LIFE AFTER SPORT: THE RELATIONSHIP BETWEEN ATHLETIC IDENTITY AND MENTAL HEALTH OUTCOMES AFTER SPORT RETIREMENT

by

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B.A., The University of British Columbia, 2012

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in

THE FACULTY OF GRADUATE AND POSTDOCTORAL STUDIES

(Counselling Psychology)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

January 2016

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Abstract

Research continues to expand in light of the growing interest in affecting healthy and positive sport career transition outcomes. Theories focusing on athlete transition have helped shape our understanding of the retirement experiences of competitive athletes; however, existing research has demonstrated mixed findings. Whereas some studies suggest that a significant proportion of athletes experience psychological complications upon sport career retirement, other studies have obtained minimal evidence of distress. The present study explored the relationships among athletic identity, mental health and well-being outcomes, and coping, both prior to and after retirement from interuniversity sport. A survey design was utilized with retiring varsity athletes across fourteen different sports at multiple western Canadian universities. Participants were asked to complete the survey approximately one month in to their final season of competition and approximately three months post-retirement. Measures in the survey included demographic questionnaires, Athletic Identity Measurement Scale (Brewer, Van Raalte, & Linder, 1993), Flourishing Scale (Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi, & Biswas-Diener, 2009), State-Trait Anxiety Inventory Y-1 (Speilberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983), Brief COPE Inventory (Carver, 1997), Center for Epidemiologic Studies-Depression Scale (Radloff, 1977), Satisfaction With Life Scale (Diener, Emmons, Larsen, & Griffin, 1985), and Subjective Vitality Scale (Ryan & Frederick, 1997). Both descriptive (i.e., means, standard deviations) and inferential statistics (i.e., ANOVA, correlation) were calculated. Results indicated that athletes who had higher athletic identity had elevated depressive symptomology and state anxiety in comparison to athletes with lower athletic identity, after sport retirement. Results pertaining to the impact of
coping on mental health and well-being variables, and their relation to athletic identity, were also supported. Particularly, athletes with higher athletic identity were found to use venting and self-distraction coping strategies significantly more than athletes with lower athletic identity, following sport career termination. Findings from the present study inform future research investigations and contribute new knowledge to the sport retirement and athlete career transition literature. With increased understanding of the psychological and emotional experience of retiring athletes, counselling and sport psychology professionals can provide the appropriate support and guidance required for adaptive transitions out of sport.
Preface

This thesis is an original intellectual product of the author, Zarina A. Giannone. The research project was conceptualized, designed, and researched by Master of Arts student, Zarina Giannone, with the support of research supervisor, Dr. Colleen Haney. All participant recruitment and data collection were completed independently by Zarina Giannone. Data analyses were performed individually, with the guidance of Dr. Bruno Zumbo.

Preliminary results of this thesis were presented as a poster:


Aspects of this thesis have been submitted for publication:


Ethics approval was obtained by The University of British Columbia Behavioural Research Ethics Board; certificate number H14-03323. Original approval was provided on December 23, 2014.
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Acknowledgements

I would like to thank my research supervisor and mentor, Dr. Colleen Haney, for her unconditional support throughout this process. Thank you for encouraging me to dream big. I would also like to extend my gratitude to my thesis committee members, Dr. Bruno Zumbo and Dr. Peter Crocker, for their expertise and for making this process very memorable for me.

This research was supported by the Social Sciences and Humanities Research Council of Canada (SSHRC) and The University of British Columbia’s Faculty of Education.
Dedication

This thesis is dedicated to the smartest people I know, my heart and soul, my parents: John and Cathy Giannone. This achievement is the product of a lifetime of your love, support, and unwavering belief in me.

I would also like to acknowledge the athletes who inspired this research.

“An athlete dies twice; the first “death” is the end of a playing career...Unlike most, a ball player must confront two deaths. First...he perishes as an athlete. Although he looks trim and feels vigorous and retains unusual coordination...the major league reflexes pass on. At a point when many of his classmates are newly confident and rising in other fields... he is experiencing the truth of finality. As his major league career is ending, all things will end. However he sprang, he was always earthbound. Mortality embraces him. The golden age has passed as in a moment. So will all things. So will all moments. Memento mori [remember death].”

-Roger Kahn, From *The Boys of Summer* (1972)
CHAPTER I

Introduction and Purpose of the Study

The life of a competitive athlete is characterized by glorious peaks and debilitating valleys (Taylor & Ogilvie, 1993). Athletes experience a wide array of emotions as they encounter the thrills and despairs of competition. Despite this emotional journey, perhaps the most significant and potentially traumatic experience has yet to be faced (Taylor & Ogilvie, 1993). Sport career termination has been recognized as a potentially vulnerable and problematic time for many athletes. As an athlete “descends from the heights of the extraordinary into the mundane world of ordinariness” (Sparkes, 1998, p. 644), he or she may encounter challenges when adjusting to life after sport. The importance of maintaining adequate mental health and well-being throughout this transition period is paramount. Further research in this area is needed to facilitate optimal mental health and wellness outcomes for athletes undergoing sport career transition.

The primary purpose of this study was to investigate the relationships between athletic identity, mental health and well-being outcomes including depressive symptomology, state anxiety, life satisfaction, flourishing, and subjective vitality. A secondary purpose of this study was to evaluate the role and influence of coping in athletic transition out of interuniversity sport. With increased understanding of the psychological and emotional experience of retiring athletes, counselling and sport psychology professionals can provide the appropriate support and guidance required for adaptive transitions.
Another rationale supporting this research regards the idea that identity and emotional hardships extend beyond the scope of athletes. For example, other elite performers such as musicians, artists, or actors may experience similar identity and emotional difficulties when undergoing career transitions (Roncaglia, 2008). Therefore, this study can systematically examine a sample (e.g., interuniversity athletes) from a larger population (e.g., competitive athletes) undergoing a specific type of transition (e.g., sport career termination) which may have implications that can be applied to additional populations (i.e., elite performers). Given the inevitable end of an athlete’s sporting career, this study was useful in gaining improved understanding of the relationship between athletic identity, mental health and well-being outcomes and the influence of coping both prior to and following sport retirement.

**History**

In a broad sense, the concept of “transition” has been associated with a wide array of topics including lifespan human development, occupational planning, educational processes, social support, and the processes of aging, retirement, and dying (Wylleman, Alfermann, & Lavallee, 2004). “Transition” has been related to the occurrence of one or more specific events which brings about not only an individual’s “change in assumptions about oneself” (Schlossberg, 1981, p. 5), but also a social imbalance which extends far beyond the changes associated with daily life (Wylleman et al., 2004). The concept of transition was initially introduced to the field of Sport Psychology in the 1960s and 1970s as psychologists and social scientists grew interested in studying the retirement experiences of athletes as they exited elite sport. The end of the athletic career was originally considered a singular event, although researchers subsequently reappraised the termination of an athletic career as a
transitional process. The author of this thesis acknowledges the transitional nature of sport retirement and supports the position that sport career termination is a transition, rather than a singular event in time. For the sake of this thesis, the terms “athlete/athletic/sport career transition”, “sport retirement”, and “sport career termination” will be used interchangeably to describe the end of an athlete’s sport career.

Across the literature, transition out of sport is recognized as a vulnerable time for many athletes (Grove, Lavallee, & Gordon, 1997) because of the significant shift in lifestyle and other personal, social, and financial factors. Athletic retirement often consists of departing from rigid schedules, training regimens and the team environment into a more autonomous lifestyle wherein retired athletes are free to explore other interests and self-roles. In a comprehensive systematic review, Park, Lavallee, and Tod (2012) investigated 126 studies on athlete career transition. Park et al. (2012) organized their findings in three sections which included: (a) sample characteristics, (b) research design, and (c) correlates of athletes’ career transition adjustment. Park et al. (2012) found that 70% of the studies reported that some of their participants expressed career transition challenges or negative emotions, including feelings of loss, identity crisis, and distress. Retirement, which often transpires at a relatively young age for most competitive athletes, includes difficulties such as confusion and redefinition of the self (Kerr & Dacyshyn, 2000).

Researchers in the field of Sport Psychology have suggested that elevated self-identification with the athlete role may lead to serious adjustment crises when faced with sport retirement (Brewer, 1993). Brewer, Van Raalte and Linder (1993) hypothesized that individuals with a strong and exclusive athletic identity may be prone to experience a variety
of emotional and identity difficulties upon sport career termination (Grove et al., 1997), possibly resulting from identity foreclosure or insufficient attempts to explore other self-roles in development (Murphy, Petitpas, & Brewer, 1996). Problems in retirement have been linked to a sense of loss of the athlete role and identity confusion as many athletes remain dependant on sport as a source of identity, even after they have disengaged from competition (Kerr & Dacyshyn, 2000). According to Brewer et al. (1993), these individuals may continue to gauge their self-worth by their ability and accomplishments as an athlete, which may pose considerable problems after sport disengagement.

Previous studies have identified both positive and negative consequences associated with strong and exclusive identification with the athlete role. Over-identification with the athlete role during sport participation may serve an important function and can result in positive outcomes such as a salient self-identity, enhanced sport performance, and increased overall health and fitness (Brewer et al., 1993). Strong and exclusive athletic identity may also have social implications including an increased sense of belonging to the sport or to the team, close relationships among coaches and teammates, as well as increased social status amongst peers. Other positive effects of strong athletic identity have been related to the acquisition of transferable skills such as work ethic, time-management, goal-oriented behaviour, discipline, commitment, team-work skills, leadership qualities, and various others (McKnight, Bernes, Gunn, Chorney, Orr, & Bardick, 2009). Nevertheless, strong and exclusive identification may not confer the same positive effects that it once did during sport engagement, when faced with sport career retirement. According to Clemmet, Hanrahan, and Murray (2012), following the transition from sport, an athlete may experience several
physiological, social, emotional, and psychological consequences, depending on the nature of the transition. Questions surrounding the short-term (i.e., within the first five years of retirement) and long-term (i.e., five years post-retirement and beyond) repercussions of sport career transition among former collegiate athletes have become a point of interest for sport psychology researchers (Simon & Docherty, 2014), although further research is needed to understand the development and maintenance of healthy and unhealthy behaviours throughout this significant life transition (Reifsteck, Gill, & Labban, 2015).

**Statement of the Problem**

Over the past three decades, a body of literature has emerged with regards to sport retirement which has provided mixed findings. Whereas some studies suggest that a significant proportion of athletes experience psychological complications upon sport career retirement, other studies have obtained minimal evidence of distress associated with transition out of sport (Grove et al., 1997). The focus in previous research has been largely on various predictors of the quality of the career transition adjustment (Park et al., 2012). For example, there has been a recent emphasis on the relationships between athletic identity and pre-retirement planning and the evolvement of transferable skills leading up to athletic termination which has been found to confer positive transition outcomes (McKnight et al., 2009). Fogarty and McGregor-Bayne (2008) found that high levels of self-perceived athletic identity were associated with indecisiveness, lack of knowledge about occupations, and internal conflicts about career choices.

Other elements which are associated with the quality of career transition pertain to the resources which are available to athletes during the sport retirement process. In their
systematic review, Park et al. (2012) identified four categories that have been found to buffer the transitional experience including (a) coping strategies, (b) pre-retirement planning, (c) social support, and (d) support programme involvement. Park et al. (2012) reported that thirty-two studies (from a total of one hundred and twenty-six studies) investigated the frequency of coping strategies used during sport career transition which solicited no clear evidence that particular coping strategies were more effective than others (aside from searching for new careers and interests). Coping strategies which were most often reported included seeking and receiving psychosocial support from close others, searching for new careers or interests, avoidance/denial, keeping busy, and acceptance. In addition, six studies contained participants who reported maladaptive coping strategies including alcohol dependence, increased smoking, suicide attempt, or drug use (Park et al., 2012). Park et al. (2012) also described the role and influence of psychosocial support. Among twenty-nine studies which assessed the role of psychosocial support in athlete transition, twenty-seven studies described that the support received from others had a positive influence on the quality of career transition. More specifically, the support provided from close others eased transition difficulties during the post-retirement adjustment period (Park et al., 2012). As coping skills and social support serve to protect athletes from being psychologically harmed, a deeper understanding of how athletes utilize coping strategies in sport retirement is needed.

A focal point of previous research has pertained to the risk factors associated with athletic identity and post-transition adjustment. Park et al.’s (2012) systematic review identified variables associated with the quality of athletes’ career transitions. The results indicated the correlates of fifteen variables which were found to be related to athlete
transition adjustment including (a) athletic identity, (b) demographic issues, (c) voluntariness of retirement decision, (d) injuries/health problems, (e) career/personal development, (f) sport career achievement, (g) educational status, (h) financial status, (i) self-perception, (j) control of life, (k) disengagement/drop-out, (l) time passed after retirement, (m) relationship with coach, (o) life changes, and (p) balance of life. Less studied are the specific mental health outcomes related to emotional disturbance in sport retirement. Since the early to mid 1990’s, few studies have provided direct support for the hypothesis that a strong, exclusive athletic identity leaves an athlete vulnerable to emotional difficulties (e.g., depression, anxiety) upon termination of his or her sport career (Brewer et al., 1993; Smith & McManus, 2008). For example, Kerr and Dacyshyn (2000) found that former high-level gymnasts reported a vexing struggle with self-redefinition after retiring from elite sport. These athletes described drifting into a “nowhere land” where they experienced feelings of disorientation, identity loss, and confusion for years following their departure from gymnastics. Although the authors reported significant challenges which were faced by these athletes, there was no clear information which articulated the experience of adverse mental health outcomes.

In contrast, in a study which investigated susceptibility for depression in current and former varsity athletes, Weigand, Cohen, and Merenstein (2015) found that completion of collegiate sports did not increase levels of depression. In fact, levels of depression were purportedly higher in current varsity athletes than former athletes, which supports the findings of Yang, Peek-Asa, Corlette, Cheng, Foster, and Albright (2007) who found that 21% of their sample of current varsity athletes indicated clinical levels of depressive symptomology. As it stands, more evidence is needed to support the hypothesis that a strong
and exclusive athletic identity may impact the mental health and well-being outcomes of athletes as they exit competitive sport.

**Research Questions**

This study focused on the relationships between athletic identity, depressive symptomology, state anxiety, life satisfaction, flourishing, subjective vitality, and coping, throughout the sport retirement process. This investigation aimed to address the following research questions to improve and inform our understanding of the transition adjustment of varsity athletes at several large Western Canadian universities.

**Questions**

1. Do athletes who score higher in athletic identity have poorer mental health and well-being outcomes than athletes who score lower in athletic identity, after sport retirement?
2. What is the relationship of coping on mental health and well-being outcomes, after sport retirement?
3. Which coping strategies are associated with higher athletic identity, after sport retirement?

**Hypotheses**

**Hypothesis One:** Athletes who score higher in athletic identity (Athletic Identity Measurement Scale (AIMS); Brewer, Van Raalte, & Linder, 1993) will score higher on a measure of depressive symptomology (Center of Epidemiologic Studies-Depression Scale; Radloff, 1977) than athletes who score lower in athletic identity, after sport retirement.

**Hypothesis Two:** Athletes who score higher in athletic identity (AIMS; Brewer et al., 1993) will score higher on a measure of state anxiety (State-Trait Anxiety Inventory: Form Y-1;
Speilberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983) than athletes who score lower in athletic identity, after sport retirement.

**Hypothesis Three**: Athletes who score higher in athletic identity (AIMS; Brewer et al., 1993) will score lower on a measure of life satisfaction (Satisfaction With Life Scale; Diener, Emmons, Larsen, & Griffin, 1985) than athletes who scored lower in athletic identity, after sport retirement.

**Hypothesis Four**: Athletes who score higher in athletic identity (AIMS; Brewer et al., 1993) will score lower on a measure of flourishing (Flourishing Scale; Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi, & Biswas-Diener, 2009) than athletes who scored lower in athletic identity, after sport retirement.

**Hypothesis Five**: Athletes who score higher in athletic identity (AIMS; Brewer et al., 1993) will score lower on a measure of subjective vitality (Subjective Vitality Scale; Ryan & Frederick, 1997) than athletes who scored lower in athletic identity, after sport retirement.

**Hypothesis Six**: Different patterns of coping (Brief COPE Inventory; Carver, 1997) will be associated with diverse athlete mental health and well-being outcomes, after sport retirement.

**Hypothesis Seven**: Athletes who score higher in athletic identity (AIMS; Brewer et al., 1993) will have different patterns of coping (Brief COPE; Carver, 1997) than athletes who score lower in athletic identity, after sport retirement.

**Relevance to Counselling Psychology**

The role of athletic identity in the sport retirement literature has important implications for the profession of Counselling Psychology. Research in this area can inform Counsellors and Counselling Psychologists of the experiences of elite athletes as they
transition out of sport. As a result, counselling professionals can assist athletes in making sufficient preparations for this major life transition and help them with their adjustment to retirement (Baillie, 1993). According to Heird and Steinfeldt (2012), it is important for counsellors to be aware of how one’s identity as an athlete influences how he or she may respond to particular challenges such as athletic retirement. Moreover, it is imperative for counselling professionals to be equipped with the appropriate theoretical framework which can be effective for counselling athletes through such difficulties. For example, Heird and Steinfeldt (2012) recommend interpersonal therapy as a potentially effective theoretical orientation as it is a time limited structure which focuses on interpersonal areas of life (e.g., grief, role transitions, interpersonal disputes, and interpersonal deficits) and may be especially applicable to transitioning athletes. Research in this area can educate counselling professionals on the risk factors associated with negative post-retirement outcomes, as well as the coping strategies most commonly used by athletes undergoing transition. Advances in knowledge can result in improvements in the effectiveness of intervention. Research also has the ability to inform transitional program development for athletes and shape current best practices.
CHAPTER II

Review of the Literature

The literature review presents an overview of the theories and issues that are related to the transition out of competitive sport. Various theoretical frameworks and models are discussed in light of sport career transition and sport retirement. These sections include theories of athlete career transition and address differences in athletic and occupational retirement. Limitations of the transition models are also identified and discussed. Furthermore, topics including athletic identity, identity foreclosure, gender differences, sport participation levels, loss, coping, considerations of international research, sport career transition research in Canada, and Canadian interuniversity athletes, are highlighted. This review overviews and synthesizes the current literature regarding athletic identity, mental health and well-being outcomes, and coping, as pertaining to sport career termination. Limitations in the current literature are identified which inform and shape the present study.

Theories of Athlete Transition

The study of athlete transition has evolved tremendously over the past thirty years. Historically, research in the area first appeared in the 1960s and has improved substantially with regards to its quality and quantity since the 1980s (Stambulova, Alfermann, Statler, & Cote, 2009). Early research focused on the development of optimal athletic performance, which neglected athletes’ often painful and challenging transitional experience as they exited competitive sport. Fortunately, athletic career transition has gained considerable attention as the need to provide explanations and offer evidence regarding the nature of the termination process continues to grow (Wagner, 2014). According to Stambulova et al. (2009), several
major shifts have occurred regarding research foci and theoretical frameworks which characterize the evolution of athlete transition research.

A wide variety of theoretical perspectives have been used to conceptualize athletic transition. Theoretical frameworks from outside of sport psychology were initially utilized to describe the transitional process including theories of thanatology (stages of dying), and social gerontology (the study of the aging process) for athletic retirement (Stambulova et al., 2009). These theories posited human transition (i.e., retirement) as a negative and often traumatic life experience. For the most part, these stage models did not hold up to empirical scrutiny (Lavallee, 2000). Following this, a notable shift emerged in the literature as the conceptualization of athletic retirement was redefined by Schlossberg (1981). Schlossberg’s (1981) seminal work included the human adaptation to transition model which described human transition as “an event or non-event [which] results in a change in assumptions about oneself and the world, and thus requires a corresponding change in one’s behavior and relationships” (p. 5). Although later challenged by sport transition researchers as lacking too many operational details, Schlossberg’s model shed light on the idea that transitions required immense human adaptation to changing life circumstances. Her model addressed many of the criticisms related to the Kubler-Ross framework of loss and grief, and spurred sport-specific athletic career termination frameworks (Petitpas, Van Raalte, & Brewer, 2013).

During the 1990s, several new models appeared in the literature which took into account the diversity of both individual and environmental factors (Petitpas et al., 2013). Unlike the previous models which were developed outside of the sport context, Taylor and
Ogilvie (1994) proposed a five-step model specifically for retiring athletes which attempted to describe athlete experiences throughout the sport career transition process, fostering positive and/or negative post-sport adjustment. Taylor and Ogilvie (1994) expanded upon Schlossberg’s work by further delineating transition as a process, rather than ‘an event or non-event’, and titled their framework the conceptual model of adaptation to athletic retirement. They recognized transition as a coping process which resulted in both adaptive and maladaptive outcomes. As this is the most comprehensive model of athlete career transition to date, it is described in further detail below.

**Conceptual Model of Adaptation to Athletic Retirement**

*Causes of Athletic Retirement.* Taylor and Ogilvie (1994) defined several pertinent reasons for sport termination. The authors suggested that the four most common factors that expedite athletic retirement include chronological age, deselection, injury, and free choice. Voluntariness of retirement can be explained as the degree of control athletes feel that they have over their decision to retire (Park et al., 2012). Taylor and Ogilvie (1994) proposed that free choice fosters the best outcomes as athletes possess increased control when they are actively involved in the decision to exit competitive sport. In the present study, participants’ reasons for sport career termination were either voluntary (e.g., deliberate decision to end interuniversity sport career) or involuntary (e.g., expiration of eligibility).

*Factors Related to Retirement Adaptation.* The researchers also observed a wide array of factors impacting retirement adaptation. Taylor and Ogilvie determined that particular factors, including developmental elements, self-identity, perceptions of self-control, social-identity, and tertiary contributors, affected the quality of adjustment to
retirement. Current research supports the notion that diverse factors influence transition outcomes (Park et al., 2012). More specifically, Taylor and Ogilvie (1994) define developmental elements as the developmental processes which individuals undergo as they mature in the sport context. They believed that the personal investment required in competitive sport participation could lead to limited development in other areas, a perspective which is echoed by the author of the present study.

In fact, many researchers agree with the position that developmental factors play a crucial role in the retirement process (Wagner, 2014). For example, Erik Erikson (1963) believed that an individual is faced with a psychosocial crisis during each stage of development, and later development can be impacted by the individual’s ability to resolve each crisis. Erikson (1963) suggested that the developmental stages of childhood enable adolescents to develop a cogent identity and clear sense of self. Moreover, adolescence is a crucial time for identity development as tasks such as identifying goals, personality development, and decision-making are in the forefront. Erikson (1963) proposed that role experimentation permitted adolescents to resolve the crisis between identity development and identity confusion. Unfortunately, other developmental opportunities may be missed as a result of an athlete’s rigorous involvement in sport.

Another element that Taylor and Ogilvie (1994) believed to influence the adjustment process in sport retirement regarded self-identity. Self-identity was described as the degree to which athletes base their self-worth on their achievements and participation in athletics. This definition has striking similarities with the definition of athletic identity as defined by Brewer et al. (1993) as “the degree to which an athlete identifies with the athletic role”. As
athlete identity is a focal point in the current study, both Taylor and Ogilvie’s (1994) and Brewer et al.’s (1993) theories serve to complement and build upon each other. In line with Brewer et al.’s (1993) view, Taylor and Ogilvie (1994) asserted that those athletes with strong and exclusive self-identities are prone to experience low self-esteem and feelings of loss following sport retirement.

Taylor and Ogilvie (1994) hypothesized that many athletes experience inhibited social roles which can serve as a barrier in sport retirement. Wethner and Orlick (1986) provided support for this recommendation as they previously found that the extension of social roles and the acquisition of new interests and focus post-retirement often indicated better transition outcomes for athletes. Finally, tertiary elements that were mentioned by these researchers included other personal, social, and environmental variables. Some examples of tertiary elements include level of goal attainment within sport, socioeconomic status, and chronic injury (for an extensive review of the various factors influencing athletes’ transition adjustment, please see Park et al., (2012)).

**Resources Available for Retirement Adaptation.** Taylor and Ogilvie (1994) described this factor as encompassing available resources such as coping skills, social support and pre-retirement planning, which were believed to impact retirement outcomes. They suggested that coping skills such as cognitive restructuring, anger management, and anxiety reduction can limit the likelihood of adjustment difficulties. Social support was also considered to be helpful in aiding healthy transitions and can include support from family and friends outside of the sporting context. In Park et al.’s (2012) systematic review, the search for psychosocial support and receiving support from others was reported more often
than any other coping strategy among retired athletes. Lastly, pre-retirement planning was considered to be a broad element which can influence successful transition. Pre-retirement planning considers the vocational, psychological, and financial concerns following sport disengagement (Park et al., 2012) and has been positively associated with the quality of athletes’ career transitions.

Lally (2007) conducted in-depth interviews with three male and three female university student athletes at three different points in time: at the outset of their final year of competition, approximately one month after retirement, and approximately one year later. Results of this qualitative study suggested that pre-retirement planning prior to the end of the athletes’ sport participation eligibility was positively linked with post-retirement adjustment. The participants explained that pre-retirement planning was done to avoid the anticipated identity and emotional disruption characteristic of athletic retirement. Some of the strategies that were used by these athletes pertained to exploring other interests and discussing the transition experience of other previously retired athletes. Lally (2007) reported that all the athletes who utilized pre-retirement planning experienced little difficulty during sport retirement. Furthermore, the adoption of identities outside of the sport setting was believed to be central to positive adjustment in sport retirement (Lally, 2007).

In contrast, Taylor and Ogilvie (1994) posited that most elite athletes may resist pre-retirement training as it may serve to threaten their sense of identity and distract them from attaining optimal performance within sport.

**Quality of Adaptation.** Taylor and Ogilvie (1994) suggested that the presence or absence of the aforementioned factors will inevitably determine whether or not an athlete
will experience a distressing transition. They highlighted that sport retirement is complex and multi-faceted and can manifest in a multitude of ways for individual athletes. Coakley (1983) suggested that sport retirement must be considered in the context of multiple variables and life circumstances. He reasoned that the complexity of these variables allow researchers to appreciate the divergent ways in which athletes experience transition out of sport.

**Interventions for Difficulties with Retirement.** Taylor and Ogilvie (1994) pointed to interventions as being integral to the transition process. Interventions are believed to decrease the risk of experiencing psychological, emotional, and social distress following sport retirement. The authors highlighted the importance of psychological services throughout the retirement process. They proposed that sport and counselling psychology professionals are needed to assist athletes with establishing a new self-identity while maintaining a sense of self-worth. They recognized that this may be a vulnerable time for many athletes, thus, the opportunity to explore feelings associated with sport retirement was believed to be imperative to successful transition. Park et al. (2012) examined eight studies that indicated positive associations between athletes’ intervention involvement and their life skills development, and the quality of career transition. According to Park et al. (2012), numerous studies reported intervention strategies to assist athletes’ sport retirement transition; however, there is currently only one published study (Lavallee, 2005) which has tested the effectiveness of a specific intervention strategy or program for supporting athletes’ transition out of sport, which indicates a need for further research examining the efficacy of athlete transition interventions.
Theory of Cognitive Appraisal

Ten years prior to the development of Taylor and Ogilvie’s theory of athletic retirement, Lazarus and Folkman (1984) proposed coping as a way to manage stress. Their framework suggested that stress is a process that involves a dynamic transactional relationship between the individual and the environment. With implications for sport career transition, Lazarus and Folkman’s (1984) theory of cognitive appraisal regarded stress as a transaction between the individual and the environment, involving the production of stressors by the environment and the response of the individual. Two processes were fundamental in their theory including cognitive appraisal (how the individual appraises the stressor/event) and coping (what the individual does to handle the event). Appraisal was defined as a cognitive evaluation of the significance of the event and the threat it may present to the individual’s well-being and included primary and secondary appraisals, in addition to reappraisals. Coping was defined as the “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). Although the two regulatory activities were generically termed “problem-focused coping” and “emotion-focused coping”, it was recognized that a variety of coping strategies could be subsumed by these general categories (Folkman & Lazarus, 1980; Grove et al., 1997). Other researchers proposed that an examination of specific strategies may be more informative than an investigation of global coping strategies. Specifically, Carver, Sherier, & Weintraub (1989) developed the COPE Inventory to measure 15 coping strategies (a variation of this measure was used in the present study) which did not group strategies into composite
categories. In the broad context of sport retirement, Folkman and Lazarus’ theory supports the perspective of Taylor and Ogilvie (1993), positioning athlete career transition as an ongoing coping process which determines and shapes the quality of post-retirement adjustment (i.e., emotional response, cognition, behaviour, etc.).

**Limitations of Theories of Athlete Transition**

Although the athlete career transition models outlined above provide important frameworks for conceptualizing the retirement process for competitive athletes, there are a few limitations that are worth noting. Firstly, most of the models were originally developed several years ago and have not been updated since, therefore lacking important advances in research, theory, and practice. With regards to the conceptual model of athletic retirement, the context of sport and the sporting environment has changed drastically over the past twenty years and few of these changes have been documented in the original theories. Additionally, the contexts in which these models were built may not necessarily reflect the context of sport in today’s world. Researchers and professionals are urged to consider the applicability of these models in present day sport environments prior to implementing them in an athlete transition setting. Another potential limitation regards the fact that these theories do not take into account the mental health status and well-being of athletes throughout the transition process. The present study aims to add to this literature.

**Athletic vs. Occupational Retirement**

Pioneering studies on athlete transition considered work retirement to be analogous with athletic retirement. In its initial stages, sport retirement research was often overlooked as it was assumed to reflect the same processes involved with workforce retirement. As
research progressed, notable differences between sport retirement and occupational retirement emerged. A primary distinction regards the time at which an athlete typically enters and exits sports. Athletes are likely to commence sports participation at a very early age in comparison to those entering the workforce. For example, the average age when athletes in the present study started participating in their sport was 9.56 years. Moreover, early entrance into sport has been linked to identity development challenges and identity foreclosure which will be discussed in more detail in a later section of this paper.

Competitive sport retirement represents a unique life change which is specific to athletes undergoing transition, as, unlike other careers, it usually ends early in life (Smith & McManus, 2008). For example, the average age that athletes in the present study retired from varsity sport was 22.14 years. Athletes usually retire at a much earlier age in comparison to people retiring from the workforce. Whereas people retiring from traditional work careers generally retire around sixty-five years of age, athletes typically retire in their early to mid-twenties (Wagner, 2014). The varying ages at which athletes typically enter and exit sport serve to further distinguish athletic retirement from occupational retirement.

Other distinctions regarding the unique transition experience of athletes have been recognized. Lotysz and Short (2004) proposed that athletes encounter diverse ways of voluntarily or involuntarily terminating their sport career which is not exclusively dependent on chronological age (as is often the case with workforce retirees). For example, athletes may have various reasons for terminating their careers including deselection, injury, and/or academic/professional opportunities. Thus, retired athletes are often expected to pursue an alternate career path which is not characteristic of workforce retirees (Wagner, 2014).
Perhaps the most significant factor pertaining to athletic retirement that distinguishes it from workforce retirement is the climate and culture of competitive sport to which many elite athletes are exposed from a very young age. The climate of competition, the pressure to excel and achieve physical and mental excellence impacts the way many athletes understand themselves, potentially altering the way they view the world around them.

On the other hand, other populations undergoing retirement transition have reported similar experiences to those experienced by retiring athletes. For example, a common challenge experienced by both athletic and occupational retirees includes a sense of loss. Occupational retirees may experience a wide array of loss including identity loss, financial loss, loss of a focus or interest, loss of meaning or purpose, or loss of a sense of achievement. According to Harvey (1996), although every type of loss involves social and psychological dynamics, most major losses result in primary changes in identity. If a workforce retiree strongly identifies with his or her work-related role, he or she may similarly experience an overwhelming sense of loss upon occupational retirement. Overall, there are some shared experiences between all people undergoing life transitions; however, we argue that athletic retirement is fundamentally different from occupational retirement in a number of important ways.

Athletic Identity

In 1993, Brewer et al. defined athletic identity as “the degree to which an individual identifies with the athlete role” (p. 237). Athletic identity is a form of identity that is based on the ascribed importance, strength, and exclusivity of the athlete role. The construct, athletic identity, was developed in light of a broader framework relating to the multidimensional self-
concept which described the human tendency to make domain-specific judgments of self-worth and competence (rather than global assessments). According to Linville (1987), a person’s self-concept is viewed as a multidimensional structure that contains thoughts and feelings about the self within various domains in life. The multifaceted nature provides numerous lenses to view the world which allow different lenses to be activated at different times, hence, the more often an identity becomes activated, the more often it becomes reinforced and increasingly salient to a person (Heird & Steinfeldt, 2011). Stryker (1968) conceptualized identity salience as the likelihood that a given identity will be activated in a given situation. That is, if one identity (e.g., athletic identity) is activated far more often and receives greater reinforcement than another identity (e.g., academic identity), then more time and focus will be directed at developing the more salient identity (athletic identity) which may come at the expense of other aspects of an individual’s life (e.g., academic achievement, alternate social roles) (Heird & Steinfeldt, 2011). As cited in Brewer et al. (1993), Harter (1990), demonstrated that self-evaluation in the physical and athletic domains is prevalent across the life span which has important implications for long-term post-retirement outcomes.

Brewer et al. (1993) highlighted that the athletic domain may not be salient for all athletes; rather, “the value or significance attributed to a given self-concept domain determines the extent to which a perceived competence or incompetence in that domain influences self-esteem, affect, and motivation” (p. 238). Therefore, incompetence in a highly valued domain may negatively impact an individual’s self-worth (Brewer et al., 1993). The authors suggested that the individual who highly values sport participation, who is
profoundly affected by outcomes in the sport context, and whose self-perceptions in that context are core to the individual’s identity, is likely to experience incongruence and difficulty when faced with sport retirement. Horton and Mack (2000) suggested that the strength of athletic identity relative to a person’s self-concept varies with past and present involvement in sport, as well as relative successes and failures in the athletic domain. Findings from various studies demonstrate that athletes who experienced a poor competitive season indicated a decline in athletic identity when compared with athletes who had a successful competitive season (Brewer, Selby, Linder, & Petitpas, 1999).

Furthermore, Brewer et al. (1993) suggested that individuals with a strong and exclusive athletic identity may be vulnerable to emotional difficulties when presented with sport retirement. More specifically, when athletes’ exclusively identify with the athlete role and do not possess other sources of self-worth or self-identification, they may be at an increased risk for emotional disturbance. Webb, Nasco, Riley and Headrick (1998), proposed that, since elite sport participation is fundamentally different from other role responsibilities and identities, negative consequences can ensue as a result of strong and exclusive athletic identity.

In a series of three studies, Brewer et al. (1993), developed and implemented the Athletic Identity Measurement Scale (AIMS) to assess the levels of athletic identity in participants. Study 1 explored the relationships between the strength and the exclusivity of the athlete role as evaluated by the AIMS. Participants included two hundred and forty-three students enrolled in an introductory psychology course or sport psychology course at Arizona State University. Participants were administered a demographic questionnaire, the Athletic
Identity Measurement Scale, the Perceived Importance Profile (PIP) and the Marlowe-Crowne Social Desirability Scale at two different points in time (fourteen days apart). The findings suggested preliminary evidence for convergent validity between AIMS and the Self-Role Scale (SRS). To address this further, Study 2 included four hundred and forty-nine students enrolled in an introductory psychology course at Arizona State University. The participants were administered a battery of questionnaires which included the AIMS, the SRS, the Sport-Orientation Questionnaire (SOQ) and the Rosenberg Self-Esteem Scale (RSES). The findings of Study 2 indicated significant correlations between the AIMS and the SRS, moderate and significant correlations between the AIMS and the SOQ, and a non-significant association between the AIMS and the RSES (suggesting that athletic identity and self-esteem were independent constructs). In Study 3, ninety members of the football team at the University of California, Davis were administered a battery of questionnaires including the AIMS, the Physical Self-Perceptions Scale (PSPS) and the Perceived Importance Profile (PIP). The chief finding in Study 3 pertained to the correlation between the AIMS and the PIP \( (r = .42) \) which was substantially lower than Study 1 \( (r = .83) \). This finding demonstrated that when the level of athletic involvement is held constant, athletic identity is related to, but is not the same as, the importance which is placed on competence in sport (Brewer et al., 1993). Across all three studies, the AIMS was found to be a reliable, internally consistent instrument which offered convergent and discriminant validity evidence in support of the claim that the AIMS accurately assesses identification with the athlete role.

A separate series of four studies was conducted by Brewer (1993) which tested the hypothesis that, “experiencing a life event which disrupts the pursuit of self-defining
activities [could be] associated with depressed mood” (p. 343). The cognitive diathesis-stress model was used to conceptualize depression which proposed that individuals who possess certain cognitive vulnerabilities will become depressed when negative life events occur (but not in the absence of such events) (Brewer, 1993). In the first two studies, participants were college students who were instructed to visualize experiencing an athletic career-ending injury. After the imagined injury, participants were asked to complete the AIMS and the Profile of Mood States (POMS). Brewer (1993) found that depression was positively related to athletic identity in both samples of college students. The third study investigated one hundred and twenty-one participants who incurred a recent injury. These participants were also provided the AIMS and the POMS which resulted in a significant correlation between athletic identity and the measure of depression. A key finding reflected that higher levels of athletic identity were related to more severe depression. In the fourth and final study of the series, Brewer (1993) studied fifteen players who incurred an injury while playing at the University of California, Davis on the varsity football team. The participants were asked to fill out the AIMS, the POMS as well as the Beck Depression Inventory (BDI). The results of the study supported the hypothesis that athletes who incurred an injury and rated high in athletic identity were more vulnerable to depression. A limitation of the fourth study regards its small sample size ($N = 15$) which significantly restricts the author’s capacity to generalize his findings. Across all four studies, a strong and exclusive identification with the athlete role was found to be related to the participants’ affective response to both hypothetical (imagined) and actual athletic injuries. Namely, in Studies 3 and 4, athletic identity was a significant predictor of depressed mood in separate samples of injured athletes.
As mentioned previously, a systematic review was conducted on athletes’ career
transition out of sport by Park et al. (2012). When examining factors related to the quality of
sport career retirement, Park et al. (2012) found that athletic identity played a significant role.
Out of the studies focusing on the relationship of athletic identity and the quality of sport
career retirement, a total of thirty-five independent studies were found to demonstrate
correlations between athletic identity and the quality of athletic adjustment post-transition.
Thirty-four of the studies demonstrated that both a strong athletic identity and a heightened
tendency towards identity foreclosure were negatively associated with the quality of athletes’
career transitions (Park et al., 2012). Additionally, the reviewed studies demonstrated that
athletes who rated high in athletic identity at the time of sport retirement experienced a loss
of identity (Park et al., 2012); however, the systematic review did not include any studies
investigating mental health outcomes. The present study will address this discrepancy in the
literature by measuring mental health outcomes both prior to and after sport retirement.

Green and Weinberg (2001) examined athletic identity, coping skills, and social
supports as moderators of mood disturbance and physical self-esteem with the occurrence of
injury in recreational sport participants. Thirty participants were recruited from various injury
rehabilitation centers. All participants had incurred an injury which inhibited them from
continuing regular physical exercise for a minimum of six weeks. Participants were
administered a demographic questionnaire, the AIMS, the Athletic Coping Skills Inventory
(ACSI), the POMS, The Physical Self-Perception Profile (PSPP), and the Social Support
Questionnaire (SSQ). With regards to athletic identity, no bivariate correlation between
athletic identity and total mood disturbance was found. These findings were inconsistent with
Brewer’s (1993) findings which demonstrated that a strong, exclusive athletic identity lead to elevated levels of depression with the occurrence of an injury (Study 4, \( N = 15 \)). Green and Weinberg (2001) posited that, because there was greater variability with regards to the scores of athletic identity in this study, the participants may not have felt that there was much at stake when experiencing an injury. This may have been due to the recreational level of sport participation in Green and Weinberg’s (2001) study. In contrast, participants in Brewer’s (1993) study participated in sport at a much higher level (i.e., varsity football players at the University of California, Davis) and displayed increased homogeneity in their athletic identity scores which suggests that the occurrence of an injury involved more risks to this particular sample (see section below titled, “Sport Participation Levels” for more detail).

Green and Weinberg (2001) reported that there was no clear evidence supporting the hypothesis that there would be a negative correlation among coping skills, social support, and the psychological reaction to injury (mood disturbance). More specifically, they hypothesized that higher levels of coping skills and social support would lead to lower levels of mood disturbance and higher physical self-esteem which was not supported by their current findings. However, the correlations were in the predicted directions.

Other studies investigated outcome variables including life satisfaction (Fraser, Fogarty & Albion, 2010; Martin, Fogarty & Albion, 2014), subjective well-being (Stephan, Bilard, Ninot, & Delignieres, 2003) and self-esteem (Stephan, Bilard, Ninot, & Delignieres, 2003; Williams, 2012) in relation to athletic identity in sport retirement. These studies emphasized the need to further examine constructs or facets of athlete well-being, utilizing concepts from positive psychology to better understand the achievement of satisfaction and
happiness in life, rather than mental illness. Life satisfaction was defined as the cognitive evaluation of one’s life as a whole (Martin et al., 2014) and is generally considered to be stable across the life span. Sinclair and Orlick (1993) studied one hundred and ninety-nine retired athletes and found that 74% of them reported feeling satisfied with their post-retirement life. In fact, 63% of these athletes indicated that sport retirement had been a positive change. Alternatively, a decline in life satisfaction following sport retirement was reported by Cecic Erpic (1998) and Werthner and Orlick (1986). Overall, previous research investigating the impact of retirement on athlete satisfaction has yielded mixed findings.

Imperative to the current study is the investigation by Martin et al., (2014) which tracked changes in athletic identity and life satisfaction over five years as a function of retirement status and the voluntary nature of sport retirement. Martin et al. (2014) employed a prospective design which studied three groups of athletes undergoing different stages of the transition process (i.e., Continuing: group remained active in competition across the five years; Retired: group was active at the beginning and had retired by the final data collection; and Intended: group who was active at the beginning of data collection and intended on retiring by the final phase of data collection) as they moved into and through sport retirement. Sixty-two athletes across twenty-three different sports participated in the study who all competed at the national-level in Australia. The participants were administered a demographic questionnaire, the AIMS, Satisfaction with Life Scale (SWLS), and a Retirement Intentions questionnaire both in 2003 and 2007. A finding which is relevant to the present study regards the negative correlation between athletic identity and life satisfaction which was observed in 2007 (Martin et al., 2014). Consistent with Brewer (1993)
and Grove, Lavallee, and Gordon (1997), this finding indicates that high levels of athletic identity may be associated with adjustment difficulties. However, Martin et al. (2014) were able to take this one step further by demonstrating that the relationship between athletic identity and life satisfaction was moderated by retirement status. More specifically, no change in life satisfaction was observed between 2003 and 2007 for the continuing or the intending groups but the retired group indicated an increase in life satisfaction. This highlights that these individuals experienced positive transition and adaptive post-retirement adjustment. Although this finding is inconsistent with some of the previous literature on sport retirement which posits a decline in life satisfaction following sport retirement, it provides new evidence of the perspective that not all athletes experience transition difficulties. Additionally, athletic identity was also found to decrease for all three groups over time. This finding is consistent with Lally’s (2007) finding that athletes considering sport retirement tend to rate lower in athletic identity (than those who are not considering retirement) which demonstrates a form of ‘self-protection’ from identity disruption as retirement approaches (Benson, Evans, Surya, Martin, & Eys, 2015; Brewer, Cornelius, Stephan, & Van Raalte, 2010; Grove, Fish, & Eklund, 2004).

**Identity Foreclosure**

Identity foreclosure regards those individuals who make commitments to roles (e.g., athlete role) without engaging in exploratory behaviour to find alternate values, needs, interests, and skills during development (Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993). It is related to the strength and exclusivity of the athlete role in which current and former athletes associate with their experience. Individuals who strongly subscribe to the
athlete role may be less likely to explore other career, education, and lifestyle options due to their intensive involvement in sport (Brewer et al., 1993) which may leave an athlete vulnerable to transition difficulties in sport career retirement (Beamon, 2012; Murphy et al., 1996; Whipple, 2009). Research has demonstrated that athletes with strong athletic identity tend to exhibit a greater propensity for athletic identity foreclosure during sport participation (Beamon, 2012). It would seem, then, that measuring athletes’ athletic identity during sport participation may be useful in predicting risk for identity foreclosure. Identity foreclosure may occur due to the inherent demands in sport (e.g., time, energy, focus, commitment, etc.) or may be the result of personal choice (Danish, Petitpas & Hale, 1993). It may impact the development of an identity outside of sport participation (Williams, 2012), limiting possible identities to grow and maintain in sport retirement. Given the insufficient exploration of other self-roles, identity foreclosure may pose transition challenges and identity confusion for athletes as they depart from the athlete role. New life roles and identities may not be available to them post-sport participation, therefore influencing a host of transition and adjustment difficulties potentially including adverse mental health outcomes.

**Gender Differences**

Researchers have speculated that males and females may experience athletic identity differently. As the culture of sport and the socialization process in development typically varies between males and females, gendered implications of athletic identity have been found to manifest in sport retirement. Previous research has indicated that males seem to have higher levels of athletic identity than females (Brewer et al., 1993; Good, Brewer, Petitpas, Van Raalte, & Mahar, 1993; Weichman & Williams, 1997). In the series of three studies
discussed above, Brewer et al. (1993) found gender differences in Study 1. Participants included female \( (n = 124) \) and male \( (n = 119) \) students enrolled in an introductory psychology or sport psychology course at Arizona State University. The results indicated that males scored significantly higher on the AIMS than females when lower levels of athletic involvement were present (Brewer et al., 1993).

A study by Sinclair and Orlick (1993) highlighted some gender differences regarding the retirement experiences of male and female high performance athletes. Sinclair and Orlick (1993) investigated participants’ reasons for retirement, coping strategies, social support, and other variables which were thought to impact the transition process. Despite the authors’ belief that gender differences were likely due to differences in gender roles (rather than a characteristic of sport retirement), the results of this study pointed to a few gender differences. Particularly, the tendency for male participants to report financial struggle and seeking employment as reasons for retirement differed from the reasons provided by female participants.

In contrast, findings from multiple studies maintain that gender does not influence levels of athletic identity (Fraser, Fogarty, & Albion, 2008; Groff & Zabriskie, 2006; Hoiness, Weathington, & Cotrell, 2008). Changes in the perception of the athletic role between males and females were proposed to be the result of the difference in gender roles, affecting the perception and behaviour on an individual basis (Prorios, Prorios, Mavrovounoitis, & Siatras, 2012). According to Prorios et al. (2012), gender roles are culturally defined and dependent, and reinforced from birth.
According to Williams (2012), research on athletic retirement and female transition outcomes is extremely limited. Kerr and Dacyshyn (2000), and later, Warriner and Lavallee (2008), contributed to this literature through their investigation of the retirement experiences of elite female gymnasts. Previous research in the area of identity development recognized interpersonal relationships as being a key ingredient of identity formation in females. Support was provided for this claim as a common finding emerged from their work suggesting that identity issues in sport retirement can be linked to interpersonal loss of relationships, the social roles related to female gymnastics, and the confusion surrounding body image and the athletic physique (Kerr & Dacyshyn, 2000; Warriner & Lavallee, 2008). A detailed description of these studies is provided in a later section of this thesis. Interpersonal therapy, as recommended by Heird and Steinfeldt (2012), is a promising treatment model for transitioning athletes, which may have particular implications for female athletes who have experienced interpersonal loss as a result of athletic retirement; however, more research is needed to better support the efficacy of this theoretical approach with this population.

**Sport Participation Levels.** As cited in Wagner (2014), Good et al. (1993) demonstrated a gender difference in athletic identity between male and female non-athletes, with males rating significantly higher in athletic identity than females. This study did not indicate a gender difference at more competitive levels of sport participation suggesting that males and females may identify with the athletic role in similar ways at the elite level (Wagner, 2014). Weichman and Williams (1997) found that, regardless of gender, high school athletes who expected to play at the college or pro-level and who had greater athletic experience, had stronger and more exclusive athletic identities. No differences were indicated
across grade and competition level, but the data demonstrated a trend for athletic identity to increase from freshmen to junior varsity to varsity (Weichman & Williams, 1997). In contrast, a study by Lamont-Mills and Christensen (2006) which investigated three factors of athletic identity (social identity, exclusivity, and negative affectivity) and its relationship to sport participation levels (elite, recreational, and non-participation), found that negative consequences of high athletic identity may exist for both elite athletes and recreational sport participants. Specifically, the male non-participation group scored lower on all three factors of athletic identity and the total AIMS score when compared with the two athlete groups. The male elite and recreational athlete groups did not differ on negative affectivity and exclusivity, although differences were identified on social identity and the total AIMS score, with elite athletes scoring higher than recreational athletes. Similarly, the female non-participation group scored lower on all three factors of athletic identity and the total AIMS score when compared with the other two athlete groups. The female elite and recreational athlete groups did not differ on negative affectivity, although differences were identified on the total AIMS score, social identity, and exclusivity, with elite athletes scoring higher than recreational athletes. Lamont-Mills and Christensen (2006) suggested that participation in sport may similarly influence the self-perceptions of recreational and elite athletes, therefore, threats to participation may result in similar consequences regardless of the level of sport competition among the athlete group.

**Loss**

A large portion of previous research in the area of athletic retirement has examined the experience of loss, although the findings remain mixed. Lerch (1984a) investigated athletic
As outlined by Kubler-Ross (1969), five stages were identified including shock and denial, anger, bargaining, depression, and acceptance. With regards to shock and denial, athletes may use denial coping strategies to avoid the experience of pain associated with sport retirement. Although this may serve a short-term purpose, negative long-term consequences of denial have been identified in the sport psychology literature (Uphill, McCarthy & Jones, 2009). The anger stage is characterized by the realization and expression of angry feelings towards the sport career termination process, although the degree to which athletes experience anger will vary. During the bargaining stage, athletes may try to meet their fate head on by making a concerted effort to continue sports participation. Lerch (1984a) suggested that, when bargaining attempts fail or do not work out, depression may occur. In the depression stage, varying levels of depression or depressive symptomology may be experienced as a response to athletic retirement (Brewer, 1993). It has been hypothesized that athletes in this stage may feel more hopeless and helpless than ever before (Wagner, 2014).

During the final stage of acceptance, athletes finally accept their fate as retirees. In this case, acceptance does not constitute as contentment, but rather that a new perspective has been established (Kubler-Ross, 1964). According to Lerch (1984a), the experience of acceptance which is experienced by athletes is different from that of terminally ill patients. That is, retired athletes are faced with the opportunity to move on in life whereas, most unfortunately, terminally ill patients are not.
Clemmet, Hanrahan, and Murray (2010) examined the stressors which athletes experienced following their transitions out of competitive sport. Their study utilized the dual process model of grieving wherein the differences between loss-orientation stressors and restoration-orientation stressors were highlighted (Clemmet et al., 2010). Thirteen participants who competed in competitive sport participated in semi-structured interviews which were analyzed via thematic analysis. The findings suggest that athletes exiting their sport experienced feelings of loss; however, many focused their attention on alternate resources which provided a sense of hope as they transitioned out of sport. A shortcoming of this study regards the fact that the authors did not specify the details of these resources or the methods that were used to collect the data. Nevertheless, this finding sheds light on the essential role of coping on the experience of loss and other post-retirement outcomes.

In another study, Kerr and Dacyshyn (2000), explored the retirement experiences using a retrospective, grounded theory approach. Seven former elite female gymnasts were interviewed who underwent sport retirement (ranging from six months to five years prior) at the time of the study. According to Kerr and Dacyshyn (2000), five of the seven participants described their transitions out of elite gymnastics as very difficult. All participants reported feeling both negative and positive emotions associated with their transition. For example, some of the negative experiences reported by all of the participants included missing some elements of their involvement in gymnastics, feelings of loss of control, disorientation, and frustration. An example of the positive emotions experienced by all the participants includes a sense of freedom from rigid schedules and relief from the stress and demands of elite
gymnastics. Furthermore, two out of the seven participants reported a sense of anger and betrayal.

In a more recent study by Warriner and Lavallee (2008) which also focused on the experiences of former elite female gymnasts, the authors focused on the role of identity and the physical self in the adaptation process. Seven former athletes participated in retrospective semi-structured interviews which were analyzed using phenomenological analysis. The data analysis yielded thirteen themes which formed five domains. According to Warriner and Lavallee (2008), two predominant themes emerged pertaining to the athletes’ experience of retirement. First, with regard to the ‘loss and turmoil’ theme, six of the seven participants described their retirement from gymnastics as profoundly traumatic. Feelings of emptiness, hopelessness and loss were frequently reported which negatively impacted their retirement experience. Second, with regards to the ‘identity confusion’ theme, the participants conveyed an overarching uncertainty about who they were outside of gymnastics (i.e., identity foreclosure). Moreover, several of the former gymnasts communicated being unsure of their interests, values and capabilities outside of the sport domain. Overall, this study provided support for the hypothesis that sport retirement is a distressful event and that extensive human adaptation is required in order to thrive during life after sport.

Coping

Crocker, Tamminen, and Gaudreau (2015) suggest that a critical process in self-regulation is coping which involves volitional thoughts and behaviours to manage demanding situations, both physical and psychological. As discussed in the introduction of this thesis, Folkman and Lazarus (1984) suggested that coping processes are considered to
be integral to human adaptation, including the transition out of competitive sport. Folkman, Lazarus, Dunkel-Schetter, Delongis, & Gruen (1986) defined coping as the cognitive and behavioural efforts to manage specific internal or external demands which are appraised as exceeding a person’s personal resources. According to Jones and Tenenbaum (2009), adaptation becomes a stress response, resembling its negative antithesis: maladaptation (as cited in Schinke, Cummings, & Bonhomme, 2013). As described in Crocker et al., (2015):

An athlete will evaluate specific demands (stressors) in terms of personal meaning based on what is at stake in respect to goals, commitments, and values (this evaluation is termed primary appraisal). In addition, the athlete also evaluates coping options, future expectancies, and agency (termed secondary appraisal). These appraisals are thought to influence an athlete’s coping actions (thoughts and behaviours) that can actively change the person-environment transaction and/or regulate emotional experience. The way that an athlete copes with specific demands will presumably influence personal and social outcomes (Lazarus, 2000) (p. 29).

As such, coping is in essential part of athlete self-regulation, facilitating adaptation both during and following sport participation. Grove et al. (1997) explored the influence of athletic identity on an athlete’s ability to cope with athletic retirement. Fifty-one retired members of the Australian national and/or state teams were mailed a questionnaire and were required to provide descriptive information regarding adjustment to retirement from competitive sport, demographic information, as well as complete the AIMS and COPE Inventory. The authors acknowledged that not all athletes undergoing sport retirement experienced transitional challenges; however, their study evidenced that some athletes do, in
fact, experience serious adjustment difficulties following sport retirement. A key finding suggested that a strong athletic identity was positively correlated with anxiety regarding career exploration and was negatively correlated with pre-retirement career planning at the time of retirement (Grove et al., 1997). In support of Brewer et al.’s (1993) findings, athletic identity was found to influence both the degree of psychological adjustment necessary, as well as the time needed to ensure quality transition. A limitation of this study regards the fact that a standardized measure of anxiety was not used in the study, thus limiting the generalizability of the anxiety-related findings. In an attempt to add to this literature, the present study aims to build upon these findings by incorporating a standardized measure of state anxiety to measure participants’ current feelings of anxiety. Another important finding regarded the various coping strategies which were used by athletes during career transition (Grove et al., 1997). Athletes were found to employ a wide range of coping skills including problem-focused, emotion-focused, and avoidance-oriented strategies. Grove et al. (1997) found that the coping strategies most often reported by athletes who rated the highest in athletic identity included venting emotions, denial, mental and behavioral disengagement.

Furthermore, Grove et al. (1997) emphasized the importance of social support throughout the transition process. Results indicated that athletes scoring high on the AIMS also reported seeking increased social support and heightened suppression of competing activities. The authors pointed to the possibility of experiencing interpersonal loss which may occur as an athlete removes himself or herself from the sport context, thus emphasizing the importance of available emotional and social support. According to Green and Weinberg (2003), several studies have indicated that social support has a buffering effect on negative
life stress. Social support may serve to safeguard the effect between the stressful event (sport retirement) and the stress reaction by preventing or limiting the stress appraisal (Folkman & Lazarus, 1984; Green and Weinberg, 2001).

Lerch (1981) looked to continuity theory to explain athletes’ continuous involvement in sport, even after athletic retirement. Continuity theory, as applied to sport retirement, states that athletes may avoid losing the athlete role by remaining in the sport in some capacity. This may occur if they do not possess a comparable alternative self-role or identity to direct their attention and energy, bringing significant meaning and purpose to their lives (Lerch, 1981). According to this theory, continuity is assumed to be a form of coping and may be achieved by becoming involved with the sport in a new way (e.g., becoming a coach, team manager, scout, referee, or by playing at a lower level). Lerch (1981) applied continuity theory with five hundred and eleven American athletes by assessing adjustment to retirement through three continuity variables including (a) post-retirement career connected to sports, (b) pre-retirement vs. post-retirement income, and (c) continuation of commitment to sport. Level of education, positive pre-retirement attitudes, and health were three other variables which were measured; however, Lerch did not find continuity variables to be significantly related to adjustment to retirement from sport.

It was hypothesized that continuity may enable athletes to make more adaptive transitions out of competitive sport and serve as a coping mechanism for athletes to deal with the real or imagined loss of the athlete role. By adopting a new role in the sport context, athletes can avoid the loss of athletic identity, as well as the ramifications typically associated with sport retirement, by replacing the athlete role with a new role relevant to the
sport context. In some cases, it seems like athletes are merely putting off what is anticipated to be a painful transition. Shachar, Brewer, Cornelius, and Petitpas (2004) hypothesized that the decision to become a coach may reflect the identity status and affect adjustment in sport retirement. They assessed differences in vocational behaviour, athletic identity, and transitional adjustment difficulties between retired athletes who chose to be coaches and retired athletes who chose careers not related to sport. Shachar et al. (2004) found that coaches had a stronger tendency to foreclose and engaged in very little exploratory behaviour of alternate careers other than coaching. However, no significant differences were found in transitional adjustment difficulties, life satisfaction, and career choice satisfaction between coaches and non-coaches.

**Cross-cultural findings.** In a cross-national comparison of elite French and Swedish athletes on coping processes, Stambulova, Stephan, and Japhag (2006) found that retired French athletes used a denial coping strategy more than retired Swedish athletes. This finding suggests that there may be some cultural differences which may impact athlete transition experience and outcomes. Alfermann, Stambulova and Zemaityte (2002) provided a cross-national comparison of German, Lithuanian and Russian athletes on coping processes which also yielded cultural differences. Two hundred and sixty-five former amateur athletes participated in the study from a variety of sports including rowing, track and field, hockey, swimming, ice skating, basketball, boxing, figure skating, artistic gymnastics, and handball. Lithuanian athletes were found to have higher athletic identity than German and Russian athletes. Lithuanian athletes also displayed ambiguous coping strategies because, on the one hand, they reported to accept the reality of their sport retirement, while at the same time they
also reported the use of denial. In contrast, the Russian athletes used denial the least and were found to utilize distraction tactics the most out of the three nations. The German athletes displayed the most readiness for career transition in comparison to Lithuanian and Russian athletes. More specifically, the Lithuanian and Russian athletes used less coping and reported more transition barriers than the Germans, including maintaining high athletic identity after sport retirement, having less positive and more negative emotional reactions to retirement, using distraction coping (Russia) and defensive coping (Lithuania). Overall, Alfermann, Stambulova and Zemaityte (2002) concluded that Lithuanian and Russian athletes experience less-effective adaptation, as demonstrated by their diminished ratings of life satisfaction and significantly longer adjustment period following sport retirement in comparison to the German athletes. For further readings on athletes’ career transitions across cultures, see Stambulova and Ryba (2013).

**Considerations Related to International Research**

Sport career transition research has been conducted in numerous countries with athletes at various levels of sport participation. According to Park et al. (2012), sport transition has been predominantly studied in North America, Western Europe and Australia. A debate which is related to the present study regards the nature of sport in Canada versus that of other countries wherein sport career transition research is conducted. Although an investigation of the similarities and differences regarding the sport context of nations outside of Canada is beyond the scope of this thesis, it is important to be aware of the potential limitations when applying foreign (including American) research to a Canadian sport environment. Specifically, attention must be paid to the cultural appropriateness of research
conducted in other countries as theory and empirical findings may be utilized in Canadian sport contexts without critical examination of its applicability. For example, through multiple ethnographic interviews with 20 male African-American National Collegiate Athletics Association (NCAA) former basketball players, Beamon (2012) reported that participants experienced a *major loss* (as defined by a significant reduction in personal, material, and symbolic resources), in addition to athletic identity foreclosure. Included in the athletes’ sense of loss was the loss of fame, recognition, compensation, and social status. Given that the monetary support and perceived importance of intercollegiate sport is markedly less in Canada than in the US, one may speculate that Canadian athletes dissimilarly experience the loss of fame, compensation, and social status. The environments in which research studies outside of Canada are conducted may not accurately reflect the context and climate of sport in Canada, thus we need to carefully evaluate the cultural and societal landscape in which the research was produced. Due to the specific research questions of the author, numerous studies which were conducted outside of Canada were described in this literature review to accurately reflect the nature of sport transition research; however, the author cautions the reader to evaluate the applicability of said research in Canadian sport contexts, while keeping in mind that the chief purpose of this study aims to contribute to the literature by adding to the Canadian repository of sport transition research, with a focus on interuniversity sport.
Sport Career Transition Research in Canada

A brief overview of athlete career transition research in Canada is discussed in this section for the purpose of positioning the current study in the Canadian literature. Over the past three decades in Canada, research on athlete career transition has spanned athletic retirement, talent development and expertise, as well as diverse writings on athlete adaptation (Shinke, et al., 2013). Initial research in this area investigated athletes’ adjustment to retirement from elite sport and has evolved to include studies examining the development of athletic talent over the lifespan and the adaptation of athletes to transitions (both within and following their competitive sport careers). The reader will likely notice that much of this research has focused on elite athlete participation, although research investigations with interuniversity athletes has become more prominent over time.

Adjusting to athletic retirement. The earliest writings on the topic in Canada were comprised by Orlick (1986) who investigated elite athletes’ retirement experiences. He noted that many former athletes experienced difficulties in “resetting” their focus for life post-Olympics, proposing that an adaptation period occurs. Concurrently, Werthner and Orlick (1986) performed a qualitative investigation with 28 Canadian elite athletes (males: n = 18; females: n = 10) which aimed to deepen our understanding of the ways in which athletes viewed their retirement experiences. In 1993, Sinclair and Orlick revisited how Canadian elite athletes interpreted and extracted meaning from their retirement experiences through a quantitative investigation which surveyed male (n = 100) and female (n = 99) elite athletes.

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1 This section was written to shed light on the trajectory of Canadian research on sport career transition. This section is not exhaustive or inclusive of all research on this topic.
According to Sinclair and Orlick (1993), athletes experienced unexpected retirement adjustment difficulties including missing the social aspects of sport, diverse work or academic pressures, the loss of the athlete status, and feelings of incompetence in non-athletic endeavours. Later, Wheeler, Malone, VanVlack, Nelson, and Steadward (1996) engaged in a qualitative (i.e., grounded theory) approach to examine the retirement experiences of Canadian male \(n = 18\) and female \(n = 10\) elite athletes, which utilized Schlossberg’s model to conceptualize the transition process. Wheeler et al. (1996) reported that athletes’ experienced both “gains and losses” in sport retirement.

**Developing athletic talent.** Writings on this topic initially appeared in Canada in 1994 when Salmela (1994) proposed that an additional stage should be added to Bloom’s (1985) talent development model to include sport retirement. Cote (1999) also revisited Bloom’s (1985) model, highlighting the importance of family on talent development. Cote (1999) subsequently addressed this gap in Bloom’s model by investigating the influence of parents and siblings of four junior Canadian national team athletes. In 2002, Durand-Bush and Salmela (2002) conducted a qualitative study with male \(n = 6\) and female \(n = 4\) Canadian Olympic gold medalists, seeking to understand the factors that contributed to the development and maintenance of elite athletic performance. Athletes in their study experienced four stages of development including (a) the sampling years, (b) the specialization years, (c) the investment years, and (d) the maintenance years. Implications regarding the development of athletic identity were emphasized, particularly in the investment and maintenance years.
Adaptation to athletic career transitions. Stambulova et al. (2009) recognized that elite athletes’ career transitions are often stressful and can pose significant challenges. Presently, Canadian investigations regarding elite athlete adaptations are underway through various funded and unfunded athlete projects (Schinke et al., 2013). The most recent developments in research include a clear shift to include a much broader framework, encompassing stress appraisal, coping, self-regulation, and the outcome of adaptation as components of a temporal process. For example, Benson et al. (2015) applied a general process model of psychological threat and defense in a series of two studies with Canadian interuniversity athletes. The purpose of the study was to “test the idea that individuals may actually report stronger identification as an athlete to counter goal-discrepant perceptions aroused by sport career threat” (Benson et al., 2015, p. 303). The results of this study provided novel insight on how a mere reminder of the end of an athletic career can influence athletes’ perception of exclusivity with the athlete role.

Canadian Interuniversity Athletes

Canadian university-level sport participation is referred to in this thesis as ‘interuniversity’ competition so as to accurately capture the Canadian context of university-level sport competition (in comparison to American, intercollegiate sport participation). Most large academic institutions field teams which compete in the Canadian Interuniversity Sport (CIS) league which hosted over 11,600 athletes (5,357 female and 6,243 male) in 2012-2013. The CIS includes exclusively Canadian academic institutions. Fewer university sports teams compete in an alternate league, the National Association of Intercollegiate Athletes (NAIA),
which includes membership from smaller colleges and universities in the United States and Canada. Participants in the current study will be competitors in either the CIS or the NAIA.

Interuniversity athletes face a wide array of challenges including competing life, academic, and athletic roles. The level of competition and associated demands of sport may influence the development and maintenance of athletic identity, indicating potential risks in post-retirement adjustment. A variety of factors have been suggested to influence and sustain athletic identity in interuniversity sport. For example, the public recognition experienced by some athletes may contribute to increased self-esteem (Wagner, 2014) and be subsequently integrated into an individual’s sense of identity.

Although some challenges are shared with their non-athlete counterparts (i.e., common developmental challenges, academic concerns, etc.), many challenges faced by interuniversity athletes are unique. According to Parham (1993), intercollegiate (interuniversity) athletes must learn to balance academic and athletic requirements and responsibilities, satisfying multiple social relationships including those with coaches, teammates, family members, friends outside of sport, and various others, while maintaining physical and mental well-being, and managing success and failure in various academic, athletic, and personal contexts. According to the CIS Athletes Guide (2014), student-athletes are required to undertake a minimum of nine academic credits per term and maintain at least a 60% average to remain eligible for interuniversity competition. Both the CIS and the NAIA promote academic and athletic excellence, although academic excellence may not always be the chief priority for all student-athletes in Canada. At times, academic achievement plays
second fiddle to athletic endeavours which may lead to the development and maintenance of a strong and exclusive athletic identity and an increased tendency for identity foreclosure.

As a result of the time, focus and energy required to excel in interuniversity competition, athletes face a number of disadvantages as they encounter sport retirement. Parham (1993) suggested that athletes often feel disconnected following sport retirement as they remain dependent on the rigid structure of competitive sport and the social support offered by coaches and teammates long after they have disengaged from competition and the team setting. Additionally, athletes have historically missed opportunities for employment as they pursue interuniversity sport because they are often required to devote the bulk of their time to athletic and academic commitments. As athletes attempt to break into the workforce following their retirement from sport, little to no experience in a professional setting may leave a student-athlete in a vulnerable and disadvantaged position. In competitive job markets, prior work experience is highly valued and a lack of it may be evaluated as an area of weakness when being considered for employment opportunities.

Pre-retirement planning and the development of transferable skills is recognized as a way that student-athletes can start to prepare for life after sport. Aspects of pre-retirement planning may include the accessing of counselling services, developing of important life skills, exploring of other self-roles, and career planning. Conversely, Parham (1993) recommends that termination is an experience for which no amount of preparation seems adequate. Canadian interuniversity sport careers have a pre-determined length (five years playing eligibility) and are relatively short-lived in comparison to the careers of professional or Olympic-level athletes who are not limited to a set amount of years at the onset of sport
participation (Wagner, 2014). With less than 1% of interuniversity athletes going on to play at the professional or Olympic level, retirement from interuniversity sport may represent the end of a long and valued athletic career. The loss of the athlete role may come at a cost to some athletes, resulting in diverse mental health and well-being outcomes following sport retirement.
CHAPTER III

Method

The present study used a quantitative approach to investigate the proposed research questions. A survey design was utilized to facilitate an improved understanding of the relationships between athletic identity, depressive symptomology, state anxiety, life satisfaction, flourishing, subjective vitality, and coping, both prior to and after sport retirement. The survey was distributed online at two points in time (pre- and post-sport retirement) and data collection spanned the course of several months (specifics are included below). An advantage of using this design for transition research regarded its prospective nature as it permitted the measurement of change as it occurred naturally (i.e., captures athletes undergoing sport retirement). According to Park et al. (2012), employing a prospective research design to study athletes’ career transition is beneficial as it allows researchers to tap into dynamic processes over time. Currently, there is a stated need in the sport transition literature to conduct research in this way (Lally, 2007; Martin et al., 2013; Park et al., 2012), thus indicating a strength of the current research design. According to Park et al. (2012), the majority of studies evaluated in their systematic review employed retrospective data collection methods, many of which reported memory and recall bias as a study limitation. Pilot testing of the survey was conducted prior to the start of the study and included five former interuniversity athletes who were ineligible for the present study. The objective of the pilot test was to ensure the quality and consistency of the questions, format, and scales included the survey. All information and feedback that was articulated in the pilot test was subsequently incorporated into the study.
Advantages of using an online survey design for this study included the increased accessibility of the survey for athletes who may have graduated from university post-retirement and/or moved away from campus. Participants were able to access the survey at a time and place that was convenient for them. The survey was economically and user friendly, and did not require a trained administrator, eliminating or reducing potential human administration error and bias. A survey approach also enabled the anonymity of participants, therefore encouraging them to be open and honest about their experiences without divulging their personal identity. Another primary strength of this survey approach regards the use of standardized measures, permitting a certain degree of generalizability from the results which can be contrasted and compared to previous and future empirical research. The selected online survey company, FluidSurveys, is a Canadian-based company which hosts all data on Canadian servers and offers first-class protection of confidential participant information.

This study used non-probability sampling which was purposive and included individuals who were available and willing to participate. Participants voluntarily participated in the study and received information about the purpose of the study, study risks and benefits, study procedures, consent and confidentiality, contact information, and community resources. Participants were required to complete an anonymous, online survey which took approximately fifteen to thirty minutes to complete at two distinct points in time: approximately one month into their final season of competition (T1) and approximately three months after sport retirement (T2). In an effort to show the researchers’ appreciation for participation, all participants were invited to input their name into a draw (on a separate
webpage that was not associated with the study) for two $50.00 gift cards at Chapters/Indigo following T1 and T2.

**Inclusion Criteria**

1. Male and female athletes participating in interuniversity (i.e., varsity) sport at one of the large Western Canadian academic institutions included in the study.
2. Athletes must have self-identified as being in their final year of either CIS or NAIA sport participation.
3. Participants were competitors on one of the following sports teams that was deemed ‘varsity status’ at their respective institutions: basketball, soccer, volleyball, football, baseball, softball, rugby, hockey, field hockey, golf, cross country, track and field, rowing, skiing (alpine), skiing (Nordic), swimming, diving, and wrestling.
4. Participants were English-speaking.

**Exclusion Criteria**

1. Participants who were simultaneously playing at the national or professional level were not included in this study (previous experience at this level was permitted; however, concurrent participation was not).

**Protection of Human Participants**

Participation in the study was voluntary. Participants were given the choice to withdraw their participation at any point, without consequences. They were informed of the purpose of the study, limits to confidentiality, and the potential risks associated with involvement in this study prior to participation. We communicated to participants that the results of the study will be made publicly available and would not include any identifiable
information. If needed, community counselling resources (i.e., campus counselling centres, etc.) were available, although these were not requested from participants at any point during the study. Data were collected and stored online using encrypted software and protected by a password known only to the Principal Investigator and the graduate student researcher. All other study related documents were stored in a locked cabinet which was only accessible to the Principal Investigator and the graduate student researcher. All research materials will be kept for a minimum of five years to ensure the integrity of the study.

**Participants**

A total of one hundred and thirty-two interuniversity athletes at multiple Western Canadian academic institutions, who self-identified as competitors in their final year of either CIS or NAIA sport participation, completed the survey at time one (T1). Seventy-two of these athletes completed the survey at time two (T2), therefore the response rate was 54.5% at T2. There were minimal differences between participants who returned and those who did not (see Table 1 for demographics; see Table 2 for scores across multiple variables).
Table 1.

Demographic data (T1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Attrition (n = 60)</th>
<th>Remained in study (n = 72)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Current age</td>
<td>21.83</td>
<td>1.87</td>
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<tr>
<td>Age started in sport</td>
<td>9.06</td>
<td>4.22</td>
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<tr>
<td>Years across lifetime in sport</td>
<td>13.10</td>
<td>4.31</td>
</tr>
<tr>
<td>Sex</td>
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<td></td>
</tr>
<tr>
<td>Male</td>
<td>22</td>
<td>36.7</td>
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<tr>
<td>Female</td>
<td>38</td>
<td>63.3</td>
</tr>
<tr>
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<td></td>
</tr>
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<td>52</td>
<td>86.7</td>
</tr>
<tr>
<td>European</td>
<td>3</td>
<td>5.0</td>
</tr>
<tr>
<td>African</td>
<td>1</td>
<td>1.7</td>
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<tr>
<td>Indigenous</td>
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<td>0.0</td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>3.3</td>
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<tr>
<td>South Asian</td>
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<td>1.7</td>
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<tr>
<td>Hispanic</td>
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<td>Marital status</td>
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<tr>
<td>Dating</td>
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<tr>
<td>Common-law</td>
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<td>8.3</td>
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<tr>
<td>Employment Status</td>
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<tr>
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</tr>
<tr>
<td>Unemployed</td>
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<td>31.7</td>
</tr>
<tr>
<td>Other</td>
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<td>3.3</td>
</tr>
<tr>
<td>Varsity sport played</td>
<td></td>
<td></td>
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<tr>
<td>Basketball</td>
<td>9</td>
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<tr>
<td>Soccer</td>
<td>24</td>
<td>40.0</td>
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<tr>
<td>Volleyball</td>
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<td>Hockey</td>
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<tr>
<td>Softball</td>
<td>1</td>
<td>1.7</td>
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<tr>
<td>Swimming</td>
<td>2</td>
<td>3.3</td>
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### Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Attrition (n = 60)</th>
<th>Remained in study (n = 72)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Varsity sport played</td>
<td></td>
<td></td>
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<tr>
<td>Field Hockey</td>
<td>1</td>
<td>1.7</td>
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<td>Rugby</td>
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<td>0.0</td>
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<tr>
<td>Cross Country</td>
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<td>0.0</td>
</tr>
<tr>
<td>Rowing</td>
<td>5</td>
<td>8.3</td>
</tr>
<tr>
<td>Wrestling</td>
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<td>0.0</td>
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<tr>
<td>Track &amp; Field</td>
<td>4</td>
<td>6.7</td>
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<tr>
<td>Skiing (alpine)</td>
<td>2</td>
<td>3.3</td>
</tr>
<tr>
<td>Skiing (Nordic)</td>
<td>2</td>
<td>3.3</td>
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<tr>
<td>Individual vs. team sport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>11</td>
<td>18.3</td>
</tr>
<tr>
<td>Team</td>
<td>49</td>
<td>81.7</td>
</tr>
<tr>
<td>Years played varsity sport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>5.0</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
<td>23.3</td>
</tr>
<tr>
<td>4</td>
<td>24</td>
<td>40.0</td>
</tr>
<tr>
<td>5</td>
<td>17</td>
<td>28.3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Years of eligibility left</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>15</td>
<td>25.0</td>
</tr>
<tr>
<td>1</td>
<td>25</td>
<td>41.7</td>
</tr>
<tr>
<td>2</td>
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<td>26.7</td>
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<td>3</td>
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<td>5.0</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Hours/week in sport activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>6-10</td>
<td>7</td>
<td>11.7</td>
</tr>
<tr>
<td>11-15</td>
<td>21</td>
<td>35.0</td>
</tr>
<tr>
<td>More than 15 hours</td>
<td>31</td>
<td>51.7</td>
</tr>
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</table>

Note: Identical demographic questionnaires were included in both the T1 and T2 surveys. The purpose of including the information from T1 (versus T2) on particular variables was to make a direct comparison between the two groups (i.e., those who completed T1 but did not complete T2 versus those who completed both T1 and T2) allowing us to describe participants who remained in the study versus those who dropped out due to attrition. Note that some of the variables (e.g., years played in varsity sport, years of eligibility left, hours/week in sport activities, etc.) may have changed over the course of the study (i.e., time period between T1 and T2).
Table 2.

Scores across multiple variables (T1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Attrition (n = 60)</th>
<th>Remained in study (n = 72)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>AIMS</td>
<td>39.83</td>
<td>5.25</td>
</tr>
<tr>
<td>FS</td>
<td>48.01</td>
<td>7.28</td>
</tr>
<tr>
<td>STAI Y-1</td>
<td>39.06</td>
<td>10.61</td>
</tr>
<tr>
<td>Brief COPE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Distraction</td>
<td>4.68</td>
<td>1.50</td>
</tr>
<tr>
<td>Active Coping</td>
<td>5.60</td>
<td>1.57</td>
</tr>
<tr>
<td>Denial</td>
<td>2.43</td>
<td>0.90</td>
</tr>
<tr>
<td>Substance Use</td>
<td>2.68</td>
<td>1.17</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>4.90</td>
<td>1.71</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>4.70</td>
<td>1.83</td>
</tr>
<tr>
<td>Behavioural Disengagement</td>
<td>2.53</td>
<td>0.92</td>
</tr>
<tr>
<td>Venting</td>
<td>3.80</td>
<td>1.47</td>
</tr>
<tr>
<td>Positive Reframing</td>
<td>5.01</td>
<td>1.67</td>
</tr>
<tr>
<td>Planning</td>
<td>5.21</td>
<td>1.73</td>
</tr>
<tr>
<td>Humour</td>
<td>4.11</td>
<td>1.80</td>
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<tr>
<td>Acceptance</td>
<td>5.15</td>
<td>1.70</td>
</tr>
<tr>
<td>Religion</td>
<td>2.93</td>
<td>1.51</td>
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<tr>
<td>Self-Blame</td>
<td>4.31</td>
<td>2.02</td>
</tr>
<tr>
<td>CES-DS</td>
<td>14.18</td>
<td>9.55</td>
</tr>
<tr>
<td>SWLS</td>
<td>25.30</td>
<td>6.31</td>
</tr>
<tr>
<td>SVS</td>
<td>30.55</td>
<td>7.25</td>
</tr>
</tbody>
</table>

*Note.* For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. AIMS = Athletic Identity Measurement Scale; FS = Flourishing Scale; STAI Y-1 = State-Trait Anxiety Inventory (Form Y-1); Brief COPE = Brief COPE Inventory; CES-DS = Center Epidemiologic Studies – Depression Scale; SWLS = Satisfaction With Life Scale; SVS = Subjective Vitality Scale.
Procedures

After obtaining approval from the Behavioural Research Ethics Board at the University of British Columbia, official letters were sent to the Athletic Directors at their respective academic institutions. The letter included information about the purpose of the study, as well as the corresponding study procedures (see Appendix A). Following their verbal and/or written communication of interest in the study, official letters were sent to varsity sport coaches, informing them of the study (see Appendix B). The graduate student researcher inquired with coaches about scheduling a mutually convenient time for in-person and virtual participant recruitment. The graduate student researcher attended varsity sport practices and meetings to inform athletes of the study, inviting eligible athletes to participate. Prospective participants were provided information about who was eligible for the study, instructions on how they could access the anonymous, online survey. Additionally, athletes were provided an opportunity to ask the graduate student researcher any questions that they had regarding the study. Prospective participants were informed of the general timeline of the study and other important information pertaining to purpose of the study, study risks and benefits, study procedures, consent, and confidentiality.

Given that varsity sports teams had varying schedules and competition seasons, the graduate student researcher contacted teams (athletes) at two distinct time periods during their final season of competition and shortly thereafter. Note that the times at which the graduate student researcher contacted teams (athletes) varied depending on the sport, league, and academic institution. There were three “waves” of participant recruitment which spanned from January, 2015 to December, 2015 capturing winter (January - May), spring/summer
(March - August), and fall (July – December) sport seasons. The graduate student researcher manually tracked the trajectory of each sport teams’ season and contacted participants as they cycled through their seasons. More specifically, participants were recruited and asked to complete the anonymous, online survey within approximately one month of commencing their final competitive season. This time frame was selected in light of Lally’s (2007) study wherein data collection occurred at the outset of athletes’ final season of competition.

Following the completion of their final season, participants were instructed to complete the anonymous, online survey a second time approximately three months after sport retirement. As the effects of post-retirement adjustment have been found to significantly decline approximately one year after sport retirement (Martin et al., 2014), the present study aimed to capture athletes’ transition difficulties at a time when they are potentially most affected by the change (i.e., three months post-retirement). Participants were asked to think of a nickname (versus their real name to ensure anonymity) which would serve to link their T1 and T2 surveys. The instructions provided for this item encouraged them to write down their unique nickname and store it in a safe and accessible place as they would need to use the same nickname at both T1 and T2. Participants were sent a generic e-mail reminding them to access the study around the times of both data collection points. A three week grace period was provided for athletes to complete the surveys following the reminder e-mail(s). Data were collected and stored online. Completed surveys were subsequently printed out and data were entered manually into IBM SPSS software.

A sample of the survey is provided in the appendices. The first page of the survey was a welcome page which aimed to provide a brief rationale about the study and included
participant instructions, the contact information of the Principal Investigator and the graduate student researcher, and the contact information regarding concerns about the rights of research participants (see Appendix C). The next page was the first demographic questionnaire titled, “Sport Participation Information” and included fill-in the blank and multiple choice questions regarding athletes’ previous and current involvement in sport (see Appendix D). Following this, participants completed the Athletic Identity Measurement Scale (AIMS; see Appendix E), the Flourishing Scale (FS; see Appendix F), the State-Trait Anxiety Inventory (STAI Y-1; see Appendix G), the Brief COPE Inventory (Brief COPE; see Appendix H), the Centre for Epidemiologic Studies-Depression Scale (CES-DS; see Appendix I), the Satisfaction With Life Scale (SWLS; see Appendix J), and the Subjective Vitality Scale (SVS; see Appendix K). Next was the second demographic questionnaire titled, “Demographic Information” which contained questions eliciting generic demographic information from participants (see Appendix L). The last page aimed to thank participants for participating (see Appendix M). By clicking “submit”, the participant was redirected to a webpage which invited them to enter their name in a draw to win one of two $50.00 gift cards to Chapters/Indigo. The authors were diligent in emphasizing that the participants’ identity was not associated with the external webpage.

Measures

Demographic Questionnaire. Information about participant characteristics were obtained (i.e., sex, age, race, gender, marital status, employment status, level of social support, etc.). Multiple items focused on sport specific information (i.e., participants asked to indicate which sport was being played at the varsity level, years spent in sport across the
lifetime, start age, years of varsity eligibility left, current affiliation with the sport, average hours per week spent in sports-related activity, etc.). Additionally, two items were asked to determine the participants’ eligibility for the study (e.g., “Are you currently participating in your sport with your varsity team?” and “Are you currently participating in your sport at the professional, national, or Olympic level?”).

**Athletic Identity Measurement Scale (AIMS).** The AIMS is used to measure the strength and exclusivity of athletic identity including its cognitive, affective, and social foundations\(^2\) (Brewer, Van Raalte, & Linder, 1993). It is a 7-item, self-report measure to which respondents indicate 1 (*strongly agree with the statement*) to 7 (*strongly disagree with the statement*). A composite score is then calculated for each participant by summing up scores on individual items, with higher scores indicating stronger and more exclusive athletic identity. In 2001, Brewer and Cornelius developed norms to which male and female athletes and non-athletes could be compared. Brewer et al. (1993) demonstrated evidence of construct

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\(^2\) The original unidimensional model proposed by Brewer et al. (1993) had 10 items as indicators of one latent variable, “athletic identity”. In subsequent years, three other models of athletic identity were proposed: (a) a correlated four-factor model (Martin et al., 1994, 1997), (b) a correlated three-factor model (Brewer, 1990; Brewer, Boin, and Petitpas, 1993) and, (c) a correlated three-factor model which differed from the above models (Hale, James, & Stambulova, 1999). A comparative analysis of AIMS factor models was performed to evaluate if a model provided an acceptable fit, and to examine which model provided the best fit to the data (Brewer & Cornelius, 2001). The results indicated strong support for a multidimensional AIMS factor structure in which three first order factors were subordinate to a higher order athletic identity factor. A higher order model, which included 7 of the 10 original AIMS items, was developed and then cross-validated with a large sample (n = 2,729) from many different sports and levels of competition. This measure was found to be superior in comparison of other unidimensional and multidimensional models. Furthermore, the internal consistency of the measure remained high (alpha = .81). These results confirmed the controversy that the AIMS is multidimensional (Brewer, 1990; Brewer, Boin, & Petitpas, 1993; Hale, 1995; Hale et al., 1999; Martin et al., 1994, 1997) and indicated that, consistent with the theoretical underpinnings of the AIMS (as originally developed by Brewer, Van Raalte, & Linder, 1993), athletic identity can, indeed, be conceptualized as a composite of multiple related factors. Due to the higher order athletic identity factor, it is still acceptable to sum the scores of the 7 items to obtain a total score reflecting the higher-order construct of athletic identity (see Brewer & Cornelius (2001) for more information).
validity for the AIMS as they found that scores among university students at a large Southwestern university (US) were highly correlated with scores on the Importance of Sports Competence sub-scale of the Perceived Importance Profile (PIP; \( r = 0.83 \)). Brewer et al. (1993) also found high internal consistency (coefficient alpha= 0.93) and test-retest reliability coefficient of 0.83 over a two week period. Murphy et al., (1996) also found high internal consistency (coefficient alpha ranging from 0.80-0.93). According to Visek, Hurst, Maxwell and Watson II (2008), the AIMS is the most frequently used measure of athletic identity by both researchers and practitioners in the world. It has been used primarily in English-speaking countries, although several other countries have utilized it in their sport research investigations (Prorios, 2012). The AIMS has been incorporated into various studies with diverse athlete populations ranging from recreational sports participation to Olympic and professional levels of competition.

**Flourishing Scale (FS).** The FS is used to measure psychological flourishing, prosperity, and feelings, both positive and negative, including self-perceived success in relationships, self-esteem, purpose, and optimism (Diener, Wirtz, Tov, Kim-Prieto, Choi, Oishi, & Biswas-Diener, 2009). It is an 8-item, self-report measure to which respondents indicate 1 (strongly disagree) to 7 (strongly agree). A composite score is calculated, with higher scores representing a person with many psychological resources and strengths (Diener et al., 2009). The measure includes items on social relationships: experiencing supportive and rewarding relationships, contributing to the happiness of others, and being respected by others. It also includes one item on the purpose and meaning of life and another item on being engaged and interested in one’s life activities. Items were also included which tapped
into self-respect and optimism, as well as feelings of competency and capability. Although the scale does not provide independent measures of facets of well-being, it yields an overview of positive functioning across diverse domains (Diener et al., 2009). The FS demonstrates high reliability and high convergence validity with similar scales (.78 and .73, respectively).

**State-Trait Anxiety Inventory (STAI; Form Y-1 only).** The STAI is used to measure two fundamentally different types of anxiety: state and trait anxiety (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983). Note that the authors of the present study used Form Y-1 only (state anxiety) to measure participants’ current symptoms of anxiety, in addition to distinguishing anxiety symptoms from depressive symptomology. STAI Form Y-1 is a 20-item, self-report measure to which respondents indicate 1 (*not at all*) to 4 (*very much so*). Items are coded according to the scoring manual which requires negative keyed items (3, 4, 6, 7, 9, 12, 13, 14, 17, 18) to be scored normally and positive keyed items (1, 2, 5, 8, 10, 11, 15, 16, 19, 20) to be reverse scored. A composite score is then calculated, with higher scores indicating elevated levels of state anxiety. Internal consistency coefficients for the scale have ranged from .86 to .95; test-retest reliability coefficients have ranged from .65 to .75 over a 2-month interval (Spielberger et al., 1983). According to Spielberger (1987), considerable evidence supports the construct and concurrent validity of the scale. Test-retest coefficients for this measure ranged from .69 to .89 (Spielberger, 1987). The STAI is primarily used in both clinical and research settings.

**Brief COPE Inventory (Brief COPE).** The Brief COPE is used to measure fourteen conceptually different coping strategies including active coping, planning, positive
reframing, acceptance, humour, religion, emotional support, instrumental support, self-
distraction, denial, venting, substance use, behavioural disengagement, and self-blame
(Carver, 1997). It is a 28-item, self-report measure to which respondents indicate 1 (I haven’t
been doing this at all) to 4 (I’ve been doing this a lot). Individual items which correspond to
specific coping subscales (fourteen in total) are then summed: items 1 and 19 (self-
distraction), items 2 and 7 (active coping), items 3 and 8 (denial), items 4 and 11 (substance
use), items 5 and 15 (emotional support), items 10 and 23 (instrumental support), items 6 and
16 (behavioural disengagement), items 9 and 21 (venting), items 12 and 17 (positive
reframing), items 14 and 25 (planning), items 18 and 28 (humour), items 20 and 24
(acceptance), items 22 and 27 (religion), and items 13 and 26 (self-blame). Respondents were
asked to consider current stressors (e.g., “These items deal with the ways you’ve been coping
with the stresses of your varsity sport participation”). Heightened scores on each subscale
indicate the presence of the corresponding coping strategy (no overall total score). Several
studies have collapsed the coping scales into various categorizations of coping styles (i.e.,
maladaptive vs. adaptive coping, problem-focused vs. emotion-focused coping, engagement
vs. disengagement coping, etc.); however, the test developers do not have a standard rule of
how to generate these categorizations and instead leave this to the user’s discretion.
According to Carver (1997), the reliabilities of all the subscales meet or exceed the 0.50
minimally acceptable cut off, with all scales exceeding 0.60 except for venting, denial, and
acceptance. Available evidence regarding the Brief COPE Inventory suggests that many of
the coping responses that this instrument assesses are integral to the coping process in
general, with some being predicative of physiological effects (Carver, 1997). The Brief

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COPE Inventory evolved from the COPE which was originally developed by Carver, Sheier, and Weintraub in 1989. Carver’s (1997) subsequent revision of the measure omits two full scales of the COPE, reduces others to two items per subscale, and adds one scale. Both the COPE and the Brief COPE have been used in research studies investigating athlete populations (e.g., Grove et al., 1997).

**Centre for Epidemiologic Studies-Depression Scale (CES-DS).** The CES-DS is used to measure depressive symptomology in the general population, and places an emphasis on the affective component including depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite, and sleep disturbance (Radloff, 1977). Its purpose differs from other depressive scales which are used for diagnostic purposes at clinical intake or for the evaluation of severity/illness over the course of a treatment. The CES-DS is a 20 item, self-report measure to which respondents indicate 1 (*rarely or none of the time*) to 4 (*most of all of the time*). Scores on each item are then coded according to the scoring manual, with raw scores coded in the following way: 1 to 0, 2 to 1, 3 to 2, 4 to 3, with the reverse scoring of positive keyed items (i.e., items 4, 8, 12, 16). A composite score is then calculated, with higher scores indicating the presence of more depressive symptomology. The CES-DS has demonstrated very high internal consistency (Cronbach’s alpha range from .84 to .85 for non-clinical samples). Adequate test-retest reliability was established (clinical and non-clinical samples range from .48 to .67), with shorter test-retest time intervals producing higher correlations than long term intervals. Validity was demonstrated by patterns of correlations with other self-report measures, by
correlations with other clinical ratings of depression, and by relationships with other variables which support its construct validity (Radloff, 1977).

**Satisfaction with Life Scale (SWLS).** The SWLS is used to measure an individual’s global judgement of his/her life satisfaction, tapping in to one of three components considered integral to the larger construct of subjective well-being (Diener, Emmons, Larsen, & Griffith, 1985). It is a 5-item, self-report measure to which respondents indicate 1 (*strongly disagree*) to 7 (*strongly agree*). The responses are all keyed in a positive direction. A composite score is calculated, with higher scores indicating greater life satisfaction. Cut off scores have been identified by Diener which facilitate a deeper understanding of respondents’ scores on this measure: 30-35 (highly satisfied; very high score), 25-29 (high score), 20-24 (average score), 15-19 (slightly below average score), 10-14 (dissatisfied), and 5-9 (extremely dissatisfied). The SWLS demonstrates good psychometric properties (Pavot, 2008). Specifically, Pavot and Diener (1993) presented data from six studies in which the coefficient alpha for the SWLS ranged from 0.79 to 0.89, indicating that the scale had high internal consistency. More recently, Adler and Fagley (2005) reported coefficient alphas of 0.87. Examples of test-retest reliability include 0.80 (Steger, Frazier, Oishi, & Kaler, 2006) for a one month interval and 0.54 over a four year span. The SWLS has been used in research studies investigating athlete populations (e.g., Martin et al., 2014).

**Subjective Vitality Scale (SVS; State level version).** The SVS is used to measure vitality or the state of feeling alive and alert to having energy (Ryan & Frederick, 1997). Vitality is considered to be a component of eudaimonic well-being and physical well-being (Ryan & Deci, 2001; Salama-Younes, 2011). Being vital and energetic contributes to
psychological wellness and enhanced functioning. The SVS (state level version) is a 7 item, self-report measure to which respondents indicate 1 (not at all true) to 7 (very true). All items are keyed in a positive direction, requiring respondents to indicate how true the statements are for them right now, in this moment. Scores of individual items are then summed to form a composite score, with a higher score indicating a better condition. According to Salama-Younes, Montazeri, Ismail, and Roncin (2009), the SVS demonstrates moderate internal consistency (Cronbach’s alpha coefficient = .83) and satisfactory reliability evidence.
CHAPTER IV

Results

Descriptive statistics (i.e., means and standard deviations) were calculated for several variables at both T1 and T2 (see Table 3). In addition to the participant demographic data that was discussed in the methods section, the descriptive statistics provided important information about our sample. Particularly, the overall group mean of athletic identity at T1 ($M = 37.46, SD = 6.18$) was statistically different ($p = .00$) at T2 ($M = 35.25, SD = 7.23$), indicating that, as a group, our sample’s identification with the athlete role declined after athletes transitioned out of varsity sport. As demonstrated in Table 3, many of the variables remained the same or changed minimally. Although not statistically significant, one notable change pertained to the means of state anxiety which seemed to increase from T1 ($M = 34.96, SD = 9.44$) to T2 ($M = 36.81, SD = 10.23$), indicating that, as a group, state anxiety tended to increase following the transition out of varsity sport. Although both time points are reported in Table 3, only T2 data, post-sport retirement adjustment data, were needed to answer the research questions.
Table 3.
Means and standard deviations across multiple variables at T1 and T2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>T1</th>
<th>SD</th>
<th>T2</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIMS</td>
<td>37.46</td>
<td>6.18</td>
<td>35.25*</td>
<td>7.23</td>
<td>-3.26</td>
<td>71</td>
<td>.00</td>
</tr>
<tr>
<td>FS</td>
<td>49.08</td>
<td>5.29</td>
<td>48.89</td>
<td>6.28</td>
<td>-.29</td>
<td>71</td>
<td>.77</td>
</tr>
<tr>
<td>STAI Y-1</td>
<td>34.96</td>
<td>9.44</td>
<td>36.81</td>
<td>10.23</td>
<td>1.40</td>
<td>71</td>
<td>.17</td>
</tr>
<tr>
<td>Brief COPE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Distraction</td>
<td>4.93</td>
<td>1.55</td>
<td>4.85</td>
<td>1.56</td>
<td>-.48</td>
<td>71</td>
<td>.63</td>
</tr>
<tr>
<td>Active Coping</td>
<td>5.89</td>
<td>1.54</td>
<td>5.71</td>
<td>1.41</td>
<td>-.92</td>
<td>71</td>
<td>.36</td>
</tr>
<tr>
<td>Denial</td>
<td>2.49</td>
<td>1.04</td>
<td>2.50</td>
<td>1.06</td>
<td>.09</td>
<td>71</td>
<td>.93</td>
</tr>
<tr>
<td>Substance Use</td>
<td>2.26</td>
<td>0.73</td>
<td>2.39</td>
<td>0.93</td>
<td>1.18</td>
<td>71</td>
<td>.24</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>5.33</td>
<td>1.79</td>
<td>5.11</td>
<td>1.52</td>
<td>-1.03</td>
<td>71</td>
<td>.31</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>5.16</td>
<td>1.75</td>
<td>5.11</td>
<td>1.44</td>
<td>-.26</td>
<td>71</td>
<td>.79</td>
</tr>
<tr>
<td>Behavioural Disengagement</td>
<td>2.61</td>
<td>1.64</td>
<td>2.49</td>
<td>0.93</td>
<td>-.58</td>
<td>71</td>
<td>.56</td>
</tr>
<tr>
<td>Venting</td>
<td>3.82</td>
<td>1.47</td>
<td>3.71</td>
<td>1.01</td>
<td>-.68</td>
<td>71</td>
<td>.49</td>
</tr>
<tr>
<td>Positive Reframing</td>
<td>5.58</td>
<td>1.64</td>
<td>5.40</td>
<td>1.49</td>
<td>-1.04</td>
<td>71</td>
<td>.30</td>
</tr>
<tr>
<td>Planning</td>
<td>5.59</td>
<td>1.61</td>
<td>5.56</td>
<td>1.46</td>
<td>-.24</td>
<td>71</td>
<td>.82</td>
</tr>
<tr>
<td>Humour</td>
<td>4.47</td>
<td>1.75</td>
<td>4.26</td>
<td>1.48</td>
<td>-1.11</td>
<td>71</td>
<td>.27</td>
</tr>
<tr>
<td>Acceptance</td>
<td>5.61</td>
<td>1.53</td>
<td>5.31</td>
<td>1.62</td>
<td>-1.38</td>
<td>71</td>
<td>.17</td>
</tr>
<tr>
<td>Religion</td>
<td>3.25</td>
<td>1.84</td>
<td>3.41</td>
<td>1.93</td>
<td>1.30</td>
<td>71</td>
<td>1.9</td>
</tr>
<tr>
<td>Self-Blame</td>
<td>4.11</td>
<td>1.49</td>
<td>3.65*</td>
<td>1.53</td>
<td>-2.50</td>
<td>71</td>
<td>.02</td>
</tr>
<tr>
<td>CES-DS</td>
<td>12.04</td>
<td>8.40</td>
<td>11.64</td>
<td>8.94</td>
<td>-.33</td>
<td>71</td>
<td>.74</td>
</tr>
<tr>
<td>SWLS</td>
<td>26.26</td>
<td>5.73</td>
<td>26.53</td>
<td>5.53</td>
<td>.47</td>
<td>71</td>
<td>.64</td>
</tr>
<tr>
<td>SVS</td>
<td>31.69</td>
<td>6.17</td>
<td>30.44</td>
<td>6.35</td>
<td>-1.74</td>
<td>71</td>
<td>.09</td>
</tr>
</tbody>
</table>

Note. Paired sample t-test. N = 72. For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. AIMS = Athletic Identity Measurement Scale; FS = Flourishing Scale; STAI Y-1 = State-Trait Anxiety Inventory (Form Y-1); Brief COPE = Brief COPE Inventory; CES-DS = Center Epidemiologic Studies – Depression Scale; SWLS = Satisfaction With Life Scale; SVS = Subjective Vitality Scale. *The mean difference is significant at the .05 level.
Research Question One

The primary research question asked if athletes who scored higher in athletic identity had poorer mental health and well-being outcomes than athletes who scored lower in athletic identity, after sport retirement. Five hypotheses were proposed and were tested using independent univariate analyses of variance (ANOVA). For these analyses, participants were classified into groups as either high (n = 14), middle (n = 30), or low (n = 28) athletic identity using a one-third split of the AIMS distribution (cut points = 34, 42). A one-third split of the AIMS distribution was used previously in a study conducted by Grove et al. (1997) which compared coping strategies across two groups of athletic identity (high vs. low). The use of a one-third split was also recommended by the test developer, Britton Brewer, through e-mailed personal communication (B. Brewer, personal communication, December 6, 2015).

Hypothesis One. The first hypothesis stated that athletes who scored higher in athletic identity would score higher on a measure of depressive symptomology in comparison to athletes who scored lower in athletic identity, after sport retirement. A one-way ANOVA was calculated on participants’ athletic identity scores and depressive symptomology. Results indicated that the athletic identity groups (i.e., high, middle, low) differed significantly in the way they expressed depressive symptoms, F (2, 69) = 3.64, p = .031 (p < .05), $\eta_p^2 = .10$.

Post hoc comparisons using the Tukey Honest Significance Difference (Tukey HSD) test indicated that the mean score for the high athletic identity group was significantly different from the low athletic identity group on depressive symptomology ($p = .03$), indicating that athletes with stronger and more exclusive athletic identities (high athletic
identity group) experienced more depressive symptoms in comparison to athletes who identified less with the athlete role (low athletic identity group). However, the middle athletic identity group did not significantly differ from the high ($p = .10$) and the low ($p = .73$) athletic identity groups (see Table 4 for means and multiple comparisons).

### Table 4.

Means and multiple comparisons on athletic identity (AI) groups and depressive symptomology.

<table>
<thead>
<tr>
<th>AI Group</th>
<th>$N$</th>
<th>$M$</th>
<th>Comparison*</th>
<th>Mean difference</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>28</td>
<td>9.46</td>
<td>Low</td>
<td>Middle</td>
<td>-1.70</td>
</tr>
<tr>
<td>Middle</td>
<td>30</td>
<td>11.17</td>
<td>Middle</td>
<td>High</td>
<td>-7.54*</td>
</tr>
<tr>
<td>High</td>
<td>14</td>
<td>17.00</td>
<td>Middle</td>
<td>High</td>
<td>-5.83</td>
</tr>
</tbody>
</table>

*Tukey HSD

*The mean difference is significant at the .05 level.

**Hypothesis Two.** The second hypothesis stated that athletes who scored higher in athletic identity would score higher on a measure of state anxiety in comparison to athletes who scored lower in athletic identity, after sport retirement. Results indicated that athletic identity (i.e., high, middle, low) groups differed significantly in the way they expressed anxiety, $F (2, 69) = 4.46, p = .015 \ (p < .05), \eta^2_p = .12$.

Post hoc comparisons using the Tukey HSD test indicated that the mean score for the high athletic identity group significantly differed from the low athletic identity group on state anxiety ($p = .01$), indicating that athletes with stronger and more exclusive athletic identities (high athletic identity group) experienced more anxiety in comparison to athletes who identified less with the athlete role (low athletic identity group). However, the middle athletic identity group did not significantly differ from the high ($p = .18$) and the low ($p = .30$) athletic identity groups (see Table 5 for means and multiple comparisons).
Table 5.

Means and multiple comparisons on athletic identity (AI) groups and state anxiety.

<table>
<thead>
<tr>
<th>AI Group</th>
<th>N</th>
<th>M</th>
<th>Comparison</th>
<th>Mean difference</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>28</td>
<td>33.58</td>
<td>Low</td>
<td>-3.84</td>
<td>.29</td>
</tr>
<tr>
<td>Middle</td>
<td>30</td>
<td>37.20</td>
<td>High</td>
<td>-9.50*</td>
<td>.01</td>
</tr>
<tr>
<td>High</td>
<td>14</td>
<td>42.86</td>
<td>High</td>
<td>-5.66</td>
<td>.18</td>
</tr>
</tbody>
</table>

*Tukey HSD
*The mean difference is significant at the .05 level.

**Hypothesis Three.** The third hypothesis stated that athletes who scored higher in athletic identity would score lower on a measure of life satisfaction than athletes who scored lower in athletic identity, after sport retirement. No significant difference was found between the athletic identity groups on life satisfaction, $F(2, 69) = .72, p = .49 (p > .05), \eta_p^2 = .02$.

**Hypothesis Four.** The fourth hypothesis stated that athletes who scored higher in athletic identity would score lower on a measure of flourishing than athletes who scored lower in athletic identity, after sport retirement. No significant difference was found between the athletic identity groups on flourishing, $F(2, 69) = .04, p = .96 (p > .05), \eta_p^2 = .00$.

**Hypothesis Five.** The fifth hypothesis stated that athletes who scored higher in athletic identity would score lower on a measure of subjective vitality than athletes who scored lower in athletic identity, after sport retirement. No significant difference was found between the athletic identity groups on subjective vitality, $F(2, 69) = 1.81, p = .17 (p > .05), \eta_p^2 = .05$. 
Research Question Two

The second research question inquired about the relationship of coping on mental health and well-being outcomes.

Hypothesis Six. The sixth hypothesis stated that different patterns of coping will be related to athlete mental health and well-being outcomes, after sport retirement. This hypothesis was tested using correlation. We decided to align our approach to organizing and understanding the coping strategies with the test developer, Charles Carver, who recommended that researchers consider each subscale on the coping measure separately to establish its relationship to other variables (instead of generating our own “adaptive” and “maladaptive” coping strategy composites) (Carver, 2007). For the purposes of organizing the data, we separated the well-being outcomes (i.e., flourishing, life satisfaction, and vitality) from the mental health outcomes (i.e., depressive symptomology and anxiety) while examining their relationships with coping.

With regard to the well-being outcome variables, the correlational analysis indicated that active coping was positively correlated with flourishing ($r = .35, p = .00$), denial was negatively correlated with flourishing ($r = -.25, p = .04$), satisfaction with life ($r = -.36, p = .00$), and subjective vitality ($r = -.41, p = .00$), and substance use was negatively correlated with flourishing ($r = -.25, p = .03$) and satisfaction with life ($r = -.27, p = .02$). The use of instrumental support was positively correlated with flourishing ($r = .27, p = .02$), behavioural disengagement was negatively correlated with flourishing ($r = -.39, p = .00$) and satisfaction with life ($r = -.44, p = .00$), and positive reframing was positively correlated with flourishing ($r = .33, p = .01$), satisfaction with life ($r = .34, p = .00$), and subjective vitality ($r = .26, p = .00$).
.03). Additionally, planning was positively related with flourishing \((r = .36, p = .02)\), acceptance was positively related with flourishing \((r = .25, p = .034)\), and self-blame was negatively correlated with flourishing \((r = -.42, p = .00)\), satisfaction with life \((r = -.40, p = .00)\), and subjective vitality \((r = -.31, p = .01)\). See Table 6 for correlations on coping strategies and well-being outcome variables.

**Table 6.**

*Correlations between coping strategies and well-being (positive) outcome variables.*

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>FS</th>
<th>SWLS</th>
<th>SVS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(r)</td>
<td>(p)</td>
<td>(r)</td>
</tr>
<tr>
<td>Self-Distraction</td>
<td>-.02</td>
<td>.87</td>
<td>-.17</td>
</tr>
<tr>
<td>Active Coping</td>
<td>.35**</td>
<td>.00</td>
<td>.19</td>
</tr>
<tr>
<td>Denial</td>
<td>-.25*</td>
<td>.04</td>
<td>-.36**</td>
</tr>
<tr>
<td>Substance Use</td>
<td>-.25*</td>
<td>.03</td>
<td>-.27*</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>.18</td>
<td>.14</td>
<td>.16</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>.27*</td>
<td>.02</td>
<td>.17</td>
</tr>
<tr>
<td>Behaviour-Disengagement</td>
<td>-.39**</td>
<td>.00</td>
<td>-.44**</td>
</tr>
<tr>
<td>Venting</td>
<td>.01</td>
<td>.93</td>
<td>-.09</td>
</tr>
<tr>
<td>Positive Reframing</td>
<td>.33**</td>
<td>.01</td>
<td>.34**</td>
</tr>
<tr>
<td>Planning</td>
<td>.36**</td>
<td>.00</td>
<td>.11</td>
</tr>
<tr>
<td>Humour</td>
<td>.03</td>
<td>.83</td>
<td>-.03</td>
</tr>
<tr>
<td>Acceptance</td>
<td>.25*</td>
<td>.04</td>
<td>.16</td>
</tr>
<tr>
<td>Religion</td>
<td>.09</td>
<td>.48</td>
<td>.04</td>
</tr>
<tr>
<td>Self-Blame</td>
<td>-.42**</td>
<td>.00</td>
<td>-.40**</td>
</tr>
</tbody>
</table>

*Note. N = 72. For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed. Coping Strategy = Subscales of the Brief COPE Inventory; FS = Flourishing Scale; SWLS = Satisfaction With Life Scale; SVS = Subjective Vitality Scale.**

**Correlation is significant at the 0.01 level (two-tailed).**

*Correlation is significant at the 0.05 level (two-tailed).*

With regard to the mental health outcomes, the correlational analysis indicated that self-distraction was positively correlated with state anxiety \((r = .25, p = .03)\) and depressive
symptomology ($r = .37, p = .00$), denial was positively correlated with state anxiety ($r = .57, p = .00$) and depressive symptomology ($r = .65, p = .00$), and substance use was positively correlated with state anxiety ($r = .37, p = .00$) and depressive symptomology ($r = .39, p = .00$). The use of behavioural disengagement was positively correlated with state anxiety ($r = .41, p = .00$) and depressive symptomology ($r = .53, p = .00$), venting was positively correlated with state anxiety ($r = .25, p = .03$) and depressive symptomology ($r = .37, p = .00$), and positive reframing was negatively correlated with state anxiety ($r = -.26, p = .03$). Additionally, self-blame was positively correlated with state anxiety ($r = .54, p = .00$) and depressive symptomology ($r = .57, p = .00$). Please refer to Table 7 for correlations on coping strategies and mental health outcomes.
Table 7.

Correlations between coping strategies and mental health (negative) outcome variables.

<table>
<thead>
<tr>
<th>Coping Strategy</th>
<th>STAI Y-1</th>
<th></th>
<th>CES-DS</th>
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<tr>
<td></td>
<td>$r$</td>
<td>$p$</td>
<td>$r$</td>
<td>$p$</td>
</tr>
<tr>
<td>Self-Distraction</td>
<td>.25*</td>
<td>.03</td>
<td>.37**</td>
<td>.00</td>
</tr>
<tr>
<td>Active Coping</td>
<td>-.14</td>
<td>.25</td>
<td>-.14</td>
<td>.24</td>
</tr>
<tr>
<td>Denial</td>
<td>.57**</td>
<td>.00</td>
<td>.65**</td>
<td>.00</td>
</tr>
<tr>
<td>Substance Use</td>
<td>.37**</td>
<td>.00</td>
<td>.39**</td>
<td>.00</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>.04</td>
<td>.76</td>
<td>.02</td>
<td>.87</td>
</tr>
<tr>
<td>Instrumental Support</td>
<td>-.05</td>
<td>.68</td>
<td>-.09</td>
<td>.46</td>
</tr>
<tr>
<td>Behaviour-Disengagement</td>
<td>.41**</td>
<td>.00</td>
<td>.53**</td>
<td>.00</td>
</tr>
<tr>
<td>Venting</td>
<td>.25*</td>
<td>.03</td>
<td>.37**</td>
<td>.00</td>
</tr>
<tr>
<td>Positive Reframing</td>
<td>-.26*</td>
<td>.03</td>
<td>-.20</td>
<td>.09</td>
</tr>
<tr>
<td>Planning</td>
<td>-.03</td>
<td>.78</td>
<td>-.01</td>
<td>.95</td>
</tr>
<tr>
<td>Humour</td>
<td>.03</td>
<td>.83</td>
<td>.09</td>
<td>.45</td>
</tr>
<tr>
<td>Acceptance</td>
<td>-.12</td>
<td>.31</td>
<td>-.09</td>
<td>.45</td>
</tr>
<tr>
<td>Religion</td>
<td>-.04</td>
<td>.73</td>
<td>.02</td>
<td>.89</td>
</tr>
<tr>
<td>Self-Blame</td>
<td>.54**</td>
<td>.00</td>
<td>.57**</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note. $N = 72$. For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed.; Coping Strategy = Subscales of the Brief COPE Inventory; STAI Y-1 = State-Trait Anxiety Inventory (Form Y-1); CES-DS = Center Epidemiologic Studies – Depression Scale; 

**Correlation is significant at the 0.01 level (two-tailed).

*Correlation is significant at the 0.05 level (two-tailed).

Research Question Three

The third research question asked which coping strategies were associated with higher athletic identity. The same groups of athletic identity (i.e., high, middle, low) which were developed using a one-third split of the athletic identity distribution (discussed above) were utilized to address this question.
Hypothesis Seven. The seventh hypothesis stated that athletes who scored higher in athletic identity would have different patterns of coping than athletes who scored lower in athletic identity, after sport retirement. Multiple independent one-way ANOVAs were conducted to test this hypothesis. Results indicated that athletic identity groups (i.e., high, middle, low) differed significantly in the way they utilized venting, $F(2, 69) = 4.40, p < .05, \eta^2_p = .11$.

Post hoc comparisons using the Tukey HSD test indicated that the mean score for the high athletic identity group ($M = 4.21$) significantly differed from the low athletic identity group ($M = 3.32$) on venting ($p = .02$), indicating that athletes with stronger and more exclusive athletic identities (high athletic identity group) utilized venting more than athletes who identified less with the athlete role (low athletic identity group). The middle athletic identity group did not significantly differ from the high ($p = .45$) and the low ($p = .12$) athletic identity groups. Please refer to Table 8 for means and multiple comparisons.

Table 8.

<table>
<thead>
<tr>
<th>AI Group</th>
<th>$N$</th>
<th>$M$</th>
<th>Comparison</th>
<th>Mean difference</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>28</td>
<td>3.32</td>
<td>Low</td>
<td>Middle</td>
<td>-.52</td>
</tr>
<tr>
<td>Middle</td>
<td>30</td>
<td>3.83</td>
<td>High</td>
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<td>-.89*</td>
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<tr>
<td>High</td>
<td>14</td>
<td>4.21</td>
<td>Middle</td>
<td>High</td>
<td>-.38</td>
</tr>
</tbody>
</table>

*aTukey HSD
*
The mean difference is significant at the .05 level.

In addition, results indicated that athletic identity groups (i.e., high, middle, low) differed significantly in the way they utilized self-distraction, $F(2, 69) = 4.93, p < .05, \eta^2_p = .13$. Post hoc comparisons also indicated that the mean score for the high athletic identity
group ($M = 4.43$) significantly differed from the low athletic identity group ($M = 5.93$) on self-distraction ($p = .01$), indicating that athletes with stronger and more exclusive athletic identities (high athletic identity group) utilized self-distraction more than athletes who identified less with the athlete role (low athletic identity group). Additionally, the mean score for the middle athletic identity group ($M = 4.73$) significantly differed from the high athletic identity group ($M = 5.93$) on self-distraction ($p = .04$), indicating that athletes with stronger and more exclusive athletic identities (high athletic identity group) utilized self-distraction more than athletes who identified with the athlete role to a moderate extent (middle athletic identity group). However, there was no significant difference between the low and middle athletic identity groups ($p = .72$). Please refer to Table 9 for means and multiple comparisons.

No significant differences were found between the athletic identity groups and active coping [$F (2, 69) = .40, p = .67 (p > .05), \eta^2_p = .01$], denial [$F (2, 69) = .42, p = .66 (p > .05), \eta^2_p = .01$], substance use [$F (2, 69) = .55, p = .58 (p > .05), \eta^2_p = .02$], use of emotional support [$F (2, 69) = .29, p = .73 (p > .05), \eta^2_p = .01$], use of instrumental support [$F (2, 69) = .46, p = .64 (p > .05), \eta^2_p = .01$], behavioural disengagement [$F (2, 69) = 1.41, p = .25 (p > .05), \eta^2_p = .04$], positive reframing [$F (2, 69) = .04, p = .96 (p > .05), \eta^2_p = .00$], planning [$F (2, 69) = .03, p = .98 (p > .05), \eta^2_p = .00$], humour [$F (2, 69) = .29, p = .75 (p > .05), \eta^2_p = .01$], acceptance [$F (2, 69) = .25, p = .78 (p > .05), \eta^2_p = .01$], religion [$F (2, 69) = .35, p = .70 (p > .05), \eta^2_p = .01$], and self-blame [$F (2, 69) = 1.12, p = .33 (p > .05), \eta^2_p = .03$].
### Table 9.

**Means and multiple comparisons on athletic identity (AI) groups and self-distraction.**

<table>
<thead>
<tr>
<th>AI Group</th>
<th>N</th>
<th>M</th>
<th>Self-distraction</th>
<th>Mean difference</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>28</td>
<td>4.43</td>
<td>Low Middle</td>
<td>-.31</td>
<td>.72</td>
</tr>
<tr>
<td>Middle</td>
<td>30</td>
<td>4.73</td>
<td>High</td>
<td>-1.50*</td>
<td>.01</td>
</tr>
<tr>
<td>High</td>
<td>14</td>
<td>5.93</td>
<td>Middle High</td>
<td>-1.19*</td>
<td>.04</td>
</tr>
</tbody>
</table>

*Tukey HSD

*The mean difference is significant at the .05 level.
CHAPTER V

Discussion

The purpose of this study was to investigate the relationships among athletic identity, mental health and well-being outcomes, and coping, as athletes retired from interuniversity sport at multiple large Western Canadian universities. This study included one hundred and thirty-two participants who completed the survey at T1, seventy two of whom completed the survey at T2. Descriptive and inferential statistics were obtained to address the research questions and hypotheses proposed at the beginning of the study. This section will provide a detailed discussion of the results of the study, while integrating the existing literature on athletic retirement. A body of work has emerged over the past three decades which has offered mixed findings on the nature of athletic career transition. Whereas some studies suggest that a significant proportion of athletes experience adjustment difficulties upon sport career retirement, other studies have obtained minimal evidence of distress (Grove et al., 1997). The present study offered new evidence on the decline of mental health for those athletes who identified strongly and exclusively with the athlete role following the termination of their athletic career. Findings pertaining to the impact of coping on mental health and well-being variables, and their relation to athletic identity, were also supported.

The Influence of Athletic Identity

The relationships among athletic identity, mental health, and well-being outcomes including depressive symptomology, state anxiety, life satisfaction, flourishing, and subjective vitality, were investigated.
Mental health outcomes. Multiple ANOVAs determined that a strong and exclusive athletic identity negatively impacted athlete mental health outcomes (i.e., depressive symptomology and state anxiety), after varsity sport retirement. Results indicated that athletes with higher athletic identity significantly differed from athletes with lower athletic identity with regards to their expression of depressive symptoms. Specifically, athletes in the high athletic identity group reported experiencing significantly more depressive symptoms ($M = 17.00$) than athletes with lower athletic identity ($M = 9.46$). This finding corroborates the findings of Brewer (1993) and Brewer et al., (1993), who found that strong and exclusive athletic identity leaves an athlete vulnerable to emotional difficulties, including depressive symptoms, following athletic career termination. The author of this thesis suspects that elevated identification with the athlete role at the time of sport retirement may have led to feelings of confusion, disorientation, and a host of other issues relating to the loss of the athletic career, therefore influencing the development of depressive symptoms.

Researchers believe that many retired athletes encounter issues related to the self-concept and the loss of a role with high perceived importance, leading to diminished functioning (Brewer et al., 1993; Lavallee et al., 1997; Pearson & Petitpas, 1990). Previous research has linked sport retirement to the loss of the athlete role, identity confusion, feelings of sadness, and other challenges, as many athletes remain dependant on sport as a source of identity, even after they have disengaged from competition. Kerr and Dacyshyn (2000) revealed that participants experienced disorientation, disillusionment, and confusion following retirement from elite gymnastics. They described losing meaning in the things that used to be central to their self-concepts (i.e., sport competition) and were no longer able to
extract purpose from their former experiences as competitive athletes. In 2008, Warriner and Lavallee reported that former gymnasts experienced identity confusion and uncertainty regarding who they were outside of sport. Participants in their study identified gymnastics as the most important aspect of their lives and endured an identity crisis during the retirement process. Results from the present study expand on the findings of previous researchers to include specific mental health outcomes, allowing us to better understand and articulate potential mental health concerns related to diminished functioning in life after sport.

According to Bader (2014), some student-athletes can be at risk for depression due to their involvement with sport, particularly regarding the psychosocial response to the end of their athletics career. Weigand et al., (2013) suggested that former university athletes encounter a loss of social support which is typically received from coaches, teammates, and other sport personnel during sport participation, potentially leading to a strain which may impact the development of depressive symptomology. If athletes remain highly dependent on this type of social support, the end of the athletic career may result in adverse outcomes and interpersonal hardship. Another possible explanation regarding the development of depressive symptoms includes the decline of athletes’ physical activity and self-esteem which may be related to the development of depressive symptoms in retirement. For example, previous research has linked elevated athletic identity with decreased physical self-esteem in sport retirement (Stephan et al., 2007; Williams, 2012), indicating that continued identification with the athlete role may negatively impact the ways in which athletes understand and regard their bodies in post-sport life.
As such, heightened self-identification with the athlete role may lead to serious adjustment challenges in sport retirement (Brewer, 1993; Brewer et al., 1993; Grove et al., 1997; Murphy, Petitpas, & Brewer, 1996). Brewer et al. (1993) proposed that athletes may continue to gauge their self-worth by their ability and accomplishments as an athlete, which may pose considerable problems after sport retirement, including the development of depressive symptoms. Evidence from the current study supports the perspective that strong and exclusive identification with the athlete role may leave an athlete vulnerable to depressive symptomology, although it is important to note that other research has found that the completion of collegiate sport does not increase levels of depression symptoms (Green and Weinberg, 2001; Lally, 2007; Weigand et al., 2015). For example, Weigand et al., (2015) found that the completion of collegiate sports did not increase levels of depression in former varsity athletes in comparison to athletes who were currently competing in intercollegiate sport competition. In fact, levels of depression were actually higher in the group containing current varsity athletes rather than former athletes.

We also obtained support for our second hypothesis which found that athletes with higher athletic identity ($M = 42.86$) significantly differed from athletes with lower athletic identity with regards to their expression of state anxiety ($M = 33.58$). These findings are similar to Grove et al., (1997) who found that a strong and exclusive athletic identity at the time of sport retirement heightens stress and anxiety responses among retiring athletes. Athletes who continued to identify strongly and exclusively with the athlete role following sport retirement may have experienced thoughts and feelings that induce anxiety about the future. Given that this group relied on their athletic identity as a dominant source of identity
in sport retirement, uncertainty about the future may have been perceived as threatening or dangerous, resulting in the development and/or expression of anxiety symptoms (Goldman, 2014). For example, avoidance, which is a common marker of anxiety, may have occurred through distancing oneself from the distressing event (i.e., the end of one’s athletic career). Our results provide new evidence on the currently limited understanding of athletes’ experience of anxiety (in relation to athletic identity) following sport career termination. As far as we are aware, this is the first study to investigate the expression of anxiety symptoms (via a standardized anxiety measure) in a group of retiring athletes.

**Well-being outcomes.** We did not obtain support for our third, fourth, and fifth hypotheses which investigated the relationships among athletic identity, flourishing, life satisfaction, and subjective vitality. Given that athletes with higher athletic identity did not significantly differ from athletes with lower athletic identity on the above variables, we speculate that athletes with strong and exclusive athletic identities may be able to experience symptoms of depression and/or anxiety (i.e., at the state level) which may be rooted in the loss of the athletic role, while simultaneously maintaining overall well-being (i.e., global judgements about the self or life circumstance). Future research is needed to better support this perspective. Nevertheless, our non-significant finding adds to previous research which has demonstrated mixed evidence relating to the influence of athletic identity on well-being outcomes in sport retirement. For example, Sinclair and Orlick (1993) found that 74% of athletes in their study (N = 199) reported feeling satisfied with their post-retirement life. Additionally, Lally (2007) found that athletes flourished in sport retirement, describing that, sport career transition, “did not prompt participants to explore neglected, abandoned, or
entirely novel identity dimensions, instead they flourished in this opportunity for self-
exploration” (pp. 96). Conversely, a decline in life satisfaction following sport retirement
was reported by Cecic Erpic (1998), Martins et al., (2014), and Werthner and Orlick (1986).
According to Sagiv and Schwartz (2000), subjective well-being may be undermined by
conflicts between values acquired during earlier times and values whose internalization are
needed in new environments. Sport retirement introduces a substantial discrepancy between
past and emerging lifestyles and identities, which could impact athletes’ experience of well-
being; however, findings from our study did not support this position.

The Impact of Coping

A secondary purpose of this study was to evaluate the role and influence of coping on
the transition out of interuniversity sport. We obtained support for our sixth hypothesis which
predicted that different patterns of coping would be related to athlete mental health and well-
being outcomes, after sport retirement. Results indicated that retiring athletes used an array
of coping strategies during sport career transition, some which were used more frequently
than others. Our sample of retiring athletes used a unique combination of coping strategies,
therefore supporting the view that coping is a complex and dynamic process (Grove et al.,
1997).

Across the well-being outcome variables (i.e., flourishing, life satisfaction, subjective
vitality), specific coping patterns emerged. The use of positive reframing was positively
correlated with all three well-being outcomes, indicating that this coping strategy may be
critical in achieving positive adaptation in sport retirement. Wagner (2014) found that
positive reframing was a coping mechanism utilized by retired athletes to combat negative
thoughts associated with athletic retirement. According to McKnight et al., (2009), the development of negative thinking patterns such as black and white thinking (e.g., the belief that an individual is worthless without sport participation), perfectionistic thinking (e.g., holding an expectation that one should be successful in other life domains immediately following retirement from sport), and mental filtering (e.g., emphasizing the negative aspects of sport career termination versus the positive aspects) can occur following sport disengagement. Therefore, positive reframing is considered to be a useful skill in coping with athletic retirement (Wagner, 2014), and can be effective in helping athletes see their transition experiences in a different, more positive light (McKnight et al., 2009). Additionally, denial and self-blame were negatively correlated with all three well-being variables, indicating that these coping strategies may serve to hinder adjustment to life after sport.

Across the mental health outcome variables (i.e., depressive symptomology and anxiety), diverse patterns of coping also emerged. Particularly, the use of self-distraction, denial, substance use, behavioural disengagement, and self-blame, were positively correlated with both depressive symptomology and state anxiety, indicating that these coping strategies may decrease athletes’ abilities to manage symptoms of depression and anxiety in sport retirement. For example, self-distraction is a strategy used by individuals to direct attention away from an event or situation which is perceived as distressing to the individual. Previous research has linked self-distraction with both positive and negative adjustment to sport career termination. For example, Werthner and Orlick (1986) found that possessing a new focus such as an academic pursuit or employment opportunity coincided with better adjustment in
sport retirement. Additionally, Wagner (2009) revealed that six (of eight) participants engaged in self-distraction as an attempt to cope with sport retirement by focusing their attention on other activities which was considered highly adaptive. In contrast, Sinclair and Orlick (1993) found that keeping busy (i.e., self-distraction) was an ineffective coping mechanism for those athletes who experienced poorer transition adjustment because they felt incompetent when they were not participating in competitive sport. Athletes may have utilized self-distraction to potentially delay processing the end of their athletics career, impacting their capacity to deal with the transition in a proactive and adaptive manner.

The other coping mechanisms which were prevalent in the current study (i.e., denial, substance use, behavioural disengagement, and self-blame) and were positively correlated with the mental health outcomes, may also offset athletes’ abilities to manage the distress associated with the end of their athletics career. According to Madden (1995), drugs and alcohol are frequently used by athletes to cope with the stress associated with current and prior sport involvement. The use of denial by athletes in the present study corroborates the findings of Stambulova, et al., (2006) who found that retired French athletes tended to use denial to cope with the termination of their athletic career. Park et al., (2012) also found that the coping strategies which were most often reported by athletes included avoidance/denial, in addition to seeking and receiving psychosocial support from close others, searching for new careers or interests, substance use, keeping busy, and acceptance. Our findings contribute to the sport retirement coping literature by providing a profile of strategies which were used by this sample of athletes to cope with the transition out of sport.
Additionally, we obtained support for our seventh hypothesis which demonstrated that higher athletic identity scores were significantly related to the use of selected coping strategies. Athletic identity groups (i.e., high, middle, low) differed significantly in the way they utilized venting, indicating that athletes with higher athletic identity displayed elevated use of venting ($M = 4.21$) in comparison to athletes with lower athletic identity ($M = 3.32$). This result corresponds with Grove et al., (1997)’s findings who determined that one of the coping strategies most often reported by athletes who scored high in athletic identity was venting. Grove et al., (1997) also found that denial, mental disengagement, and behavioral disengagement were frequently utilized by athletes who scored high in athletic identity following sport career termination. The author speculates that the use of venting by athletes who scored higher in athletic identity in the present study may be due to their need to express and/or expulse negative feelings associated with the end of their athletic career.

Our results also indicated that athletic identity groups (i.e., high, middle, low) differed significantly in the way they utilized self-distraction, indicating that athletes with higher athletic identity ($M = 5.93$) displayed heightened use of self-distraction in comparison to athletes with lower athletic identity ($M = 4.43$). This result opposes the findings of Alfermann et al., (2002) who conducted a cross-national comparison of competitive athletes in Germany, Lithuania, and Russia and found that Lithuanians had the highest athletic identity and reported the most frequent use of denial and acceptance coping strategies. Our study adds to this literature by demonstrating the utilization of specific coping strategies by athletes with strong and exclusive athletic identities. A deeper understanding of the strategies
used by athletes with strong athletic identity can impact the ways we conceptualize and treat sport transition adjustment difficulties such as depressive symptomology and state anxiety. In sum, venting and self-distraction may be somewhat adaptive in the early stages of sport career transition; however, researchers agree that prolonged use of these strategies may interfere with long-term adjustment (Grove et al., 1997), calling into question the longstanding risks involved with utilizing these coping strategies in sport career retirement.

**Limitations**

One limitation of the study was that statistical power was reduced due to the small sample size ($N = 72$). We speculate that with a larger sample size, greater sophistication in statistical analyses may have led to the detection of more significant differences amongst the variables of interest. Another possible limitation regards our analyses which did not correct for the Type 1 error rate for multiple dependent variables. We acknowledge that, by performing the analyses in this way, we may have declared some groups as different when in reality they did not differ in the population, thus inflating the Type 1 error rate. Lastly, this study measured transition adjustment at only one point in time (i.e., three months post-retirement). A second or third data collection point may have been useful in assessing transition outcomes and adjustment over time.

**Implications**

Consistent with research which has linked the strength and exclusivity of athletic identity with negative adjustment to life after sport, this study provides renewed insight on the transition process out of interuniversity sport. Although several previous studies identified factors associated with the quality of adjustment (e.g., Park et al., 2012), no study
has provided direct evidence of adverse mental health outcomes, specifically depressive symptomology and anxiety, since the pioneering studies on athletic identity and emotional disturbance in 1993 (Brewer, 1993; Brewer et al., 1993). Participants in the present study who scored high on athletic identity demonstrated increased depressive symptomology and state anxiety following their departure from interuniversity sport. This finding contributes to the original perspective which holds that athletes experience an array of transition difficulties, pointing to a potential risk of adverse mental health if athletes continue to identify strongly and exclusively with the athlete role. Furthermore, our results are consistent with the theoretical models presented in this thesis, particularly, the conceptual model of sport retirement (Taylor & Ogilvie, 1993), which places emphasis on the profound influence of athletic identity.

Sport retirement is considered to be a complex and multi-faceted transition experience which must be considered in the context of multiple life circumstances. As demonstrated in our study, coping patterns emerged in relation to specific mental health and well-being outcomes. In addition, athletes who identified strongly with the athlete role also exhibited the use of particular coping strategies such as venting and self-distraction. Our findings can inform future research as well as clinical practice, advancing the work of both Sport Psychology and Counselling Psychology professionals and researchers. For example, our capacity to improve interventions and assist athletes undergoing sport career retirement may be augmented by this knowledge, allowing us to implement increased awareness of the unique barriers and/or coping strategies that may be used by athletes in transition. As such, a deeper appreciation for the factors which influence post-retirement adjustment may spur the
individualization of our services, allowing us to meet the distinct needs of transitioning athletes. Given that some athletes may be susceptible to negative mental health outcomes shortly after retirement (i.e., approximately three months post-retirement as studied in this research), professionals may consider assessing the strength and exclusivity of athletic identity, as well as the extent of identity foreclosure, while athletes are still participating in interuniversity sport to potentially offset adverse outcomes in retirement.

Moreover, our findings help situate Canadian sport transition research in the broader literature. As discussed in a previous section of this thesis, cross-cultural differences were highlighted between nations which produce sport retirement research. Differences pertaining to the climate of sport in nations outside of Canada, particularly the United States, were deliberated, shedding light on environmental differences related to varsity sport participation. For example, monetary differences in athletic scholarships that are awarded in the US (i.e., NCAA) versus Canada (i.e., CIS) are unprecedented. In 2014, the NCAA awarded $2.7 billion in athletic scholarships (National Collegiate Athletics Association, 2015), while the CIS awarded a mere $16 million (Canadian Interuniversity Sport, 2015). Even when adjusting for population differences, it is evident that much more financial support/reward is available to varsity athletes in the US than in Canada, highlighting one advantage that can potentially impact how athletes develop and manifest athletic identity. In light of this, our research is commensurate with the findings that were previously produced in the US relating to the influence of athletic identity on mental health outcomes (referred to as emotional disturbance in Brewer, 1993 and Brewer et al., 1993) in sport retirement. Despite greater perceived importance, social following, monetary reward, fame, recognition, and an array of
other contributing factors which are typically experienced by intercollegiate athletes in the US, Canadian interuniversity athletes in the present study still demonstrated elevated levels of athletic identity after transitioning out of varsity sport. Although this study did not compare CIS and NCAA athletes directly, this finding is noteworthy because it calls into question commonalities among these two groups in terms of their development and expression of strong and exclusive identification with the athlete role. Future research is needed to better understand cultural differences between interuniversity athletes so that we are able to better grasp the applicability of research produced abroad. Overall, greater awareness of the negative outcomes associated with a strong and exclusive athletic identity is needed, if we are to fully comprehend and assist athletes in achieving positive adaptation to life after sport.


Appendices

Appendix A

Sample Letter for the Director of Athletics

Mr. Gordon Hopper
Director – Athletics & Team Services
Department of Athletics
293 – 6081 University Blvd
War Memorial Gymnasium
Vancouver BC V6T 1Z1

My name is Zarina Giannone. I am a graduate student at the University of British Columbia where I am working towards my Master of Arts Degree in the Department of Educational and Counselling Psychology, and Special Education. Over the past several months, my research supervisor, Dr. Colleen Haney, and I have been developing a research project to conduct my final thesis. The purpose of this letter is to briefly explain my project and invite the Department of Athletics and members of the varsity sports teams at UVic to participate in my study. As a UBC Women’s Soccer alumni (2006-2011), I would feel privileged to have the opportunity to conduct my research within the varsity context which enriched so many facets of my life.

The aim of this project is to explore the influence of identity after transitioning out of varsity athletics. I plan to look at how certain variables relate to one another with the hope of gaining a clearer understanding of the experience of athletes undergoing the transition process.

The present study will consist of two identical anonymous online surveys. The first survey will measure athletes’ levels of athletic identity, coping and mental health prior to sport retirement. The second survey will measure athletes’ levels of athletic identity, coping and mental health following sport retirement. We are interested in seeing if anything changes for athletes across this transition period. The survey should take approximately 15-30 minutes to complete and it should only be completed by athletes who are transitioning out of varsity sport (e.g. 4th or 5th year players).

There are no known physical or psychological risks associated with this study; however, some questions on the survey may be considered sensitive by some individuals. Participating in this study is completely voluntary for athletes and participants are permitted to discontinue participation in the study at any time without consequence. Since the survey is anonymous, there will be no records identifying participants and they will be assured of complete confidentiality. All procedures utilized for this research project were approved by the Behavioural Research Ethics Board of the University of British Columbia.

If your Department supports this research, I would ask that you send a connecting e-mail to coaches voicing your support for the study and introducing us as researchers. We will then contact the head coaches via telephone/e-mail to discuss the possibility of including prospective participants from each varsity sport team. Should you have any questions or concerns, you may contact me by telephone at 604 319 9110 or by e-mail at zarina.giannone@gmail.com. I will follow-up by telephone/e-mail next week. Your cooperation and participation is extremely important to us and we thank you for considering our request.

Dr. Colleen Haney
T: 604 822 4639
E: colleen.haney@ubc.ca

Zarina Giannone
T: 604 319 9110
E: zarina.giannone@gmail.com
Appendix B

Sample Cover Letter for Varsity Coaches

Mr. Mike Mosher
Head Coach
UBC Men’s Soccer Team
6081 University Blvd
War Memorial Gymnasium
Vancouver BC V6T 1Z1

Dear [Name],

My name is Zarina Giannone. I am a graduate student at the University of British Columbia where I am working towards my Master of Arts Degree in the Department of Educational and Counselling Psychology, and Special Education. Over the past several months, my research supervisor, Dr. Colleen Haney, and I have been developing a research project to conduct my final thesis. As I have already received support from Mr. [Name], Director- Athletics & Team Services, to pursue this study within your department, the purpose of this letter is to briefly explain my project and invite your team, Men’s Soccer, to participate in my study.

As a UBC Women’s Soccer alumni (2006-2011), I would feel privileged to have the opportunity to conduct my research within the same program which enriched so many facets of my life.

The aim of this project is to explore the influence of identity after retirement from varsity athletics. I plan to look at how certain variables relate to one another with the hope of gaining a clearer understanding of the transition barriers which athletes face as they exit competitive sport.

There are no known physical or psychological risks associated with this study; however, some questions on the survey may be considered sensitive by some individuals. Participating in this study is completely voluntary for athletes and participants are permitted to discontinue participation in the study at any time without consequence. The present study will consist of two identical anonymous online surveys. The first survey will measure athletes’ levels of athletic identity and mental health prior to sport retirement. The second survey will measure athletes’ levels of athletic identity and mental health following sport retirement. The survey should take approximately 15-30 minutes to complete and should only be completed by athletes who are transitioning out of varsity sport this season (e.g. 4th or 5th year players). Since the survey is anonymous, there will be no records identifying participants and they will be assured of complete confidentiality. All procedures utilized for this research project were approved by the Behavioural Research Ethics Board of the University of British Columbia.

If your team chooses to participate, the process will include my coordinating a mutually convenient time for me to attend a team training session for participant recruitment. Prospective participants will be provided further information, if interested.

If you choose to allow members of the Men’s Soccer Team to participate in the study, please provide your written/verbal consent. Should you have any questions or concerns, please contact me by telephone at [phone number] or by e-mail at zarina.giannone@gmail.com. Your cooperation and participation is extremely important to us and we thank you for considering our request.

Sincerely,

Dr. Colleen Haney
T: [phone number]
E: colleen.haney@ubc.ca

Zarina Giannone
T: [phone number]
E: zarina.giannone@gmail.com
Appendix C

Welcome to the study!

We are asking you to complete this anonymous survey package to help us gain a clearer understanding of the transition barriers which varsity athletes face as they transition out of varsity sport. We are interested in investigating what helps and what hinders athletes undergoing the transition process. This is an opportunity for you to share your experiences and contribute to research on the psychological health and well-being of competitive athletes in Canada. Your involvement in this study may influence future generations of varsity athletes and, thus, is very important. Your openness and honesty are significant and greatly appreciated.

Participant Instructions

The present study will consist of two anonymous online surveys. Please complete the first survey at one point during your final season of competition (i.e., approximately one month into your season). The second survey should be completed three months after varsity sport retirement. A computer generated e-mail will be sent to you to remind you of the second survey closer to the date. It is expected that the survey package will take approximately 15-30 minutes to complete. Since the survey is anonymous, there will be no records identifying athletes and participants will be assured of complete confidentiality. All procedures utilized for this research project were approved by the Behavioural Research Ethics Board at UBC. You may discontinue participation in this study at any time without consequences. If you complete the survey it is assumed that consent for participation was provided. After completion of each of the two surveys, a page which is unassociated with the study will appear asking if you would like to be entered into a draw for two $50.00 gift cards to Chapters/Indigo as a token of our appreciation for your participation. If you wish to input your name into the draw, please follow the prompts which will redirect you to a separate webpage. If you have any questions about the study, please contact Dr. Colleen Haney or graduate student researcher, Zarina Giannone, by telephone or by e-mail. If you have any concerns about your treatment or rights as a research participant, you may contact the Research Subject Information Line at the UBC Office of Research Services at 604-822-8598.

Thank you for your participation.

Sincerely,

Dr. Colleen Haney & Zarina Giannone

Department of Educational and Counselling Psychology, and Special Education, University of British Columbia, Neville Scarfe Building2125 Main Mall, Vancouver, BCV6T 1Z4 | Canada
Appendix D

Sport Participation Information

Please respond honestly to each item below.

Please select the sport that you participate in at the varsity level at your institution:

- Basketball
- Football
- Soccer
- Volleyball
- Hockey
- Baseball
- Softball
- Swimming
- Field Hockey
- Rugby
- Golf
- Cross Country
- Rowing
- Track & Field
- Skiing (Alpine)
- Skiing (Nordic)
- Wrestling
- Diving

How many years have you played varsity sport?


How many years of eligibility do you have left?


Are you currently participating in your sport with your varsity team?

☐ Yes
☐ No

Are you currently participating in your sport at the professional, national or Olympic level?

☐ Yes
☐ No

Please indicate your current affiliation with your sport.

☐ Player/Team Member
☐ Coach
☐ Team Manager
☐ Strength and Conditioning Coach
☐ Athletic Therapist
☐ Unaffiliated
☐ Other, please specify... ______________________

On average, how many hours per week do you spend participating in sports related activities (i.e., team practices, weight training, team meetings, etc.)?

☐ 0-5 hours
☐ 6-10 hours
☐ 11-15 hours
☐ More than 15 hours

Please indicate your age when you started participating in your sport.


Please indicate how many years (across your lifespan) that have you participated in your sport.


Please include a nickname below that is specific to you. Make sure to select a nickname that is relevant to you and easy to remember. As this survey is anonymous, we will use this nickname to link Survey #1 with Survey #2, instead of your real name (e.g., Michael Jordan= Air Jordan).

PLEASE WRITE DOWN YOUR NICKNAME IN A SAFE AND SECURE LOCATION AS YOU WILL BE REQUIRED TO REMEMBER IT WHEN YOU COMPLETE THE FOLLOW-UP SURVEY.

Please indicate which survey you are currently completing.

☐ I am currently completing this survey for the first time.
☐ I am currently completing the follow-up survey.
Appendix E

Please select the number that best reflects the extent to which you agree or disagree with each statement regarding your sport participation.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree: 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Strongly Agree: 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>I consider myself an athlete.</td>
<td>o</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have many goals related to sport.</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Most of my friends are athletes.</td>
<td>o</td>
<td></td>
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</tr>
<tr>
<td>Sport is the most important part of my life.</td>
<td>o</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>I spend more time thinking about sport than anything else.</td>
<td>o</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>I feel bad about myself when I do poorly in sport.</td>
<td>o</td>
<td></td>
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</tr>
<tr>
<td>I would be very depressed if I were injured and could not participate in sport.</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
Appendix F

Below are 8 statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by indicating a response for each statement.

1 - Strongly Disagree 2 – Disagree 3 - Slightly Disagree 4 - Neither Agree nor Disagree 5 - Slightly Agree 6 - Agree 7 - Strongly Agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree: 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Strongly Agree: 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>I lead a purposeful and meaningful life.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>My relationships are supportive and rewarding.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am engaged and interested in my daily activities.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I actively contribute to the happiness and well-being of others.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am competent and capable in the activities that are important to me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am a good person and live a good life.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am optimistic about my future.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>People respect me.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Appendix G

A number of statements which people have used to describe themselves are given below. Read each statement and then select the appropriate number to indicate how you feel right now, that is, at this moment. There are no right or wrong answers.

1 - Not at all 2 - Somewhat 3 - Moderately so 4 - Very much so

<table>
<thead>
<tr>
<th>Statement</th>
<th>1: Not at all</th>
<th>2: Somewhat</th>
<th>3: Moderately so</th>
<th>4: Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel calm.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I feel secure.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am tense.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I feel strained.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I feel at ease.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I feel upset.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I am presently worrying over possible misfortunes.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I feel satisfied.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I feel frightened.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I feel comfortable.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
A number of statements which people have used to describe themselves are given below. Read each statement and then select the appropriate number to indicate how you feel right now, that is, at this moment. There are no right or wrong answers.

1 - Not at all 2 – Somewhat 3 - Moderately so 4 - Very much so

<table>
<thead>
<tr>
<th>Statement</th>
<th>1: Not at all</th>
<th>2: Somewhat</th>
<th>3: Moderately so</th>
<th>4: Very much so</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel self-confident.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel nervous.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel jittery.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel indecisive.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I am relaxed.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel content.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I am worried.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel confused.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel steady.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>I feel pleasant.</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
</tbody>
</table>
Appendix H

These items deal with ways you've been coping with the stresses of your varsity sport participation. There are many ways to try to deal with problems. Obviously, different people deal with things in different ways, but we are interested in how you've tried to deal with it. Please indicate your answer to the statements by using the response choices below:

1 - I haven't been doing this at all 2 - I've been doing this a little bit 3 - I've been doing this a medium amount 4 - I've been doing this a lot

I've been turning to work or other activities to take my mind off things. ○ ○ ○ ○
I've been concentrating my efforts on doing something about the situation I'm in. ○ ○ ○ ○
I've been saying to myself "this isn't real". ○ ○ ○ ○
I've been using alcohol or other drugs to make myself feel better. ○ ○ ○ ○
I've been getting emotional support from others. ○ ○ ○ ○
I've been giving up trying to deal with it. ○ ○ ○ ○
I've been taking action to try and make the situation better. ○ ○ ○ ○
I've been refusing to believe that it has happened. ○ ○ ○ ○
I've been saying things to let my unpleasant feelings escape. ○ ○ ○ ○
I've been getting help and advice from other people. ○ ○ ○ ○
These items deal with ways you've been coping with the stresses of your varsity sport participation. There are many ways to try to deal with problems. Obviously, different people deal with things in different ways, but we are interested in how you've tried to deal with it. Please indicate your answer to the statements by using the response choices below:

1 - I haven't been doing this at all 2 - I've been doing this a little bit 3 - I've been doing this a medium amount 4 - I've been doing this a lot

I've been using alcohol or other drugs to help me get through it. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been trying to see it in a different light, to make it seem more positive. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been criticizing myself. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been trying to come up with a strategy about what to do. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been getting comfort and understanding from someone. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been giving up the attempt to cope. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been looking for something good in what is happening. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been making jokes about it. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping. 1: Not at all 2: A little 3: Medium amount 4: A lot
I've been accepting the reality of the fact that it has happened. 1: Not at all 2: A little 3: Medium amount 4: A lot
These items deal with ways you've been coping with the **stresses of your varsity sport participation**. There are many ways to try to deal with problems. Obviously, different people deal with things in different ways, but we are interested in how you've tried to deal with it. Please indicate your answer to the statements by using the response choices below:

1 - I haven't been doing this at all  2 - I've been doing this a little bit  3 - I've been doing this a medium amount  4 - I've been doing this a lot

<table>
<thead>
<tr>
<th>Statement</th>
<th>1: Not at all</th>
<th>2: A little</th>
<th>3: Medium amount</th>
<th>4: A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>I've been expressing my negative feelings.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been trying to find comfort in my religion or spiritual beliefs.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been trying to get advice or help from other people about what to do.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been learning to live with it.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been thinking hard about what steps to take.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been blaming myself for things that happened.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>I've been praying or meditating.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>I've been making fun of the situation.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Appendix I

Below is a list of the ways you might have felt or behaved. Please select how often you have felt this way during the past week.

1 - Rarely or none of the time (less than one day) 2 - Some or a little of the time (1-2 days) 3 - Occasionally or a moderate amount of time (3-4 days) 4 - Most or all of the time (5-7 days)

<table>
<thead>
<tr>
<th></th>
<th>1: Rarely</th>
<th>2: Sometimes</th>
<th>3: Moderately</th>
<th>4: Most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>I was bothered by things that usually don’t bother me.</td>
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<tr>
<td>I did not feel like eating; my appetite was poor.</td>
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<tr>
<td>I felt that I could not shake off the blues even with help from my family and friends.</td>
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<tr>
<td>I felt I was just as good as other people.</td>
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<tr>
<td>I had trouble keeping my mind on what I was doing.</td>
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<tr>
<td>I felt depressed.</td>
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<tr>
<td>I felt that everything I did was an effort.</td>
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<tr>
<td>I felt hopeful about the future.</td>
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<tr>
<td>I thought my life had been a failure.</td>
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<tr>
<td>I felt fearful.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Below is a list of the ways you might have felt or behaved. Please select how often you have felt this way during the past week.

1 - Rarely or none of the time (less than one day) 2 - Some or a little of the time (1-2 days) 3 - Occasionally or a moderate amount of time (3-4 days) 4 - Most or all of the time (5-7 days)

<table>
<thead>
<tr>
<th>Statement</th>
<th>1: Rarely</th>
<th>2: Sometimes</th>
<th>3: Moderately</th>
<th>4: Most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>My sleep was restless.</td>
<td></td>
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<tr>
<td>I was happy.</td>
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<tr>
<td>I talked less than usual.</td>
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<tr>
<td>I felt lonely.</td>
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<tr>
<td>People were unfriendly.</td>
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<tr>
<td>I enjoyed life.</td>
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<tr>
<td>I had crying spells.</td>
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<tr>
<td>I felt sad.</td>
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<tr>
<td>I felt that people dislike me.</td>
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<tr>
<td>I could not get “going.”</td>
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</tbody>
</table>
Appendix J

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item. Please be open and honest in your responding.

1 - Strongly Disagree 2 – Disagree 3 - Slightly Disagree 4 - Neither Agree nor Disagree 5 - Slightly Agree 6 - Agree 7 - Strongly Agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree: 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Strongly Agree: 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>In most ways my life is close to my ideal.</td>
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<tr>
<td>The conditions of my life are excellent.</td>
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<tr>
<td>I am satisfied with my life.</td>
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</tr>
<tr>
<td>So far I have gotten the important things I want in life.</td>
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<tr>
<td>If I could live my life over, I would change almost nothing.</td>
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</tbody>
</table>
Appendix K

Please respond to each of the following statements in terms of how you are feeling right now. Indicate how true each statement is for you at this time.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not at all true: 1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Very True: 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>At this moment, I feel alive and vital.</td>
<td>○</td>
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<tr>
<td>I don't feel very energetic right now.</td>
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</tr>
<tr>
<td>Currently I feel so alive I just want to burst.</td>
<td>○</td>
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</tr>
<tr>
<td>At this time, I have energy and spirit.</td>
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</tr>
<tr>
<td>I am looking forward to each new day.</td>
<td>○</td>
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<td></td>
</tr>
<tr>
<td>At this moment, I feel alert and awake.</td>
<td>○</td>
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</tr>
<tr>
<td>I feel energized right now.</td>
<td>○</td>
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</tbody>
</table>
Appendix L

Demographic Information

Please respond honestly to each item below.

Sex:

☐ Male
☐ Female

Current Age:


Race/Ethnicity:

☐ Canadian
☐ American
☐ European
☐ African
☐ Indigenous
☐ Asian
☐ South Asian
☐ Middle Eastern
☐ Hispanic
☐ Other, please specify... ______________________

Marital Status

☐ Single
☐ Dating
☐ Married
☐ Common-law
☐ Divorced
☐ Separated
Employment Status

☐ Employed
☐ Unemployed
☐ Other, please specify... ______________________

What is your current year in university?

☐ 1st year
☐ 2nd year
☐ 3rd year
☐ 4th year
☐ 5th year
☐ Other, please specify... ______________________

Please indicate your academic major:


Please indicate how many semesters until graduation:


In one-two sentences, please indicate your short-term academic or career goals.


Please respond honestly to each item below.

Have you ever been diagnosed with an emotional or psychological disorder?

☐ Yes
☐ No

If YES, please indicate the type of emotional or psychological disorder:


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Approximate date of diagnosis:


Are you currently seeking counselling or psychological services?

☐ Yes  
☐ No

Please indicate your current sources of social and emotional support in your life

(select all that apply)

☐ Immediate family  
☐ Extended family  
☐ Teammates/Coaches  
☐ Friends (outside of sport)  
☐ Friends (within the sport context)  
☐ Co-workers  
☐ Professors  
☐ Mentors  
☐ Other, please specify... ______________________

How would you rate the current level of social and emotional supports in your life?

<table>
<thead>
<tr>
<th>Poor</th>
<th>Average</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Appendix M

Thank you for participating in the survey!

Please click 'Submit' below to be redirected to a separate webpage which allows the opportunity to include your name in a draw for two $50.00 Chapters Gift Certificates.