisal support (Langford et al., 1997; Shumaker & Brownwell, 1984). In the current sample, appraisal and emotional support appeared to be the most salient. Specifically, appraisal support (e.g., communication relevant to individuals’ self-appraisal; Langford et al., 1997) from key social agents at impressionable times (e.g., following the NHL Draft) was a consistent occurrence among athletes that enhanced self-confidence and motivation to persist at advancing their careers. Notably, Vealey, Garner-Homan, Hayashi, and Giacobbi (1998) also found esteem (i.e., appraisal) social support to be important source of sport confidence in high school athletes. Secondly, emotional support (e.g., communication of love, empathy, trust, and caring; Langford et al., 1997), particularly parental emotional support, was important to those athletes who faced adversities and stress during childhood and adolescence. Overall, our findings support previous research indicating that social support is important for buffering of (Fletcher & Sarkar, 2012; Sarkar & Fletcher, 2014a, 2014b) and positive adaptation to adverse experiences (Seery, 2011).

Shifting from interpersonal to intrapersonal mechanisms for goal attainment, participants highlighted changes in their goal-setting and training practices that they believe made significant
contributions to their arrival in the NHL. Throughout childhood and early adolescence, the majority of participants described their goal-setting as an informal, ego-oriented practice (Ames, 1992). Specifically, throughout most of participants’ childhood and Junior hockey experience, perceptions of success were based on performance outcomes (e.g., points, ice time), and how their performance compared to teammates and opponents. Aligned with previous findings (see, for a review; Ntoumanis & Biddle, 1999), this ego-orientation negatively influenced participants’ cognitions (i.e., confidence, motivation), affect, and behaviour (i.e., performance slumps). Fortunately for a number of participants, key social agents intervened, utilizing a more task-involved climate to orient athletes’ goal-setting to areas identified by professional organizations as weaknesses. Importantly, it has been established that significant others (e.g., coaches) can strongly influence whether athletes will be ego-involved or task-involved when approaching a task (e.g., Balaguer, Duda, Atienza, & Mayo, 2002; Hodge, Graham, & Smith, 2014), but to our knowledge, this is the first study to demonstrate this influence from sport agents and professional scouts.

Generally, the shift from ego-orientated to task-involved goal-setting coincided with participant integration of deliberate practice into their training regimen. Deliberate practice is considered highly effortful and structured training directed toward learning from and improving one’s weaknesses (Ericsson, Krampe, & Tesch-Römer, 1993). Adhering to the advice of key social agents, participants accepted the criticisms from reputable sources (i.e., key social agents, professional organizations) and dedicated training to improving specific weaknesses. In their meta-analysis of deliberate practice in sport research, Macnamara, Moreau, and Hambrick (2016) concluded that deliberate practice accounts for only 1% of variance in performance among elite level performers. Interestingly, the majority of participants acknowledged that they did not utilize deliberate practice until they had received feedback on the weaknesses that were preventing them from competing at the professional level. Although these
recollections of deliberate practice are subjective, future research should examine the timing of deliberate practice in an athlete’s development, and the efficacy among elite-level prospects.

Despite the findings of this study, results should be considered in light of certain limitations. Considering the use of retrospective interviews, information obtained from participants was susceptible to egocentric biases, by which participants may overestimate their personal influence on their experience, undervaluing the contributions of other factors and entities (Benson, Eys, Surya, Dawson, & Schneider, 2013). As a closely related issue, there are several challenges with recruiting professional athletes (e.g., formal channels, demanding travel schedules), and this resulted in our only being able to conduct a single interview with each participant. Research in this area would benefit from longitudinal designs whereby temporal changes in athlete’s perceptions and resources could be monitored. Specifically, interviews with athletes leading up to, during, and immediately following a selection process in both older (i.e., NHL Draft) and younger adolescence (i.e., Canadian Hockey League Priority Selection Drafts) would contribute to our understanding the mechanisms by which different factors influence athletes engagement with such adversities. Lastly, participants were recruited for this study because of their demonstrated ability to overcome adversity. However, participant experience at the NHL level varied from 6 to 304 competitions. Considering the likelihood that the experience of an established athlete would likely differ from someone competing to prove their value to a professional organization, it would be interesting to contextualize the value of adversity at these varying stages of a professional athlete’s career. In addition, it would be helpful to understand the perspective of team officials (i.e., scouts, managers) when evaluating and developing prospects. Considering the amount of research (i.e., scouting, background checks) that goes into drafting a player, it would be beneficial to test and understand the proxy measures that contribute to these decisions.

Conclusion
Experiences with adversity are common for athletes aspiring to reach the highest levels of sport (Sarkar & Fletcher, 2014a). For participants, adversities are variable (i.e., frequency, duration, intensity) and come from numerous sources (i.e., personal lives, competition, sport organizations). The ability to succeed on this unconventional path to the NHL appears to be influenced by athletes’ long-term objectives and aspirations, psychological attributes, and mechanisms for goal attainment. When young athletes’ are encouraged to pursue their sport of interest, they develop a broad conceptualization of their future self, or “possible selves” (Bateman & Barry, 2012) that is refined through experiences and social support (e.g., heeding critical feedback from professional hockey organizations). It is also important to note that certain psychological attributes (i.e., competitiveness, confidence, focus, motivation, passion, perseverance) appear to influence elite performance across a variety of sports (e.g., Durand-Bush & Salmela, 2002; Gould et al., 2002). Finally, perceived social support at impressionable times led to changes in athletes’ goal-setting and training practices (i.e., adoption of more deliberate practice), which led to improvements in their areas of weakness, and eventually to the opportunity to play professional hockey. In recognizing important contributions of these factors over varying periods of athletes’ careers, future research investigating athletes’ experiences prior to, during, and following adversity may be able to evaluate the relationship between the influence of these factors and when they are most leveraged by athletes.
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Chapter 4

General Discussion

The purpose of the present study was to explore the factors that helped elite athletes overcome a common adversity (i.e., non-selection in the NHL Draft) and achieve their long-term objective of playing in the NHL. Semi-structured interviews with current undrafted NHL players ($N = 12$) and subsequent thematic analysis revealed four “higher order” themes that encompassed the integral characteristics and experiences that helped participants reach the NHL, despite not being selected in the NHL Amateur Entry Draft. Specifically, these athletes spoke to numerous psychological attributes that facilitated their progression, discussed the adversities and stressors that they experienced, outlined mechanisms for their eventual goal attainment, and explained their lifelong objectives. The discourse that follows will include an integrated summary of the key findings from this research, its strengths and limitations, potential future directions, and its suitability for a Master’s Thesis.

Previous investigations of elite athletes’ engagement with adversity have found that the source, frequency, intensity, and duration of such experiences can be variable (Galli & Vealey, 2008; Sarkar & Fletcher, 2014a). The present study interviewed current undrafted NHL players because not being selected in the NHL Draft was expected to represent a significant adversity in relation to becoming an NHL player. Indeed, from an objective standpoint, this perception is based on the fact that undrafted players comprise a modest 15.65% of NHL rosters (108 of 690 NHL players at time of recruitment). In addition, from a subjective socially constructed perspective, the amateur draft represents the identification of athletes deemed to be suitable for the elite levels of competition, so not being selected may negatively influence athlete self-perceptions. This was perhaps best reflected in the perceptions that seemed to be dependent on the developmental stream an athlete competed in prior to becoming a professional (i.e., CHL, NCAA). Specifically, athletes who competed in the CHL viewed going undrafted in the NHL Draft
as a significant adversity because it represented a missed major milestone. Comparatively, athletes who competed in the NCAA felt less strongly about being unselected because the actual prospect of becoming a professional hockey player did not become real until the end of their collegiate careers (i.e., 22-24 years of age). Despite the different perspectives of the importance of the NHL Draft in and of itself, however, there was consensus that all those unselected faced continued unique hockey-related stressors throughout their paths to the NHL (and even while playing in the NHL) because of their status as undrafted players.

The path to the NHL was one that led participants to encounter numerous organizational and competitive stressors unique to their status as undrafted players. In this context, stressors are considered the ongoing hassles and demands associated with athletes’ sporting lives (Sarkar & Fletcher, 2014a), and although they may not meet the threshold-dependent criteria often attributed to adversities (Luthar & Cicchetti, 2000), recent studies have suggested that stressors can accumulate and lead to similar detrimental effects (e.g., Fletcher & Sarkar, 2013). For this sample of undrafted NHL players, organizational stressors (e.g., intra-team competition, role assignment) appeared to be more confounding and frustrating than competitive stressors, a similar sentiment to that expressed by Olympic champions (e.g., Hanton, Fletcher, & Coughlan, 2005). Generally, participants felt that drafted teammates were given more opportunities (e.g., greater playing time, promotion to more elite leagues, higher salary) because their success, in part, reflects well on the ability of the organization to scout, draft, and develop players within their system. To this extent, competitive stressors (e.g., injuries, performance expectations) were perceived to be predictable and within one’s control relative to organizational stressors.

The second topic influencing participants’ achievement despite adversity was their long-term goal of playing in the NHL. The dream of one day playing in the NHL originated from ice hockey-related activities (e.g., attending and watching ice hockey) with family and friends during early childhood. Hidi
and Renninger (2006), propose that social support is integral to the development of interest through the introduction to an activity, providing tasks and environments that challenge and create opportunities, and by serving as role models. It is also suggested that advanced phases of interest development are associated with more ambitious goals (Hidi & Renninger, 2006), and this was certainly evident in participants’ sharing of their vision of playing in the NHL with key social agents (e.g., friends, parents, teachers) in structured (e.g., school assignments) and unstructured activities (e.g., deliberate play; Côté, 1999). The act of imagining future personal or professional states is referred to as “possible selves,” and is thought to positively affect motivation and behaviour in pursuit of long-term objectives (Bateman & Barry, 2012). Although there is much work to be done in understanding the longitudinal influence of long-term objectives (Bateman & Barry, 2012), participants’ acknowledgement of their goal of reaching the NHL during the different phases of their career indicates that it was an influential factor in their eventual achievement. By encouraging youth to develop long-term personal objectives, we may be influencing their confidence and motivation to pursue their interests. Key social agents (i.e., parents, coaches) are invaluable resources in the development of possible selves by providing challenging environments that reinforce healthy expectations.

Certain psychological attributes helped athletes deal with the various adverse experiences during their careers. Participants identified competitiveness, confidence, focus, motivation, passion, and perseverance as influential psychological factors on the path to the NHL. Notably, each of these attributes has previously been recognized as important contributors to elite sport performance (e.g., Durand-Bush & Salmela, 2002; Gould, Dieffenbach, & Moffett, 2002; Thomas, Lane, & Kingston, 2011; Vallerand et al., 2008), and also represent important subcomponents of umbrella constructs that have been investigated in sport—namely, psychological resilience (i.e., confidence, focus, motivation; Fletcher & Sarkar, 2012), mental toughness (i.e., competitiveness, focus, motivation, perseverance; Gucciardi,
Gordon, & Dimmock, 2008), and grit (i.e., passion, perseverance; Duckworth, Peterson, Matthews, & Kelly, 2007). To situate these findings within the broader sport literature, the following sections will extend from the information provided in Chapter 3 of this document, and speak to the role of competitiveness, focus, motivation, and perseverance in participants’ careers.

From an early age, participants described possessing a superior competitiveness to peers in many types of competition. As their hockey careers advanced, teammates and opponents were perceived to share this enhanced level of competitiveness and participants felt success was contingent on their ability to enhance their intensity and consistency in this capacity. According to Durand-Bush and Salmela (2002), Olympians and World Champions found competitiveness to be critical for developing and maintaining elite sport performance, and this might be particularly relevant as competitiveness is associated with athletes’ ability to adapt to setbacks (e.g., injuries, performance slumps) that are encountered in pursuit of performance excellence (MacNamara, Button, & Collins, 2010a, 2010b). Accordingly, the natural competitive tendency that these athletes described could have minimized the proximal impact that being unselected had on them. Their desire to outperform others and prove themselves in challenging situations likely fueled a desire to progress and achieve in various tasks (e.g., training, competition), which contributed to the eventual realization of their long-term goal.

The athletes also attributed their ability to focus to have been an influential factor throughout their careers, yet conceded that it developed over time and was not immediately effective. Throughout the early portion of their careers, participants described their explicit focus on performance (e.g., individual statistics) and major career outcomes (e.g., awards, selection in the NHL Draft). By focusing on outcomes that were largely out of their direct control, they described the associated fluctuations in their confidence and motivation. Importantly, during their reflections, the athletes discussed their development and eventual ability to focus their efforts on tasks within their control (e.g., work ethic, their
role). They highlighted this transition as a key mechanism that enabled them to attain the NHL, which is in concert with previous sport literature that supports the ability of Olympic champions to focus on themselves rather than the performance of others, and the process rather than the eventual results (Fletcher & Sarkar, 2012). Gould and colleagues (2002) also described the tendency for Olympic champions to minimize their thinking during competition and their ability to buffer distractions (Gould et al., 2002). Clearly, participants developed an understanding that focusing on controllable factors would have a significant impact on the prospect of a career in ice hockey, and the shift from disappointment after not being drafted to using critical feedback to improve weaknesses that prevented their selection is an example of this evolution. This is likely an important note for elite developmental leagues where similar selection processes occur. Reinforcing the need to focus on factors within one’s control and relevant to their development could attenuate the disappointment of not being selected, and direct attention to improving areas of weakness.

Considering the attained level of performance, it is perhaps not surprising that motivation was a ubiquitous characteristic identified throughout the careers of these athletes. Motivation addresses the “what” and “why” of human behaviour, or the direction, intensity, and persistence of effort (Ryan & Deci, 2000). This group of undrafted players felt that they possessed a higher motivation to achieve than their peers in amateur hockey, which translated to a greater capacity for hockey-related activities (i.e., training, deliberate play, competitions). Participants also described the ability to use events (e.g., the death of a loved one) and feedback (e.g., feedback on areas to improve) as motivation to improve. This finding is consistent with previous research indicating elite athletes are able to integrate environmental demands to ignite their motivation to improve and perform at higher levels (Sarkar & Fletcher, 2014b; Sarkar, Fletcher, & Brown, 2015). This is a process that Ryan and Deci (2000) have referred to as internalization and integration. Internalization involves “taking in” external rewards that are valued, and integration is
the degree to which these rewards become intrinsically valued and motivating (Ryan & Deci, 2000). Despite possessing a high level of intrinsic motivation for hockey-related activities from a young age, the ability to internalize and integrate external motivators was an important experience for this group of undrafted NHL players.

Perseverance represented the recognition of challenging circumstances in participants’ careers and a willingness to direct various cognitive and physical abilities towards overcoming those challenges. Perseverance has previously been described a personality characteristic (e.g., DiMenichi & Richmond, 2015) that reflects an individual’s tendency to pursue the achievement task when it becomes difficult or boring (Anestis & Selby, 2015). Perseverance is also an important component of valued umbrella-constructs such as grit and mental toughness (Duckworth et al., 2007; Gucciardi et al., 2008). Participants prepared themselves to persevere by appraising adversities as challenges worthy of engagement and leveraging past experiences to enhance confidence in one’s ability to persevere. Previous work with elite athletes has recognized the contributions of perseverance during both the development and maintenance of elite sport performance (Durand-Bush & Salmela, 2002). Considering the long path to the NHL for undrafted NHL players, perseverance was a key psychological attribute contributing to participants’ achievement.

The final topic identified by participants encompassed specific mechanisms for goal attainment. Specifically, changes to perceptions of social support, goal-setting, and deliberate practice at critical points helped alter the trajectories of participants’ careers. Notably, changes to these mechanisms for goal attainment occurred following the NHL Draft (for CHL players), or during college (for NCAA players). Perceived social support was a pervasive mechanism for goal attainment throughout athletes’ careers. Participants discussed the multidimensional nature of social support, in that informational, instrumental, appraisal, and emotional support were all delivered from key social agents (e.g., parents,
teammates, coaches; Langford Bowsher, Maloney, & Lillis, 1997; Shumaker & Brownwell, 1984) at opportune moments. Previous research has shown that adverse experiences can facilitate the development and enhancement of athletes’ perceived social support (Calhoun, Cann, & Tedeschi, 2010; Seery, 2011), which was consistent with our findings. For example, appraisal support (e.g., communication relevant to individuals’ self-appraisal; Langford et al., 1997) from key social agents at impressionable times (e.g., following the NHL Draft) was a consistent occurrence among athletes that enhanced self-confidence and motivation to persist at advancing their careers. Social support is critical in facilitating athletes’ attempts to work through and make meaning from their stressor (Galli & Reel, 2012). Without the support of key social agents, participants may not have made the key changes that helped them earn an opportunity to play professional hockey.

This sample of undrafted NHL players highlighted changes in their goal-setting and training practices that they believe made significant contributions to their arrival in the NHL. Throughout childhood and adolescence, participants developed an informal, ego-oriented goal-setting practice (Ames, 1992), that was directed toward the comparison of performance outcomes (e.g., points) with teammates and opponents. Fortunately, key social agents intervened at impressionable times (e.g., following adversity) reorienting athletes’ goal-setting to areas of weakness identified by professional organizations. Although both ego and task orientations occur simultaneously to enhance performance in high level sport (Harenberg, Reimer, Karreman, & Dorsch, 2016), participants’ integration of a more task-involved goal focus coincided with an uptake of deliberate practice (Ericsson, Krampe, & Tesch-Römer, 1993). Adhering to the advice of key social agents, participants accepted the criticisms that were passed down from professional organizations, and dedicated training to improving specific weaknesses. By identifying and adjusting ineffective goal-setting, and implementing more impactful training practices, participants improved their opportunities to play professional hockey.
**Strengths, Limitations, and Future Directions**

Recruiting professional athletes can be a challenging endeavor (e.g., contact through “gatekeepers;” demanding schedules), and our ability to recruit 11.11% (12 of 108 undrafted NHL players) of current undrafted NHL players likely provided a representative sample of this population and their experiences. Analysis of the data revealed themes encompassing numerous factors that have previously been identified as important to elite athletes’ engagement with adversity (Gould et al., 2002; MacNamara et al., 2010a, 2010b). The findings also confirm that elite athletes tend to experience adversities that can be categorized as personal, competitive, or organizational (Sarkar & Fletcher, 2014a). Overall, this study provides insight pertaining to elite ice hockey players’ successful engagement with adversity in concert with supporting previous research on the topic of adversity and achievement in elite sport.

Finally, the results of this study should be considered in light of certain limitations. The cross-sectional design and availability of professional athletes limited data collection to a single time point. This is one reason that the topic of elite athletes’ engagement with adversity would greatly benefit from longitudinal design whereby athlete’s perceptions and resources can be monitored over time. Specifically, interviews with athletes leading up to, during, and immediately following a selection process in both older (i.e., NHL Draft) and younger amateur hockey players (i.e., CHL Priority Selection Drafts) would contribute to our understanding the mechanisms by which different factors influence athletes engagement with such adversities. Additionally, this research design could be applied to other sports that utilize selection processes to identify similarities and differences in athletes’ experiences. Lastly, it would be helpful to understand the perspective of key social agents (i.e., family members, coaches, sports agents), as the timing of support delivered by these individuals was key to participants’ successful engagement with adversity.
Suitability of this Research for a Master’s Thesis

This research project was conceptualized from a developed interest in athletes who succeed when faced with adversity. With the support of Dr. Martin, I have taken the idea that previous work has overlooked the experience of a common adversity among an elite group of athletes and demonstrated that this shared experience can be perceived and overcome in multiple ways. I conceived and presented the idea for this project to Dr. Martin, who provided the support and guidance to make it a successful project and an invaluable learning experience. This project exposed me to the responsibilities of project management, from development of the research ethics application, to the semi-structured interview guide, to recruitment, analysis, and writing. This research also afforded the opportunity to collaborate with Dr. Mustafa Sarkar from Nottingham-Trent University. Dr. Sarkar—an expert on psychological resilience in athletes—has been an invaluable resource who has made me a better researcher by challenging my thinking and my approach to interviewing elite athletes. This project has also been an informative and enjoyable introduction to qualitative research. From design, to analysis, to presentation, we have attempted to maintain consistency with our approach, and I hope that our construction of the participants’ experiences with adversity reflect this intention. Similarly and more broadly, I feel my exposure to a range projects and courses during my Master’s degree has prepared me to take on new challenges and continue my development as an academic.
References


Galli, N., & Reel, J. J. (2012). 'It was hard, but it was good': A qualitative exploration of stress-related growth in Division I intercollegiate athletes. *Qualitative Research in Sport, Exercise and Health, 4*(3), 297-319. doi:http://dx.doi.org.proxy.queensu.ca/10.1080/2159676X.2012.693524


Sarkar, M., Fletcher, D., & Brown, D. J. (2015). What doesn't kill me...: Adversity-related experiences are vital in the development of superior Olympic performance. *Journal of Science and Medicine in Sport, 18*, 475-479. doi:[http://dx.doi.org/10.1016/j.jsams.2014.06.010](http://dx.doi.org/10.1016/j.jsams.2014.06.010)


Appendix A

Research Ethics Approval – Queen’s University
May 04, 2016

Mr. Jordan Herbison
Master’s Student
School of Kinesiology and Health Studies
Queen’s University
28 Division Street
Kingston, ON, K7L 3N6

GREB Ref #: GSKHS-225-16; Romeo # 6017980
Title: “GSKHS-225-16 Investigation of the concept of ‘grit’ as it pertains to elite hockey players”

Dear Mr. Herbison:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "GSKHS-225-16 Investigation of the concept of ‘grit’ as it pertains to elite hockey players" for ethical compliance with the Tri-Council Guidelines (TCPS 2 (2014)) and Queen’s ethics policies. In accordance with the Tri-Council Guidelines (Article 6.14) and Standard Operating Procedures (405.001), your project has been cleared for one year. You are reminded of your obligation to submit an annual renewal form prior to the annual renewal due date (access this form at [http://www.queenu.ca/traq/signon.html](http://www.queenu.ca/traq/signon.html); click on "Events"; under "Create New Event" click on "General Research Ethics Board Annual Renewal Form for Approved Studies").

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one year period (access this form at [http://www.queenu.ca/traq/signon.html](http://www.queenu.ca/traq/signon.html); click on "Events"; under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example, you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To submit an amendment form, access the application by at [http://www.queenu.ca/traq/signon.html](http://www.queenu.ca/traq/signon.html); click on "Events"; under "Create New Event" click on "General Research Ethics Board Request for Amendment of Approved Studies". Once submitted, these changes will automatically be sent to the Ethics Coordinator, Ms. Gail Irving, at the Office of Research Services for further review and clearance by the GREB or GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Sincerely,

John Freeman, Ph.D.
Chair
General Research Ethics Board

c. Dr. Luc Martin, Faculty Supervisor
   Dr. Lucie Levesque, Chair, Unit REB
Appendix B

Research Ethics Approval – University of Lethbridge
Thanks for addressing the reviewers’ concerns, Jordan. Your human research ethics application titled “An investigation of the concept of “grit” as it pertains to elite hockey players” has been reviewed and approved on behalf of the Human Subject Research Committee, and has been assigned Protocol #2015-017. If the application needs to be reviewed in other jurisdictions, please be advised that this approval may be only the first step in the ethics approval process. Please also be advised that any changes to the protocol or the informed consent which may give rise to ethical concerns must be forwarded as an amendment request to the HSRC for consideration.

We wish you and your colleague the best with your research.

Susan

Susan Entz
Ethics Officer
Office of Research Ethics
B620, University Hall
University of Lethbridge
4401 University Drive
Lethbridge, Alberta T1K 3M4
Phone: (403) 329-2747
Fax: (403) 382-7185
Appendix C

Participant Information Letter
Dear (Athlete name),

My name is Jordan Herbison and I am a Graduate Student and researcher at Queen’s University working under the supervision of Dr. Luc Martin (Assistant Professor, School of Kinesiology & Health Studies). I am currently conducting a research project that will improve our understanding of the role of ‘grit’ in sports—specifically hockey. As such, I’d like to invite you to take part in an individual interview. If you agree, I will ask a series of questions intended to explore the concept of grit so I can better understand its relevance within this context. Depending on your preference (but also geographical location), we will be conducting the interview over the phone or in person, and with your permission, it will be audio-recorded.

If you’d like to take part, the interview should take approximately 30-50 minutes. None of the questions will be of an intrusive nature, however, you will be asked to reflect upon not having been drafted into the NHL, which may cause psychological discomfort. There is also no immediate benefit from participation, however you will aid in our attempts to better understand grit in the context of sport. Your participation in this project is completely voluntary, and there are no consequences should you decide to withdraw from the study. This can be done up to the point the study is prepared for publication by notifying the lead investigator (Jordan Herbison) at the contact information listed below and any information that you have provided will be deleted by the researchers.

Any answers you provide will be combined with those of other participants, they will remain confidential, and they will be presented in aggregate form. Responses/encrypted data files will be assigned a pseudonym known only to the researchers and kept on an encrypted hard drive at Queen’s University.

If you have any questions or want further information about the study, please contact Jordan Herbison at 403-915-6646 or jordan.herbison@queensu.ca. Alternatively, questions regarding rights as a participant in this research may be addressed to the Chair of the General Research Ethics Board at 613-533-6081 or chair.GREB@queensu.ca. Finally, in the event that you should experience psychological discomfort following the interview, we direct you to contact the Mental Health Helpline (Ontario Government) at 1-866-531-2600.

If you agree to take part in the interview, we can now establish a time for me to contact you for a telephone interview or to meet in person. Once we decide on an interview type and time (and potential location for in person interviews), I will read or provide you with a consent form to confirm your agreement to participate prior to the commencement of the interview.

I’d like to thank you for the consideration of our request, and look forward to hearing from you.

Sincerely,

Jordan Herbison, MSc Candidate (Lead Investigator)
Performance Lab for the Advancement of Youth in Sport
School of Kinesiology and Health Studies
Queen’s University
Contact Number: 403-915-6646
jordan.herbison@queensu.ca
Appendix D

Participant Consent Form
My name is Jordan Herbison and I am a Graduate Student and researcher from Queen’s University. I would like to invite you to take part in a research project. If you decide to take part in the project, you will be asked questions pertaining to ‘grit’ as it relates to your experiences in hockey. This interview will take approximately 30-50 minutes of your time on one occasion. None of the questions are of intrusive nature, however, you will be asked to reflect upon not having been drafted in the past, which may cause psychological discomfort. There are also no direct benefits related to your involvement in this project, however you will aid in our attempts at better understanding the role of grit in the context of sport. With your permission, the interview will be audio-recorded.

With regard to confidentiality, no one other than the researchers will know your responses. They will be saved on an encrypted hard drive that only the researchers have access to. All researchers involved with this study will sign a confidentiality agreement. Also, should you wish, you will be given the opportunity to review your transcribed interview material (which will be labeled with a pseudonym) prior to the analysis. In addition, should the results be published, they will be in aggregate form and no personal information will be disclosed.

Please understand that your participation in this project is completely voluntary. There will be absolutely no consequences should you not want to participate. In addition, you are able to withdraw from the study up until the research is prepared for publication by notifying me at the contact information listed above and any information that you have provided will be deleted by the researchers.

This information will further our understanding of grit within the context of elite sport. Should you be interested in knowing the results of the study, we will be happy to provide you with either a summary of the results, or the published article once it is accepted for publication.

If you have any questions or want further information about the study, please contact Jordan Herbison at (403) 915-6646 or jordan.herbison@queensu.ca. Alternatively, questions regarding rights as a participant in this research may be addressed to the the Chair of the General Research Ethics Board at 613-533-6081 or chair.GREB@queensu.ca. Finally, in the event that you should experience psychological discomfort following the interview, we direct you to contact the Mental Health Helpline (Ontario Government) at 1-866-531-2600.

Your participation is important to us. Thank you for your help.

By signing this form (if over the phone, request verbal confirmation to these statements), you are indicating that you understand the research description provided, are aware of what will be asked of you, and that you agree to take part in this study.

SIGNED....................................................................                          DATE……………................

I hereby grant permission for the interview to be audio-recorded:

SIGNED....................................................................                          DATE……………................
Appendix E

Semi-structured Interview Guide
Achievement Despite Adversity: A Qualitative Investigation of Undrafted National Hockey League Players

Semi-structured Interview Guide

Participant number:

Name:

Date of birth:

Gender:

Address:

Telephone number(s):

E-mail(s):

Sport:

NHL Service (years):

Junior Draft (League/Round):

Years competing in sport:

Interview date:

Time begun:

Time ended:

Duration of interview:
**Introduction:**
I am a researcher in sport and exercise psychology at Queen’s University who is interested in understanding the characteristics and experiences that help elite athletes overcome adversity. I would like to thank you for your participation in our research and to be clear, over the next period of time, I will be asking you questions about your experiences and development as an athlete. If at any time you feel that you do not want to carry on with this interview, you may withdraw with absolutely no consequences. With your permission, I would like to record the interview and transcribe it once we have concluded. The length of this interview will be approximately 30-50 minutes. You can be sure that the information you share will remain confidential, and if presented or published, will be discussed in aggregate form. Do you have any questions before we begin?

**Introductory Questions:**
To begin, I’d like to understand what influenced you to pursue hockey as a career, and when this goal became clear for you.

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Participant Probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a Thinking back to your childhood and adolescence, can you share with me some of</td>
<td>• IF SPECIFIC, what about (insert activity mentioned) influenced you to exert such effort?</td>
</tr>
<tr>
<td>the other activities that you enjoyed participating in when you were younger?</td>
<td>• IF NOT SPECIFIC, do you feel that you have a balanced approach to most activities in your life?</td>
</tr>
<tr>
<td>1b Would you say that you approached all of your activities with the same effort,</td>
<td></td>
</tr>
<tr>
<td>or did you spend more effort on certain activities?</td>
<td></td>
</tr>
<tr>
<td>1c Can you share with me why you decided to pursue hockey over other activities?</td>
<td>• Approximately how old were you?</td>
</tr>
<tr>
<td></td>
<td>• Did you aspire to play in the NHL?</td>
</tr>
<tr>
<td></td>
<td>• Did you set hockey-specific goals for yourself? If so, what were they?</td>
</tr>
<tr>
<td>1d Once you decided that a career in hockey was what you wanted to pursue, did</td>
<td>• Was hockey more or less enjoyable?</td>
</tr>
<tr>
<td>anything change?</td>
<td>• Did you dedicate more time to practice, training, etc.?</td>
</tr>
<tr>
<td></td>
<td>• Do you feel that you missed out on anything as a result?</td>
</tr>
</tbody>
</table>
**Transition Questions:**
To better understand your development, I’d like to ask you a few questions about your junior and professional career leading up to your NHL debut.

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Participant Probes</th>
</tr>
</thead>
</table>
| **2a**  
Thinking back to your junior career, were there expectations for you to become a professional hockey player? | • Were there expectations from external sources (i.e. coaches, parents, etc.)?  
• Internal expectations? Were these outcome related (i.e. getting drafted) or task related (i.e., development of specific skills)?  
• Did you ever talk with anyone about these expectations? |
| **2b**  
Did you ever compare yourself to teammates or opposing players? | • Was there anything specific that you felt set you apart from these other players?  
• Did these comparisons motivate you to change your behavior (i.e. train more often, nutrition, etc.)?  
• Did comparing yourself to others ever affect you in a negative way? |
| **2c**  
Can you tell me about any sacrifices that you made during your junior hockey career? How about during your minor-pro career? | • Education, work, extracurricular, relationships.  
• If you could go back, would you change anything (i.e., decisions)? |
| **2d**  
In your mind, when did you believe that you had a chance to make it to the NHL? | • Did any of your goals change (i.e. outcome vs task)? |
Key Questions:
Moving on to the main part of the interview, I’d like to explore some of the events that you feel have been most important for you making it to the NHL, and how you responded to these situations.

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Participant Probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3a Can you give me any examples from your life where you overcame adversity or obstacles that could have prevented you from reaching the NHL?</td>
<td>• How did you react to not being selected in the NHL entry-draft? How would you describe your emotions at the time?</td>
</tr>
<tr>
<td></td>
<td>• What course of action did you take to cope with this adversity?</td>
</tr>
<tr>
<td></td>
<td>• Did not being selected raise any doubts in your mind about becoming a professional hockey player? IF SO, what were they and how did you deal with them? IF NOT, did you believe in everything that you were doing to make it to the next level (i.e., training, ability to compete, nutrition, etc.)?</td>
</tr>
<tr>
<td></td>
<td>• Did you turn to anyone or did anyone step up and offer their support during this time?</td>
</tr>
<tr>
<td></td>
<td>• How did that/those individual(s) support you?</td>
</tr>
<tr>
<td>3b How would you describe your passion for hockey?</td>
<td>• Did it ever drive you to achieve something that you or others didn’t think you were capable of?</td>
</tr>
<tr>
<td></td>
<td>• Did it ever drive your actions that may have set you back (i.e. overtraining driving you to injury)?</td>
</tr>
<tr>
<td>3c Can you provide an example of a something that has made an impact on your professional career that you learned from a</td>
<td>• How did recognizing this affect you?</td>
</tr>
</tbody>
</table>
teammate, coach or other player? This could be something that they taught you or something you just learned through observation.

| 3d | If you could go back and talk to your younger self after not being drafted, or another young player who went unselected in the NHL draft, what would you tell them? |
| 3e | What advice would you give to coaches, managers, or hockey organizations in managing their players who don’t experience being drafted in the NHL entry draft? |

**Ending Questions:**
This just about completes this interview, I have just a couple concluding questions for you.

<table>
<thead>
<tr>
<th>Interview Questions</th>
<th>Participant Probes</th>
</tr>
</thead>
<tbody>
<tr>
<td>4a <strong>Provide a summary of key points.</strong></td>
<td></td>
</tr>
<tr>
<td>4b Do you feel you’ve had the opportunity to share a complete and accurate account of your experience as an undrafted professional hockey player who has reached the NHL?</td>
<td></td>
</tr>
<tr>
<td>4c Do you have any suggestions or comments for future interviews I will be conducting with other players?</td>
<td></td>
</tr>
<tr>
<td>4d Before I turn off the recorder, is there anything else that you would like to share?</td>
<td></td>
</tr>
</tbody>
</table>

**Concluding Statement:**
That concludes our interview. I would like to take this opportunity to thank you for your time. Your input is very important to us and we appreciate you discussing your experiences with us. Once again, I would like to assure you that your responses will remain confidential. Thank you.
Appendix F

Participant Demographics
Table 1

**Participant Demographics**

<table>
<thead>
<tr>
<th>Participant Number</th>
<th>Nationality</th>
<th>Birth Year</th>
<th>Developmental Stream</th>
<th>Position</th>
<th>NHL Games Played</th>
<th>Total Points</th>
<th>Penalty Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Canada</td>
<td>1990</td>
<td>CHL</td>
<td>Forward</td>
<td>87</td>
<td>16</td>
<td>27</td>
</tr>
<tr>
<td>2</td>
<td>Canada</td>
<td>1987</td>
<td>CHL</td>
<td>Defense</td>
<td>230</td>
<td>67</td>
<td>157</td>
</tr>
<tr>
<td>3</td>
<td>Canada</td>
<td>1983</td>
<td>NCAA</td>
<td>Forward</td>
<td>285</td>
<td>70</td>
<td>159</td>
</tr>
<tr>
<td>4</td>
<td>Canada</td>
<td>1985</td>
<td>NCAA</td>
<td>Forward</td>
<td>198</td>
<td>70</td>
<td>215</td>
</tr>
<tr>
<td>5</td>
<td>Canada</td>
<td>1993</td>
<td>CHL</td>
<td>Forward</td>
<td>60</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>6</td>
<td>Canada</td>
<td>1990</td>
<td>CHL</td>
<td>Defense</td>
<td>209</td>
<td>35</td>
<td>228</td>
</tr>
<tr>
<td>7</td>
<td>U.S.A.</td>
<td>1986</td>
<td>NCAA</td>
<td>Defense</td>
<td>304</td>
<td>71</td>
<td>157</td>
</tr>
<tr>
<td>8</td>
<td>Canada</td>
<td>1984</td>
<td>CHL</td>
<td>Forward</td>
<td>230</td>
<td>21</td>
<td>521</td>
</tr>
<tr>
<td>9</td>
<td>Canada</td>
<td>1990</td>
<td>CHL</td>
<td>Goalie</td>
<td>65</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
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<td>1986</td>
<td>NCAA</td>
<td>Defense</td>
<td>57</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>11</td>
<td>Canada</td>
<td>1985</td>
<td>CHL</td>
<td>Forward</td>
<td>14</td>
<td>2</td>
<td>22</td>
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<tr>
<td>12</td>
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<td>1991</td>
<td>NCAA</td>
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<td>1</td>
<td>2</td>
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</table>