

## ABSTRACT

### ATHLETES' EXPERIENCES OF LEAVING SPORT DUE TO SPINAL CORD INJURY: A MULTIPLE CASE STUDY EXAMINATION

by Derek Michael Zike

Leaving sport can be a difficult transition for an athlete. This process is one comprised of both positive and negative events, which can significantly affect individual development. Much of the previous research utilizing the Conceptual Model of Adaptation to Retirement Among Athletes (Taylor & Ogilvie, 1994) has focused on normative and non-normative career-ending injury. No prior investigations have used the entire conceptual model to focus on spinal cord injury specifically. This study was a multiple case investigation into athletes' experiences of leaving able-bodied sport with a spinal cord injury. Semi-structured interviews and multiple inventories were conducted with three athletes who had left able-bodied sport due to a spinal cord injury. In general, findings indicated that athletes adjusted to transition in various positive and negative ways. The influence of the adaptive community, coping strategies, and social support were perceived to facilitate transition. Support for the conceptual model was found.

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A MULTIPLE CASE STUDY EXAMINATION

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## Chapter One

### Introduction

Transitioning from sport is a significant process of change in an athlete's life. This process is accompanied by many adjustments in self-perception, social environment, emotions, and relationships. Transition occurring unexpectedly can make this process more difficult. Generally, researchers have grouped reasons for athletes to leave their sports career into two categories: normative and non-normative transitions. Normative transitions are characterized by an athlete's decision that is anticipated in nature while non-normative transitions occur unexpectedly (Stoltenburg, Kamphoff, & Bremer, 2011). Examples of normative transition include graduation and loss of eligibility in high school or college sport, declined performance with age, and deselection. Non-normative transitions describe the process of significant, unexpected and unpredictable change for an individual, which does not follow the predictable developmental pattern of the life cycle (Stoltenburg et al., 2011). This process can be comprised of both positive and negative events, which can significantly affect individual development. An example of non-normative transition is when an athlete suffers a career-ending injury.

Career-ending injury has previously been examined among college and professional athletes, but the area of catastrophic and more specifically spinal cord injury among athletes has been neglected. Catastrophic injury usually occurs suddenly and without warning. It can leave a person suffering from permanent disabilities (Zemper, 2009). Catastrophic injuries have serious, long-term effects on the individual and their families, and can be caused by any number of different circumstances. Sport injuries that qualify as catastrophic include those that result in a fatality or in a non-fatal brain or spinal cord injury, or skull or spinal fracture. These catastrophic injuries have an enormous impact on the lives of the individuals who experience them. These impacts are not felt merely physically. The person is also affected mentally, emotionally, and socially. In the 30 year period between 1982 and 2012 there were 1,204 non-fatal catastrophic sports-related injuries and illnesses reported at the high school and college level (Mueller et al., 2012). Of these instances, 47.2% were characterized with permanent severe dysfunctional disability. Considering not all events are reported, this is a significant number of occurrences that result in long-lasting effects. Ice hockey, football, and gymnastics account for the highest rates of direct catastrophic injury at the level of high school and college (Mueller et al., 2012).



## **Spinal Cord Injury**

The present study will specifically focus on spinal cord injury (SCI). Usually brought on by sudden, traumatic impact to the spine that fractures or dislocates vertebrae, SCI can damage nearly all spinal cord axons (Crewe & Krause, 2009). Some injuries will see a full recovery and other injuries will result in complete paralysis. Paraplegia and quadriplegia are the most common manifestation of spinal cord injury. Quadriplegia is caused by damage to the cervical spinal cord segments at levels C1-C8 and results in partial or total loss of sensory and motor control at the torso and all four limbs. Paraplegia affects the legs and possibly the trunk, but not the arms.

Spinal cord injury is classified as complete or incomplete, and the ASIA Impairment Scale is used to grade severity of neurological loss (Young, n.d.). “Complete,” or ASIA A, is defined as no motor or sensory function in the anal and perineal region representing the S4 and S5 sacral segments. The vertebrae are divided into the vertebral segments cervical (neck; C1-C7), thoracic (chest; T1-T12), lumbar (back; L1-L5), and sacral (tail; S1-S5). ASIA B “Incomplete” is defined as preserved sensory but not motor function below the neurological level and includes sacral segments S4 and S5. The spinal roots that enter at the spinal column between each vertebral segment define the neurological level (Young, n.d.). The spinal cord segments do not necessarily correspond to the vertebral levels. For example, the C6 spinal cord is situated at the C5 vertebrae, and the C4 spinal roots exit at the spinal column between the C4 and C5 vertebrae. ASIA C “Incomplete” is defined as having motor function preserved below the neurological level, and more than half of the key muscles below the neurological level have a muscle grade of less than 3. ASIA D “Incomplete” is defined as motor function preserved below the neurological level, and at least half of the key muscles below the neurological level have a muscle grade of 3 or more. ASIA E “Normal” is defined as motor and sensory function are normal (Young, n.d.).

Spinal cord injuries can be fatal. Those who survive an SCI will most likely suffer from a wide range of medical complications. These complications can include, but are not limited to chronic pain, bladder and bowel dysfunction, and increased susceptibility to respiratory and heart problems (Crewe & Krause, 2009). What are listed here are physical complications. Describing the psychological and social consequences of SCI is more complex. Individuals who experience objectively similar levels of trauma can respond in completely different ways. These differing responses to trauma are a result of a multitude of psychosocial factors that include self-concept,

social support, available resources, developmental backgrounds, education, etc. When an individual suffers an SCI, the whole person is affected by the injury. The whole person consists of the physical, psychological, and social aspects of an individual. A person's spinal fracture tells a practitioner nothing about how that person's self-concept will be affected or what relationships they can lean on for support. This means that when a person suffers a SCI the whole person must be understood in response.

There are some common characteristics of the SCI adjustment process. Most individuals are left no opportunity for preparation due to the sudden and unexpected nature of the injury (Crewe & Krause, 2009). Thus, the entire adjustment process usually begins after injury. The loss of the ability to participate in valued activities is another experience shared by those suffering from SCI (Crewe & Krause, 2009). These losses can have a significant effect on a person's identity. A loss of independence in daily living is one of the most profound changes after SCI (Crewe & Krause, 2009). Individuals with an SCI typically have to rely on others for assistance in activities such as feeding, bathing, or transportation. Due to the visibility of such an injury, the stigma of physical disability may compromise social interaction and opportunities (Crewe & Krause, 2009). The loss of certain physical abilities or bodily functions can lead to insecurities and the pre-conceived notions of others. A significant issue of individuals with SCI is depression. The rate of depressive disorder is about three times higher than the general population (Crewe & Krause, 2009). This can interfere with health and psychosocial functioning. A key focus of this study is how individuals adjust psychologically. Psychological adjustment, which has been measured by satisfaction with life, has been known to continue to improve for years after injury (Crewe & Krause, 2009).

The current total number of SCI cases in the United States is approximately 230,000. Each year nearly 11,000 individual cases of SCI are added to the United States total (Crewe & Krause, 2009). DeVivo (2012) conducted an extensive literature review of all relevant studies of the descriptive epidemiology of SCI. The incidence and prevalence of traumatic SCI cases in the United States was found to be higher than in the rest of the world. These results are suggested to be attributed to the relative absence of SCI in other countries due to acts of violence and related to motor vehicle crashes (DeVivo, 2012). The SCI incidence rates are highest for persons in their late teens and early twenties. The average age at injury has been found to be increasing in accordance with an aging general population at risk. As the percentage of new SCIs over the age

of 60 increases, the occurrence of preexisting major medical conditions that could make acute care and rehabilitation treatment more difficult will also increase (DeVivo, 2012). Another statistic worthy of note is that SCI annual incident rates are typically 3 to 4 times higher for men than women. This may be attributable to the physical risk inherent in certain male-dominated occupations, sports, or other activities. Motor vehicle crashes have been shown to be the leading cause of SCI, but the proportion of SCIs due to falls has been increasing steadily from 16.2% in the 1970s to 21.8% since 2000 (DeVivo, 2012). In regards to psychosocial outcomes, both Craig Hospital Assessment and Reporting Technique (CHART) and satisfaction with life scores are higher for persons with a longer duration of SCI. This may be explained by individuals' ability to accept and adapt to their injuries over time.

According to the National Spinal Cord Injury Statistical Center (NSCISC, 2014) approximately 10.3% of reported spinal cord injuries were a result of sport and recreation. There has been a reported decline in sports-related SCIs from 14.2% in the 1970s to 10% since 2010 (DeVivo, 2012). One reason for these results may be the implementation of safety and injury prevention initiatives. It is important to examine SCI in the athlete population because of the significance of the body to athletes, and the severe impact SCI has on the body as well as the person as a whole. The present study examines spinal cord injury in the athlete population in order to better understand the impact of SCI on athletes' experiences in leaving able-bodied sport. Understanding the factors associated with these injuries and the subsequent transition process may better inform practitioners as to how to assist these athletes. There is a multitude of variables that can be examined.

### **Self-Concept**

A significant factor in the effectiveness of an athlete's transition is the reconceptualization of their self-concept and identity. Self-concept is understood as the individual's conception of self that emerges from social interactions and, in turn, guides or influences the behavior of that individual (Kinch, 1963). In other words, what an individual perceives their socially constructed role to be will have an effect on their actions. How well athletes re-socialize to alternative roles from sport can determine the success of their transition.

How significantly athletes identify with the athlete role factors into the multi-dimensional self-concept. Brewer, Van Raalte, & Linder stated that athletic identity consists of the cognitive, affective, behavioral, and social concomitants of identifying with the athlete role (as cited in

Murphy, Petitpas & Brewer, 1996, p. 240). Furthermore, athletic identity is understood as the degree to which an individual identifies with the athlete role and looks to others for acknowledgement of that role (Brewer et al., 1993). It can define the way in which an individual evaluates their competence or worth. Individuals may focus their self-identity on the athlete role if they are intensely involved in athletics and receive encouragement for participation (Green & Weinberg, 2001). One issue with athletic identity is when athletes are centered on their sport role and become injured or have negative experiences that threaten their identity. When an individual's focus on their identity becomes disrupted it may lead to negative emotional and psychological reactions. Hinitz explained that athletic identity has been inversely related to ease of adjustment following sport career termination (as cited in Murphy, Petitpas & Brewer, 1996). If this relationship holds true, a high athletic identity may result in a more difficult transition process from sport.

### **Social Support**

Developments in transition research and recent studies have revealed the importance of social support in a healthy transition. There has not been a consistently agreed upon definition or measurement of social support in the existing literature. Yang, Peek-Asa, Lowe, Heiden, & Foster (2010) used the SSQ-6, defining social support as an athlete's appraisal of the support potentially available to them from their social network and how satisfied they were with that support. This interpretation will operate as the definition for social support in the present study. Green and Weinberg (2001) conducted an investigation to examine athletic identity, coping skills, and social support as moderators of mood disturbance and physical self-esteem with the occurrence of injury in recreational participants. This study polled participants who suffered an injury that prohibited physical activity for at least 6 weeks. Their results revealed individuals' increased satisfaction with their social support network and higher levels of coping skills were related to lower levels of mood disturbance during transition. Green and Weinberg (2001) suggested future research should explore injuries that may cause permanent disabilities and the consequences on an individual's physical self-esteem. This recommendation helped confirm the need for investigations like the current study.

Sport participation post-SCI and other social factors would be assumed to be valuable in the psychological adjustment to transition and injury. Tasiemski and Brewer (2011) examined the interrelationships among athletic identity, sport participation, and psychological adjustment

in a sample of participants with spinal cord injury (SCI). The current amount of weekly sport participation was positively related to athletic identity when age, gender, and pre-SCI amount of weekly sport participation were controlled. Higher levels of athletic identity and better psychological adjustment were associated with the ability to practice one's favorite sport after SCI, and team sport reported better psychological adjustment (Tasiemski & Brewer, 2011). These findings suggest the importance of social factors in the link between sport participation and psychological adjustment in people with SCI. Therefore, being able to participate in sport with other individuals despite SCI can be a key factor in a successful transition. Retrospective assessments of pre-SCI athletic identity were recommended for future research (Tasiemski & Brewer, 2011). The present study considers this advice in an attempt to illustrate a better picture of athletic identity and spinal cord injury.

### **Adaptive Sport Participation**

The U.S. Department of Health and Human Services stated the conclusions made by the CDC that, when compared to individuals without activity limitations, individuals with activity limitations have been found to experience fewer days of vitality and more days of pain, depression, anxiety, and sleeplessness (as cited in Zabriskie, Lundberg, & Groff, 2005, p. 177). Staying physically active has been demonstrated to positively impact individuals with disabilities (Zabriskie et al., 2005). Disabled individuals that remain physically active are better adjusted and more satisfied with life. They report having fewer days of pain, depression, anxiety, and sleeplessness. Disabled individuals also describe improved vitality, and substantial increases in their life expectancy (Zabriskie et al., 2005).

In order to provide disabled individuals with more opportunities to remain physically active, adaptive sport and recreation programs have been established. Adaptive sport and recreation has been identified as any modification of a sport or recreation activity to accommodate the varying ability levels of disabled individuals (Lundberg, Taniguchi, McCormick, & Tibbs, 2011). The provision of specialized equipment is a key feature of adaptive sports and recreation. Examples of specialized or adaptive equipment can range from handcycles and sit skis to mounts and grips for fishing rods or hunting equipment. This equipment assists disabled individuals by facilitating as much independent participation as possible (Lundberg et al., 2011). There are many choices that individuals with a disability can make when pursuing adaptive athletic endeavors. Persons with paraplegia can choose from sports such as sledge

hockey, basketball, and skiing to name a few. The severity of the physical impact a disability has on an individual can limit those choices. The physical consequences of cervical SCI limit the opportunities disabled individuals have to take part in vigorous physical activity (Tasiemski & Osinska, 2013). This can make the achievement of fulfilling athletic pursuits increasingly difficult. Despite their disability, individuals with tetraplegia may have the option to participate in several different sports including swimming, table tennis, and archery (Tasiemski & Osinska, 2013).

The common purpose of community-based adaptive sport and recreation programs has been described as the improvement of quality of life, health, confidence, and community integration of individuals with disabilities (Lundberg et al., 2011). These aims target individuals with disabilities in an effort to foster growth in several different aspects of the self (e.g. physical, mental, social, etc.). While adaptive sports primarily focus on the recreational experiences of disabled individuals, adaptive sport and recreation programs also provide opportunities for friends, family, and other interested individuals to mutually participate (Lundberg et al., 2011).

Adaptive sport has been found to affect disabled individuals in many positive ways. Lundberg et al. (2011) stated that adaptive sport provides disabled individuals with opportunities to positively compare themselves with others without disabilities, experience freedom and success, build social networks, and feel a sense of normalcy. The feeling of a sense of normalcy was identified as a direct result of participation in adaptive sport activities (Lundberg et al., 2011). This feeling of normalcy was in contrast to the idea of being stigmatized as helpless, abnormal, and dependent on others (Lundberg et al., 2011). Individuals' feeling of normalcy were represented by perceptions that activity participation was not limited in comparison to others, social interaction with friends, and feeling as though they were not so different or being treated differently (Lundberg et al., 2011). Findings indicated that the adaptive sport experience facilitated a sense of normalcy because it provided them with opportunities to develop and express their competence, be socially active and included, and be recognized for their similarities as opposed to their differences (Lundberg et al., 2011).

Regular participation in adaptive sport and recreation has been found to positively influence disabled individual's self-concept (Suc, Lesnik, & Erpic, 2015). Suc et al. (2015) showed that there is not much difference between the self-concept of persons with disabilities who practice sports and the overall population. Disabled individuals who do not practice sports

have reported a lower self-concept, and especially a lower physical self-concept. Blinde and McClung described the positive influence recreational sport had on the self-perceptions of disabled individuals (as cited in Zabriskie et al., 2005, p. 178). They detailed that recreational sport improved individuals' physical self-perceptions, increased confidence to pursue new activities, created opportunities to experience their bodies in new ways, and allowed them to redefine their physical capabilities.

There are several other identified benefits of regularly practicing sports for persons with disabilities. Those who do, have been found to experience more overall bodily function, are more independent despite their disability, and take better care of themselves (Suc et al., 2015). Scarpa explained that disabled individuals who practice sport are also more emotionally stable, are more satisfied with themselves, relieve stress through sport similar to the general population, and handle everyday stressors more constructively (as cited in Suc et al., 2015, p. 40). Researchers have also examined the outcomes of participation in adaptive sport and recreation on quality of life. Zabriskie et al. (2005) explained that their findings indicated the quality of life, overall health, quality of family life, and quality of social life for disabled individuals were all positively influenced by participation in adaptive sport and recreation.

### **Subjective Well-Being**

Examining how individuals evaluate their lives after injury may help explain aspects of the transition process. Diener, Suh & Oishi stated that a construct in the field of psychology that is related to people's evaluation of their lives is subjective well-being (as cited in Coakley, 2006, p. 35). This construct has been used to find global feelings of life satisfaction and discover affective self-evaluations. Diener, Suh & Oishi also outline certain aspects of the study of subjective well-being that allow for a better understanding of the relationship between transition from sport and subjective well-being (as cited in Coakley, 2006, p. 35). First, the basic assumption is that a respondent is in a privileged position to report their internal experience of well-being. This differs from being externally dictated by researchers and practitioners in traditional clinical psychology. Next, the topic of subjective well-being also involves the entire range of well-being from intense dissatisfaction to extreme satisfaction, making positive well-being as important as negative well-being. Finally, both the temporal moods and long-term states are involved in the topic of subjective well-being. The evaluation of the long-term will assist in the assessment of what can be a lengthy transition process.

Support for the use of subjective well-being as a way to assess elite athletes' perceptions of themselves on the well-being continuum and the quality of their lives after retirement from sport was found in a study by Stephan, Bilard, Ninot & Delignieres (2002). They used a mixed methods research study to assess former French Olympic athletes. The 12-item General Health Questionnaire and the Satisfaction with Life Scale were given to the athletes interviewed. Data from the study showed an initial decrease in subjective well-being and a period of difficulty in regards to feelings and attitudes. This was followed by stabilization and increase of subjective well-being and an adjustment to a new lifestyle, social roles, and professional responsibilities. The implications from this study suggest that assessing subjective well-being when examining sport-career transition can be valuable. Important to understand is that subjective well-being fluctuates and depends on an individuals' evaluation of their current circumstances (Coakley, 2006). This means information about the influence of time is missing in single time-point collections and must be interpreted accordingly.

Andrews and Withey identified three components of subjective well-being: positive affect, negative affect, and life satisfaction (as cited in Diener, Emmons, Larsen, & Griffin, 1985). The life satisfaction component refers to the cognitive-judgmental aspect of subjective well-being. According to Shin and Johnson, Life satisfaction is defined as "a global assessment of a person's quality of life according to his chosen criteria" (as cited in Diener et al., 1985). Individuals' judgment of their satisfaction is dependent on a comparison of one's present circumstances with a standard individuals set for their self (Diener et al., 1985). Individuals place different values on different life domains. Because of this, measures of life satisfaction (e.g., SWLS) ask a person what their overall evaluation of their life is instead of obtaining a sum of specific domains.



## Chapter Two

### Review of Literature

The research on transition and how it relates to a large number of variables is rapidly developing. There have been major recent transformations in how researchers approach transition. In order to effectively explore these variables and their interrelatedness with other factors, it is important to grasp the available literature. The existing views of transition from sport are a fairly recent development that is still being constructed and examined. Blinde and Greendorfer (1985) provide examples of the critique and challenges made to the early literature and theoretical perspectives. At the time, beliefs about transition were deeply rooted in social gerontology and thanatology. Social gerontology is a perspective focused on aging (Taylor, Ogilvie & Lavallee, 2006). This view considers life satisfaction to be dependent upon characteristics of the sports experience. Thanatology, as suggested by Rosenburg, views retirement from sport as akin to social death (as cited in Taylor et al., 2006). This is characterized as social isolation and the rejection from the in-group. Blinde and Greendorfer (1985) criticized these approaches for their narrowness and lack of applicability to voluntary and involuntary transition. Implicit in these perspectives was the assumption that retirement was an event that represented an abrupt termination of the athlete role.

Researchers have now come to understand that retirement and transition is a process. Individuals need to work through a period of adjustment to their new role. The concept of the social death, a product of social gerontology, was generalized across individuals retiring from sport. This was viewed as an overly negative portrayal of social isolation and ostracism of individuals disengaging from sport (Blinde & Greendorfer, 1985). These assumptions were argued to be problematic when applied to athletic retirement.

A central issue for these researchers was the lack of consideration given to resocialization in existing research. Typically, athletes retiring from sport are significantly chronologically younger than the retiring worker. Athletes will most likely need to transition and re-socialize into alternative roles. This lack of investigation into the phenomenon of athlete resocialization after athletic retirement requires researchers inquire about athletes' socialization into alternative roles. One suggestion is that retirement from sport may simply be a system-induced mechanism (Blinde & Greendorfer, 1985). This means retirement may represent simply leaving a formal level of sport and not a withdrawal from sport itself. It was highlighted within the article that

future research on post-retirement involvement in sport as a mediating factor would be necessary (Blinde & Greendorfer, 1985). The continued involvement in sport as a coach or in some related context may ease the transition process by allowing individuals to maintain a sport-related identity and their social support system (Lavallee, Gordon, & Grove, 1997). These same individuals may put themselves at risk for transition difficulties when they finally leave the coaching ranks.

Using a cultural mindset, Stambulova, Alfermann, Statler, and Cote (2009) analyzed the evolution, current status, and further development of transition literature and practice. There have been several major historical trends that have influenced our current understanding. One significant shift in thinking has been the view of transition as a coping process with potentially positive or negative outcomes (Stambulova et al., 2009). How individuals interpret and handle the factors involved in their transition impacts their experience. Stambulova (2011) cited Vygotsky's 1984 developmental psychology theory on crisis periods, which contributed the idea of the double nature of developmental crises. One side of developmental crises is that any crisis is difficult and demands a full mobilization of resources. The other side of crises gives an individual an opportunity to grow, develop, and learn new competencies.

The next major shift was the development from focusing exclusively on athletic retirement to studying a range of transitions within the "whole career" approach (Stambulova et al., 2009). This affected how we perceive the athletic experience, recognizing the weight of minor pivots in individual careers. The third shift has been towards a more inclusive approach involving a life-span perspective concerning other life spheres rather than exclusively on sport (Stambulova et al., 2009). Created by Wylleman and Lavalle, the developmental model of transitions faced by athletes acts as a framework for the idea of interrelatedness of sport and other areas (Stambulova, 2011). This holistic understanding of transition allows us to be more cognizant of other variables outside of sport.

How people come to understand and explain the factors involved in their transition has become a major development in the research. Cognitive appraisal models have been found to be viable as explanatory frameworks for adjustment to injury (Green & Weinberg, 2001). These models explain that an individual's interpretation or appraisal of an injury and their available resources determines how the individual will react emotionally. Thus, variables such as athletic identity and social support are not the sole determinants of an individual's psychological

reactions. Athletes who suffer the same injury may react differently because of personal and situational factors, such as loss of opportunity to gain a college scholarship, locus of control, and playing status (Green & Weinberg, 2001).

### **Conceptual Framework**

Taylor and Ogilvie's (1994) Conceptual Model of Adaptation to Retirement Among Athletes is a framework for examining the transition process (hereafter referred to as the conceptual model: see Figure 1). Taylor and Ogilvie developed this model in an attempt to integrate the available theoretical and empirical investigations with their own applied work. This conceptual model helps inform the researcher of how the individual perceived the factors and resources related to their adjustment to transition as well as whether the transition was successful. There are five stages that comprise this model. Each of these stages present factors that influence how successful an athlete's transition is.

Stage 1 covers the reasons of career termination, which include age, deselection, consequences of injury and free choice (Taylor et al., 2006). Age, a normative cause of transition, involves declining performance due to advanced age. Deselection, another normative cause of transition, is associated with the selection process for sport teams. This process disregards those who don't have the performance criteria to move on to each subsequent competitive level. Injury is also a cause for transition. Athletes can be forced to retire due to the circumstances of their injury. Severe injuries and the physical disabilities that can accompany them can result in a range of psychological and emotional difficulties. Finally, some athletes may leave sport at their own volition. This could be a product of an individual achieving their sport goals, a lack of enjoyment, or any number of personal, social, or sport reasons. The different reasons given for an individual's transition may dictate a variety of issues involved in the degree of distress experienced.

Stage 2 involves factors related to the adaptation to career transition (e.g. developmental contributors, self-identity, perceptions of control, social identity) (Taylor et al., 2006). Developmental contributors refers to the developmental experiences that have taken place since the start of an individual's sport career. These experiences can influence individuals' perceptions of their self and their interpersonal skills to adapt to transition. For example, a single-minded pursuit of excellence that is rooted in an athlete's earliest experiences may lead to a personal investment that restricts development in other life areas. The factor of self-identity is concerned

with the extent athletes define their self worth by participation and achievement in sports. According to Pearson & Petitpas, how limited an individual is to their athletic identity can influence their sense of self-worth when they lose that support during the transition process (as cited in Taylor et al., 2006). Perceptions of control involve the degree of control an athlete believes they have when leaving sport. Blinde & Greendorfer stated that the absence of control in the retirement process might create a highly threatening situation (as cited in Taylor & Ogilvie, 1994, p. 8). Social identity refers to the diversity of individuals' identity. This factor is concerned with a person's loss of status tied to sport, and their ability to assume certain roles within and outside of sport. How individuals deal with the changes and difficulties associated with these factors depends on the resources available to them.

Stage 3 is the available resources for athletes including coping strategies, social support, and pre-retirement planning (Taylor et al., 2006). These are the factors that can influence an individual's ability to respond to transition problems effectively. Coping strategies are used to handle the changes during the transition process that will affect a person cognitively, emotionally, and behaviorally. These strategies can include cognitive restructuring, relaxation training, or skills assessment and development among many others. Social support is found in the friends, family members, organizations, etc. that make up an individual's support system. An athlete's degree of immersion into the sports world can influence their adjustment process. Blinde & Greendorfer stated that when athletes perceive themselves to be disconnected from the social support system that they associated with sport involvement they may become isolated, thus leading to distress (as cited in Taylor & Ogilvie, 1994, p. 11).

Pre-retirement planning involves a variety of activities done before the transition process begins. These activities may include continuing education, social networking, and investment or occupational endeavors. Research has indicated that pre-retirement planning can have positive consequences for individuals. Gathered responses from participants in the study by Stoltenburg et al. (2011) suggested that having a contingency plan would allow for a smoother transition. It would be interesting to see if the prevalence of disability would affect athletes' contingency plans and the supposed benefits. Stambulova et al. (2009) listed a number of statements and recommendations derived from their literature review. They stated that athletes should search for a balance between current demands and anticipated future demands in their athletic careers. Social support from coaches, parents, and consultants is necessary to help athletes increase their

awareness of forthcoming demands and the resources/strategies necessary to cope with them (Stambulova et al., 2009). Research has also advised athletes to search for balance between demands in and out of sport and to focus on transferrable competencies (Stambulova et al., 2009). A study involving elite athletes in their first year of retirement from sport discussed that developing transferrable skills may provide direction and motivation in the post-athletic career (Stephan et al., 2003). The availability of these resources and their interaction with the factors in stage 2 can significantly influence how an athlete perceives their transition experience.

The quality of career transition is addressed in stage 4. An athlete's healthy or distressful response to, and quality of, transition will be evident by the previous stages of the process (Taylor et al., 2006). The presence of and degree to which contributing variables affect an individual will most likely dictate how healthy a transition is. While research into sport career transition has continued to grow, the literature has not produced evidence of difficulties with distressful transitions at all levels of sport participation. Coakley suggested that some might experience leaving sport as a natural process of eligibility in high school or college sport (as cited in Taylor et al., 2006). Other researchers claim that distress from sport career transition may manifest in a range of disruptive ways (Taylor et al., 2006). More serious transition difficulties may result in alcohol or drug abuse, anxiety, and depression. When the quality of a transition becomes distressful that is when intervention is needed.

Stage 5 is the intervention strategies professionals can implement to assist an athlete with their transition (Taylor et al., 2006). If an athlete experiences a crisis transition, intervention strategies (e.g. stress management, emotional expression, broadening their role repertoire, etc.) can be used to move individuals to a healthy transition. Retirement or transition planning has been established as an important factor in the transition process, but attention also must be focused on post-retirement mediation. Stephan et al. (2003) highlighted the need for interventions to assist in phases of transition. Consultants need counseling frameworks like the Mobilization Model of Counseling Athletes in Crisis-Transitions to assist individuals. It functions as a tool that consultants can utilize to support clients in analyzing their crisis-transition (Stambulova, 2011). The mobilization model is aimed at assisting athletes to analyze difficult career situations and turn ineffective coping into effective coping. Investigations like the present study into spinal cord injuries and how they affect transition will potentially inform the development of future counseling frameworks.

Taylor & Ogilvie (1994) developed this model in an attempt to characterize the retirement process from beginning to end. As pointed out by Stoltenburg, Kamphoff, and Bremer (2011), several researchers have investigated parts of Taylor and Ogilvie's (1994) model (c.f., Alfermann, Stambulova, & Zemaityte, 2004; Grove, Lavalley, & Gordon, 1997; Koukouris, 1991; Stephan, Bilard, Ninot, & Delignieres, 2003). Alfermann, Stambulova, & Zemaityte (2004) assessed the cognitive, emotional, and behavioral consequences of athletes' sport career termination at the national and international level in three different nations. Results of their study showed retirement planning to contribute to significantly better cognitive, emotional, and behavioral adaptation. More specifically, high athletic identity led to less positive reactions to retirement and to more problems in the adaptation process. Coping strategies were also discussed as 'accepting the reality,' denial, and distraction strategies were the most used (Alfermann et al., 2004). Alfermann, Stambulova, & Zemaityte (2004) suggested, based on the results of their study, psychological training program interventions for athletes approaching sport career termination and already retired athletes to help them accumulate and utilize transition resources.

Grove, Lavalley, & Gordon (1997) examined elite level athletes' financial, occupational, emotional, and social adjustment to retirement from sport. Athletic identity, coping strategies, and quality of adjustment to retirement were also assessed. Results of the study showed that the most often used coping strategies were acceptance, positive reinterpretation, planning, and active coping. Athletic identity had a significant relationship with coping processes, emotional and social adjustment, pre-retirement planning, and anxiety about career decision-making. Results indicated that individuals with a strong and exclusive athletic identity up to the point of retirement might be vulnerable to career transition difficulties (Grove et al., 1997). These difficulties include an increased reliance on coping strategies such as denial, mental disengagement, behavioral disengagement, and venting of emotions. The researchers utilized the AIMS inventory for this study. Athletes scoring high on AIMS score were more inclined to seek social support and suppress competing activities than low AIMS scorers (Grove et al., 1997). These results emphasize the need to develop competencies and interests in other activities and roles. A multi-method approach involving qualitative information was recommended for future research on athletic identity (Grove et al., 1997).

Koukouris (1991) looked at why 'ex-athletes' from different sports drop out, what problems they face, and whether they continue in sports in any capacity. The researcher inquired

about the participants' reason for leaving sport as well as symptoms of problems with adjustment to transition. Stephan, Bilard, Ninot, & Delignieres (2003) examined French Olympic athletes' subjective well-being during the process of transition from elite sport. Pre-retirement planning was found to ease the adjustment to a new life, and a sense of control was strongly associated with a positive evaluation of one's life. They stated that their results provided information on Taylor & Ogilvie's (1994) assumptions about the coping skills used by retiring athletes and the way social support mediates adjustment to retirement. Until recently, the entire conceptual model has been examined sparingly (c.f. Coakley, 2006; Stoltenburg, Kamphoff, & Bremer, 2011; Hurley, 2014; Nassi, 2014).

Coakley (2006) investigated the entire conceptual model through the examination of seven retired NFL players' sport career transition experiences. In Coakley's dissertation, she found pre-retirement planning was described as inadequate by most of the athletes interviewed. This lack of preparation resulted in negative feelings of subjective well-being. Support was found for the conceptual model. Coakley (2006) came to the conclusion that, "the sport career transition is a complex, multidimensional process and the outcome is contingent upon the individuals' cognitive, social, behavioral and emotional resources and level of preparation for the sport-career transition" (p. 2). Coakley's dissertation was the earliest study found to have looked at the full conceptual model. While Coakley's research examined normative transition experiences, Stoltenburg, Kamphoff, and Bremer (2011) recognized the gap in the literature in regards to career-ending injuries.

Stoltenburg, Kamphoff, and Bremer (2011) utilized the entire conceptual model to investigate the psychosocial effects of sport career transition due to career-ending injury. Findings from this study support many aspects of Taylor and Ogilvie's (1994) conceptual model. Stages 2, 3, and 4 were addressed by the individuals' reported experiences with career-ending injuries (Stoltenburg et al., 2011). It was found that athletes who identified strongly with their role in sports experienced more adjustment difficulties. When discussing pre-retirement planning, several individuals felt that having a "Plan B" eased the difficulty of transition. The importance of social support in transition was also identified. Curiously, Stoltenburg et al. (2011) found that some participant responses proposed that a lack of control over the decision to leave sport made for an easier transition. This finding seems counterintuitive. It would seem that the ability to consciously decide when to transfer from the athlete role would be preferred. Further

research into this variable is definitely needed. Five distinct themes that materialized from the interview transcripts include: pre-retirement planning, athletic identity, social support, consequences of the injury, and nature of the injury (Stoltenburg et al., 2011). These themes are representative of how complex and multidimensional the transition process is. One of the limitations outlined in this study was that there were a variety of career-ending injuries experienced by participants. The type of career ending injury suffered might influence the sport career transition experience.

Hurley (2014) documented the lived experiences of professional rugby union players that had retired due to suffering a career-ending sport injury. They attempted to more fully examine the experience of career-ending injury through the combination of the conceptual model and the integrated model of response to sport injury (Wiese-Bjornstal, Smith, Shaffer, & Morrey, 1998). Hurley stated that these two models could logically complement each other in understanding the transition experience due to career-ending injury. They felt that the combined frameworks could cover the range of aspects that are potentially relevant to both psychological reactions to injury and the career transition process. Findings from this study were that participants' level of preparedness, the severity of injuries suffered, and the nature of their sport and organization had a significant influence on recovery and transition (Hurley, 2014). Loss of self and social identity during transition led to adjustment difficulties, and participants reported using different forms of support (e.g. sport psychologist) to cope with transition. Support for the conceptual model was provided by the indication that a successful transition out of rugby was mediated by balancing their resources and demands. The conceptual model was addressed to be lacking in its ability to account for cognitive and emotional reactions. The integrated model of response to sport injury (hereafter referred to as the integrated model) takes into account personal and situational moderating factors and how they interact with an individual's cognitive appraisal of injury, the subsequent emotional and behavioral response, and physical and psychological recovery (Wiese-Bjornstal et al., 1998). This integrated model, while shown to cover a range of potentially relevant psychological reactions to injury, will not be utilized in this study. The current study is more specifically concerned with spinal cord injury, the process of transition, and subsequent subjective well-being. The cognitive and emotional reactions of injury go beyond the scope of the current study.



Nassi (2014), like Hurley (2014), utilized both the conceptual model and integrated model to examine the transition experiences of former professional Finnish ice hockey players who retired as a result of career-ending injuries. Support for stages of the conceptual model were found. Findings of this study indicated that developing a more balanced self-identity, access to social support, and financial stability were involved in a successful transition. Self-reflection was identified as a cognitive coping strategy utilized in the transition process. This strategy and a lack of pre-retirement planning were found to be the resources with the most prominent influence.

The Conceptual Model of Adaptation to Retirement Among Athletes was utilized in the present study. This model is a practical framework for exploring other non-normative transition such as spinal cord injury. The stages of the conceptual model help examine the factors and resources related to the transition from sport as well as the quality of transition. In previous research utilizing the conceptual model much of the focus has been on normative and non-normative career-ending injury. Of the research to date investigating the entire conceptual model, no study has been found to focus on spinal cord injury specifically. The present study sought to fill this gap in the literature.

### **The Present Study**

This study involves multiple interests. Transition from an individual's sport career is viewed as a stage of individual development. The intent of this study is to look at how individuals are affected by this developmental stage. Quality of life/well-being of an individual's post-career transition is also of interest. Examining what individuals' well-being is like now post-injury is believed to be important. The process of transition itself is another interest. It is believed that there is little known about the process of transition from sport due to spinal cord injury.

According to Schram (2006), a research purpose is what the researcher is seeking to understand about something or gain insight into what is going on in a setting. The research purpose of this study is to examine individuals' experience of transition from sport due to spinal cord injury utilizing the Conceptual Model of Adaptation to Career Transition (Taylor & Ogilvie, 1994; Taylor et al., 2006). The second research purpose of this study is to investigate the subjective well-being of these individuals. A practical purpose is a statement focused on accomplishing, changing or evaluating something (Schram, 2006). The practical purpose of this study, or what it is the researcher wants to accomplish, is to add to the literature on spinal cord

injury and athletes' sport career transition experiences to inform those working with such athletes (e.g., sport psychologists) on how to better assist and support these athletes.

The focus of a study, as reflected in a researcher's statement of research purpose, is supposed to direct attention to conceptual concerns and point toward an inquiry into the meaning of something (Schram, 2006). The focus of this study, or the larger conceptual concern in which the research purpose is situated, is healthy sport career transition after spinal cord injury. A study's locus is where these conceptual concerns are located, in the sense of situating them in a specific social process or set of circumstances (Schram, 2006). The locus of this study, or the processes and/or circumstances in which the larger conceptual concern (or focus) is situated, is the process of transition from sport that individuals go through when a spinal cord injury occurs.

The Conceptual Model of Adaptation to Career Transition has been supported in previous research (Coakley, 2006; Stoltenburg et al., 2011; Hurley, 2014; Nassi, 2014). Utilizing this theoretical framework helped guide the understanding of Spinal Cord Injury and athletes' experiences. The expected outcomes of the proposed research were that the results would illustrate the experiences of individuals transitioning from sport due to a spinal cord injury. It was also expected that similarities would be found in participant responses, and that participant's reporting of their experiences of sport career transition due to spinal cord injury would illuminate uniquely different challenges in comparison to previous transition research.

## Chapter Three

### **Methodology**

As stated above, this study examines individuals' experience of transition from sport due to spinal cord injury utilizing a conceptual framework of transition. In this section, the methodology of this project is described. Specifically, what multiple case study research is and why it is conducted is discussed first. Next, the aim of the study, the research lens used, and the research approach that informed this study is explained. Then the specific method being used, that is, qualitative semi-structured interviews informed by select quantitative inventories, as well as the techniques that will be used to ensure quality in this study are presented. After this, procedures are discussed. The methodology section concludes with an explanation of the process of data analysis.

#### **What Is Case Study Research and Why Do We Do It?**

An understanding of case study research was developed from the work of Yin (2012) and Baxter & Jack (2008). Case study research is a social science method that seeks to gather an in-depth understanding of a single or small number of cases, which are set in their real-world contexts. As defined by Yin (2012), case study is an empirical inquiry about a contemporary phenomenon, set within its real-world context, especially when the boundaries between phenomenon and context are not clearly evident. An assumption of researchers employing this method of study is that examining the context and complex conditions related to a case is essential to understanding the case. The case study method is based on a constructivist paradigm that recognizes the importance of human subjectivity without outright rejecting the notion of objectivity (Baxter & Jack, 2008). One of the advantages of this method is the close collaboration between participant and researcher. This collaboration enables the researcher to better understand participant actions by gathering participants' descriptions of their story through their own view of reality.

There are several situations in which the opportunity to apply the case study method is provided. First, a case study design should be considered when your research addresses a "how" or "why" question. Case studies are more appropriate than other methods due to the rich description or insightful explanation that are more likely to come from case study. Second, the case study design should be considered when the behavior of those involved in the study couldn't be manipulated. Third, the case study method also favors the collection of data that

cover contextual conditions or exist in natural settings because of the believed relevance to the phenomenon under study. Fourth, the case study method should also be considered when the boundaries between phenomenon and context are unclear (Baxter & Jack, 2008; Yin, 2012).

In a case study, the main unit of analysis is the case. A case is generally a bounded entity (e.g. person, organization, event, etc.). This means that it is a thing, distinct in its existence, limited by its own subjectivity. The first step in designing a case study is defining the case that you are studying (Yin, 2012). This typically means deciding on what the case isn't. Next, you must decide the type of design that you will be using. This entails choosing if your study will consist of single or multiple cases, and whether to keep your case holistic or to embed subcases within an overall holistic case. A common multi-case design is a direct replication. In this design, the conditions in two or more cases will be examined by comparison to see if the same findings might be replicated. Alternatively, in a theoretical replication, deliberately contrasting cases might be included to predict contrasting results for anticipatable reasons (Yin, 2012).

The third step in designing a case study is deciding whether or not to use theory to construct the essential methodological steps including: developing a research question, selecting cases, defining the relevant data to be collected, etc. Theoretical propositions are used in case study research to suggest a simple set of relationships (Yin, 2012). This set of relationships may be understood as a hypothetical story about why an act or event occurs. The more elaborate the theory, the more intricate the patterns will be that it points to. An advantage of using theoretical propositions is that it ensures that the report remains focused on addressing the patterns or relationships of data, and superfluous data doesn't distract the researcher (Baxter & Jack, 2008). Conceptual frameworks, like the one used in this study, serve several purposes in case study research. Frameworks help identify who will and will not be included in a study; describe what relationships may be found based on logic, theory and/or experience; and serve as an anchor for the study and is referred to at the stage of data interpretation (Baxter & Jack, 2008).

There are a variety of sources of case study data. Six common sources include: direct observations, interviews, archival records, documents, participant-observation, and physical artifacts (Yin, 2012). Regardless of the source, case study evidence can include both qualitative and quantitative data. The findings from these sources should not be understood separately, but rather together as narrative. Each data source converges together to contribute to the researcher's understanding of the whole phenomenon (Baxter & Jack, 2008). The converging lines of these

sources are meant to make findings as robust as possible. When presenting the evidence in your case study, it must be done with sufficient clarity so that readers are allowed to independently judge your interpretation of the data, and assess validity or credibility. Therefore, data should be placed in the final report clearly and with plenty of detail.

Case study research has failed to achieve widespread recognition as a method. There are several reasons for this failure, but one in particular is that there is a belief that case study research is the exploratory phase for other methods. This view is outdated as case study research goes well beyond exploratory functions. A lack of trust in the credibility of case study researchers' procedures is another reason for the limit to the recognition of case study research. It is the responsibility of the researcher to implement processes that ensure credibility. Processes of member checking, reflection on interview notes, or double coding are useful (Baxter & Jack, 2008). Other researchers question the sufficient protection against biases, and perceive an inability to generalize findings to any broader level (Yin, 2012). In case study research the appropriate type of generalizing is analytic generalizations. Analytic generalizations depend on using a study's theoretical framework to establish a logic that might be applicable to other situations (Yin, 2012).

### **Aim(s) of Study**

The aim of this study is explanatory/theoretical because as Schram (2006) states, those with explanatory/theoretical aims seek to identify and analyze patterns related to what is happening, and to identify plausible relationships shaping what is happening. This study sought to identify and analyze patterns related to what is happening (and not) in individuals' transitions from sport due to spinal cord injury. This study also wanted to identify plausible relationships between what is happening (and not) in terms of the factors related to adaptation to transition, available resources, and the quality of adaptation to athletic retirement. The aim of this study is also descriptive, because as Schram (2006) says, those with descriptive aims want to document and describe what is happening in a setting, event, or set of circumstances. In this study it was sought to document and describe what is happening in a particular transition for individuals.

### **Research Lens**

The aims of this study are better described as making sense of the way things are, which falls on the interpretive side of the interpretive/critical continuum. The interpretive lens is a shared belief that what people know and believe to be true about the world is constructed as

people interact with one another over time in specific social settings (Schram, 2006). This notion of social construction of reality guides research aims to understand this complex and constructed reality from the point of view of those who live in it. This focus situates people's meanings and constructs within and amid specific social, political, cultural, economic, ethnic, and other contextual factors (Schram, 2006). The task is to interpret these multiple perspectives through direct interactions that focus and refine the interpretation. Given the assumptions and beliefs of this lens, it would require the researcher to conduct research by examining the multiple meanings people construct for their surroundings and time. The task of interpretation in this study is thus to construct a 'reading' of these multiple meanings and voices together and make sense of the phenomenon.

### **Research Approach**

The research approach this study utilized is multiple-case study. In multiple-case studies, the researcher is enabled to explore differences within and between cases (Yin, 2003). The researcher hopes to achieve the replication of findings across cases. It is important that the cases are chosen carefully so that the researcher can predict similar results across cases. Alternatively, the researcher may choose cases in order to predict contrasting results based on a theory (Yin, 2003). Multiple-case studies are often equated with multiple experiments. The difference being that context is different for each of the cases. Compared to the holistic case study that allows the understanding of one unique case, in multiple-case study we examine several cases to better understand similarities and differences between cases. There are advantages and disadvantages to this type of design. The evidence that is created from this type of study is considered robust and reliable, but it can also be time consuming and expensive to conduct (Baxter & Jack, 2008).

### **Methods of Ensuring Quality**

There are several threats to validity in qualitative research that researchers must be aware of. A wide array of methods is available to help ensure the quality of a study. One potential threat is researcher bias, which is when researchers find what they want to find as a result of selective observation. A strategy used to understand and combat researcher bias is called reflexivity. This means the researcher is actively engaging in critical self-reflection about his or her potential biases or predispositions (Johnson, 1999). Interpretive validity is another criteria by which the quality of a study is evaluated. This form of validity refers to accurately portraying the meaning attached by participants to what is being studied by the researcher. It is the degree to

which the research participants' viewpoints, thoughts, feelings, and experiences are accurately understood and portrayed by the researcher (Johnson, 1999). A strategy for achieving interpretive validity is participant feedback. Through this strategy you share your interpretations of participants' viewpoints with the participants so that you may clear up any areas of miscommunication (Johnson, 1999).

Establishing external validity helps ensure the quality of a study as well. This form of validity involves the ability to generalize from a set of research findings to other people, settings, and times. In order to help the readers of a study know when they can generalize from findings, researchers can employ several strategies. These strategies include providing the number and kinds of people in the study, how they were selected to be in the study, contextual information, the nature of the researcher's relationship with the participants, etc. (Johnson, 1999). These methods of ensuring quality in a research study assist researchers in creating a final product to be shared. In this study, what was done to increase credibility was discussions with a supervisor to examine potential biases placed in interview questions. There was also an attempt to maintain interpretive validity by providing complete interview comments so as to avoid loss of context and accurately portray interviewee responses. External validity was established by providing information on the participants, and how they were recruited.

### **Procedures**

For this study, participants were individuals that are/were athletes who suffered a spinal cord injury and subsequently transitioned out of sport. The spinal cord injury could have been a result of playing the sport, but it did not necessarily have to be. The spinal cord injury also could have happened indirectly from the sport they played. This study was limited to those individuals who did not experience a full recovery from spinal cord injury, and no longer participate in able-bodied sport. Athlete was defined as a person who participates or did participate in an organized competitive individual or team sport. Competitive sport was distinguished as participation at a level of personal investment beyond a recreational or intramural league level. This study did not define an athlete as someone who exercises frequently by running, weight lifting, etc. on their own. Participants must have participated in a club, school, or professional sport organized or governed by a set of rules.

A sample size range of 3 to 8 was sought to be included in this study. The number of participants was acceptable at the anticipated low number because the goal of this research was

in-depth narrative, and positioning the participants' perspective as the feature. What made the researcher decide that there were enough participants was the richness of the participants' narrative. All participants were at least eighteen years of age at the time of contact. Important characteristics of the participants include being no younger than 14 years of age at the time of injury, and having suffered the SCI in the last 2 to 15 years. The lower limit was set at 14 years of age because it is believed that by that age participants would have reached the high school level of competitive organized sport deselection that requires commitment and identification to the athlete role. The 2 to 15 year post-injury range was set to allow adequate recall of transition and SCI experiences, and limit the study to individuals who had enough time to experience the transition process. Gender and ethnic background were not particularly important to this study, but participants were anticipated to be mostly male and Caucasian. A heterogeneous sample was sought after, but a homogenous sample of Caucasian males was acceptable. There was no use of vulnerable populations such as children (under age 18), prisoners, mentally disabled persons, economically or educationally disadvantaged, or pregnant persons.

Participants were asked to identify their ASIA level. It was anticipated that participants might feel uncomfortable revealing their ASIA level. If they did not wish to divulge that information or simply did not know, they instead were asked to identify if they have quadriplegia or paraplegia. All participants would identify as having an injury-related disability that falls in the above spinal cord injury criteria. Although some spinal cord injuries see a full recovery, the participants in this study would still have their injury-related disability.

The recruitment and sampling of participants was done through voluntary referral from the University of Michigan Spinal Cord Injury Model System. Individuals were also recruited through convenience sampling. There was no random experimental sampling due to the nature of the multiple case study approach. The researcher remained aware of the years post-injury range and age limit of potential participants during the study and recruitment. Recruitment was adjusted if needed to include a more even age distribution. If a heterogeneous sample could not be attained, recruitment was adjusted to a homogenous sample. The nature of the relationship between the researcher and the participants was purely professional. The researcher did not contact the participant about the study unless it was included in the research activities. In convenience sampling a participant was contacted via email using the initial contact script (see Appendix A). Eligible participants that were contacted using the UMSCIMS received a



recruitment letter (see Appendix L). If they decided that they wanted to participate they then could contact the researcher. The researcher would then use the initial contact script in email or telephone contact. Each potential participant was approached formally using recruitment scripts and consent forms (see Appendix C).

Participants completed a one-hour interview process that consisted of four questionnaires and a semi-structured interview. The interviews took place either through Skype or FaceTime applications, over the phone, or face-to-face depending on the interviewee's preference and location. There was compensation for the interview. For the time spent completing the interview and surveys participants received a \$15 Amazon gift Card. If for any reason a participant could not complete the interviews/survey they would receive a \$5 Amazon gift card. This compensation was mailed electronically to an email address supplied by the participant. There were no identifiable benefits for the participants of this study outside of the compensation for participating. It was believed that participants could find the interview process somewhat therapeutic by allowing them to discuss their experiences openly, but there was no immediate therapeutic intent by this study.

There was the possibility that participants may have found it difficult to recount and explain their transition experience. The likelihood of this happening was mostly unpredictable as every individual varies in their comfort with discussing their experiences. If an identified risk event occurred, such as discomfort in answering a question about their experience, participants would have been given the opportunity to choose to not answer the question, come back to it later, or end the interview altogether. If a participant encountered distress, the situation would have been handled by going through the ALGEE steps of Mental Health First Aid. The A in ALGEE stands for identifying access for risk of suicide or harm. The L in ALGEE stands for listening non-judgmentally. The G in ALGEE stands for giving reassurance and information. The first E in ALGEE stands for encouraging appropriate professional help. The second E in ALGEE stands for encouraging self-help and other support strategies. The interviewer was Mental Health First Aid certified (see Appendix K). The participant was also given a list of resources including a free hotline (see Appendix C). Participants were informed that Miami University is not responsible for the costs of any treatment. Participants may have also worried that they had been misquoted. This outcome was less likely as participants were made aware of actions taken to minimize this. To minimize likelihood of misquoting or getting an answer that incorrectly

illustrates a participant's experience, interview transcripts were combed over for accuracy to the recording. Participants were also given the opportunity to look over the interview transcript as well.

To avoid risk and potentially adverse reactions by the participant, the participants' identifying information was kept confidential. The data was treated as confidential as the interviews were conducted through FaceTime, Skype, or phone call. Confidential documents, recordings, and information were retained for up to a year after the end of the study. The data was disseminated without any identifying information. The researcher had access to the confidential data. The thesis advisor and thesis committee had access to only information without names, phone numbers, or email addresses. Data and recordings of interviews were stored on a computer system in a locked folder. The recordings of interviews were saved and stored on a computer system in a locked folder without names or identifying information as soon as the interview was finished. The names on the transcripts and recordings were changed to Participant 1, 2, 3, etc. When the researcher transcribed the recordings, the recordings and transcriptions both were placed in the same locked folder and would be kept there until a year after the interview. The transcripts and recordings were deleted off the computer system in which they were stored after one year.

Participants were informed about the proposed research and the risks associated with the project via a written consent form (see Appendix C). The consent form described the project and its risks; it also provided sources of additional information if the participant had questions about the project or his or her rights. The researcher gave the participant or the participant's representative adequate opportunity to read the consent form. If the participant could not read the form it could be read to them. They were also given ample opportunity to have any questions about the study answered before they signed the consent form. A copy of the form was given to the person signing the form. A statement on voluntary participation was included on the consent form that stated that participation was voluntary; refusal to participate would involve no penalty or loss of benefits to which the subject was otherwise entitled; and the subject could discontinue participation at any time or decline to answer specific questions without penalty or loss of benefits to which the subject was otherwise entitled. Participants were also made aware through a statement on the consent form that the interview could be stopped at any time without penalty and that they could withdraw their responses from inclusion in the study.

After granting consent, participants completed a background information sheet at the start of the interview process (see Appendix D). Participants then filled out four inventories (see Appendices F, G, H, & I). These inventories include the Athletic Identity Measurement Scale (AIMS), Retrospective AIMS, the 6-item Social Support Questionnaire (SSQ-6), and the Satisfaction With Life Scale (SWLS). They were delivered to participants and returned through mail, email, or in-person. Participants with physical limitations that make it difficult for them to fill the questionnaires out on their own could request assistance. They could authorize another individual to fill in their inventory responses for them or the responses could be given over the phone. It took approximately 15 minutes for the participants to finish the inventories.

Once these inventories were completed, a semi-structured interview was conducted. The inventory scores were shown and explained to participants before they were asked to answer qualitative interview questions regarding the inventory scores. Participants explained how instrument scores illustrated their experiences. The semi-structured interview took between 30 minutes and an hour. Due to the semi-structured nature, the interviews followed a script (see Appendix J). The interviews were recorded. After the interviews were finished, the researcher transcribed the interview recordings. The transcriptions were combed over for accuracy to the recording.

Participants were emailed after the transcriptions were complete and offered the opportunity to look over the transcript, and verify the accuracy of the information. If the participants declined the opportunity to look over the transcripts or failed to answer the email in which the offer was sent within one week, the transcripts were accepted as they were. Before and after the interview process participants were made aware of the objectives of the present research study. Those that chose to be involved in the study were debriefed using the concluding script following the completion of the interview and survey process (see Appendix E). The researcher providing the inventories and conducting the interviews had IRB training experience and had experience conducting semi-structured interviews and collecting data.

### **Central and Topical Research Questions**

Central Research Question 1: What are the experiences of transition out of able-bodied sport by individuals that have suffered a spinal cord injury?

Topical Research Questions:

1. How does this individual describe the turn of events that led to their spinal cord injury (SCI) and transition from sport as well as the situation following their SCI?
2. How does this individual perceive the psychosocial factors related to their adaptation to career transition?
3. What resources did this individual perceive to be available to them for the adjustment to career transition?
4. How does this individual perceive the quality of their adjustment to career transition?
5. If they felt they experienced career transition distress, what methods of intervention have they used to achieve healthy career transition?

Central Research Question 2: How do individuals who have stopped participating in able-bodied sport due to a spinal cord injury perceive their well-being?

### **Measurement**

This is a cross-sectional assessment that was carried out at one point in time. It was tasked to provide a snapshot of athletes' experiences. Both qualitative and quantitative methods of inquiry were used in this study. The quantitative data was used to inform interview questions and participant responses.

**Semi-structured interviews.** This study utilizes semi-structured interviews. Semi-structured interviews allow the interviewer some latitude in how questions are asked, but still include the same basic questions. Compared to unstructured interviews, by standardizing the interviews to some degree semi-structured interviews preserve a degree of comparability across interviews (Shank, 2006). There is one interview guide for this study. The interview guide uses questions as starting points from which flexible discussion can allow for the development of unexpected themes. The guide displays an ontological position that assumes people's knowledge and perceptions are meaningful properties of social reality. Questions were developed to explore consequences of the injury, athletic identity, social support, coping skills, and pre-retirement planning. Individuals were also asked how healthy or favorable their transition was. The individual responses were examined for themes and connected to the appropriate variables of the conceptual model. As a part of conducting qualitative interviews, before the actual interview it is suggested to get background information from the interviewee (Mason, 2002). This was done using a background information sheet. Interviews were conducted in-person, over the phone, or through email.

**AIMS.** The Athletic Identity Measurement Scale was developed with the purpose of assessing the degree to which an individual identifies with the athlete role (Ostrow, 1996). The AIMS contains 10 items and participants respond to each item using a 7-point Likert-type scale that is anchored from 1 (strongly agree) to 7 (strongly disagree). Total scores range from 7 to 70. Lower total scores are associated with a stronger athletic identity.

The initial construction of the AIMS contained 11 items that were based on input from undergraduate research assistants and former athletes (Ostrow, 1996). Through preliminary analysis, one item was eliminated. In regards to reliability, Cronbach alpha coefficients of .93, .87, and .81 were reported (Brewer, Van Raalte, & Linder, 1993). A test-retest reliability coefficient of .89 was reported over a 14-day period. An analysis by Tasiemski and Brewer (2011) that polled a group of participants (N=1,034) supported the unidimensionality and internal consistency of the AIMS inventory with people with SCI. This gives confirmation to the reason for implementing such a questionnaire to evaluate the exclusivity of the athlete role. AIMS scores were reported to be higher for individuals with high levels of athletic involvement. For this study, the AIMS would be administered twice. The first scale was answered retrospectively, with questions adapted to past tense. The second scale was asked in the present tense. Evaluating an individual's athletic identity before and after injury provides insight into their transition process.

**SSQ-6.** The 6-item Social Support Questionnaire (SSQ6) was constructed with the purpose of measuring athletes' available resources for social support and their satisfaction with that support. This inventory is a shorter version of the 27-item Social Support Questionnaire. The SSQ-6 contains 6 items. Each item assesses two dimensions. The first part measures the number of available sources of social support an individual has (Yang et al., 2010). They are asked to list all the people they know whom they can rely on for support in the various manners described. An example of the questions asked is “Whom could you really count on to be dependable when you need help?” The questionnaire gives participating athletes response choices of family, friend, coach, athletic trainer, physician, counselor, or other. To find the number of different sources of social support, the total number of available individuals for the six questions is summed and then divided by 6 (Yang, Peek-Asa, Lowe, Heiden, & Foster, 2010).

For the second part, they are asked to rate their level of satisfaction with the overall support that is available to them. Participants responded to each question on a 6-point Likert

scale, ranging from “Very dissatisfied” (1) to “Very satisfied” (6) (Yang et al., 2010). Adding total satisfaction scores of the 6 questions and then dividing by 6 is how you calculate an overall satisfaction score. The SSQ-6 has demonstrated adequate internal reliability. Consistency has been reported as ranging from 0.93 to 0.96 (Yang et al., 2010).

**SWLS.** The 5-item Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin 1985) was constructed to measure the aspects of subjective well-being that include life satisfaction as a cognitive-judgmental process. The scale was designed based on the assumption that, in order to measure the concept of life satisfaction, one must ask participants for an overall judgment of their life. It emphasizes the individual’s own standards of evaluation. The SWLS contains 5 items and participants respond to each item using a 7-point Likert-type scale that is anchored from 1 (strongly disagree) to 7 (strongly agree). Total scores range from 5 to 35. Initially, the SWLS contained 48 self-report items that consisted of the factors: negative affect, positive affect, and satisfaction. Affect factors were removed as well as some satisfaction factors, which left 10 items. Due to the similarity of some items, 5 items were removed. This left the scale as it is currently constructed. Strong internal reliability and moderate temporal stability have been shown by the SWLS. Diener et al. (1985) reported a coefficient alpha of .87 for the SWLS and a test-retest stability coefficient of .82. Internal consistency has also been reported by a number of other researchers (Pavot & Diener, 1993). In regards to clinical measures of distress, the SWLS has shown to be negatively correlated. Blais et al. reported that there was a strong negative correlation ( $r = -.72, p = .001$ ) between the SWLS and Beck Depression Inventory (as cited in Pavot & Diener, 1993).

### **Analysis**

**Quantitative.** To analyze the data collected from the quantitative methods, AIMS, SSQ-6, and SWLS scores were recorded and examined. The demographic questionnaire, including the adjustment to life after career transition measure, was gathered as well. Participant responses were collected and then used to inform qualitative interview questions and responses. Interview guide questions used survey responses to direct the line of inquiry.

**Qualitative.** Qualitative analysis is done through four phases: (1) defining the type of analysis to use, (2) classifying the data, (3) making connections among different classes of data, and (4) presenting the results (Shank, 2006). The researcher finds or constructs patterns of order that cut across various aspects of data. These patterns come to characterize different segments of

data called themes. Thematic analysis involves the induction, feedback and comparison, and saturation of the data. Interview transcripts are created from the recorded interviews. Responses are then combed through and coded for meaning. These codes are words or phrases that act as labels for data. Codes are given to words or statements that address the question asked in a meaningful way. Any shared meanings between the individual codes are then located. The shared meanings found are grouped into patterns that stand for different groups of data. This was done for each transcript. The themes that arise from the transcripts are compared and contrasted with the themes from the other transcripts. Finally, conclusions are discussed based on the supposed tendencies from the data. While the guiding conceptual framework was used in the development of research questions, the analysis of data was not rigidly kept to the framework's constructs. Results of the interviews could indicate limitations of the model.

## Chapter Four

### Results

#### Description of Study Participants

This study sought to gather information on individual athletes' experiences of transition from able-bodied sport due to a spinal cord injury. Three athletes were interviewed separately. Their responses were analyzed and used to construct a narrative for each individual.

**Interviewee 1.** The first individual interviewed for this study was a 31-year-old Caucasian male. For the purpose of anonymity, this individual is referred to as Interviewee 1. He was 29 years old at the time of his injury, which occurred while playing rugby. Prior to the injury, this individual had participated in rugby for three years and was at a graduate school level of formal education. Interviewee 1 described the level of his spinal cord injury to be at the T12 to L1 area of vertebrae, and identified himself as a paraplegic. The length of time that Interviewee 1 felt it took to adjust to his transition was 24 months or 2 years.

**Interviewee 2.** The second individual interviewed for this study was a 28-year-old Caucasian male. For the purpose of anonymity, this individual is referred to as Interviewee 2. He was 23 years old at the time of his injury, which occurred while participating in the sport of motocross. Prior to the injury, this individual had participated in sport for 15 years. He was at a professional school level of formal education at the time of injury. Interviewee 2 described the level of his spinal cord injury to be at the T9 vertebrae with an ASIA level of A, and identified himself as a paraplegic. The length of time that Interviewee 2 felt it took to adjust to his transition was 12 months or 1 year.

**Interviewee 3.** The final individual interviewed for this study was a 23-year-old Caucasian male. For the purpose of anonymity, this individual is referred to as Interviewee 3. He was 18 years old at the time of his injury, which occurred outside of sport while diving into a reservoir. Prior to the injury, this individual had participated in sport (e.g. cross country, rowing) for four years and was at a high school level of formal education. Interviewee 3 described the level of his spinal cord injury to be at the C4 to C6 area of vertebrae, and identified himself as a quadriplegic. The length of time that Interviewee 3 felt it took to adjust to his transition was 18 months or 1.5 years.



## Case-by-Case Analysis

This study addressed two questions. What are the experiences of transition out of able-bodied sport by individuals that have suffered a spinal cord injury? And how do individuals who have stopped participating in able-bodied sport due to a spinal cord injury perceive their well-being? The themes that emerged varied by case. A case-by-case analysis of each theme and the sub-themes that comprise it, providing evidence of each, is presented. After each theme and sub-theme of a case is explained, a summary describes how the themes work together to answer the research questions of interest in this study.

**Case 1.** Case 1 is an examination of the themes that emerged from the discussion with Interviewee 1. In case 1, there are five themes. One of the themes, change, is comprised of two sub-themes.

**Change.** A theme that arose from the analyses was change. This is where the athlete's experience begins. The catalyst for this individual's transition was a spinal cord injury that occurred while participating in able-bodied sport. He identified the injury as a fracture of the T-12 vertebrae that was caused by severe impact with other competitors. The interviewee also explained that he was injured while outside of the United States. Due to the policy in the United Arab Emirates and the lack of rehabilitation facilities for spinal cord injury, this meant that Interviewee 1 had to be relocated to the United States, away from his career. After arriving in the United States, the interviewee's transition process experienced delays as a result of multiple consecutive surgeries to stabilize his spine. These surgeries occurred over the course of what the interviewee described as a "year and a half or two years." Interviewee 1 perceived this change and the process of recovery to have taken away his control over the decision of when to retire from rugby, and to have muddled his priorities. He felt that his recovery time left him no other choice, but to make himself comfortable with pausing his life for two years.

**Interviewee 1:** Yeah so I was playing club rugby in Dubai -- or Abu Dhabi and playing club rugby in the championship game kind of thing and I made a tackle and was at the bottom of the pile and three guys fell on me in a funny way and, yeah, basically I was sitting on the ground and my face hit the ground between my legs, fractured my T-12 vertebrae.

**Interviewee 1:** I stayed in the hospital in the UAE for about a week just to get recovered enough to where I could be medevac'd home because in the UAE they don't have any rehab facilities for spinal cord injuries. Their policy is to just ship people out to Europe and the U.S. So after about a week I was stabilized enough to fly home.

**Interviewee 1:** I had a total of five back surgeries in the last year and a half or two years. So the first one was the main surgery. The second and third were to clear up an infection in the

incision. The third one or the fourth one was to -- the hardware that they had installed in my back was causing an infection in my spinal column so they had to take the hardware out. So they took the hardware out I think in February of this year and when they took the hardware out my spine didn't fuse correctly and so my vertebrae were just doing this as I would sit up and lay down, shift around. So, surgery number five was in April, I think. And they had to put the hardware back in. So they put the hardware back in and it didn't get infected this time around. So, after that that was the final surgery and that was it for, you know, a couple more rounds of out patient physical therapy.

**Interviewee 1:** Well, it just scrambled my priorities really. Just had to put life on hold and be comfortable putting life on hold for two years.

**Interviewee 1:** But, so, yeah, just kind of forced my hand really to make the transition a little earlier than I expected so --

*Adaptive Change.* A sub-theme of the change that Interviewee 1 experienced was the adaptive changes that he had to make in order to adjust to his injury. Interviewee 1 described his initial concern after he suffered his spinal cord injury as “the unknown.” He stated that he had no function below the level of his injury. This meant that he had to be patient throughout the rehabilitation process before he could determine what function would return. Once the interviewee was able to ascertain the function his body still had, he was able to re-evaluate what he was capable of doing and draw comfort from this realization. Interviewee 1 perceived that the amount of time he was provided to focus on rehabilitation, without the pressure to return to work, helped influence his ability to accomplish this re-evaluation.

**Interviewee 1:** But it was just kind of the unknown because at that point I had no function of anything below the injury. And it was just kind of a wait and see kind of what came back throughout the injury and throughout the rehab.

**Interviewee 1:** I knew I'd be able to get the job training and get back to work and I knew I had full use of my arms and hands and things like that. So I knew I wasn't in that bad shape relative to what it could have been.

**Interviewee 1:** Yeah, but just kind of re-evaluating, looking at what I can still get done

**Interviewee 1:** I just had a lot of time to think about it for those 20 months that I was not working. And it worked.

The interviewee described the difficulties that he experienced while adjusting to spinal cord injury. These difficulties included bowel and bladder incontinence, and a susceptibility to pressure sores. Interviewee 1 perceived the avoidance of bowel or bladder ‘accidents’ in public to be a major concern that he had to adapt to and continue to monitor. The interviewee also explained why he had to keep an eye on his skin for pressure sores. He described how a pressure sore could severely limit his activity involvement and health.

**Interviewee 1:** The most difficult stuff was just the -- well bowel and bladder, that's always a big one. You know, accidents in public, that's always rough and it's kind of one that will continue to be rough so. So avoiding that was one big thing.

**Interviewee 1:** I fell out of my chair one time while I was transitioning. I was transitioning into a boat actually and I fell out of my chair and I got a cut on my butt which turned into a sore which ended up putting me in the hospital for a little over a month. So I didn't look after it really. It was new. So that was the big health thing, really. And since then pressure sores have been my biggest hang up. Just because I spent a lot of time in my chair and I'm pretty active and so, yeah, I got a nasty pressure sore on the flight back out here and so when that happened I just had to kind of go into -- because that was a month before I went back to work. So with that I had to go into full no sports mode and just not really spending much time in my chair at all so it could get healed up as best it could before I went back to work.

Interviewee 1 detailed the way his activity involvement was impacted by spinal cord injury, and the way he adapted in transition. The interviewee described several activities that he still has access to, including several social opportunities that allow him to stay involved with his former rugby team. A concern drawing from his susceptibility to pressure sores was explained to be the reason why he has been hesitant to return to his kayaking tour guide role that he once held. Interviewee 1 went on to explain how he has adapted to his loss of leg function, which affected his swimming ability post-injury. The interviewee described how he responded to his loss of function by adjusting to his body's capabilities and gradually worked to regain his independence in the pool.

**Interviewee 1:** I'm changing, you know, the things I was interested in. I mean the things I was able to participate in, you know.

**Interviewee 1:** I was a kayaking tour guide on the weekends when I was here. I haven't gotten back into that yet because I'm a little concerned about sitting in a kayak and pressure sores. I still do a bit of kayaking when I'm back home and stuff, I just haven't gotten back into it since I've been out here. And then the other thing is just music -- play a little guitar and a little piano and just get with friends out here and have a group of us that gets together and goes out. But then, yeah, the other thing is just really the social side of the rugby club. There are all these events going on and all this stuff, dinners at the clubhouse and get-togethers on the weekend and things. Even though I'm not playing rugby now, I'm still active in the social side of that.

**Interviewee 1:** So just teaching myself how to swim without using my lower body, you know. Just getting comfortable, you know, getting out of my chair and into the pool and, comfortable with doing the swim without using my legs and, getting comfortable getting out of the pool. And then doing that all on my own to where I wouldn't need a lift to get me in and out to where I wouldn't -- if I'm in a pool with a life guard and being able to go that all on my own as opposed to having to bring a friend along.

Finally, the interviewee explained how he adjusted his behavior and approach to activities in order to compensate for his physical capabilities. In adapting to transition,

Interviewee 1 felt that he must plan ahead more often for his activities. He also stated that focusing on only a couple tasks or activities at once was a positive influence on his transition process. Interviewee 1 perceived that limiting reckless behavior was what he needed to focus on in order to prevent negative outcomes going forward.

**Interviewee 1:** Well, they've made me more cautious, I guess. That's for sure. I have to think ahead a lot with all the things I'm doing and all the activities I'm in. I kind of think a lot more long-term with everything that I'm doing.

**Interviewee 1:** I tried to phase things in slowly and not take on too many things at once, really. I think that was good. Like I still don't have, you know, the racing wheelchair yet. I'm doing the hand cycling and then the swimming and then work that in later. I think it was good that I didn't try and get involved in too many things, and focus on a couple things at a time.

**Interviewee 1:** Well, I don't know, maybe recklessness. I did just flip my hand cycle in a race last week and got my arms all scuffed off but lucky my legs didn't get beat up. So I would say just recklessness and training, yeah, I would say recklessness and being able to -- since I've been in the chair just being in a situation where I would quit before bad things happened. I'm doing my walking, quit while I've still got some energy left as opposed to pushing it and falling over or -- so, yeah, just cutting out the reckless behavior as much as possible.

*Career Change.* A second sub-theme of the change that Interviewee 1 experienced was career change. The interviewee's statements indicated that adjustment to, or the loss of, his career was a concern after he suffered his spinal cord injury. The interviewee explained that the job security he was assured of helped facilitate his transition. His good fortune to not have to drastically alter his work expectations was also perceived to be a positive influence comforting him during the transition process.

**Interviewee 1:** At my school and stuff they would have a job for me when I was ready to come back so that was good to know and that made it kind of a lot easier to transition. I was fortunate to work in a career where I didn't have to modify too much of my work expectations based on my injury.

The interviewee stated that he has returned to work overseas after his nearly two years of recovery and rehabilitation in the United States. He described how his role has changed to a more administrative position since returning to work. Although he maintains he could have returned to working in the classroom, he acknowledged that his diminished physical capabilities would have complicated his ability to be effective.

**Interviewee 1:** United Arab Emirates. So that's where the injury happened and that's where I'm back working now.

**Interviewee 1:** I've made the transition from being a -- kind of a classroom teacher into being more of an administrative role. That's not to say I couldn't be a classroom teacher but that's just, you know, working with kids with disabilities -- well, you know, aggressive kids with autism,

you know, so it's a little more complicated being in a wheelchair. I could have done it but I've been in the classroom long enough and this just opened up more of an administrative role so I took that.

***Significance of Sport.*** Another theme that arose from the analyses was the significance of sport to the interviewee's adaptation to transition. The interviewee described the developmental experience he had of temporarily leaving sport after college, and the difficulty he felt in living without sport involvement. He perceived this experience to have confirmed his need for sport as a positive influence on his life. When the interviewee described the challenge facing an athlete transitioning with a spinal cord injury, he emphasized the need to shift the focus from one athletic pursuit to the next. His self-perception of the positive influence of sport in his life seems to have led him to believe that sport must remain a fixture in his life.

**Interviewee 1:** I learned after I graduated college -- I played baseball in college. And after I graduated from college and started working I stopped playing competitive sport and stopped playing team sports for the first two years out of college. And it was a bit of a grind. It was a bit of a tough transition time. Getting back into team sports just improved my life basically. And so just going through that, you know, I kind of knew that sport was something that I needed psychologically

**Interviewee 1:** Changing, shifting gears from playing rugby in the UAE or whatever it was to becoming a swimmer, becoming a hand cyclist and so just making that transition from shifting your focus around one athletic event or competition to another really.

Interviewee 1 explained how he used, and continues to use, sport in his rehabilitation during transition. The interviewee claimed that taking a sport mentality or approach to physical therapy positively influenced his transition. He also states that he has stayed active in sport as a method of rehabilitation. The interviewee believes that maintaining a physically fit condition will help keep him prepared if the opportunity to fully recover ever arises.

**Interviewee 1:** You look at all the training that goes into just sport in general and that's a really easy transition from the training for sports and training for rehabilitation and physical therapy. It's just taking that approach from the sport mentality into, you know, focusing that on your physical therapy. That made it that much easier.

**Interviewee 1:** physically just being in a chair and continuing to rehab and do all those things, you know, you can't -- the chance of me walking again are zero if I get up to 300 pounds. So continuing to stay active in sport it's not so much for the glory or anything like that but just I see it as part of my continuing rehabilitation, really.

A common thread running through the statements made by the interviewee was the perceived change in social identity from before injury to post-injury. The interviewee felt the loss of status as a player and a teammate, which has since been replaced by the status as a

spectator or supporter, to diminish the level of camaraderie he felt. Without that player/teammate status, he no longer feels the ability to relish in the team's achievements. The sports that Interviewee 1 stated he is involved in now (e.g. hand-cycling, swimming) are more individual pursuits. This may make it difficult for him to regain the camaraderie and achievement he misses.

**Interviewee 1:** I guess it's always different not being a part of the team. I can -- I'm back and I'm a supporter now as opposed to a teammate. So I'm not in the locker room and having all that level of camaraderie I guess. I'm still a part of it. I guess going from a teammate to a supporter really.

**Interviewee 1:** I guess seeing my teammates win a couple big championships while I was gone. That was cool but it was the same thing where I was a spectator versus a player. So really that was cool seeing that stuff happen but I missed out on it -- as the experiences as a player.

The interviewee's responses were indicative of the role or roles that they perceived to have defined their self-worth in regards to participation and achievement. Interviewee 1 responded to the 10-item Athletic Identity Measurement Scale (AIMS) questionnaire and the retrospective 10-item version of the AIMS regarding the degree to which they identify with the athlete role (see Appendix F & G). The total scores on the AIMS can range from 7 to 70 with lower scores associated with a stronger athletic identity. Interviewee 1 recorded a 31 total score on the AIMS questionnaire and a 31 total score on the retrospective AIMS. These scores mean that his athletic identity, or identification with the athlete role, did not change from pre-injury to the time the questionnaire was filled out. When asked how these scores illustrate their association with the athletic identity, the interviewee explained that they perceived it to be an indicator of the significant value he places on sports and the balance he maintains between sports and other life roles or activities.

**Interviewee 1:** I think with both of them the only one I strongly disagreed with was that sport was the only important thing in my life, you know. Sport is something that's obviously, it's very important but, you know, I think there are other things in my life that I like to, you know -- just in terms of jobs -- my job, my friends, my family, other activities. But, yeah, other than that I think the score is really what it is, just highly important to me before and continues to be now after injury.

***Adaptive Sport/Community.*** The adaptive community and adaptive sport were a noticeable theme throughout the interviewee's experience. Interviewee 1 discussed how adaptive sport and the adaptive community facilitated his transition from able-bodied sport with a spinal cord injury. The access to information about programs and opportunities, the ability to find fulfilling athletic pursuits, and the guidance from those with previous experience were factors

that the interviewee perceived to have affected the transition process. Interviewee 1 detailed the information and the adaptive sport equipment that his rehabilitation hospital provided. He also felt that he was better prepared than others due to the knowledge he gained through his work as a special education teacher. Despite the knowledge he had and the information available to him, the interviewee still felt that more information regarding activities and opportunities would have aided his transition.

**Interviewee 1:** I was at Marry Free Bed Hospital and they only do spinal cord injuries so they were able to fill me in on what is out there, and able to loan me a hand cycle for a couple races early on. And once I got into it I was able to get my own hand cycle pretty early on, about a year after the injury.

**Interviewee 1:** I'm a special education teacher so I've got a pretty good idea of the programs and the services and the rehabilitation and all the stuff they can do so I wasn't as worried about that stuff as a lot of people probably would have been.

**Interviewee 1:** I guess just knowing what's out there, and knowing the things that I can get involved in really. And the things that I can look forward to and work towards.

The interviewee described how, in his transition from able-bodied sport, he quickly pivoted his role as an athlete into more individual and adaptive sports like triathlons, hand-cycling, and swimming. The realization that his able-bodied sport career was over allowed Interviewee 1 to begin to look forward to other athletic pursuits. Accomplishment in the new adaptive activities he is involved in was perceived as positive experiences during his transition process.

**Interviewee 1:** Accomplishing new things, new challenges. Everything's new and different when you first get into it. So, yeah, just figuring out what those challenges are and figuring out how to get things taken care of.

**Interviewee 1:** I mean it was pretty quick, really. You know, my career was over so I was almost excited to -- not excited but just like looking forward to the next thing really because it's not like I was going to make a comeback in any other sports I was in before, you know. It was pretty quick.

**Interviewee 1:** So just going from the team sports like rugby or team sport like baseball and more individual sports like triathlon training, hand cycling, swimming, things like that.

Interviewee 1 discussed the individuals from the adaptive community with previous experience in adaptive activities. He explained that their advice and guidance helped him navigate and become comfortable with these new activities.

**Interviewee 1:** Just talking with people who have done it before, you know. Talking with a friend of mine who just finished an ironman last year. He's a paraplegic and talking to him about

this training for the hand cycle and training for the swimming and all the stuff that went into that. Having people who know what's going on and can answer your questions.

**Social Support.** The theme of social support was suggested by the interviewee's perception of the numerous outlets and influence of his social network during the transition process. Interviewee 1 discussed the many ways he felt his social resources impacted him. The interviewee described the access he had to a psychologist during the rehabilitation process. He explained that they stayed in touch for nearly a year and a half after his injury, but have since left the relationship on an as needed basis.

**Interviewee 1:** Well, for psychological they put me in touch with a psychologist during the rehabilitation process, just staying in touch with her throughout the whole rehabilitation process anyways.

**Interviewee 1:** I continued to talk to a psychologist throughout the year and a half I was at home. I haven't spoken to anybody since I've been back out here. Just kind of left it as a check in if anything goes wrong really or if there are any hang-ups.

Interviewee 1 explained the ways that he felt his social support influenced him. He perceived that his friends' involvement in his activities had a positive effect on him. The individual identified his biggest supporter was his mother. He explained that his mother spent a lot of time with him while he was living with his parents during the rehabilitation process. The interviewee used the social support he experienced as a coping resource. The attention he was getting regarding his recovery progress was utilized as a source of motivation in physical therapy. Not all attention was experienced as facilitative. Interviewee 1 explained that he didn't like being the focus of concern for others. He felt that the transition process with a spinal cord injury can be more difficult for family members, and he didn't like feeling like he was the reason for that.

**Interviewee 1:** I would say just the need to be involved. The need to be in a group, and so just by getting involved in group training sessions or getting friends going out to the cycling track or friends going out for a swim, having that support network has helped.

**Interviewee 1:** It would have to be my mom. I moved back in with my parents for the rehab process. So my mom had just retired and my dad was around too but he was still working for the majority of it. So it was a lot of [REDACTED] and mom time.

**Interviewee 1:** Yeah, just the talking with my closest friends and my family, you know. And just knowing that I had so many people, you know, kind of checking up on my Facebook and checking up on my progress and concerned about my progress. That was a good motivator to continue going to my physical therapy, and keeping my head on straight just because I had a lot of people checking up on me really and a lot of people looking out for me.



**Interviewee 1:** But also other people worrying about me, you know. I didn't like that. You know, everybody gets concerned. It's tougher for your family to go through something like this a lot of times than it is for us.

The interviewee described how his social network financially supported him during the transition process. He explained that his rugby club and the other clubs in his community worked together to fundraise for him. Interviewee 1 stated that the money raised from the rugby clubs was essential in eliminating financial difficulties from his adaptation to transition for the first year after his injury. The interviewee perceived the fundraising and spreading of awareness to have expanded his social network. He felt that his friends from before injury had remained, but since his injury he had been introduced to many others.

**Interviewee 1:** And so the rugby club came together and they raised a ton of money to where they're continuing to raise money. And so it wasn't -- so our club started that out and all the other different rugby clubs from around the region chipped in and had events and stuff. And so I was really fortunate on the financial side to have that kind of support from the start, really. And that just -- the big thing with that is that took one more variable out of the equation, you know, for the rehab and return to work process. I could just live for a year and not have to worry about money.

**Interviewee 1:** You know, if anything, my social network has expanded since I was injured just because the rugby club put together a bunch of fundraisers and they were doing all this awareness stuff. Because of that I met a lot of people from a lot of different clubs and a lot of people -- my school and people from other schools who had chipped in and so if anything it's expanded, really. I'm still friends with the same people I was before. Just, you know mixed in a couple new ones, I guess.

Interviewee 1 responded to the 6-item Social Support Questionnaire (SSQ6) regarding the social support resources available to them and their satisfaction with that support (see Appendix H). The SSQ number score ranged from 0 to 9, and the SSQ satisfaction score ranged from 1 to 6. Interviewee 1 recorded a SSQN of 3.83, and a SSQS of 5.50. Interviewee 1 was asked how these scores illustrate their available social support and their satisfaction with that support. The interviewee interpreted these scores as indicative of the amount of places he can turn to for help. He feels that there are individuals around the world supporting him.

**Interviewee 1:** I think it's on par with what I was -- kind of where I'm at. I know I've got a lot of support, you know from friends and family, you know around the world really so just from my -- back home, people out here looking out for me. I've got a lot of places to turn if things go wrong.

**Quality of Adaptation.** The interviewee's perception of the quality of their adaptation was a theme that arose from the analysis. How the interviewee evaluated their reaction was influenced by factors involved in the previously mentioned themes. Interviewee 1 perceived the

quality of their adaptation to be very good. He based this assessment on his capacity to pursue new athletic pursuits, and return to work. The capability to achieve these two things in two years was perceived by Interviewee 1 as a favorable to his quality of adaptation. In regards to his perception of his satisfaction with life, the interviewee described himself as pretty satisfied. When asked where he was dissatisfied with life, he put it plainly that “it is what it is.” He perceived that he could improve his life by getting comfortable with his work and sport roles, and finding a romantic relationship.

**Interviewee 1:** Very good, very good. I've been able to make it back into a situation where I can go back to work and then continue to really start to train for the different things. I think doing that in two years I think I've been pretty lucky to be able to get to where I am. And start fresh really.

**Interviewee 1:** I would say I'm pretty satisfied. So I guess one step above just satisfied.

**Interviewee 1:** So getting comfortable in my new position and comfortable with sport and then finding a lady friend at some point too would be good. Get involved with that.

**Interviewee 1:** I don't know if that -- dissatisfied with where I'm at, it's just kind of that it is what it is. I'm comfortable with the fact that everything's new and I've got to get all these new challenges taken care of really. I guess -- I wouldn't say I'm dissatisfied with it. You know with just being a newcomer, again, with -- a newcomer at work, a newcomer in sports and, you know the relationship side with finding a girl.

The interviewee's perception of what constitutes a healthy transition may give some insight into how they assessed their own. Interviewee 1 described a healthy transition as one that mirrors sport involvement as much as possible from before injury to post injury. Then on a general level, he felt that one must first assess what you were invested in, and the satisfaction you received from it, before attempting to replicate it as best you can.

**Interviewee 1:** Well, with I guess look at your level of, you know, how much you engaged in sport or team sports beforehand and then trying to replicate that as closely as possible with sports that are similar in terms of their physical side and the social side too. Kind of what so look at what you did and what you got out of it beforehand and then try and replicate that as best as you can afterwards.

Interviewee 1 responded to the 5-item Satisfaction with Life Scale (SWLS) questionnaire regarding his current life satisfaction (see Appendix I). The total scores on the SWLS can range from 7 (Not Satisfied) to 35 (Fully Satisfied). Interviewee 1 recorded a 28 total score on the questionnaire. When asked how these scores illustrate their satisfaction with life, the interviewee explained that they perceived it to be an indicator of his contentment with where he was, but also that there was room for improvement post-injury.

**Interviewee 1:** I think it shows that I'm happy but I've got a ways to go, you know. It's not like a Disney movie or anything. I'm happy with where I'm at but you know, it's early on in the post injury thing so got stuff to work on.

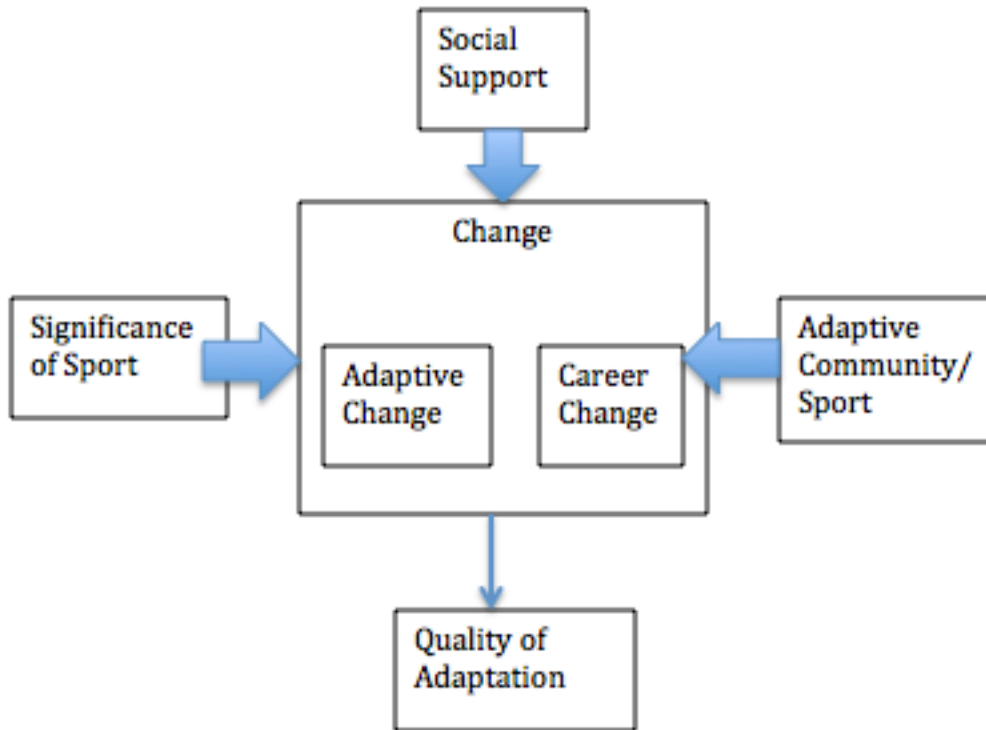


Figure 2: Interviewee 1 Conceptual Map

### Summary

The experience by Interviewee 1 of adaptation to career transition as a result of spinal cord injury was one unique to him. The interviewee's transition process, which was set in motion by a collision with other competitors in a rugby match, forced the athlete to leave the country he was living and working in to seek medical treatment and rehabilitation. His was a process delayed by several consecutive surgeries over the course of nearly two years. An understanding of this athlete's story can be derived from the inter-relationships among the themes and sub-themes that emerged from the athlete's responses.

The interviewee's story begins with change. His spinal cord injury signaled an upheaval to his life and the way he lived it. Within this theme of change, Interviewee 1 experienced a disruption in his physical functioning, affecting the activities he was involved in, as well as a disturbance in the career he had secured. The adaptive and career change that the interviewee

faced, and was tasked with responding to, was dependent on several conditions. This change, and the resulting perception of the quality of adaptation, can be understood by viewing the circumstances surrounding it. The social support available to the interviewee, the significance of sport, and the adaptive sport and community are factors involved in the transition from able-bodied sport with a spinal cord injury. Interviewee 1 revealed the degree to which these factors either facilitated or impeded his movement towards a healthy transition in his interview responses.

The interviewee's injury and the uncertainty he had about the function he would regain complicated his ability to adapt. The financial support he received from his social network gave him the ability to live for a year without financial concern and focus on his rehabilitation. The social support experienced by Interviewee 1 was perceived to have grown post-injury. He felt he had many outlets for support, his mother being the biggest. The interviewee struggled with being the concern of others, but he utilized the attention he felt from his social network as positive motivation.

Assured by his employer, Interviewee 1 knew that he would have a job when he was able to return. He also felt comforted by the perception that his work expectations would be largely unaffected. This job security helped eliminate career change concern. The interviewee did acknowledge that his physical function would have complicated his role in the classroom, but he was satisfied with the new role he found himself in.

The interviewee explained his self-perception from developmental experience that sport was a necessary positive influence in his life. He utilized a sport mentality and approach to physical therapy and rehabilitation to help cope with difficulties in transition. Interviewee 1 discussed how his activity involvement was affected by his physical ability. He had to adjust to bowel and bladder incontinence, and pressure sore susceptibility. He also had to adapt his behavior to his body's current capabilities. Despite these changes, the interviewee was comforted by the function that he had retained. Interviewee 1 saw several activities he still had access to.

In order to return to sport, he would need to do so in an adaptive fashion. The rehabilitation hospital he was enrolled in provided him with information regarding opportunities, and loaned him adaptive equipment. Members of the adaptive community facilitated his entry to adaptive sport by offering their advice and guidance. These resources provided to Interviewee 1 and his eagerness to excel in new adaptive sports helped him regain fulfilling athletic pursuits.

When assessing the quality of his adaptation and satisfaction with life, Interviewee 1 qualified the regaining of athletic and career pursuits and satisfaction with athletic challenges as factors in his positive judgment. The time he felt was afforded to him was also viewed as a positive influence on his ability to adapt. The interviewee expressed a longing for the camaraderie and shared experience of achievement, but the areas where he recognized a need for improvement was romantic involvement and comfort in his new career and sport roles.

**Case 2.** Case 2 is an examination of the themes that emerged from the discussion with Interviewee 2. In case 2, there are six themes. One of the themes, change, is comprised of two sub-themes.

**Change.** The athlete's experience begins at change, a sudden profound change in this person's life. This theme arose from the analyses. The catalyst for this individual's transition was a spinal cord injury that occurred while participating in able-bodied sport. Interviewee 2 identified the injury as a result of serious impact during a motorbike accident. The unexpectedness of the injury and subsequent transition were perceived to have blindsided the athlete. Due to the interviewee's stated lack of ability to prepare, he felt that the change he was experiencing took a long time to "sink in."

**Interviewee 2:** So I was in a practice the day before a big race. I'd been riding pretty good and went off the track because it was raining, took a little break. They groomed the track. And when I got back out the first lap was feeling really good. And riding about and came up to a big step up jump and had the same gear, same speed that I had but I think the combination of a little bit of wet dirt and then the new groom made me come up a little bit short and I landed -- when I landed I kind of compressed and then launched off the back of the landing and I did kind of a half somersault and landed like 30 feet down on my upper shoulders and it pretty much folded me like a pretzel and I was out.

**Interviewee 2:** I think I was probably kind of blindsided by it. And I think it took a long time for some things to really sink in.

**Adaptive Change.** A sub-theme of the change that Interviewee 2 experienced was the adaptive changes that he had to make in order to adjust to his injury. This adaptive change is the physical, mental, and emotional changes experienced by the interviewee. Interviewee 2 explained that his comfort with himself, and being able to accept his struggles with new tasks and activities was a positive influence on his adaptation. Where the interviewee felt that he struggled during his transition was in the management of his emotions and the communication of his feelings. His inability to express himself was perceived to have negatively influenced his

transition. While Interviewee 2 felt that he managed his emotions poorly, he stated that he did not feel like he experienced any depression-like symptoms.

**Interviewee 2:** My willingness to put myself out there and not be embarrassed if I fell or was embarrassed -- you know, I didn't get embarrassed easily. I was okay to put myself out there and be in an awkward situation.

**Interviewee 2:** I think I just kind of internalized a lot and rather than talking about them or letting myself express them, I kind of just packed it all in and shut it up tight. And that definitely affected me in a negative way. It took a little while for things to start coming up. But I think even now I notice that one of my mechanisms for dealing with whether it's a problem with a girlfriend or something else I internalize everything and shut down. It's almost like -- how I do explain it? Yeah -- rather than wanting to talk about things and express my feelings, I just kind of shut people out and try to ignore it and wait for it to go away on its own. So, I think that probably affected me in a bad way, brought out a bad way of coping with things just being so unexpected. I didn't have any other way that I knew of to deal with it.

**Interviewee 2:** I don't think I went through any depression. I mean -- I don't know, maybe slightly but that was not always a huge concern. I had my good and my bad days, but the good days definitely outweighed the bad. I never felt like that was a huge problem.

The interviewee described the physical changes that he had to adapt to after his injury. Interviewee 2 explained that his adjustment to bowel and bladder incontinence was difficult for a significant period of time. He felt that he continues to struggle with managing the incontinence on occasion. The interviewee described the spasticity that he developed as a result of his injury. He explained the spasticity to be a positive influence in preventing pressure sores from developing on his skin.

**Interviewee 2:** Physically bowel, bladder stuff, that sucked for a while. It still sucks every now and then.

**Interviewee 2:** Yeah, I was plagued with a lot of spasticity in my legs. And that is the same I had in my bladder. I was really prone to a lot of bladder infections and leaking between catheters and stuff like that. It took me a really long time to get it to where it is now and even sometimes now it can be problematic. So, yeah, those were probably the biggest negative things in my life now. Or if a bowel program doesn't go well or it takes forever and that stuff can really bother me.

**Interviewee 2:** Pretty fortunate in that I think my spasticity keeps me pretty protected from pressure sores. I almost got one. I had the beginnings of one, but that was because of my shower chair was not padded and I had a long transfer. Once I caught it, fortunate I caught it early and got a padded shower chair and did a lot of weight relief and it went away.

*Career Change.* The career change experienced by Interviewee 2 is the second sub-theme of change. A concern that the interviewee had after suffering his spinal cord injury was whether he would be able to continue to pursue a career in dentistry. He responded to this concern by choosing to focus on achieving his goal no matter the obstacles he would face. Interviewee 2

chose to not take a year off from dental school after his injury. He felt that this choice to continue with school while recovering from injury, and the mental occupation with schoolwork was a positive method of coping for him. The interviewee stated that his ability to practice for a year and the achievement of securing a residency was “huge” for him. He perceived these achievements to be a positive influence both personally and emotionally.

**Interviewee 2:** I was concerned about my career. I was in my second year of dental school and I didn't want to give that up.

**Interviewee 2:** Yeah, I chose that there was not going to be a change. I was going to do everything and anything I needed to do in order to still become a successful dentist. And I did it.

**Interviewee 2:** I think not taking a year off was a coping method for me. Because I was so crazy busy to make up -- probably that second part of semester of dental school during the hardest semester that I didn't have time to think about anything else other than schoolwork. And I think it was just a really, really good thing for me to do. I didn't realize how important it was at the time.

**Interviewee 2:** I practiced for a year before I started this residency I'm in now and that was huge for me on a personal and emotional level to be able to succeed in that.

The interviewee explained that his career was largely accessible to his injury and physical capabilities. He stated that he was able to find the necessary adaptive tools. Interviewee 2 described the change he had to make in order to succeed in his career. He felt that he needed to work harder and be more efficient in order to excel amongst his peers.

**Interviewee 2:** Occupational was fortunately not too bad. Most dentists sit down when they work anyway, so I'm kind of fortunate there. I had to get a hand wrist app, which is like the foot pedal they use to operate the drill. And they had already had one built, I don't know why, and I was able to get it adapted into my school. So that helped. And then other than that, I probably had to be more efficient than the next guy. A little bit harder for me to go and grab something if I forgot something. I just had to be a little bit better than the next guy and I was able to be just as fast if not faster than most.

***Significance of Sport.*** The significance of sport to the interviewee's adaptation to transition was another theme that arose from the analyses. Interviewee 2 explained that he identified with both the sport (e.g. Motocross) and student roles that he maintained before his injury. He stated that he mainly identified with his role as a full-time student. In adjusting to his transition, the interviewee explained that he could never see himself letting go of his sport or career involvement. Interviewee 2 sees sport and dentistry as necessary fixtures in his life.

**Interviewee 2:** Full-time student, the other sports we talked about earlier, but mainly the student thing was the majority of my life.

**Interviewee 2:** I never had the thought of giving up sports totally to strictly practice dentistry. I always knew it was going to have to be a balance between the two in my life. So, yeah, I could never give up sports. I could never give up dentistry. I'm okay with giving up some sports to be smarter about my career, but I couldn't give them both up.

The interviewee described his perception of himself as an active person. He believes that he needs to be active and social. If Interviewee 2 did not have these experiences then he felt that he would be miserable. This self-perception drove the interviewee to be active post-injury and pursue the opportunities available to him. Interviewee 2 stated that he gave up hope of returning to able-bodied sports. He felt that he didn't want to hold on to the idea of returning to his previous capabilities. The interviewee didn't perceive his transition to be completely unexpected. He seemed to know that a transition from motorsport was impending. Interviewee 2 believed that his injury merely altered the activity involvement he would choose after transitioning. The interviewee's self-perception of being an active person and his belief that his transition was merely redirected may have been factors in the interviewee's eagerness to return to sport. Interviewee 2 perceived a desire to regain his sport pursuits. He felt that his ability to return to sport pursuits spurred him along into activity involvement.

**Interviewee 2:** I think I was just always really an active person. I wanted to get out and do things, interact with others and be social. If I was sitting around I was miserable. So, I knew that if I was going to have to be sitting around and doing nothing I was going to be miserable. Whether or not my situation changed, the way I felt about it wouldn't.

**Interviewee 2:** I had given up on the idea of able-bodied sports. I wasn't trying to hang on to a pipe dream of me being able to walk again.

**Interviewee 2:** I think it more changed my transition. I'm still very active in sports but they're just different sports now.

**Interviewee 2:** So I was really anxious and eager to get out there and do whatever I could to get back into the sporting world. So I could start getting that taste for what I loved so much. And once I started to, it was pretty contagious and that's definitely what led me down the path

In his responses, Interviewee 2 explained how he believed his developmental experiences influenced his transition from able-bodied sport. The participation in a sport demanding significant effort was believed by Interviewee 2 to have positively influenced his preparation to handle the rigors of adaptation to transition.

**Interviewee 2:** I think that -- I guess I could use an example of motocross. No matter how gifted you are athletically which I would say I'm, pretty solid athlete, I guess. But, no matter how much an athlete you are to compete in motocross you have to work your tail off. It's super, super endurance based, technical, and you just have to work on it to be good at it without the work to put in. So, I put in quite a bit of work to get to where I was. I think I was used to needing to put



in work to get in -- to get out results. So, the new things that I was doing post injury, them being a little bit harder, I think I was more in tuned and okay with the hard work that it was going to take to get where I wanted to be.

Interviewee 2 responded to the 10-item Athletic Identity Measurement Scale (AIMS) questionnaire and the retrospective 10-item version of the AIMS regarding the degree to which they identify with the athlete role (see Appendix F & G). The total scores on the AIMS can range from 7 to 70 with lower scores associated with a stronger athletic identity. Interviewee 2 recorded a 28 total score on the AIMS questionnaire and a 24 total score on the retrospective AIMS. These scores mean that his athletic identity, or identification with the athlete role, decreased to a certain degree from pre-injury to the time the questionnaire was filled out. When asked how these scores illustrate their association with the athletic identity, the interviewee talked about how he feels he currently has more goals related to sport and is more competitive in team sport now than before injury. Interviewee 2 went on to say that he felt sport was always important to him, but he now had more responsibilities and roles outside of sport competing with the athlete role.

**Interviewee 2:** Honestly not -- like number two, I have many goals related to sport. I think I probably have more goals related to sport now than before. I think, if anything, I'm more competitive on an official basis. I've always picked up basketball and stuff like that, but now I'm on a team. And we always skied for fun and now I race (inaudible). Stuff like that. I think honestly I might have more goals related to sport now. But, I think a lot of things that changed were more because of just my age that was changing, less with my injury. Because, you know, sport was never the only thing. It's probably the one thing I strongly disagree with is that sport was the only important thing in my life. But, I think, it was always really important to me. But as I aged, there was just more priorities that I have to deal with. But, you know, the sport will never become much less important to me. But -- yeah, honestly I don't feel like it changed a whole heck of a lot. You know, the way I got as an athlete. I think I might have gotten more competitive on like an official, I don't know --

***Significance of Normalcy.*** Normalcy, or return to what the interviewee considered normal, was a noticeable theme throughout the interviewee's experience. Interviewee 2 discussed how a return to normalcy facilitated his transition from able-bodied sport with a spinal cord injury. The interviewee described his ability to "get back to normal" as a method coping with his transition. He felt that a return to normalcy was difficult, but that difficult task was perceived as a positive influence. Interviewee 2 believed that focusing on returning to normal and graduating on time with his peers kept him from worrying about himself. The interviewee felt pride and relief in being able to graduate on time, and being active romantically with women again.

**Interviewee 2:** Getting back to school was probably more of a therapy for me than anything. It was nice to get back to normal in that stuff. That was hard for sure. I was able to get back caught up with my -- graduate on time. So it was definitely difficult, but difficult in a good way, gave me something to think about rather than worrying about myself.

**Interviewee 2:** I got back to normal on so many other things in my life, getting back active and back with girls and all that stuff. To be able to graduate on time was -- yeah, I hardly can explain that to you. You know, you're successful going through these things. It feels good to get back.

The interviewee explained that his friend's helpfulness and the efforts by his social support to act like the situation was "normal" helped make the transition easier. He said that the actions by others to make him feel like he was the same person as before his injury were a positive influence on his adjustment to transition.

**Interviewee 2:** I don't know for sure, but I know damn well it helped more than I can explain to just have so many friends that were A being so helpful, but B were so willing to act and be like nothing really changed. And it was just the same old [REDACTED] kind of thing.

**Interviewee 2:** It was huge in my recovery when you have everyone around you being positive and hanging out and making you feel normal or making the situation feel normal. It's a lot easier to get used to things.

*Adaptive Sport/Community.* A noticeable theme throughout the interviewee's experience was adaptive sport and the adaptive community. Interviewee 2 discussed how adaptive sport and the adaptive community played a role in the process of transition from able-bodied sport with a spinal cord injury. The interviewee described his worries immediately post-injury. He was concerned about the activities he was involved in, the impact on his career, and his ability to participate in those activities again. Interviewee 2 explained that his introduction to the adaptive community helped assuage those fears.

**Interviewee 2:** I was bummed thinking about everything that I do -- all the activities and how those had changed. And, you know, that was before we knew the adaptive community and all the different stuff that we could still be doing. So, I was definitely worried. I was even worried about stuff down to specialties, you know.

The interviewee perceived adaptive sports as a refreshing experience that he was ready to participate in. He felt that achievement in these new adaptive sports was a positive experience in his adjustment to transition. Interviewee 2 described how his sport involvement from pre- to post-injury stayed largely the same. The sports were merely altered to adaptive versions. He avoided returning to motocross in an adaptive fashion with the belief that the risk involved was not "worth it." The interviewee experienced some difficulty in adjusting to adaptive sports. He

felt that being able to “swallow his pride” was a necessity in being able to enjoy the competitive level of adaptive sport.

**Interviewee 2:** So I think when I started the adaptive sports it was refreshing and new, ready to go forward.

**Interviewee 2:** Starting and excelling at the new sports. Being good enough to really enjoy them.

**Interviewee 2:** So, I guess, it mainly just changed me right into the adaptive sports community. So rather than snow skiing I got into sit skiing. Rather than playing regular basketball, playing wheelchair basketball. Things like that. The one thing I haven't really gotten back into and has changed most is motocross, that's how I got hurt. So, you know, I still love the sport, watch it and all that but some guys go out and adapt their bikes and try to get back at it but that's not worth it to me. Too much risk.

**Interviewee 2:** It's more -- for me it was just accepting the level that you could compete at. I was pretty fortunate. I'm a C-9 so I think I have a pretty moderate level of ability so I can be pretty competitive with things. I think that changes when you go up higher levels. But then you can get into different things too. I think -- it's finding your niche and being okay with excelling at what you're good at or what you're able to be good at rather than just doing whatever you want. Like I was a big golfer before and I've tried to adaptive golfing now. There's no way I could ever be nearly as good as I could and it bums me out to the point where I don't(inaudible) but, like sit skiing I can keep up with anyone and, you know, I was a damn good skier before and I'm a pretty damn good skier now. That's no big deal for me. But, I think, you know, like swallowing your pride can be really difficult and just being okay with what you can do now versus what you want to be able to do. Can be a little bit of a disconnect there that -- it gets to me sometimes.

The interviewee described the benefits he experienced from interacting with the adaptive community. He felt that his transition and social network were made better. The adaptive community facilitated his branching out to a lot of opportunities that he does not believe he would have been able to take advantage of otherwise. The interactions with a member of the adaptive community were perceived to have helped him to transition into adaptive sports.

**Interviewee 2:** It got way better. I met so many people through the adaptive community. And I started to branch out a little bit more and travel more. There are a lot of good opportunities that go to different adaptive programs or take advantage of different opportunities. I've met more people in the last five years since my injury than I have in the rest of life.

**Interviewee 2:** And kind of a crazy story but a long story short, a friend of a friend of my dad's is in a chair and was able to meet me pretty early on. He's a really active guy and he's the one who taught me how to ski and I hang out with a lot. And he really helped transition into the new sport life.

***Social Support.*** The social support theme was suggested by the amount of responses regarding how others influenced the interviewee's transition from able-bodied sport with a spinal

cord injury. Interviewee 2 perceived himself as having a good group of friends. He felt that they positively influenced his activity involvement and his recovery. The interviewee claimed to have a positive outlook on his transition process and the obstacles he faced. This positivity was perceived to have come about as a result of the feeling that he had to be positive for fear of negatively impacting others. Despite this feeling, the interviewee felt that the attention from others positively impacted him. Interviewee 2 described different influences on him from his parents. His mother was believed to be his “rock.” She provided a positive influence and outlet. Interviewee 2 felt that his father’s difficulty with experiencing the interviewee’s injury and transition was a negative influence. He felt that it hurt him emotionally. His family struggled with the financial burden of medical bills and supplies. The interviewee’s explained that his family had to rely on fundraising support from his social network.

**Interviewee 2:** Socially I have a really good group of friends. That's probably one of the reasons I got out there and was so successful in getting better. So that definitely didn't change at all. Tons of friends that love to help and we'd go out and do tons of stuff together all the time. So that was pretty easy.

**Interviewee 2:** I had a pretty good outlook on things. I was positive, maybe more because I felt like I had to be for everyone else. But I think it helped me to –

**Interviewee 2:** The most difficult was seeing my dad. He was pretty devastated. I don't think he'll ever be the same. He definitely blames himself for getting me into riding motocross. So that kind of -- emotionally that kind of roughs me out

**Interviewee 2:** I talked with my mom a lot. She went through a lot of difficult things in her life. And she seemed like she always knows the right thing to say, give me a good perspective on things. Knows when to just listen and also when I want to hear her talk so, she was definitely my rock.

**Interviewee 2:** Financially, definitely was hard. You know how the -- not the lab bills -- but hospital bills and medical bills after that and medical supplies. That was hard on my family because we didn't come from much money. We weren't hurting totally bad, but it certainly wasn't easy. Had to do fund raisers and stuff like that.

The interviewee described the negative influence that a poor romantic relationship post-injury had on him. He felt that the relationship negatively influenced his poor emotional adjustment.

**Interviewee 2:** A crappy or poor relationship with a girlfriend at the time. She wasn't even a girlfriend, more just dating. And I had dated her previously. And after my accident she was willing to be there. So I thought that that was the answer to my problems emotionally. And she was a pretty terrible person and, at the same time, I was -- like I was telling you earlier, I internalized a lot of things and I didn't talk as much as I should have. So we got into a pretty bad situation and I think that messed with me for a little while.

Interviewee 2 responded to the 6-item Social Support Questionnaire (SSQ6) regarding the social support resources available to them and their satisfaction with that support (See Appendix H). The SSQ number score ranged from 0 to 9, and the SSQ satisfaction score ranged from 1 to 6. Interviewee 2 recorded a SSQN of 5.33, and a SSQS of 5.83. Interviewee 2 was asked how these scores illustrate their available social support and their satisfaction with that support. The interviewee talked about how he perceived the amount of individuals he could feel comfortable confiding in positively impacted his recovery. He felt that his social support had a normalizing effect on not only how he felt about himself but the situation he was in as well.

**Interviewee 2:** I think it's just having that many close people that I feel comfortable with sharing with all the information with. It was huge in my recovery when you have everyone around you being positive and hanging out and making you feel normal or making the situation feel normal. It's a lot easier to get used to things.

*Quality of Adaptation.* A theme that arose from the analyses was the interviewee's perception of the quality of their adaptation. The interviewee's evaluation of their reaction was influenced by factors involved in the previously mentioned themes. Interviewee 1 perceived the quality of their adaptation to be pretty good. He based this assessment on his own perception and the perceptions of others. The interviewee explained that he wouldn't change much about his life. He believed that his social support system was a positive factor, but a positive romantic relationship would improve his life. Interviewee 2 explained that his transition and injury gave him a new valuable perspective, and he believed it made him a better person. The interviewee also explained that, although he moved on from able-bodied sport early on, he still struggles occasionally with a yearning for his life before injury.

**Interviewee 2:** I think I did pretty darn good. I feel that way myself and then obviously I was then told that I did well.

**Interviewee 2:** I would say I live a better life than many people I know. And I feel very fortunate in that I have a high quality life. And, yeah, I wouldn't change much.

**Interviewee 2:** So, having not only a social support system but perks and all on a love life basis are really supportive and awesome woman would have been great.

**Interviewee 2:** I think it made me a lot better person. I always wish that I could have my old life back but I would change that wish and say that the only way I'd want that back is if I could be the person that I am now back then. If that makes sense? I think I got a lot of perspective and a different view on the world that I really cherish and I'm happy that I found. I'm bummed that I had to find it the way that I did. But at the same time I don't regret any of the lessons I've learned.

**Interviewee 2:** I think it's a grey area. I guess I accepted it pretty early on and was ready to move on to other sports after a couple months I was able to. But, on the other side of that coin, I still haven't come to grips or been okay with giving up that part of my life. It still hurts every now and then.

The interviewee described a healthy transition as that which remedies your personal issues and regains as much independence as possible first. Then, the interviewee described, you should get involved in the adaptive sport community as soon as possible.

**Interviewee 2:** Taking care of your personal issues first. Getting yourself as stable as possible and some independence there. But, at the same time, getting involved in the adaptive sport community as soon as absolutely possible.

Interviewee 2 responded to the 5-item Satisfaction with Life Scale (SWLS) questionnaire regarding their current life satisfaction (See Appendix I). The total scores on the SWLS can range from 7 (Not Satisfied) to 35 (Fully Satisfied). Interviewee 2 recorded a 31 total score on the questionnaire. When asked how these scores illustrate their satisfaction with life, the interviewee explained that they felt it showed their happiness with the current place in their life.

**Interviewee 2:** I think they illustrate just how happy and satisfied I am with my current life. I gave all of those questions high numbered responses, and that is because I really am very happy with my life.

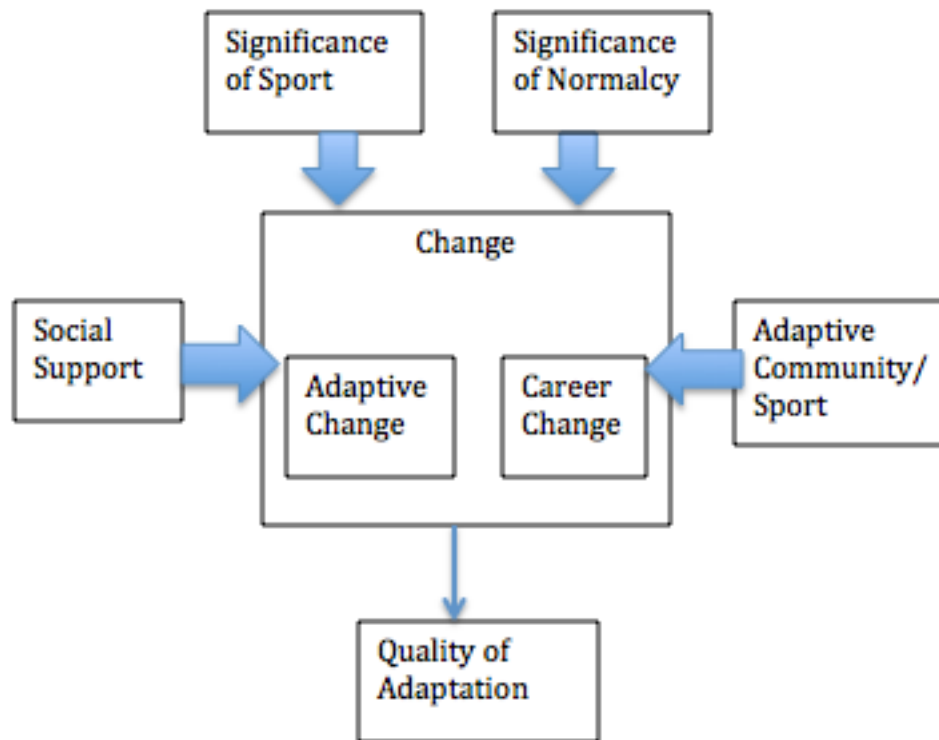


Figure 3: Interviewee 2 Conceptual Map

## Summary

The transition process for Interviewee 2 began when the athlete suffered a spinal cord injury while participating in sport. This change blindsided the interviewee, disrupting his life and the way he had become accustomed to living it. He felt that he needed time to fully comprehend the injury, the transition, and everything that was happening to him. In fact, the interviewee described a healthy transition as one that accomplishes the necessary tasks in a timely fashion. Interviewee 2 saw remedying personal issues and regaining independence as the priority tasks. Once those have been achieved, he felt that participating in adaptive sport was an activity that was necessary to get involved in as soon as possible.

The change experienced in a transition can take many forms. Interviewee 2 had to respond to a disruption in his physical functioning, affecting the activities he was involved in, as well as a disturbance in his career pursuits. The interviewee's ability to handle these changes was dependent on several conditions. The importance placed on normalcy, the social support available, the significance of sport, and the adaptive sport and community were factors involved in the transition from able-bodied sport with a spinal cord injury for Interviewee 2. Viewing the circumstances surrounding the change experienced by the interviewee and his interpretation of these factors can help inform an understanding of this individual's perceived quality of adaptation.

The interviewee felt that he had achieved a good quality of adaptation to transition. This conclusion was supported by a comparison to others and encouragement from his social support. Where Interviewee 2 felt that he would like to see improvement was in the development of a supportive romantic relationship. The interviewee believed a poor experience with a romantic relationship early in the process of transition negatively influenced his communication of emotions to those supporting him. Interviewee 2 also struggled with the pressure to stay positive for others. Although he felt the added attention had a positive impact, he did not like being the focus of others' concern. The interviewee explained that his father's emotional response to his injury and transition was one of the most difficult things he had to experience.

Otherwise, Interviewee 2 interpreted his social network as largely supportive. The interviewee explained that his mother's receptiveness was a significant outlet for him. He also perceived his friends' involvement in activities with him as a positive influence. The interviewee believed that his willingness to try new things without fear of embarrassment as essential in

helping him adapt. Interviewee 2 commonly referred to normalcy in his responses. He described his social support as having a normalizing influence when he felt his friends treated him in the same manner as before the injury. It made him feel comfortable in a difficult period of transition.

Interviewee 2 described his determined focus on dental school, which he desperately did not want to give up. He was concerned that his physical function would affect his ability to maintain his career path, but his transition was positively influenced by the adaptability and accessibility of his school and career workplace. The interviewee decided to not take time off from school to focus on his transition. Instead, he resolved to bury himself in schoolwork, which he believed gave him a positive outlet for directing his attention. The interviewee took great satisfaction in his ability to graduate at the same time as his peers. This return to normalcy in career pursuit was viewed to have a positive effect on him.

The interviewee described the obstacles he faced and continues to face in his physical adaptation to injury (e.g. bowel and bladder incontinence, spasticity, and pressure sores). The interviewee coped with the difficulties he experienced by drawing from his own self-perceptions. From his developmental experiences he knew he needed to be active. Interviewee 2 mostly identified with the role of a full-time student, but sport was very important to him as well. He always saw sport and dentistry as part of his life. When Interviewee 2 began his transition he was eager to return to sport. He was initially concerned about the adaptive opportunities available to him, but quickly he learned of the opportunities with the assistance of individuals from the adaptive community. The interviewee felt that his social network grew considerably with his involvement in the adaptive community. This addition to his network was explained to have helped him branch out into multiple adaptive interests. Interviewee 2 stated that once he was able to accept his adaptive level of competition, and experience athletic achievement again he felt that his interest in adaptive sport grew. Being able to put able-bodied sport behind him helped facilitate the reaching of a healthy transition.

**Case 3.** Case 3 is an examination of the themes that emerged from the discussion with Interviewee 3. In case 3, there are six themes. One of the themes, change, is comprised of one sub-theme.

**Change.** Change was a theme that arose from the analyses. Change is where the athletes experience begins. The catalyst for this individual's transition was a spinal cord injury that occurred outside of sport. He identified the injury as being caused by a diving accident in a



reservoir. Interviewee 3 was relocated from Indiana to Georgia a month after his injury to be enrolled in a rehabilitation hospital with proficiency for spinal cord injury. Interviewee 3 explained that his spinal cord injury coincided with the end of his sport career. This change, the impetus for his transition from able-bodied sport, occurred at the same time as the interviewee was transitioning from high school to college. This means that the interviewee's transition as a result of spinal cord injury was just one of multiple transitions that he was managing. The interviewee perceived that the inability to prepare for his transition and the amount of transitions at once negatively affected him. He felt that more time to adjust to transition would have helped him adjust better.

**Interviewee 3:** I just did high school sports and I was injured after my senior year of high school

**Interviewee 3:** I was done pretty much with my organized sporting career like right, you know -- that finish coincided with my spinal cord injury.

**Interviewee 3:** I was in a diving accident in a reservoir in July of 2011 and right after was at Methodist Hospital in Indianapolis for a month or so, maybe a little less and I went on to the Shepherd Center Rehab Hospital in Atlanta and did in-patient and out-patient rehab there for a while before going back to school.

**Interviewee 3:** If you had maybe a longer period of time to digest some of the things it might have been easier. The fact that there were so many transitions all at once so the suddenness of it was tough. Yeah, I would say that.

*Adaptive Change.* A sub-theme of the change that Interviewee 3 experienced was adaptive change. Adaptive change consists of the adaptive changes that he had to make in order to adjust to his injury. The interviewee perceived his injury and transition as forcing him to adapt to a different way of navigating his environment, and assume a new perception of "things." The loss of independence and reliance on others for tasks that he would have otherwise been able to handle before his injury were an obstacle Interviewee 3 had to overcome. The interviewee viewed the regaining of more independence was what he needed in order to improve his transition. Interviewee 3 did not see depression symptoms as complicating his transition. He seemed to anticipate a "normal" amount of depression that he determined that he handled effectively.

**Interviewee 3:** I mean, I think so. Overall just like having a different way of going about the world. And a different outlook on some things.

**Interviewee 3:** Probably -- I mean just getting used to on the one hand a new way of moving around and not being able to be as independent -- not just like the walking component but like having to rely on others to do certain things like getting up in the morning and going to bed at

night, that sort of thing. Probably the biggest ones. And also when I got to school, doing school differently with [REDACTED], quite as hard, I think.

**Interviewee 3:** I guess more independence in terms of not having to rely on someone all the time to do activities would probably be the answer.

**Interviewee 3:** Nothing major. Nothing besides like the normal depression that initially comes with spinal cord injury. So nothing like besides that, I don't think.

The interviewee also felt that understanding government help options and insurance was an obstacle in his transition. He had to find a way to fund a manual chair without the support of insurance.

**Interviewee 3:** Obviously, things are expensive, as you know. I think just like trying to understand to navigate all the government help options there are and trying to figure out insurance and trying to learn all that very quickly. Kind of like a whole new language. So it's definitely -- some things are a financial burden like my adding a manual chair as a backup and like that wasn't going to be covered by insurance.

*Significance of Sport.* The significance of sport to the interviewee's adaptation to transition was a theme that arose from the analyses. Interviewee 3 had an understanding prior to his injury that he would not pursue professional or organized sports after high school. For the interviewee, the larger obstacle he had to overcome, in regards to sport, was his inability to freely participate in leisure and physical activities. He perceived that he had to face the realization that his disability would limit the activities accessible to him. Interviewee 3 explained the dissatisfaction he had with his physical activity options. He felt that his FPS bike wasn't a fulfilling pursuit.

**Interviewee 3:** It's always pretty much the game. I guess in terms of professional, organized sports, I knew I was pretty much going to be done at high school.

**Interviewee 3:** Yeah, I just did high school sports and I was injured after my senior year of high school. So I was never going to like do anything professional by any means or in college or anything. So, I guess the more relevance for me was transitioning away from more leisure and maintaining good shape kind of activities, not like a professional or anything like that.

**Interviewee 3:** But I always assumed I would stay active like in outdoor sports and things. I guess it changed because I realized that some of those things wouldn't be as much of an option.

**Interviewee 3:** But like in terms of my transition to sport -- I don't -- the only activity I really do physically is like FPS bike which is great for staying in shape and I appreciate it for that but it's not exactly fun. So, in terms of that, not ideal but that's just one aspect.

The interviewee described the aspects of sport that he missed. He longs for the camaraderie of team sport, the social atmosphere, and collaboration. In his future career,

Interviewee 3 aims to replicate that collaborative social environment. Interviewee 3 also wished for the physical fitness he had before injury.

**Interviewee 3:** I think probably camaraderie and like being in good shape, those two things.

**Interviewee 3:** I guess the social aspect. My sports career, having the need and like desire to rely on other people to do a team activity is something that's not really part of -- since I don't really do team sports anymore; it's not really part of my sport in life anymore. But as I slide over into just like my reliance and joy to be around other people and things. So, as I continue to -- I don't know what kind of career I'll have, I hope to be involved with other people somehow.

The interviewee explained that his developmental experience in sport gave him a strong work ethic. He felt that this perceived strong work ethic was helpful in his transition experiences.

**Interviewee 3:** I guess just doing high school sports gave me a pretty strong work ethic. I think I was already a pretty hard worker and that was a helpful transition in terms of therapy and stuff. Just like treating it like a sport or like a job or something. Like something that you just have to do. I think that was helpful in that respect. And that's also been helpful as I encounter daily challenges or whatever. Challenges out in the world just like being able to rely on that sense of strong work ethic has been helpful.

Interviewee 3 responded to the 10-item Athletic Identity Measurement Scale (AIMS) questionnaire and the retrospective 10-item version of the AIMS regarding the degree to which they identify with the athlete role (See Appendix F & G). The total scores on the AIMS can range from 7 to 70 with lower scores associated with a stronger athletic identity. Interviewee 3 recorded a 68 total score on the AIMS questionnaire and a 57 total score on the retrospective AIMS. These scores mean that the interviewee's athletic identity, or identification with the athlete role, decreased from pre-injury to the time the questionnaires were filled out. When asked how these scores illustrate their association with the athletic identity, the interviewee explained that, while he partook in high school sport for many positive aspects, he never really identified with the athlete role. Interviewee 3 felt his inability to freely participate in physical activity was what led to his largely nonexistent identification with the athlete role now.

**Interviewee 3:** I loved doing high school sports but I was never really -- I knew I was never going to be professional or I was anywhere good enough to do it in college or anything so while I really liked it, I liked it for the leisure, staying in shape aspects and the social aspects and the like learning lessons aspects. So like I never really identified -- would have identified myself primarily as an athlete. And now that's just intensified. It probably would have done it a little bit anyway when I was done with high school sports. But the fact that I can't get up and run and do the more leisurely aspects just like makes me less identified as an athlete so, yeah, not too much difference, but I guess still a difference.

***Significance of School.*** Another theme that arose from the analyses was the significance of school to the interviewee's adaptation to transition. Previously, the interviewee discussed his

understanding that his sport career would not continue past high school. In his responses, Interviewee 3 explained that he identified more with the student role than the athlete role due to his higher prioritization of academics. He held the perception that he was destined for a career in some form of professional services. After his injury, the interviewee set his goal in transition to get back to school. Interviewee 3 interpreted the directing of his focus toward this task as a coping strategy. The new environment and challenges at college were perceived to a positive stimulant. The interviewee felt that his new environment and available outlets helped facilitate his transition.

**Interviewee 3:** I guess primarily just as a student. So that was my biggest identity was as a high school student and like if I prioritized academics over athletics.

**Interviewee 3:** That didn't really affect me a whole ton because like I said I was never going to be like a professional athlete or most likely use like manual labor as something. I didn't really know what I wanted to do before and I still don't entirely know what I want to do. But that hasn't really been as big of a factor for me because I always knew I was just going to be in professional services or something.

**Interviewee 3:** And then for me it was really just trying to get back to school. It was my main goal and sort of thing keeping me focused. And also sort of like functioned as a coping mechanism. And so in terms of transitioning through another occupation it was really just trying to get back to school as the best way to start all of those processes over again.

**Interviewee 3:** I guess just like having other outlets, probably. So like going to college is probably the biggest one and just like being surrounded by a whole new environment and new challenges, that sort of thing.

*Adaptive Community/Sport.* A theme throughout the interviewee's responses was adaptive sport and the adaptive community. Interviewee 3 discussed adaptive sport, the adaptive community, and how the two played a role in the process of transition from able-bodied sport with a spinal cord injury. Despite the proficiency with spinal cord injuries of the rehabilitation hospital that the interviewee was enrolled in, he felt that he did not have adequate available information on the accessible and adaptive opportunities available to him. Interviewee 3 acknowledged that there were many adaptive programs available, but he did not engage with them. There would appear to be some disconnect between this interviewee and the adaptive community in regards to the transference of information and the facilitation of participation. Interviewee 3 perceived that initiation on his part to investigate available adaptive opportunities would be helpful. He stated that he did reach out to those with similar experiences of spinal cord injury, but none with experiences that reflected his. The interviewee felt that contacting those that had experienced the multiple transitions (e.g. high school to college, and transition from

able-bodied sport with a spinal cord injury) that he did would have helped facilitate his transition more.

**Interviewee 3:** I think lack of information is probably the biggest one. Even I mean, shepherd had a lot of sports programs, outpatient things but I never got really involved in those.

**Interviewee 3:** I guess like maybe getting in touch with adaptive sports like teams and clubs. There are other kinds of like ways of doing sports, I guess.

**Interviewee 3:** I think just trying to seek out people by myself. So trying to go to people maybe who were doing different things and seeing how they fit in with the rest of their lives by themselves.

**Interviewee 3:** I think probably just not a lot, but probably reach out more to people who had been in similar situations and talked to more like mentors who had been through, yeah, also like spinal cord and college transition sort of thing.

***Social Support.*** The social support experienced by the interviewee was a theme throughout his responses. Interviewee 3 discussed the many ways he felt his social resources impacted him. The interviewee perceived that reinforcing his belief in the meaningfulness of his friendships and relationships was a positive influence on his transition. He described how he used these friendships. Interviewee 3 viewed talking with friends about “everything” as a coping strategy. The interviewee admitted that it was difficult to differentiate what growth in his social support was influenced by his transition and what was a result of the process of moving into a new college environment. The transition was perceived to have deepened the bonds with the close friends he had before injury.

**Interviewee 3:** knowing that a lot of your friendships and relationships are still really meaningful.

**Interviewee 3:** I think the biggest one is just like relying on friends in terms of support just like talking with them about everything that's going on would probably be the biggest one for me.

**Interviewee 3:** I think it did to the extent. It's weird because I would have been going to college that year anyway that everyone went. It did to the extent that I still -- I stayed in close contact with almost all of my close friends from beforehand and like I said, just deepened those bonds. And then when I went to college next year, sort of got a whole new set of friends. So, yeah, I guess it did and it didn't.

Interviewee 3 identified the people he perceived to be his largest supporters, which included his parents and family, his close friends, the rehabilitation hospital staff, and the college administration. He explained that these supporters positively influenced his transition through medical assistance.

**Interviewee 3:** The biggest was just like my family and close friends. They were definitely the biggest resource, helping, you know, with everything. Both like all the medical stuff and

figuring out how -- and afterwards and future roles and stuff. So, I think, my family was definitely the biggest resource. And the people at the rehab hospital were really helpful. [REDACTED], especially. And when I got to school the administration at duke was really helpful too.

**Interviewee 3:** Probably both my parents. Primarily. They were just there all the time.

**Interviewee 3:** I need to rely on relatives and friends for fundraising support.

The interviewee described the relationship he had with the counselor at the rehabilitation hospital. He perceived the counselor to have been a helpful trusted resource.

**Interviewee 3:** So I had like a counselor at the shepherd center, all the patients did, I think, especially all the adolescent ones. That was helpful

**Interviewee 3:** Yeah, so she -- maybe once a week was the -- I'm trying to remember. I think that was right. She wouldn't always talk about spinal cord injury and stuff but she became like a trusted resource. She had been doing it for a long time so it was nice to hear her perspectives of how she worked with people who had gone on to do lots of cool things. So, yeah, just a really good sort of listening friendly ear.

Interviewee 3 responded to the 6-item Social Support Questionnaire (SSQ6) regarding the social support resources available to them and their satisfaction with that support (See Appendix H). The SSQ number score ranged from 0 to 9, and the SSQ satisfaction score ranged from 1 to 6. Interviewee 3 recorded a SSQN of 9, and a SSQS of 6. Interviewee 3 was asked how these scores illustrate their available social support and their satisfaction with that support. The interviewee explained that he feels he has very good social support from many different people. He perceived this social support to have positively impacted him post-injury.

**Interviewee 3:** I definitely feel that I'm very well socially supported, so I'm not surprised that I had a high score (I think I do at least...). I think I'm very fortunate in the relationships and support I've received from friends and family, and that's definitely made things easier post injury.

**Quality of Adaptation.** From the interviewee's responses arose the theme of quality of adaptation. The interviewee's assessment of his response to transition was influenced by factors involved in the previously mentioned themes. The initial concerns that the interviewee had were of the permanence of his physical disability, the effect on his ability to go to college, and his relationships/friendships. Interviewee 3 perceived the quality of his adaptation to be really good. He qualified this assessment with the perception that he is happy with his plans for the future, and his social support. Interviewee 3 also stated that he feels that he hasn't yet completely moved on from his transition. He considers it an ongoing process.

**Interviewee 3:** I think overall really good. I'm really happy person and have plans for the future. I'm happy with those.

**Interviewee 3:** I'm very satisfied. Yeah. I just graduated college. Yeah I've got good plans the next couple of years. Good people around me. Very satisfied.

**Interviewee 3:** I guess the same as whether the permanence of it, how it would affect my ability to go to college was probably one of the biggest ones, how it would affect relationships and friendships and that sort of thing. And also just the ability to lead an active and fulfilling life.

**Interviewee 3:** I don't know if I ever fully -- I think it's something you still kind of think about sometimes so I have to say it's an ongoing sort of process thing.

A description of what a healthy transition looks like may be different for each person.

Interviewee 3 qualifies a healthy transition as that which adapts an individual's goals to their current abilities and opportunities while putting things in appropriate perspective. He also stated that recognizing his primary source of satisfaction, focusing on that source, and appreciating the other resources he had was beneficial.

**Interviewee 3:** I think one that just like remains true to the goals of the person. So, if they were trying maybe not. If they were trying to be a professional athlete because that may not be realistic. But just trying to realize there are other outlets in life and trying to see how those fit in with all the other things you've got going on now. I think just keeping it all in perspective as much as possible.

**Interviewee 3:** I think for me sports were never the primary like granter of my satisfaction. It was recognizing that and focusing on other things, especially school and like relationships with those around me.

Interviewee 3 responded to the 5-item Satisfaction with Life Scale (SWLS) questionnaire regarding their current life satisfaction (See Appendix I). The total scores on the SWLS can range from 7 (Not Satisfied) to 35 (Fully Satisfied). Interviewee 3 recorded a 26 total score on the questionnaire. When asked how these scores illustrate his satisfaction with life, the interviewee explained that he felt it accurately represented him. He went on to say that he was happy with his current place in life and support available, but recognized there is room for improvement.

**Interviewee 3:** This is pretty accurate. Like I said, I lead a pretty good life at this point. I'm pretty happy with where I am and all the support I've had to get here so, yeah, I guess I'm not too surprised but there's always things to work towards so I guess I'm never completely satisfied. So, I think, (inaudible) if you had a perfect score, maybe. Always things to improve on. Yeah, does that make sense?

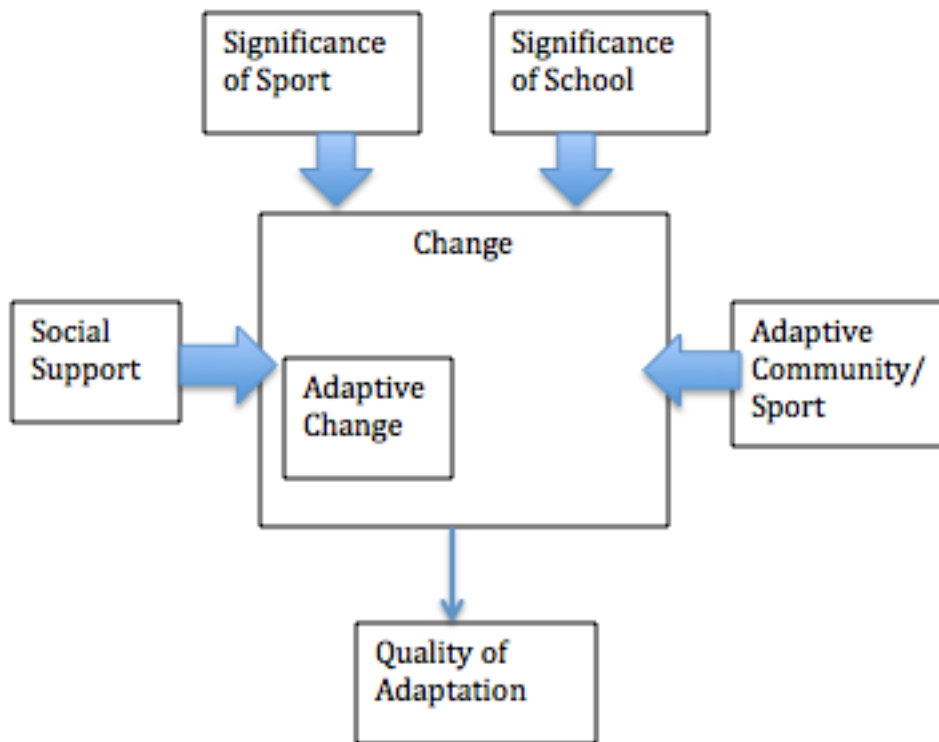


Figure 4: Interviewee 3 Conceptual Map

**Summary**

A spinal cord injury suffered while outside of sport set the transition process from able-bodied sport in motion for Interviewee 3. This change was one of many being managed by the interviewee at the time of injury. Interviewee 3 was in the process of graduating from high school to college. He also stated that the end of his sport career coincided with his injury. The adjustments needed to successfully manage each of these transitions were perceived to be a difficult task. The interviewee acknowledged that having a longer time period to adjust would have made his transition easier.

Within the theme of change, Interviewee 3 experienced drastic alterations to his physical capabilities, which affected the activities he was involved in. The adaptive change that the interviewee faced, and was tasked with responding to, was dependent on several conditions. The social support available to the interviewee, adaptive sport and the adaptive community, the significance of sport, and the significance of school were factors involved in the transition from able-bodied sport with a spinal cord injury. Viewing the interrelatedness of the themes and sub-



themes in this interviewee's responses will help better inform an understanding of his narrative and the way he perceives the quality of his adaptation.

The interviewee's new level of physical function complicated his adjustment process. The hostility and inaccessibility of his environment forced Interviewee 3 to find a new way of navigating the world. His lack of independence meant that he had to rely heavily on others. The interviewee stated that the support he received from his family, friends, and caregivers were a large resource in adjusting to these obstacles, but developing more independence was what he believed would improve his satisfaction with life. Despite the changes he was experiencing, the interviewee did not perceive that he suffered from anything more than "normal" depression symptoms. In fact, the interviewee thought the new outlook on life that he felt he received through transition was a positive product of his experience.

Initial concerns that the interviewee had were in regards to the effect his injury would have on his ability to go to college, and lead an active and fulfilling life. Interviewee 3 viewed himself primarily as a student over athletics. He did not see the loss of sport as a negative, because he did not believe his athletic pursuits would lead to a career in sport. Going to college and securing a career in professional services was believed to be the path he would follow. His enrollment in a rehabilitation hospital delayed his entry to college. Interviewee 3 explained that, during his recovery process, he set a goal of getting back to school. This became a coping mechanism for keeping his thoughts productively focused. Once he achieved his goal, the interviewee also found the new environment and challenges of college to be a positive influence.

While the interviewee did not perceive future sport pursuits to be much of an option at the time of his injury, he did describe the significance of sport to him. He believed that the strong work ethic he developed through sport was a great tool to use throughout therapy and overcoming daily obstacles. Interviewee 3 liked sport for the benefits of leisure, physical fitness, and social aspects. Even though he knew that he would be done with sport after high school, he believed he would continue to participate in forms of physical activity for the benefits he described. The interviewee felt that, now years removed from his injury, he does not have satisfying physical activity options. He still misses the camaraderie and fitness aspects of sport, as well as the ability to exercise freely. But, Interviewee 3 perceived his lack of physical function to have severely limited his physical activity opportunities. He lamented the scarcity of

information available to him regarding adaptive opportunities, but he also acknowledged that he did not take advantage of adaptive sport programs at the rehabilitation hospital.

Interviewee 3 admits that adaptive sport programs may have had a positive influence on his transition, but he has used the adaptive community in alternate ways. The interviewee contacted individuals that have previously dealt with a spinal cord injury to learn from their experience and responses. He felt this was helpful, but he also thought that reaching out to those who had a more similar experience to his would have been more beneficial.

The adaptive community was one form of social support that Interviewee 3 relied upon. The support he received from friends and family, caregivers, counselor, rehabilitation hospital, and college administration was perceived to be largely facilitative in his transition process. A concern the interviewee had at the onset of his transition was the effect his injury would have on his relationships. The interviewee stated that understanding he still had deep meaningful relationships with his friends was very helpful.

The interviewee perceived his quality of adaptation to be good, but he also still sees his transition as an ongoing process. He believed that recognizing what he received satisfaction from (e.g. school, friendships) was an important part of his adjustment. Interviewee 3 went on to explain that remaining true to his goals, and getting the most satisfaction he could from the activities he was involved in would lead to a healthy transition. His graduation from college, satisfaction with those around him, and development of what he perceived to be good future plans were signifiers of the good quality of adaptation that he could identify.

### **Cross-Case Analysis**

This study combined the findings across cases in an effort to identify themes that may emerge as consistent in interviewee narratives.

**Finding 1: Interviewees' recognition of the importance of time in transition.** Each interviewee discussed the effect that time, and their perception of it, had on their transition process. Interviewee 1 was grateful for the financial support and career stability assurances he was given because of the ability it provided him to live without financial worry and focus on rehabilitation for over a year. The interviewee did not initially know the physical function that he would regain. The time he was provided to wait and re-evaluate his capabilities was perceived to have helped him successfully transition. Interviewee 1 also felt that being able to return to athletic and career pursuit in two years was an indicator of the positive quality of his transition.

Whereas Interviewee 1 had resources provided to him to fully focus on re-evaluating his capabilities, Interviewee 3 felt that the many transitions he was experiencing at once made his adjustment difficult. Interviewee 3 thought that having a longer period of time to adapt would have been beneficial. Despite the amount of time that had passed between the injury and interview, Interviewee 3 felt that his transition process was ongoing. This thought raises an interesting question. When does an interviewee perceive their transition complete, and how do they qualify that? Interviewee 2 shared a similar view about his transition. He felt that he still has yet to become comfortable with giving up able-bodied sport. The change that the interviewee experienced was perceived to have happened so suddenly that it he felt it took time to sink in. But, while the other interviewees appreciated all the time they had to adjust, Interviewee 2 chose to not take a year off from dental school. He felt that the choice to occupy himself with schoolwork was a positive influence on him. How each individual values the time they have to adjust, and decides what to do with it may impact their ability to transition successfully.

**Finding 2: Regaining independence is a priority of the interviewees.** A common theme that arose across the individual cases was the importance interviewees placed on regaining independence. Interviewee 2 explained that he perceived a healthy transition meant regaining as much independence as possible before pursuing other activities. Interviewee 3 described how his loss of independence meant he had to rely more heavily on others to accomplish daily tasks. Getting accustomed to this need of others was a challenge for the interviewee. He felt that regaining some of his lost independence would improve his satisfaction with life. Interviewee 1 responded to his loss of physical function by adapting and teaching himself how to swim again. He gradually worked to regain his independence so that he would be able to swim, and get in and out of the pool on his own. Each interviewee placed importance on being able to get back some amount of their capability to be independent of others.

**Finding 3: The shared experience and guidance of those in the adaptive community influenced interviewees' adaptation.** Interviewees expressed their perceptions of the facilitative effect that members of the adaptive community had on their transition process. Interviewee 1 and Interviewee 2 both identified individuals involved in the adaptive community that provided information and guidance into adaptive sport. The interviewees appreciated the help that these individuals provided by easing their entrance into adaptive sport. Understanding the similar experiences of those that have gone through a spinal cord injury, and how they have responded

in those situations, was perceived to be a valuable tool in transition. All three interviewees discussed how they used these shared experiences. Interviewee 3 described how he reached out to those who had experienced spinal cord injury, and analyzed what they did. The interviewee explained that he felt talking to those who had been through a more similar college transition while adjusting to SCI would have been more beneficial. This last comment may have the most significance. Simply introducing two individuals who have suffered a spinal cord injury may not be helpful. The value in a shared experience for individuals recovering from a spinal cord injury may be in their ability to identify with a role or recognize an obstacle.

**Finding 4: Sport developmental experiences were perceived to aid in rehabilitation.**

Another common theme that emerged across cases was the perception by interviewees that their experience in sport prepared them or was a valuable tool to overcome obstacles in rehabilitation. Interviewee 1 discussed how he utilized his training for sport by assuming a sport approach or mentality towards physical therapy. The interviewee felt that using that approach made the rehabilitation process “that much easier.” Interviewee 2 and Interviewee 3 both explained that the work ethic they developed through sport participation became valuable when encountering the difficult situations they faced post-injury. Interviewee 3 carried his perceived strong work ethic into his daily challenges. The interviewees perceived their work ethics to be helpful in their adaptation. This theme reveals that those transitioning from sport with a spinal cord injury have applied past experiences and skills in order to ease their adjustment to transition.

**Finding 5: Availability of a counseling resource may have been facilitative.** The interviewees discussed their psychological and emotional reactions to transition. None of the interviewees reported struggling with symptoms of depression. Interviewee 2 stated that he had his good and bad days, but he never felt that depression was a concern. Interviewee 3 thought that he went through the “normal” initial depression, but he didn’t feel like it was a major factor. What may have been a resource that helped facilitate transition was the access to a psychologist or counselor. Interviewee 1 and Interviewee 3 reported having access to psychologist or a counselor throughout different lengths of time early in their transition. Interviewee 2 did not report having access to a counselor. The interviewee did discuss having trouble communicating his emotions. The internalization of his feelings when he was having troubles was perceived to have hurt him during his transition.

**Finding 6: Career pursuit concern and the satisfaction from achieving career milestones were factors in the interviewees' transition process.** Career pursuit was a theme that emerged across the cases. Each interviewee discussed the initial concern they had post-injury regarding whether injury would impact their ability to continue to pursue a career. Interviewee 1 was assured early on that he would have a position available for him to return to. The interviewee explained that this assurance comforted him, making it easier for him to transition. Interviewee 3 discussed his concern about whether he would be able to go to college as he planned. He set his goal in rehabilitation to get back to school. The interviewee described how caregivers and members of the college administration helped to facilitate his entry into and stay at college. Interviewee 2 also addressed his concern for his ability to return to dental school and pursue a career as a dentist. The interviewee found his school and desired career to be largely adaptable and accessible. He explained that he needed to use an accessible application and adjust his workplace efficiency. This accessibility helped relieve him of obstacles in transition.

The interviewees discussed the changes that they had to make, like those made by Interviewee 2, in order to continue their career pursuits. Despite the belief that he could have returned to teaching in the classroom, Interviewee 1 acknowledged that his injury would have made the position more difficult. He instead took the opportunity that presented itself to move into a more administrative position. Interviewee 3 discussed the changes he had to make. The interviewee had to learn to navigate his environment, and get used to relying on others for their assistance. These changes made by the interviewees were perceived to be helpful.

The interviewees perceived their ability to return and excel in their career to be an indicator of the quality of their adaptation to transition. When describing the quality of his adaptation, Interviewee 1 qualified that being able to return to work was a reason why he felt the quality was good. Interviewee 2 described the satisfaction he received from graduating on time with his peers and achieving a residency. He explained that it felt good to get back. The interviewee thought that these achievements were important to him both personally and emotionally. Interviewee 3 discussed that he had graduated from college. He stated that his graduation and plans for the future were sources of satisfaction. The responses from the interviewees show that their ability to maintain their career investment and draw satisfaction from it was facilitative of their transition.

**Finding 7: The direction of an interviewee's focus was used to manage transition obstacles.** Each interviewee perceived that by directing their focus they were able to ease difficulties in transition that would have otherwise been there. Interviewee 1 explained that he made a conscious effort to not take on too many activities at once. He thought that by focusing on hand cycling and swimming before phasing in other activities was helpful for him in transition. Interviewee 2 stated that he chose to not take a year off from school. The interviewee discussed how this decision to focus on his schoolwork during a difficult semester acted as a coping strategy for him. He felt that being able to focus on returning to normalcy and occupying his mind with schoolwork kept him from worrying and having unproductive negative thoughts. Interviewee 3 also felt that his focus on returning to school was a positive influence. He described this focus as a coping strategy as well.

**Finding 8: Interviewees perceived involvement in adaptive sport and the adaptive community to have a positive impact.** A theme that emerged across the cases was the impact that adaptive sport and the adaptive community had on the process of transition. Interviewee 1 discussed how he re-evaluated his physical capabilities in the first year of his transition. Once he was able to recognize which activities were still accessible to him he made the effort to get involved. The interviewee thought that he must simply shift his focus from one athletic pursuit to the next. He perceived that his able-bodied sport was over and that realization stimulated excitement for the next challenge. Through the guidance of those that have participated in adaptive sport he was able to develop competence in adaptive sport. In his description of the quality of his adaptation, the interviewee stated that being able to return to training for athletic pursuits was a reason why he felt his adaptation quality was 'very good.'

Interviewee 2 viewed adaptive sport as refreshing and new, and he was ready to get involved. He stated that the adaptive community helped comfort his fears about the loss of the activities he valued. When he went to enter adaptive sport he explained how a member of the adaptive community helped facilitate his entry. He felt that his social network improved with his involvement in the adaptive community, and helped him branch out to different programs and opportunities.

Interviewee 3 explained that, although the rehabilitation hospital he was enrolled in offered adaptive sport programs, he chose to not participate. At the time of the interview, he described his dissatisfaction with the physical activity opportunities that he perceived were

available to him. His FPS bike was not a fulfilling activity to him. When asked how his transition could be improved, the interviewee acknowledged that getting involved in adaptive sport might have been helpful.

**Finding 9: Relationships with friends were valuable resources to the interviewees.**

Another theme that emerged across the cases was the value of the relationships the interviewees had with friends. The interviewees discussed how the involvement of friends in their transition process was helpful in several ways. Interviewee 1 appreciated being able to talk with his closest friends. The interviewee stated that his friends' involvement in activities (e.g. going to the cycling track, going swimming) helped him as well. Interviewee 2 had a similar experience. He attributed much of his transition success to his group of friends. The interviewee explained that his friends loved to help and do different activities with him. The interviewee discussed how his friends helped him achieve "normalcy" by acting like nothing had changed and treating him as the same person. He felt that they could make a situation feel "normal." When they were together and being positive he explained that it made it easier to get used to things. Interviewee 3 also recognized the helpfulness of being able to be open about things when talking with friends. He stated that understanding that he still had close meaningful friendships was helpful in his transition.

**Finding 10: The impact of transition on others and the attention received from their social support affected interviewees.** An interesting theme that emerged from the cases of Interviewee 1 and Interviewee 2 was the impact that others' concern and attention had on the interviewees. Interviewee 1 explained that the attention he received from those checking up on him and paying attention to his progress acted as a motivator for him to stay focused on rehabilitating. But, he also stated that he didn't like seeing other people, such as his family, concerned and worrying about him. Interviewee 2 attributed his positive outlook to those supporting him. He explained that he might have felt like he had to maintain a positive outlook for "everyone else." The interviewee struggled with his father's negative reaction to his injury. The pressure to remain positive may be attributed that experience.

## Chapter Five

### Discussion

The purpose of this study was to examine individuals' experience of transition from sport due to spinal cord injury utilizing the Conceptual Model of Adaptation to Career Transition (Taylor & Ogilvie, 1994; Taylor et al., 2006). Through interviews with athletes who suffered a spinal cord injury and subsequently transitioned out of able-bodied sport, an understanding of their experiences was obtained. Much of the previous research utilizing the conceptual model has focused on normative and non-normative career-ending injury. Since there had been no investigation found to use the entire conceptual model to focus on spinal cord injury specifically, the conceptual model was used to inform this study and was explored in the interviews. In this chapter, the current findings of this study are discussed in relation to previous research. The findings may help to identify the factors that contributed to how individuals experience the process of transition from able-bodied sport with a spinal cord injury.

Support for Taylor and Ogilvie's (1994) Conceptual Model can be found from the interview data. The findings address Stages 2, 3, and 4. The final stage was not addressed, as no systematic interventions were implemented to assist an athlete in transition. Two of the interviewees did have access to a counselor/psychologist, but there was no distress or intervention discussed in regards to those relationships. Throughout their recovery and rehabilitation process, the interviewees discovered their own methods of managing transition difficulties.

Within Stage 2 of the conceptual model exist all of the factors related to the adaptation to career transition (developmental experiences, self-identity, perceptions of control, social identity, and tertiary factors). Interviewees in this study addressed each of the Stage 2 factors of the conceptual model. The first factor of Stage 2, developmental experiences, is the details of an athlete's life since the inception of their athletic careers that may have contributed to their development (Taylor et al., 2006). All of the athletes in this study specifically discussed their interpersonal skills and self-perceptions developed through sport. Interviewees reported that their developed work ethic and sport mentality from sport participation aided in the approach to rehabilitation and daily obstacles.

It was suggested by Taylor and Ogilvie (1994) that the most fundamental of the psychological issues to influence adaptation to career transition is the degree to which an



athlete's self worth is defined by their athletic identity. The current findings addressed self-identity, which is the second factor within Stage 2. The two interviewees that reported moderate scores on the AIMS, both pre- and post-injury, discussed the balance they felt they maintained between their life roles. The two interviewees' continued athletic pursuits in adaptive sport post-injury was perceived to be a positive influence throughout their transition. Curiously, the interviewee that reported a low AIMS score both pre- and post-injury discussed the difficulties he had in transition in regards to finding fulfilling physical activity pursuits. The findings would suggest that the athletes who more strongly identified with their role in sports experienced an easier adjustment to the transition as a result of pivoting their sport participation into adaptive sport. Previous research has found that the development of a more balanced self-identity was involved in a successful adjustment to transition, while a high athletic identity may lead to more difficulty in transition (Nassi, 2014; Murphy, Petitpas & Brewer, 1996). This research relates to this study because the interviewees' reportedly broad identities were perceived to be a positive influence on each athlete's experience of transition.

The third factor within Stage 2 is social identity. This refers to the diversity of an athlete's identity, and the popular status they may define themselves in terms of. The two interviewees that most identified with the athlete role described the difficulties they experienced with loss of status. One interviewee struggled with the inability to share in his team's achievements, and with getting accustomed to a supporter rather than teammate role. Research by Blinde and Greendorfer (1985) has stated that when athletes perceive themselves to be disconnected from their sport social support system they may become isolated and distressed (as cited in Taylor & Ogilvie, 1994, p. 11). The research relates to the current study as the athlete's perception of detachment from his team's achievement and camaraderie led to distress. Another interviewee found he had to "swallow his pride" when it came to accepting his adaptive level of competition and adjusting from his previous athletic status. All three interviewees discussed how helpful the student/occupational identity was to their transition. The development of these life roles outside of sport gave each interviewee a broader identity.

Perceived control, the fourth factor of Stage 2, is an athlete's perception that they chose to leave sport of their own volition. Two of the interviewees felt that they were forced to quit participating in their sport while Interviewee 3 felt his injury coincided with his decision to cease participating. Previous research has stated that lack of control over retirement can lead to

transition difficulties (Blinde & Greendorfer, 1985). All three interviewees discussed their difficulties with the sudden change, but the two interviewees that felt they were forced to quit explained that the change was something they had to make themselves comfortable with and that took time to sink in.

The final factor in Stage 2, tertiary contributors, is the personal, social, and environmental variables that may influence an athlete's transition. Tertiary contributors that impacted athletes in this study were their socioeconomic status, overall health, and their physical capabilities and independence. The socioeconomic status of the interviewees was a major factor as each athlete had to face enormous costs in regards to equipment, hospital bills, rehabilitation fees, etc. The interviewees discussed that they were fortunate enough to have the fundraising support they needed, some more than others. Overall health was also a common factor in the interviewees' adjustment. The management of skin health, bowel and bladder dysfunction, spasticity, and infection from surgery were referred to. These overall health issues, outside of surgery infections, were conditions that the interviewees perceived would need to be managed going forward. The physical capabilities and independence of the interviewees were mentioned as factors in their adjustment as well. The amount of independence and bodily function they could regain through recovery and adaptation to their environment played a role in the interviewees' perception of their transition quality.

Stage 3 of the conceptual model involves the available resources utilized by athletes to overcome difficulties in transition. The available resources in Stage 3 include coping strategies, pre-retirement planning, and social support (Taylor et al., 2006). In this study the athletes discussed the coping strategies they used during their transition. The interviewees described altering or narrowing their focus when confronted with transition obstacles. While one interviewee focused on fewer activities so as to avoid overwhelming himself, the other two interviewees set their sights on returning to educational and career pursuits. The interviewees discussed that this direction of focus had a positive impact on their transition. One interviewee talked about returning to normalcy at length. Previous research has shown that activities such as adaptive sport facilitate a sense of normalcy by providing individuals with opportunities to express competence, be included, and be recognized for their similarities rather than their differences (Lundberg et al., 2011). Getting involved in activities with friends and working towards catching up with school peers were explained by Interviewee 2 to have a normalizing

effect on the situations he was in and on how he felt about himself. Returning to normalcy was discussed as a positive coping strategy.

Adaptive sport was another outlet that interviewees used to cope with the loss of able-bodied sport. The two interviewees that identified as paraplegic discussed their self-perceptions that sport was a necessary fixture in their life. They shifted their focus to forms of adaptive sport post-injury in order to recoup the benefits they felt they received from sport. The use of adaptive sport and the sense of achievement garnered from participation helped the interviewees' transition from able-bodied sport. While the interviewee that identified as quadriplegic did not engage with adaptive sport, he did report using certain methods of physical activity that were ultimately unfulfilling. Previous research has shown how difficult it can be for those with a cervical spinal cord injury to find fulfilling activity (Tasiemski & Osinska, 2013). This could mean that even though some adaptive sports may provide positive experiences the achievement of vigorous physical activity may be challenging for those with cervical spinal cord injury.

The next factor of Stage 3, social support, is the social support system developed from athletes' immersion in the associations found in the sports environment. Previous research has demonstrated the importance of social support during the transition process (Stoltenburg et al., 2011; Stephan et al., 2003; Grove et al., 1997). The interviewees in this study discussed the social support they received from friends, family, their workplace, school administration, their sport community, and the adaptive sport community. They perceived their social support system to have facilitated a healthy transition. The interviewees discussed the importance of a shared social reality. Their relationships with those in the adaptive community were believed to have helped them enter adaptive sport, and understand what others have done in response to injury. Shared social reality support is a dimension of social support, which is rooted in the belief that others have the same or similar understanding of the world as you (Pines, Aronson, & Kafry, 1981). Research by Martin & Mushett (1996) found shared social reality to be of perceived importance to disabled athletes. The results of this study give reason to believe that this is still the case as the shared experiences and guidance of those in the adaptive community were viewed by all of the interviewees as having a positive impact on their adjustment.

Interviewees discussed negative aspects of social support that hindered their transition. While one interviewee struggled with his father's reaction to his injury, another interviewee felt that an unhealthy romantic relationship diminished his ability to communicate his emotions.

Without adequate support or with negative support athletes may experience more distress while trying to adapt.

Pre-retirement planning, the final factor of Stage 3, involves a variety of activities done before the transition process begins to prepare for the adjustment. Previous research has stated that the adjustment process usually begins after spinal cord injury due to the unexpectedness of the injury and the inability to prepare (Crewe & Krause, 2009). Two of the interviewees discussed the suddenness of their injuries, which they felt was tough on their experience. It was described as being blindsided. The interviewees explained that the change took a long time to sink in, and could have been benefited with more time to adjust. In another study involving elite athletes in their first year of retirement from sport, it was found that developing transferrable skills might provide direction and motivation in post-athletic career (Stephan et al., 2003). All three interviewees discussed the career pursuits they had outside of sport that began before injury. They described how their focus on returning to, and achievement in, their career pursuits after injury was a positive influence on their experience of transition. Research by Stoltenburg et al. (2011) found that individuals felt having a “Plan B” eased the difficulty of transition. These results relate to the present study as the interviewees indicated that having an alternative career pursuit positively impacted their transition.

In the fourth stage of the conceptual model, the overall quality of the transition is addressed. In this stage, it is determined whether or not the transition is considered healthy, which depends upon the previous stages of the conceptual model. All of the interviewees reported that they perceived the quality of their adaptation to transition to be “good.” The interviewees’ perceptions appear to be congruent with their quality of adaptation as analyzed through the conceptual model. Career transition distress manifested itself in a variety of ways during the transition process, including missing the social aspects and shared achievement of sport, concern for career pursuits, and worrying about how their physical function would affect their activity. Each interviewee overcame the distress they encountered with the contribution of the variables from the previous steps.

The secondary purpose of this study was to investigate the subjective well-being of individuals leaving able-bodied sport as a result of spinal cord injury. The interviewees discussed their satisfaction with life and reported their SWLS scores. All of the interviewees reported moderately high to high scores on the SWLS. When asked about their perception of the scores

they reported, the interviewees described their happiness with their lives, but they also recognized that there was room for improvement. Two of the interviewees discussed their athletic pursuits as qualifiers of their satisfaction with life, and the other acknowledged his dissatisfaction with his physical activity opportunities. Previous research has stated that individuals remaining physically active after spinal cord injury have reported more satisfaction with life (Zabriskie et al., 2005). The interviewees SWLS scores do not explicitly support these findings, but the interviewees' statements regarding the satisfaction they have drawn from athletic pursuits do tend to agree with the research.

Previous research has also pointed out the importance of time in the adjustment to transition (Hurley, 2014; Koukouris, 1991). Crewe & Krause (2009) discussed that psychological adjustment, which has been measured by satisfaction with life, has been known to improve for years after injury. The more time an individual has to adjust the more positive perspective they can adopt of their transition and better manage difficulties. The small sample of SWLS scores taken from the interviewees in this study does not confirm this research when compared to the time between injury and inquiry. Looking at the interviewees in this study, they reported that the length of time they felt it took to adjust to transition ranged from 1 to 2 years. Interviewee 1 described his surgery and recovery process as taking at least a year. The reported transition adjustment periods could be influenced by recovery from surgery.

### **Limitations and Implications for Future Research**

The present study has its limitations. A small sample size was used with the case study approach as the researcher sought to explore the deeper meaning of the interviewees experiences leaving able-bodied sport with a spinal cord injury. The size of the sample is appropriate to the case study approach, but the generalizability of the findings to other athletes who suffer a spinal cord injury and subsequently leave able-bodied sport is limited. Further research could be carried out on a larger sample, but a larger sample would most likely necessitate a different approach. The homogeneity of the sample used could be a limitation as well. The sample included in this study consisted exclusively of Caucasian males. The lack of diversity in the sample could make the findings less generalizable as well. By diversifying the sample in future investigations, the experiences of other athletes might be encapsulated as well.

This was a retrospective study. The investigation asked the interviewees to recall how they experienced their transition and how well they adapted to life post-injury. In the recruitment

of participants, a range of 2 to 15 years post-injury was set in an attempt to only gather participants with adequate recall of their experiences. The potential for recall bias and the limitation of participant's recollection are concerns with studies like this (Lavallee & Robinson, 2007). The length of time between injury and inquiry can have an important impact on not only athlete's recovery and adjustment, but also their perspective of their transitional experiences (Lally, 2007; Wippert & Wippert, 2008). Future research could employ a more longitudinal study in an effort to better examine the dynamic process of career transition over time.

Another possible limitation of this study is the methods used to recruit participants. In this study, a recruitment letter was distributed through email with the help of the University of Michigan Spinal Cord Injury Model System. Individuals that were sent this letter were not contacted directly by the researcher. The individual was able to make the decision whether they would volunteer for the study or not before making any contact with the researcher. Selection bias may have occurred in this study. Athletes may have self-selected into this study if they had experienced a more positive sport-career transition. An athlete may have also felt that they could more capably take part in the study if they felt that they were past the emotional and/or behavioral difficulties in their adjustment to injury. The athletes that were experiencing emotional and/or behavioral difficulties in their adjustment to sport-career transition may have self-selected out of the study.

Subjective well-being is a construct that fluctuates over time. How an individual evaluates their current circumstances will dictate the degree of change. Since this study only collected subjective well-being at one point in time, the investigation is without information regarding the construct and the influence of time. In the future, researchers should find a way to establish multiple time points to gather information on subjective well-being during the transition process.

It should be noted that this study might have suffered from the interviewees' assumptions of the interviewer. The researcher conducting these interviews is a quadriplegic that has experienced similar transition events and obstacles. Due to the fact that the interviewees' had knowledge of the researcher's background before the interview, they might have been less inclined to be explanatory or descriptive during the interview process. This could result in depriving the richness of answers to interview questions. Lastly, future research should consider the difference between paraplegic and quadriplegic when examining transition from able-bodied

sport with a spinal cord injury. The amount of body function that an individual will retain and the resulting independence and activity involvement they will have can vary dramatically. This could result in intriguing differences in adjustment.

### **Implications for Future Practice**

One of the more important findings of this study was the fact that participants felt adaptive sport pursuits were a positive impact on their adjustment to transition. Also notable are the interviewees' perceptions that participating in activities with friends helped to facilitate their activity involvement. Practitioners should be aware of this information, and perhaps encourage shared adaptive sport opportunities for friends or family of disabled individuals. The guidance and sharing of past experiences by those in the adaptive community was facilitative of interviewees' adjustment to transition as well. Supporting mentor relationships between individuals that have just suffered spinal cord injury and those that have gone through similar experiences may be of benefit.

The direction of focus was found to be a common coping tool used by the participants of this study. The refocusing of one's attention to approach adjustment goals and activity involvement was viewed as facilitative to a healthy adjustment. Assessing an individual's focus and informing them of the benefit of attentional focus as a mental skill could be important for practitioners to be aware of. The implications of this study for future practice point toward a need for applied sport psychology practitioners or consultants to gain expertise and perspective in working with SCI or disabled athletes/physically active individuals.

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Figure 1

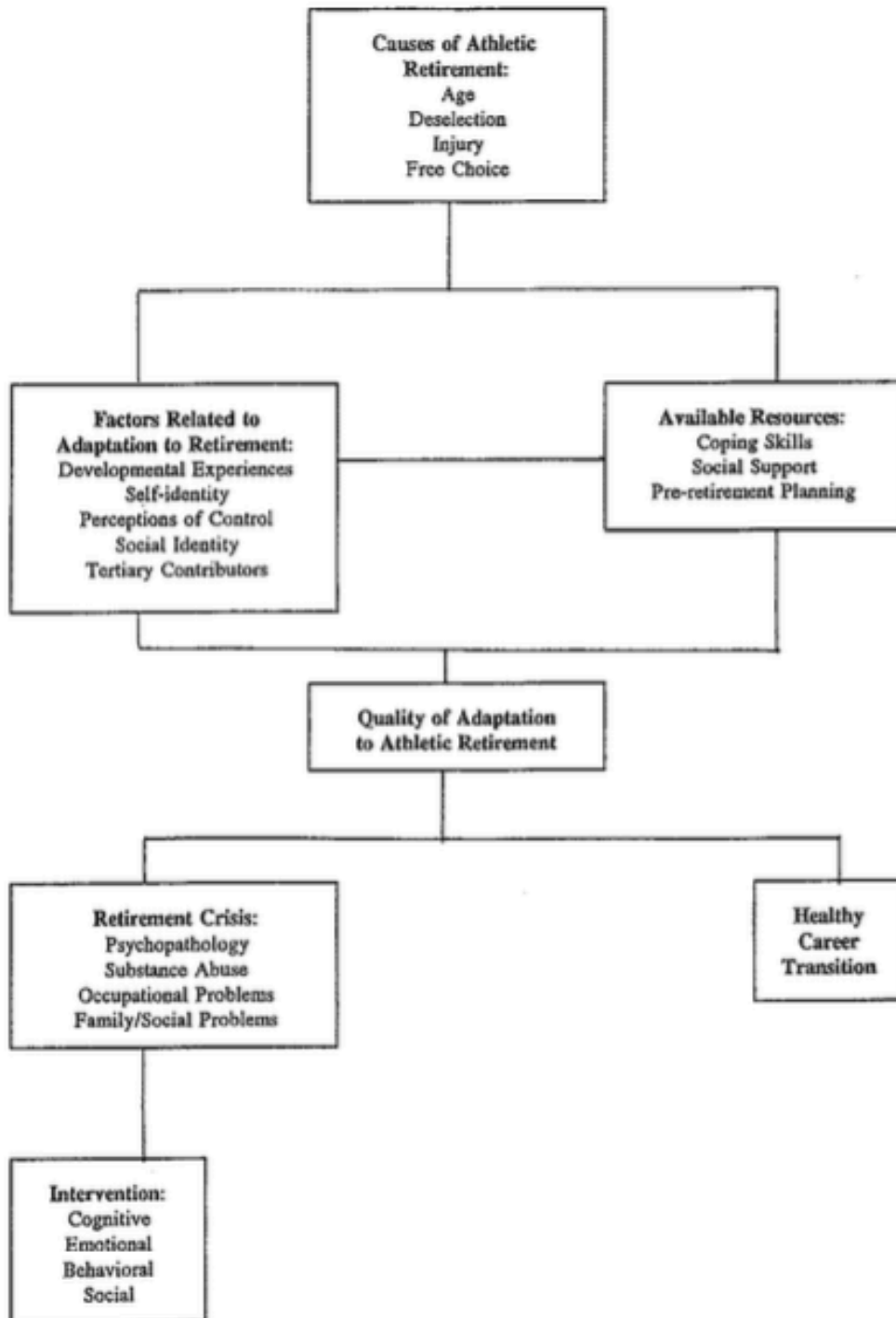


Figure 1. Conceptual model of adaptation to retirement among athletes.

## Appendix A

### Initial Contact Script

Hello! My name is Derek Zike and I am currently a graduate student at Miami University. I am working on completing a thesis in order to meet my degree requirements. Because of my interest in becoming a counseling sport psychologist, I have chosen the topic of sport career transition due to spinal cord injury for my project.

I am contacting you to see if you'd be willing to help me out with my project. If so, your involvement would include filling out a few short surveys and participating in an interview about your experiences and perceptions of sport career transition due to spinal cord injury. I expect this interview will take no longer than 1 hour. For the time spent completing the interview and surveys you will receive a \$15 Amazon gift Card. If for any reason you cannot complete the interviews/survey you will receive a \$5 Amazon gift card.

Is this something you think you could help me out with?

**IF YES:** Great! Then let me get a sense of when you might be available for an interview...

Is it okay if I contact you the day before the interview to confirm it with you? What is the best way for me to reach you?

Also, let me give you my contact information in case you have any questions or concerns. My phone number is (317) 656-1558.

At this point do you have any questions? O.k. I'll see you on the \_\_\_\_\_ at \_\_\_\_\_!

**IF NO:** That's fine! No problem. Thanks for considering it!

## Appendix B

### Interview: Introductory Script

- Thank you for agreeing to participate in my project. I know that you are taking time out of your schedule to participate in this interview.
- I really appreciate your willingness to help me gain a better understanding of sport career transition due to spinal cord injury.
- My goal for this interview is to learn about your experiences and perceptions of sport career transition due to spinal cord injury.
- There are not any right or wrong, good or bad answers. Rather, I am interested in **your** perceptions, experiences, and insights.
- If any question is unclear to you just let me know. If you don't want to answer a question just say so. And of course, you are free to end this interview at any time.
- Do you have any questions for me before we get started?
- O.k., let's get started...
  - Letter of Informed Consent
  - Background Information Sheet
  - Retrospective Athletic Identity Measurement Scale (AIMS)
  - Athletic Identity Measurement Scale (AIMS)
  - 6-item Social Support Questionnaire (SSQ6)
  - Satisfaction With Life Scale (SWLS)
- O.k., now I guess we're actually ready to start the interview so let's make sure the recorder is working...

## Appendix C

### Participation and Informed Consent

Dear \_\_\_\_\_:

My name is Derek Zike and I am currently a graduate student at Miami University. I am working on completing a thesis in order to meet my degree requirements. Because of my interest in becoming a counseling sport psychologist, I have chosen the topic of sport career transition due to spinal cord injury for my project.

You are invited to participate in my project. If you are willing to do so, I will interview you about your experiences and perceptions of sport career transition due to spinal cord injury. Participants must be older than 18 to participate in this study. This interview will be audio-tape recorded and transcribed verbatim. Before the interview you will be asked to fill out surveys as well. Confidentiality of records identifying a participant will be maintained by storing interview recordings, transcripts, and any other identifying information on a computer system in a locked folder as soon as the interview is finished. The researcher will have sole access to this folder. The recordings and transcriptions will both stay in the same locked folder for up to a year after the interview, after which, they will be deleted. Your name will not be associated with your responses in any way (that is, the information you provide will be used anonymously and grouped with the information of other interviews). The interview in its entirety should take no more than 1 hour. Declining to participate will involve no penalty or loss of benefits to which a participant is otherwise entitled. Your participation is voluntary, and you may discontinue participation at any time without penalty or loss of benefits to which a participant is otherwise entitled. You will not be asked to do anything that exposes you to risks beyond those of everyday life. A reasonably foreseeable risk of this study is that a participant may experience discomfort in recounting their experiences. In the event of a research-related injury, you should communicate with any of the contacts listed below. If distress is encountered in recounting past experiences, the interviewer will be Mental Health First Aid certified and able to assist or refer you to the appropriate medical or professional help. Miami University is not responsible for the costs of any treatment.

Mental Health Resources: [www.healthyplace.com/other-info/resources/mental-health-hotline-numbers-and-referral-resources/](http://www.healthyplace.com/other-info/resources/mental-health-hotline-numbers-and-referral-resources/)

24-Hour Crisis Support Hotline:

- Call 775-784-8090
- Text "ANSWER" to 839863

For the time spent completing the interview and surveys you will receive a \$15 Amazon gift Card. If for any reason you cannot complete the interviews/survey you will receive a \$5 Amazon gift card. The benefit of this project, educationally, is that it will help me understand sport career transition due to spinal cord injury, and fill holes in the existing literature.

If you have further pertinent questions about the research, please contact me at (317) 656-1558, or [zikedm@miamioh.edu](mailto:zikedm@miamioh.edu) for answers. You can also contact my faculty advisor Dr. Robin Vealey ([vealeys@miamioh.edu](mailto:vealeys@miamioh.edu)). For answers to pertinent questions about research participants' rights you can contact the Office for the Advancement of Research and Scholarship (OARS) (513-529-3600, [humansubjects@miamioh.edu](mailto:humansubjects@miamioh.edu)). Thank you for your participation and for helping me out with this thesis project. I am very grateful for your help and hope that it will be an interesting process for you. You may keep this top portion of the page.

\*\*\*\*\*

Cut/tear at the line, keep the top section and return this bottom section.

I agree to participate in the interview on sport career transition due to spinal cord injury. I understand my participation is voluntary and that my name will not be associated with the information I provide.

Participant's Signature \_\_\_\_\_

Date \_\_\_\_\_



Appendix D

**BACKGROUND INFORMATION SHEET**

Interviewee #1

Date/Time/Place of Interview:

Sex:            F        M

Race: \_\_\_\_\_

Age: \_\_\_\_\_

Age at the Time of Injury: \_\_\_\_\_

Formal Education at the Time of Injury:

HS            College            Graduate School            Prof'l School

Level of Spinal Cord Injury: \_\_\_\_\_

Sport: \_\_\_\_\_

How Many Years of Sport Participation Prior to Injury: \_\_\_\_\_

Length of Time to Adjust to Transition in 6 Months Increments: \_\_\_\_\_

ASIA Level: \_\_\_\_\_ (or)

Do you identify as Paraplegic, Quadriplegic, or Neither? \_\_\_\_\_

## Appendix E

### **Interview: Concluding Script**

- Well, it looks like our interview is wrapping up.
- But before we conclude is there anything else you can tell me that you didn't get a chance to say that you think will help me gain a better understanding of sport career transition due to spinal cord injury.
- Do you have any questions for me about this project?
- O.k. Well thank you very much for allowing me to interview you and for sharing all of your experiences of sport career transition due to spinal cord injury.
- May I contact you again if I need any clarification concerning anything we talked about or if I have follow-up questions?
- Would you like to look over the interview transcript once it has been transcribed and verify the accuracy of the transcription?
- And finally, do you want a copy of your interview transcript or my final report? (if yes, what would be the best way for me to give you that information?)
- Thank you again!

Appendix F

The Athletic Identity Measurement Scale (AIMS)

1. I consider myself an athlete.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

2. I have many goals related to sport.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

3. Most of my friends are athletes.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

4. Sport is the most important part of my life.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

5. I spend more time thinking about sport than anything else.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

6. I need to participate in sport to feel good about myself.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

7. Other people see me mainly as an athlete.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

8. I feel bad about myself when I do poorly in sport.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

9. Sport is the only important thing in my life.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

10. I would be very depressed if I were injured and could not compete in sport.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

Athletic Identity Measurement Scale (AIMS) Scores

1 (Strongly Agree) – 7 (Strongly Disagree)

	Interviewee #1	Interviewee #2	Interviewee #3
1.	1	1	7
2.	1	3	7
3.	2	1	6
4.	6	3	7
5.	4	5	7
6.	3	2	6
7.	3	3	7
8.	3	2	7
9.	7	7	7
10.	1	1	7
Total:	31	28	68

Appendix G

The Athletic Identity Measurement Scale (AIMS) [Retrospective]

1. I considered myself an athlete.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

2. I had many goals related to sport.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

3. Most of my friends were athletes.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

4. Sport was the most important part of my life.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

5. I spent more time thinking about sport than anything else.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

6. I needed to participate in sport to feel good about myself.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

7. Other people saw me mainly as an athlete.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

8. I felt bad about myself when I did poorly in sport.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

9. Sport was the only important thing in my life.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

10. I was very depressed if I was injured and could not compete in sport.

Strongly Agree : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_ : Strongly Disagree

Athletic Identity Measurement Scale (AIMS) [Retrospective] Scores  
 1 (Strongly Agree) – 7 (Strongly Disagree)

	Interviewee #1	Interviewee #2	Interviewee #3
1.	1	1	4
2.	1	2	5
3.	1	1	3
4.	7	3	7
5.	5	2	7
6.	2	2	6
7.	2	3	7
8.	2	2	5
9.	7	7	7
10.	3	1	6
Total:	31	24	57

## Appendix H

### The 6-item Social Support Questionnaire (SSQ6)

#### Instructions:

The following questions ask about people in your environment who provide you with help or support. Each question has two parts. For the first part, list all the people you know, excluding yourself, whom you can count on for help or support in the manner described. Give the persons' initials, their relationship to you (see example). Do not list more than one person next to each of the numbers beneath the question.

For the second part, circle how satisfied you are with the overall support you have.

If you have had no support for a question, check the words "No one," but still rate your level of satisfaction. Do not list more than nine persons per question.

Please answer all the questions as best you can. All your responses will be kept confidential.

#### Example:

Who do you know whom you can trust with information that could get you in trouble?

No one	1) T.N. (brother)	4) T.N. (father)	7)
	2) L.M. (friend)	5) L.M. (employer)	8)
	3) R.S. (friend)	6)	9)

How satisfied?

6 – very satisfied	5 – fairly satisfied	4 – a little satisfied	3 – a little dissatisfied	2 – fairly dissatisfied	1 – very dissatisfied
--------------------	----------------------	------------------------	---------------------------	-------------------------	-----------------------

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1. Whom can you really count on to be dependable when you need help?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

2. How satisfied?

6 – very satisfied	5 – fairly satisfied	4 – a little satisfied	3 – a little dissatisfied	2 – fairly dissatisfied	1 – very dissatisfied
--------------------	----------------------	------------------------	---------------------------	-------------------------	-----------------------

3. Whom can you really count on to help you feel more relaxed when you are under pressure or tense?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

4. How satisfied?

6 – very satisfied	5 – fairly satisfied	4 – a little satisfied	3 – a little dissatisfied	2 – fairly dissatisfied	1 – very dissatisfied
--------------------	----------------------	------------------------	---------------------------	-------------------------	-----------------------

5. Who accepts you totally, including both your worst and your best points?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

6. How satisfied?

6 – very satisfied	5 – fairly satisfied	4 – a little satisfied	3 – a little dissatisfied	2 – fairly dissatisfied	1 – very dissatisfied
--------------------	----------------------	------------------------	---------------------------	-------------------------	-----------------------

7. Whom can you really count on to care about you, regardless of what is happening to you?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

8. How satisfied?

6 – very satisfied	5 – fairly satisfied	4 – a little satisfied	3 – a little dissatisfied	2 – fairly dissatisfied	1 – very dissatisfied
--------------------	----------------------	------------------------	---------------------------	-------------------------	-----------------------

9. Whom can you really count on to help you feel better when you are feeling generally down-in-the dumps?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

10. How satisfied?

6 – very satisfied	5 – fairly satisfied	4 – a little satisfied	3 – a little dissatisfied	2 – fairly dissatisfied	1 – very dissatisfied
--------------------	----------------------	------------------------	---------------------------	-------------------------	-----------------------

11. Whom can you count on to console you when you are very upset?

No one	1)	4)	7)
	2)	5)	8)
	3)	6)	9)

12. How satisfied?

6 – very satisfied	5 – fairly satisfied	4 – a little satisfied	3 – a little dissatisfied	2 – fairly dissatisfied	1 – very dissatisfied
--------------------	----------------------	------------------------	---------------------------	-------------------------	-----------------------

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Scoring:

1. Count the total number of people for each of the odd-numbered items. Add the totals together (Max = 54). Divide by 6 for per item SSQ Number Score, or SSQN.

2. Add the total Satisfaction scores for the 6 even-numbered items (Max = 36). Divide by 6 for per item SSQ Satisfaction score or SSQS.

3. You can also compute a Family score and a Non-Family score by using the method #1 for all people described as family members, or not described as family members respectively.



The 6-item Social Support Questionnaire (SSQ6) Scores

Odd #'s: 0 (No one) – 9 (Max number of people)

Even #'s: 6 (Very Satisfied) – 1 (Very Dissatisfied)

	Interviewee #1	Interviewee #2	Interviewee #3
1.	6	7	9
2.	6	6	6
3.	3	4	9
4.	6	6	6
5.	4	6	9
6.	5	6	6
7.	5	6	9
8.	6	6	6
9.	2	6	9
10.	5	6	6
11.	3	3	9
12.	5	5	6
SSQN:	3.83	5.33	9
SSQS:	5.50	5.83	6

## Appendix I

### The 5-item Satisfaction with Life Scale (SWLS)

Below are five statements that you may agree with or disagree with. Using the 1-7 scale below indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

1
2
3
4
5
6
7  
 strongly disagree   disagree   slightly disagree   neither agree nor disagree   slightly agree   agree   strongly agree

1. \_\_\_\_\_ In most ways my life is close to my ideal.
2. \_\_\_\_\_ The conditions of my life are excellent.
3. \_\_\_\_\_ I am satisfied with my life.
4. \_\_\_\_\_ So far I have gotten the important things I want in life.
5. \_\_\_\_\_ If I could live my life over, I would change almost nothing.

The 5-item Satisfaction with Life Scale (SWLS) Scores			
<i>1 (Strongly Disagree) – 7 (Strongly Agree)</i>			
	Interviewee #1	Interviewee #2	Interviewee #3
1.	4	6	5
2.	6	6	6
3.	6	6	6
4.	5	6	5
5.	7	7	4
Total:	28	31	26

## Appendix J

### Interview Questions

*For the purpose of this interview, transition is defined as the movement from actively participating in able-bodied sport to the participant's current role.*

CRQ 1: Do you think that your spinal cord injury influenced your sport-career transition? If so, how?

TRQ 1: Describe the turn of events that led to your Spinal Cord Injury (SCI) as well as the situation following your SCI?

- a. What were some of your immediate concerns/worries when your SCI occurred?
- b. What were the most difficult experiences/adjustments that you had to face after your spinal cord injury?
- c. What would you say are the unique challenges athletes suffering a spinal cord injury experience during a transition from sport?

TRQ 2: What psychological, social, financial, or occupational changes did you experience, if any, related to your adaptation to career transition?

- a. How did your views, attitudes and beliefs during your sport career influence your career transition from sport to your current role?
- b. How did your developmental experiences since the start of your sports career help/hurt your preparation for a post-sport career?
- c. How do your AIMS scores illustrate how you identify with being an athlete both pre- and post- career transition/spinal cord injury?
- d. What other activities or roles (besides sport) were you involved in during your sport career?
- e. How do you think the unexpected nature of your spinal cord injury/transition affected you?
- f. What group(s) of people did you spend most of your time with during your sport career?
- g. How did you think your social network changed after your spinal cord injury?
- h. Did you experience any significant social changes when withdrawing from participation in able-bodied sport?
  - If so, what were the most significant to you?

TRQ 3: What resources did you have available to you for your adjustment to spinal cord injury and moving from able-bodied sport participation to your current role?

- a. Explain how you chose to handle your career transition due to spinal cord injury.
  - What type of coping methods did you utilize?
- b. Who was most supportive or helpful during your sport-career transition?
- c. How do your SSQ-6 scores illustrate the social support you feel you have and your level of satisfaction with it?

- d. How much thought did you give to a future withdrawal from sport and career transition during your sport career?
- e. Did you partake in any type of pre-retirement planning prior to being injured?
  - If so, when did the preparation for life after sport begin?
- f. Looking back, what would have been most beneficial to help with your transition?

TRQ 4: How would you describe the quality of your adjustment to your spinal cord injury and moving from able-bodied sport participation to your current role?

- a. As best as you can, please describe the quality (negative/positive) of your adaptation to career transition.
- b. Did you engage in any behaviors that you perceived to be negative in terms of making the sport-career transition?
- c. What behaviors do you believe positively influenced your sport-career transition?
- d. What positive experiences did you have during your transition?
- e. What negative experiences did you have during your transition?
- f. Looking back, is there anything you would have done differently to help adapt to the transition?
- g. Given your experience, how would you describe a healthy sport-career transition after spinal cord injury?
- h. How long did it take for you to come to terms with your transition from sport?

TRQ 5: If you felt that you experienced distress while moving from able-bodied sport participation to your current role, what methods of intervention did you utilize to achieve a healthy career transition?

- a. Did you experience any mental health related or physical problems?
  - Did you seek help from a counselor or other professional?
- b. Did you experience any other forms of difficulties while moving from able-bodied sport participation to your current role?
  - Is so, how did you remedy those difficulties?

CRQ 2: Do you think that your spinal cord injury and the process of moving from participating in able-bodied sport to your current role have influenced your well-being? If so, how?

- a. What would you say you needed after your sport career ended to give your life meaning and satisfaction?
  - What did you miss?
- b. How satisfied are you with your life at the current moment?
  - In what ways could it be improved?
  - In what areas of life are you dissatisfied?
- c. How do your SWLS scores illustrate your satisfaction with life?

Appendix K

Mental Health First Aid Certification

Mental Health  
First Aid USA



**MENTAL  
HEALTH  
FIRST AID**

Certificate

**Derek Zike**

has completed the 8-hour course and is now certified in

**Mental Health First Aid USA**

And has been trained to provide initial help to people experiencing mental health problems such as depression, anxiety disorders, psychosis and substance use disorders.

This certification became effective on: 02/11/2016  
Date

This certification expires on: 02/11/2019  
Date

John Ward, PhD  
Instructor Instructor



**NATIONAL COUNCIL  
FOR BEHAVIORAL HEALTH**  
MENTAL HEALTH FIRST AID

Mental Health First Aid USA is coordinated by the National Council for Community Behavioral Healthcare, the Maryland Department of Health and Mental Hygiene, and the Missouri Department of Mental Health.



## Appendix L

### Recruitment Letter



Dear Potential Participant,

I am writing to tell you about a study examining athletes' experiences of leaving sport due to spinal cord injury that I am conducting at Miami University. You are being contacted because the University of Michigan Spinal Cord Model System identified you as being eligible.

The purpose of this research study is to examine individuals' experience of transition from sport due to spinal cord injury utilizing a conceptual model, and to investigate the subjective well-being of these individuals. You may be eligible for this study if you:

- Are 18 years of age or older
- Suffered a spinal cord injury in the last 15 years and did not experience a full recovery
- Were 14 years of age or older at the time of injury
- Participated in organized competitive able-bodied sport

Participants will complete a one-hour interview process that consists of four questionnaires and a semi-structured interview. There is compensation for the interview. For the time spent completing the interview and surveys participants will receive a \$15 Amazon gift Card. If for any reason a participant cannot complete the interviews/survey they will receive a \$5 Amazon gift card.

This study has been approved by the Institutional Review Board for the Use of Human Subjects in Research (IRB) at Miami University.

If you are interested in learning more about this study, please review the enclosed information, and email me at [zikedm@miamioh.edu](mailto:zikedm@miamioh.edu). You can also call me at (317) 656-1558.

It is important to know that this letter is not to tell you to join this study. It is your decision. Your participation is voluntary. Whether or not you participate in this study will have no effect on your relationship with the University of Michigan Spinal Cord Injury Model System. You do not have to respond if you are not interested in this study. If you do not respond, no one will contact you, but you may receive another email that you can simply disregard.

Thank you for your time and consideration. I am look forward to hearing from you.

Sincerely,

Derek Zike

**[Signature redacted]**

Appendix M

Letter of Support from University of Michigan Spinal Cord Injury Model System



**SPINAL CORD INJURY  
MODEL SYSTEM**  
Department of  
Physical Medicine  
and Rehabilitation  
325 E. Fisherhowe Pkwy, Ste  
300  
Ann Arbor, Michigan 48108  
Telephone: (734) 763-9971  
Fax: (734) 926-7115

**Department Chair:**  
Edward Hurvitz, MD

**Co-Directors:**  
Anthony Chiodo, MD  
Denise G. Tate, PhD, ABPP

March 2, 2016

Derek Zike  
Department of Kinesiology and Health  
Miami University  
Oxford, OH 45056

Dear Derek,

I am writing this letter to confirm that the University of Michigan Spinal Cord Injury Model System (UM-SCIMS) will assist in recruitment for your study on the impact of traumatic spinal cord injury on participation in competitive sport.

UM-SCIMS will send your recruitment letter/flyer to UM-SCIMS participants who are eligible for your study, along with a cover letter informing them that they should contact you directly if they have an interest in participating.

Sincerely,

A black rectangular box redacting the signature of Gina M. Jay.

Gina M. Jay, Ph. D.  
UM-SCIMS  
734-763-9773  
ginajay@med.umich.edu