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University Athlete Transition: Making the Jump from Sport to Life

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A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts

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UNIVERSITY ATHLETE TRANSITION:
MAKING THE JUMP FROM SPORT TO LIFE

(Thesis format: Monograph)

by

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Graduate Program in Education

A thesis submitted in partial fulfilment
of the requirements for the degree of
Master of Arts

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Abstract

The general purpose of this dissertation was to examine how perfectionism might influence career planning through its relationship with career decision-making self-efficacy, career goal setting, and career outcome expectations in Canadian university student-athletes. Specifically, this dissertation addressed two main research questions: Does perfectionism enhance or inhibit career planning in university student-athletes; and is this in turn influenced by the relationship between perfectionism (strivings and concerns) and the social cognitive variables of the SCCT (i.e., career decision-making self-efficacy, career goal setting, and career outcome expectations)?

In order to validate and test the measurement models of perfectionism, decision-making self-efficacy, career goals, outcome expectations, and career planning in a population of Canadian university student-athletes, factor analyses were conducted. In addition, path analyses were conducted to test for the multiple mediation model of perfectionism via self-efficacy, career goals, and outcome expectancies.

The results provide important answers to the research questions posed and suggest that depending on the dimension of perfectionism observed (strivings or concerns) perfectionism either enhances or inhibits post-sport career planning in university student-athletes via the mediating influence of career decision-making self-efficacy. In addition, the results confirm the interrelationships among the social cognitive career theory variables in a population of Canadian university student-athletes, and confirm that career decision-making self-efficacy and goal setting are mechanisms underlying post-sport career planning in university student-athletes.

Keywords: transition, career, sport, university, student-athlete, perfectionism

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Table of Contents

	Page
Abstract.....	ii
Acknowledgements.....	iii
Table of Contents.....	iv
List of Tables.....	vi
List of Figures.....	vii
Chapter 1.....	1
1 Review of Literature.....	1
1.1 Transition.....	1
1.2 Career Transition Frameworks.....	2
1.3 Athlete Career Transition.....	8
1.4 Career Planning in Sport-Life Transition.....	11
1.5 Perfectionism.....	13
1.6 Study Rationale and Research.....	17
Chapter 2.....	20
2 Methods.....	20
2.1 Ethics.....	20
2.2 Participants.....	20
2.3 Procedure.....	21
2.4 Measures.....	22
2.4.1 Demographics.....	22
2.4.2 Career Planning.....	22
2.4.3 Self-Efficacy.....	23

2.4.4	Outcome Expectancies.....	23
2.4.5	Career Goals.....	24
2.4.6	Perfectionism.....	24
2.5	Data Analysis.....	26
Chapter 3	27
3	Results.....	27
3.1	Preliminary Analysis of Demographics.....	28
3.2	Preliminary Analysis of Social Cognitive Variables.....	29
3.3	Factor Analysis.....	30
3.4	Mediation Analysis.....	30
Chapter 4	32
4	Discussion.....	32
4.1	Descriptives.....	33
4.2	Correlations.....	34
4.3	Mediation.....	36
4.4	Limitations and Future Directions.....	39
4.5	Conclusions.....	40
References	42
Curriculum Vitae	60

List of Tables

		Page
Table 1	Descriptive statistics for participant demographics related to academic studies.....	54
Table 2	Descriptive statistics for participant demographics related to sport participation.....	55
Table 3	Descriptive statistics and Pearson correlations for all social cognitive variables.....	56
Table 4	Ranges for Communalities, Eigenvalues, and percent of variance for each scale.....	57
Table 5	Regression coefficients for perfectionistic strivings and concerns on self-efficacy, and for self-efficacy and goal setting on career planning..	58

List of Figures

	Page
Figure 1	
Path Analysis for the relationship between perfectionism (strivings and concerns) and career planning. All coefficients represent unstandardized regression coefficients.....	59

Chapter 1

1 Review of Literature

1.1 Transition

Transition and change are natural and integral dimensions of life (Borgen, Butterfield, & Amundson, 2010). In the field of counselling psychology, transition has been defined as a process that causes a change in how one views the self and the world, and which requires a corresponding change in one's behaviour and relationships with others (Schlossberg, 1981). Although there are many different types of transitions that an individual can experience throughout the life span, a common thread is that transition requires some level of adaptability and adjustment on the part of the individual.

The transition from university studies to the work force is one such transition phase that a multitude of individuals experience in a lifetime, and this particular phase has been shown to be critical for graduates in terms of future career success (e.g., Hirschi, Niles, & Akos, 2011; Koen, Kelhe, and Van Vianen, 2012). Individuals in this phase of life are taking on the first of likely many career transitions, each of which will necessitate varying degrees of adaptability (Murphy, Blustein, Bohlig, & Platt, 2010). An individual's experience and response to this first-of-its-kind transition will be important in future career transition scenarios. Abandoning the student life and stepping into full-time employment can be challenging and overwhelming (e.g., Galambos, Barker, & Krahn, 2006; Kenny & Sirin, 2006; Murphy et al., 2010; Schulenberg, Bryant, & O'Malley, 2004). However, research suggests that there is variability between individuals in how one experiences this transition phase (Arnett, 2000); some graduates will navigate this transition with confidence, excitement and optimism, whereas others will face this

life phase with uncertainty, hesitation and psychological strain. No two individuals will experience transition equally.

For student-athletes, adding to the complexity of the school-to-work transition is the termination of, and graduation from, university sport. For a select few university students, varsity athletics is a unique and important life phase that reflects several years of competitive and elite-level sport involvement. As the name suggests, student-athletes are in the unique position of combining a focus on sport and studies. The reality is that for the majority of university student-athletes (99%), their elite-level competitive sport careers will terminate as they complete their university sport experience (Harrison & Lawrence, 2003; Ogilvie & Howe, 1986). Therefore, this sport-career transition phase provides an added dimension for university student-athletes to navigate above the anticipated transition from university life to the working world.

1.2 Career Transition Frameworks

Given the varying individual differences in how people experience transition, researchers have explored the factors that influence successful career transition. Many have suggested that an individual's approach to transition can impact transition success and the individual's life satisfaction (e.g., Brownrigg, Burr, Locke, & Bridger, 2012; Murphy et al., 2010), and recent studies in the area of career counselling have demonstrated that successful transition from school-to-work requires important career-related preparation (e.g., Hirschi et al, 2011; Koen et al., 2012). In order to help understand how an individual can approach and navigate transition with success, several theoretical frameworks have been explored. For example, research using frameworks of

self-determination theory (SDT; Deci & Ryan, 1985), career adaptability (Savickas, 1997), and social cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994) have examined some aspect of transition success.

According to Blustein (2006), an important part of working with clients during career change and transition is the need to understand the individual's motivation toward change. Self-determination theory (SDT; Deci & Ryan, 1985; Ryan & Deci, 2000) represents a broad framework for the study of human motivation and personality, and proposes that in order to foster and sustain motivation for change, an individual requires three basic human needs: competence, autonomy, and relatedness (Ryan & Deci, 2000). Specifically, competence refers to feelings of effectiveness in one's ongoing interactions with the social context. According to SDT (Deci & Ryan, 1985), as an individual feels confidence (competence) he or she is more likely to internalize socially-defined goals. Autonomy represents the need to be the perceived source of one's own behaviour; autonomy is central to feelings of well-being (Deci & Ryan, 2000) and is necessary for an individual to internalize goals and values (Savickas, 2005). In the context of career transition, promoting individual autonomy with respect to career planning and preparation could influence an individual's motivation and positive experience in transitioning from school to work (Stringer, Kerpelman, & Skorikov, 2011). Finally, relatedness refers to the need to belong (Baumeister & Leary, 1995) and be connected to other human beings. Individuals look to important others for encouragement and a sense of value in the goals they've set. SDT proposes that the degree to which any of these three psychological needs (i.e., competence, autonomy, and relatedness) is unsupported within a social context will have a detrimental impact on wellness in that setting.

The transition from school-to-work for university graduates will require varying degrees of coping skills and adaptability over time (Murphy et al., 2010). Career adaptability is a construct related to SDT in the context of career transition (Savickas, 2005) and is central in career preparation (Skorikov, 2007). Adaptability is a modification to Super's (1980; 1990) life span, life space theory of career development. Career adaptability is "the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by change in work and working conditions" (Savickas, 1997, p. 254). That is, career adaptability is the readiness of the individual to take advantage of opportunities and manage transitions, barriers and setbacks (Savickas & Portfeldt, 2012). According to Savickas and Portfeldt (2012), career adaptability comprises four psychosocial resources: concern, control, curiosity, and confidence. Concern is related to anticipating one's future, while control refers to the knowledge of what career to pursue. Curiosity reflects observing the various options available and confidence is defined as having the self-efficacy to undertake activities needed to achieve career goals. It has been proposed that individuals who possess career adaptability have the resources to manage career transitions (Savickas, 2005), and thus emerge from this stage more successfully.

As demonstrated above, many career development theories use stage models, and variations thereof (e.g., Super, 1980; 1990), or consider the individual's skills, interests, and values (e.g., SDT; Deci & Ryan, 2000) to explain factors involved in career choice. However, Hackett and Lent (1992) proposed that career theory-building efforts should bring together conceptually-related constructs (e.g., self-efficacy, self-concept) and more fully explain outcomes common to several career theories (e.g., satisfaction, stability). In

addition, they suggested that career theories should account for the relationships among seemingly diverse constructs (e.g., self-efficacy, interests, abilities, needs). Thus, it is important to consider that career development and transition may be influenced by a variety of personal sentiments and motives, and responses to unplanned events. Social cognitive theory (Bandura, 1986) takes into consideration the many factors that interact in a dynamic fashion to move an individual along one career path or another, and thus could provide a grounded theoretical framework upon which to build a career theory.

Social cognitive career theory (SCCT; Lent et al., 1994) is a well-established theory and provides a unifying framework by which to understand, explain, and predict the processes through which individuals develop vocational interests and make career choices (Brown, 2002). SCCT is anchored within Bandura's (1986) social cognitive theory and explores how an individual's career and academic interests mature, how one's career choices are developed, and how these choices are turned into action. According to SCCT, a variety of social cognitive variables – person, behavioural, and environmental – influence the career choice process. Specifically, SCCT focuses on three primary person mechanisms that are used to form the core of the career-specific social cognitive framework: self-efficacy, outcome expectations, and career goals (Lent et al., 1994).

Self-efficacy. Self-efficacy reflects an individual's belief in his or her ability to engage in specific behaviors that will yield a desired outcome (Bandura, 1977; 1997), and affects one's choice of behavior, activity, and exerted effort (Strauser, 1995). Bandura (1977) suggested that individuals develop their sense of self-efficacy from four sources of information: personal mastery experiences (i.e., performance accomplishments and successes), vicarious experience (i.e., learning from modeled behavior), verbal persuasion (i.e., social interactions and social influence), and physiological states (i.e., emotional

arousal or how an individual feels in a situation). In the career literature, career self-efficacy relates to one's sense of competency and proficiency regarding one's ability to perform career-relevant activities or occupational tasks (Betz, 1992). Hackett and Betz (1981) proposed that perceptions of self-efficacy influence achievement behavior, academic and career decisions, as well as career adjustment processes. They also have argued that vocational self-efficacy may be a critical factor in the likelihood of a person being successful and persistent in his or her career choice. These findings were later supported by Rogers and Creed (2011) who state that individuals who are highly efficacious approach tasks as challenges to be mastered rather than as threats to be avoided.

Outcome Expectations. Outcome expectations, or expectancies, are the beliefs related to the consequences of performing a specific behavior (Lent et al, 1994). In the context of career transition, outcome expectations will influence career behaviour. Bandura (1986) suggests that outcome expectations are in part determined by self-efficacy in circumstances where outcomes are closely linked to the quality of one's performance. In other words, outcome expectations are formed thorough past experiences, either direct or vicarious, and the perceived results of these experiences. An individual will behave according to the value he or she places on a particular outcome in combination with the belief in his or her ability to produce that certain outcome (Bandura, 1986; Vroom, 1964).

Career Goals. A goal can be defined as the identification of and engagement in a future plan or particular activity intended to bring about the achievement of a desired outcome (Bandura, 1986). Goals require an individual to exercise forethought and are said to play a vital role in the self-regulation of behaviour (Bandura, 1986). By setting

goals, an individual will organize his or her behaviour in a manner that will increase the likelihood of achieving a desired outcome (Lent et al., 1994). In terms of career theory, Lent and his colleagues (1994) define goals as intentions, plans or aspirations to engage in a particular career direction. Therefore, goals are important elements of career choice and decision making given their role in motivating behaviour in order to achieve a desired career-related outcome.

SCCT proposes that self-efficacy promotes career goals, or intentions to engage in a certain activity, which in turn, stimulate career choice behaviours, such as career planning (Rogers & Creed, 2011). In addition, SCCT proposes that career choice behaviours (e.g., career planning) are shaped by contextual factors, such as supports and barriers in the individual's life (e.g., financial and familial support, educational barriers, etc.). Given their influence on goals and actions, these contextual variables can impact, either positively or negatively, one's career path development (Lent et al., 1994). Also, SCCT proposes that person inputs (i.e., predispositions and personality) can influence the career choice process. Finally and in line with Bandura's (1986) social cognitive theory, SCCT proposes that the relationships among self-efficacy, outcome expectancies, and goal systems are reciprocal in nature (Lent et al., 1994). In other words, individuals who are confident with making career decisions, are motivated to set goals, and believe that their actions will result in certain outcomes are more likely take on career planning behaviours (Rogers & Creed, 2011). Thus, social cognitive career theory provides a theoretical perspective that highlights a more comprehensive, cohesive understanding of career choice, development, and adjustment (Lent et al., 1994).

1.3 Athletic Career Transition

Athletic career transition is a normal and inevitable part of sport for all athletes (Stambulova, Alfermann, Statler, & Côté, 2009; Zaichkowsky, Kane, Blann, & Hawkins, 1993). Alfermann and Stambulova (2007) define athletic career as sport activity that spans over many years, which is voluntarily chosen by the individual, and during which time the individual's aim is to achieve personal peak athletic performance in one or several sport events. Therefore, it is understandable that an athlete can experience several and various transitions over the course of his or her sport career. The sport transition literature has defined sport-career transitions as either normative (i.e., predictable, anticipated, and voluntary) or non-normative (i.e., unpredictable, unanticipated, and involuntary) (e.g., Jones, Mahoney, & Gucciardi, 2013; Stambulova, 2000). For example, normative transitions can include when an athlete moves from one competitive level to the next or when an athlete terminates his or her sport career due to retirement from sport. Non-normative transition would entail such experiences as deselection from a team, or the experience of a career-ending injury. Irrespective of the transition type, this phase of an athlete's career will be experienced differently by each athlete (Stambulova et al., 2009), and will be partially dependent on the individual athlete's perception of the transition (Sinclair & Orlick, 1993). Stambulova (1994) identified six normative within-career transitions of an elite athletic career, two of which being the transition from peak athletic career to the final stage (e.g., an Olympian who enters her last year or sport competition, regardless of level), and the transition to the post-sport career (e.g., competitive athlete who retires from sport competition and begins a new vocation). However, it is important to note that Wylleman and Lavalee (2004), in what has been considered an extension of Stambulova's (1994) work on athletic career transition,

emphasize the importance of a holistic approach in athlete transition, which includes both athletic and non-athletic (e.g., academic and vocational) challenges and events. In addition and consistent with theoretical models (e.g., Schlossberg, 1981), within-career transitions have been found to include many normative and non-normative events that can challenge the achievement of personal goals and psychological well-being for athletes in transition (e.g., Pummell, Harwood, & Lavallee, 2008).

Research studies examining the predictors of successful athlete transition have identified numerous factors that influence an athlete's transition out of sport (e.g., Stambulova et al., 2009). According to Stambulova and her colleagues (2009), successful athlete transition takes place when an athlete is able to develop and use effectively all of the necessary resources to cope with transition barriers. Recent research conducted by Park, Lavallee, and Tod (2013) provided a systemic review of studies on athletes' career transition out of sport. The authors examined, among other things, the correlates focused on the psychological predictors associated with the quality of athletes' career transitions and found fifteen variables associated with the quality of athletes' career transitions (e.g., athletic identity, pre-retirement planning, balance of life while competing, coping strategies, psychosocial support, etc.). One of the strongest positive predictors of successful athlete transition out of sport is career planning (e.g. Warriner & Lavallee, 2008), and research has demonstrated that making timely plans for life after sport plays a vital role in enhancing the quality of transition out of sport and the athletes' ability to cope with transition (e.g., Stambulova et al., 2009; Young, Pearce, Kane, & Pain, 2006). In fact, Rogers and Creed (2011), who conducted a longitudinal examination of career planning in adolescents, suggest that career planning and exploration are behaviours that are vital to the career development process.

In the context of post-sport career, retirement planning refers to the extent to which athletes anticipate their time of retirement and their post-sport life (Demulier, Le Scanff, & Stephan, 2013). Specifically, planning for post-sport life includes psychological preparation before career termination and having clear non-sport related goals (e.g., Warriner & Lavalley, 2008). Research has demonstrated that planning for post-sport career leads to a smoother and healthier transition in life and into the work-force after sport (Coakley, 2006). In addition, retirement planning is associated with more positive and less negative emotional reactions to sport career terminations, lower use of distraction strategies, shorter duration of the transition period, and higher life satisfaction (Alfermann, Stambulova, & Zemaityte, 2004).

Even though every high-performance athlete will come to the end of his or her sport career at the elite level, the majority of competitive athletes do not consider, acknowledge the need for, or engage in career planning as a part of the preparation for this likely transition out of sport (North & Lavalley, 2004; Park et al., 2013). In the world of high-performance sport, it is expected that active competitive athletes devote the majority of their time and energy to their sport training, performance, and achievement. Since most competitive athletes choose to focus almost exclusively on their sport, the result is that other life interests are pushed aside during their competitive years (e.g., Harrison & Lawrence, 2003; Pummell et al., 2008). Hence, this total involvement in one's sporting role and a denial of impending sport career termination can interfere with pre-retirement planning and thus, athletes may perceive this transition period as uncertain and stressful (e.g., Alfermann & Stambulova, 2007; Lavalley & Robinson, 2007; Pummell et al., 2008; Taylor & Ogilvie, 1994; Taylor & Ogilvie, 2001). Although career termination

may result in distress for many athletes, no two athletes react equally (Stambulova et al., 2009).

In the context of university sport, it has been suggested that many student-athletes commit to the role of athlete only (Good, Brewer, Petitpas, Van Raalte, & Mahar, 1993) as a result of the devotion of countless hours to his or her sport, and often fail to investigate other identities, such as that of student. This total commitment to the athlete role has been associated with lower self-efficacy with career decision-making (Brown, Glastetter-Fender, & Shelton, 2000). In contrast, Harrison and Lawrence (2003) found that student-athletes in their study realised that excellence in both academic and athletic pursuits could contribute to overall well-being of the student-athlete in transition. That is, the authors suggest that student-athletes who are made aware of life after sports become cognisant of the need to begin to plan for their transition out of student-athlete life. Sport career transitions pose substantial challenges and pressures on athletes in addition to the need to balance other life domains (Pummell et al., 2008), and this is particularly true for the student-athlete. Career research confirms that athletes in career transition would be best served by searching for balance between current demands and anticipated future demands in their sport career, and that career and retirement planning are active coping strategies that can facilitate an athlete's adaptation to post-career (Stambulova et al., 2009). Specifically, career planning has been shown to be positively associated with post-sport life adjustment among college athletes (Lantz, 1995).

1.4 Career Planning in Sport-Life Transition

Given the substantial support for the importance of career planning in maximizing the success and quality to sport-career transition (e.g., Harrison & Lawrence, 2003; Pummell et al., 2008; Stambulova et al., 2009; Warriner & Lavalley, 2008), Demulier, Le

Scanff, and Stephan (2013) drew upon Lent and colleagues' (1994) social cognitive career theory in order to examine the potential psychological processes associated with post-sport life career planning in elite competitive athletes. The authors concluded that the three social cognitive constructs (i.e., career goals, self-efficacy, and outcome expectancies) were important proximal determinants of career planning, while personality was more distal determinant of career planning through its influence on the social cognitive variables. Proximal determinants are those factors that have the most direct effects on the variable of interest, whereas distal determinants are those factors that less direct effects on the variable of interest and often are mediated or moderated by more proximal factors. Results showed that among the traits defined by the five factor model of personality (Costa & McCrae, 1992), conscientiousness, and more precisely competence, emerged as the most important trait involved in career planning (Demulier et al., 2013). Specifically, conscientious athletes were more likely to plan for their future career because they set higher goals and were more confident in their capacity to plan their future career.

Demulier and colleagues (2013) provided important insights into the mechanisms that underlie career planning among athletes in the context of sport career termination. Moreover, the authors suggested that by investigating the explanatory power of personality traits, the knowledge about the determinants of career planning for athletes in sport career transition may be improved. This supports the view of early career choice theorists (e.g., Super, 1980) who argued that person inputs (i.e., predispositions, personality) are important components of career development. However, it should be noted that research that combines personality and career choice theory (e.g., SCCT) in the

general psychology literature is scarce, let alone such research in the area of athlete career transition. Thus, examining personality dimensions in the context of career development and sport career transition warrants further exploration.

1.5 Perfectionism

Perfectionism is a personality trait that has been a relevant topic in the sport psychology literature (e.g., Gotwals, Stoeber, Dunn, & Stoll, 2012; McArdle, 2010; Stoeber, 2011; Stoeber, in press). Given that perfectionism is a prevalent personality characteristic that can be seen in individuals in many life domains (Stoeber & Stoeber, 2009), it is not surprising that this trait is found often in competitive sport and high-performance athletes (e.g., Dunn, Gotwals, & Causegrove Dunn, 2005; Gould, Dieffenbach, & Moffett, 2002; Flett & Hewitt, 2005; Koivula, Hassmén, & Fallby, 2002). In fact, within the sport psychology literature perfectionism has been shown to play an important role in the cognitive, affective, and behavioural functioning of athletes across various sport domains (e.g., Dunn, Causgrove Dunn, & Syrotuik, 2002; Stoeber, 2011). For example, research in the sport domain has demonstrated the existence of relationships between athletes' perfectionistic orientations and sport performance, competitive anxiety, body image, burnout, and overall athletic success, to name a few (e.g., Appleton, Hall, & Hill, 2009; Gould et al., 2002; Hall, Kerr, & Matthews, 1998; Koivula et al., 2002; Stoeber, Otto, Pescheck, Becker, & Stoll, 2007).

Perfectionism is defined as striving for flawlessness and setting exceedingly high standards for performance, accompanied by tendencies for overly critical evaluations (Flett & Hewitt, 2002). Early works in clinical psychology suggested that perfectionism was a one-dimensional, dysfunctional and unhealthy characteristic often associated with

psychological maladjustment (e.g., Burns, 1980). Later however, it was proposed that perfectionism was a multidimensional characteristic that had both adaptive and maladaptive dimensions (e.g. Frost, Marten, Lahart, & Rosenblate, 1990; Stoeber, Otto, Pescheck, Becker, & Stoll, 2007). However, this has been a point of debate in the general psychology literature (e.g., Owens & Slade, 2008). The recent focus of the sport perfectionistic research has been on answering the question of whether perfectionism is a maladaptive or adaptive trait in athletes. The result, however have proven to be controversial. On the one hand, perfectionism has been shown to be a maladaptive trait for athletes (e.g., Flett & Hewitt, 2002; 2005). For example, in their review on perfectionism in sport, Flett and Hewitt (2005) argue that perfectionism is a negative characteristic that may prevent the very thing (i.e., perfection) that it seeks to promote. In contrast, some research suggests that perfectionism could be considered an adaptive personality characteristic under certain conditions (e.g., Dunn et al., 2002; Gotwals et al., 2012; Gould et al., 2002; Sagar & Stoeber, 2009). For example, a study examining the relationship between perfectionism and competitive anxiety in elite athletes (Koivula et al., 2002) found that healthy perfectionists showed higher levels of self-confidence and lower levels of somatic anxiety.

Burns (1980) proposed that in order to understand the effects of perfectionism on well-being and performance, it is necessary to differentiate adaptive and maladaptive subtypes. In line with Burn's recommendations, Stoeber (2011) suggested that one way to address the debate of whether perfectionism is an adaptive or maladaptive characteristic in the sport context is to examine athletes' levels of perfectionism across the two main dimensions of perfectionism: perfectionistic strivings and perfectionistic concerns.

Stoeber and Otto (2006) define perfectionistic strivings as those aspects of perfectionism associated with strivings for perfections and setting exceedingly high standards of performance, whereas perfectionistic concerns as those aspects of perfectionism associated with concerns over making mistakes, fear of negative evaluations by others, feelings of discrepancy between one's expectations and performance, and negative reactions to imperfection. According to Stoeber (2011), although the two dimensions often show positive correlations (i.e., individuals who show high levels of perfectionistic strivings also show high levels of perfectionistic concerns), perfectionistic strivings and perfectionistic concerns show different individual patterns of associations. That is, research that has explored the two dimensions of perfectionism in sport has demonstrated that perfectionistic concerns are positively related with maladaptive characteristics (e.g., negative affect, cognitive and somatic anxiety, fear of failure), whereas perfectionistic strivings show positive relationships with adaptive characteristics such as positive emotions, competitive self-confidence, and hope of success, to name a few (for review see Stoeber, 2011).

It is important to note that researchers have emphasised that in order to examine the unique relationships of the two perfectionistic dimensions, the overlap between perfectionistic concerns and perfectionistic strivings must be controlled (e.g., Stoeber & Otto, 2006; Stoeber, 2011). When this happens, perfectionistic concerns and strivings show clear differences in their relationships with key variables, as noted above. It appears that when the negative impact of perfectionistic concerns are controlled for, perfectionistic strivings among athletes are most often associated with positive characteristics, processes, and outcomes (Gotwals et al., 2012; Stoeber, 2011). Moreover, Gotwals and colleagues (2012) and Stoeber (in press) suggest that the overlap between

perfectionistic concerns and strivings appears to suppress the perfectionistic concerns' associations with negative characteristics as well as the positive relationships between perfectionistic strivings and adaptive characteristics, while inflating the positive relationships between perfectionistic strivings and maladaptive characteristics. Stated differently, when reviewing perfectionism research in sport (e.g., Gotwals et al., 2012; Stoeber, 2011), the findings show that only perfectionistic concerns are clearly maladaptive, whereas perfectionistic strivings seem to provide athletes with emotional and motivational fuel to endeavour to be the best that they can be and reach for excellence. However, this may be true only when perfectionistic strivings are not accompanied by perfectionistic concerns since these are maladaptive and may interfere with an athlete's motivation, self-esteem, and psychological and physical well-being (Stoeber, 2011).

Thus, to return to the original question of whether perfectionism in sport is an adaptive or maladaptive personality characteristic, it can simply be stated that it is not the focus of attaining perfection in sport that is problematic; what is problematic is the focus on not attaining perfection (i.e., concerns of mistakes and negative reactions to imperfection) (Stoeber, 2011). The majority of evidence from the sport perfectionism literature suggests that perfectionism may have its benefits (i.e., perfectionistic strivings are primarily adaptive in nature), yet it may also be of detriment (i.e., when perfectionistic concerns are not controlled) to athletes in the sporting context (Gotwals et al., 2012; Stoeber, in press).

In the context of career development, research has demonstrated that an individual's progress through the career development process is affected by many factors,

including the presence of perfectionistic traits, negative thinking, and self-efficacy (e.g., Andrews, Bullock-Yowell, Dahlen, & Nicholson, 2014; Ganske & Ashby, 2007).

Furthermore, recent research by Andrews and colleagues (2014) demonstrated a positive relationship between career decision-making self-efficacy and adaptive perfectionism in a sample of college students. Specifically, their findings demonstrate that adaptive perfectionists had high confidence in completing career decision-making tasks, while maladaptive perfectionists showed lower confidence with respect to the same career decision-making tasks. These results support prior research that suggested that perfectionism may influence the career development process through its relationship with decision-making self-efficacy (e.g., Ganske & Ashby, 2007) and show that perfectionism is a personality trait that deserves further consideration in the context of career development.

1.6 Study Rationale and Research Questions

It has been shown that when it comes to career transition, one of the most important predictors of successful transition is career planning (Park et al., 2013), a finding that is consistent across many populations including student-athletes (e.g., Rogers & Creed, 2011; Stambulova et al., 2009; Warriner & Lavalley, 2008; Young et al., 2006). Successful career transition equates to better outcomes reflected on measures of mental health, life satisfaction, and career goal achievement (e.g., Alfermann et al., 2004; Coakley, 2006). From a counselling perspective, in support of student-athletes who are transitioning successfully from university sport and into a career, it is important to identify the factors or variables that influence career planning.

Social Cognitive Career Theory (SCCT; Lent et al., 1994) has been used as a framework in several studies to examine the variables that influence and are related to

career planning in the context of career transition (e.g., Demulier et al., 2013). SCCT theory proposes that three main psychological determinants are associated with career planning: career decision making self-efficacy, career goals, and career outcome expectations. Research using SCCT to examine athletic career transition has found that athletes who are high in career decision making self-efficacy, those who set career goals, and those who have positive career outcome expectations will be more likely to career plan (Demulier et al., 2013). In addition, the same research found that these cognitive variables are influenced by personality, specifically conscientiousness (i.e., competence). Other research has demonstrated that personality is related to career goals, career decision-making self-efficacy and outcome expectancies, which in turn have been shown to influence career planning (Rogers & Creed, 2011). Specifically, adaptive perfectionism (i.e., perfectionistic strivings) has been shown to influence career development through its positive relationship with self-efficacy (e.g., Andrews et al., 2014; Ganske & Ashby, 2007; Stoeber, 2011).

Given that previous research has examined these variables in the athlete population (Demulier et al., 2013), and that such research suggests the exploration of personality traits related to the determinants of career planning in athletic career transition, this study proposes to extend this line of research by examining how perfectionism may influence career planning through its relationship with career decision making self-efficacy, career goal setting, and career outcome expectations in university student-athletes. The following research questions were the focus of this research:

1. Do student-athletes who are approaching the end of their university sport career manage career-planning differently based on their varying degree of perfectionism

(strivings or concerns)? More specifically, does perfectionism enhance or inhibit career planning in university student-athletes?

2. Is this difference, assuming there is one, influenced by the relationship between perfectionism (strivings and concerns) and the social cognitive variables of the SCCT (career decision making self-efficacy, career goal setting, and career outcome expectations)? How?

Considering that the end of a student-athlete's university sport career is an important time period in terms of career decision-making and planning (e.g., Hirschi et al., 2011; Koen et al., 2012), understanding the factors that influence the successful transition of university student-athletes away from sport and school and into a career could aid sport psychology counsellors to enhance the transition process. Specifically, as suggested by Gotwals and colleagues (2012), determining the degree to which athletes' perfectionistic tendencies are comprised of perfectionistic strivings versus perfectionistic concerns could help counsellors create interventions aimed at reducing an athlete's level of perfectionistic concerns, while maintaining levels of perfectionistic strivings in order to enhance the social cognitive variables (i.e., self-efficacy, goal setting, outcome expectations) that influence successful transition for those athletes approaching the end of their university career.

Chapter 2

2 Methods

2.1 Ethics

Ethics was obtained from the University of Western Ontario ethics board. Participation in the study was voluntary and participants did not receive any direct personal remuneration for their participation. There were no known risks or discomforts associated with this research project. The completed questionnaires were stored in a locked cabinet, inside a locked office, and after five years all of the questionnaires will be shredded. No other agencies or individuals outside of the research team had access to the data collected. Student-athletes were instructed that a summary of the study's findings could be obtained by contacting the lead investigator, and contact information was listed on the letter of information.

2.2 Participants

Male and female participants were recruited from the varsity student-athlete population at a Canadian university. Three criteria were set for participant inclusion in the study: Participants were (1) at least 18 years of age, (2) registered in full or part-time studies at Western University, and (3) student-athletes participating in any of the university's high-performance competitive varsity sports. For the purposes of the present study, high-performance competitive varsity sports were defined as those sports where the university-level competition is sanctioned by the Canadian Interuniversity Sport body (CIS) (e.g., rugby, hockey, volleyball, curling, basketball, swimming, track & field, cross country, wrestling). The CIS is the national governing body of university sport in Canada.

The inclusion criteria were selected in order to target those student-athletes who would enter the university sport-career transition phase within the next five years, and for whom their university sport experience represents a highly competitive environment.

2.3 Procedure

The coaches of the various CIS university varsity sport teams were approached by the lead researcher to request an initial meeting with the student-athletes. During this initial meeting, the researcher provided the student-athletes with an overview of the present study's purpose and aims. Student-athletes matching the inclusion criteria were informed that they were: free to choose to participate in the study; assured that their responses would remain confidential; their anonymity would be guaranteed, and; once informed of their rights and the ethical obligations of the researcher, were asked to participate in the study. The student-athletes were informed that the researcher would return for a second meeting at a pre-determined date immediately prior to or after a team practice session in order to conduct the research with those student-athletes interested in taking part in the study. Team coaches (i.e., head coaches and assistant coaches) were asked to be absent during the second meeting so as to avoid influencing student-athlete participation. During the second meeting, participants were given a letter of information that outlined the purpose and aims of the study, and were informed that they could withdraw from the study at any time and that this would not affect them negatively in any way. Participants were provided with a series of questionnaires, which took approximately 10-15 minutes to complete. The questionnaires were used to examine the relationships between perfectionism, self-efficacy, outcome expectancies, career goals, and career planning in university student-athletes.

2.4 Measures

2.4.1 Demographics

Participant demographics were collected. These included participant initials, age, gender, year and program of study, sport, and year of university sport competition eligibility. Also, student-athletes were asked if they participated in any other university sports, which sport they considered their primary sport and the highest competitive level they had reached in their respective sport(s). In addition, student-athletes were asked if they intended to continue to participate in sport post-graduation and if so, in which sport(s) and at what anticipated competitive level.

2.4.2 Career Planning

The 10-item Career Planning (CP) subscale of the Career Development Inventory short form (CDI-A SF; Patton, Creed, & Spooner-Lane, 2005) was used to measure participants' amount of career planning that they have undertaken and the degree of that engagement. When answering each item, athletes were asked to think about their post-sport career. A sample item is: "With regard to your post-sport career, how much have you thought about and planned to (a) choose a post-sport career in general, (b) take subjects that will help me in my future career." The CP subscale uses a 4-point Likert scale ranging from 1 to (*I have not thought about this at all*) to 4 (*I have made definite plans, and have started to carry them out or know what to do to carry them out*), which reflects low to high levels of career planning. Participants' scores on the CP subscale are determined by adding the rating values for the responses given, which higher scores indicate more planning. Previous use of the career planning scale has demonstrated

acceptable internal validity (Cronbach's alpha = .83; Demulier, Le Scanff, & Stephan, 2013). Cronbach's alpha for the present scale was .91.

2.4.3 Self-Efficacy

The 25-item short version of the Career Decision-Making Self-Efficacy Scale Short Form (CDMSE-SF; Betz, Klein, & Taylor, 1996) was used to measure student-athletes' levels of confidence in their ability to make career-related decisions following retirement from sport on a 5-point Likert scale ranging from 1 (*no confidence at all*) to 5 (*complete confidence*). Higher scores indicate higher career decision-making self-efficacy. A sample item is: "How much confidence do you have that you could determine the steps necessary to successfully transition from university to your post-sport career?" Previous studies (e.g., Demulier et al., 2013; Patton et al., 2005; Rogers, Creed, & Glendon, 2008) have reported adequate validity for the scale and indicated satisfactory internal reliabilities (Cronbach's alphas range = .87-.94). Cronbach's alpha for this inventory was .94.

2.4.4 Outcome Expectancies

The Career Decision-Making Outcome Expectancies Scale (CDMOE; Betz & Voyten, 1997) was used to assess outcome expectancies regarding career decision-making behaviours. The measure assessed active athletes' beliefs that certain behaviours would be useful to subsequent career options and decisions. The 14-item scale measures perceived long-term consequences of success in specific educational (7 items) and career decision-making (7 items) behaviours. A sample question is: "If I spend enough time gathering information about my future post-sport career, I will have all the information I need to make good career decisions." Responses were collected using a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate

higher outcome expectancies. Betz and Voyten (1997) found that outcome expectations were related to other variables in the expected direction, supporting the validity of the scale and reported coefficient alpha values of .79 based on a university student sample. Other studies (e.g., Demulier et al., 2013; Rogers et al., 2008) have reported adequate validity for the scale and indicated satisfactory internal reliabilities (Cronbach's alphas range = .83-.86). Cronbach's alpha for the present inventory was .78.

2.4.5 Career Goals

A 6-item scale, originally devised by Mu (1998), was used to assess the level of athletes' career-related goal-setting. Athletes were asked to indicate how closely each statement described their feelings at the present time on a 6-point Likert scale, ranging from 1 (*never*) to 6 (*always*). This gives a possible range of 6-36, with higher scores representing more career-related goal-setting. A sample item is: "I know what I want to do in terms of an occupation or career after I graduate from university." Mu reported preliminary validity data and an internal reliability of .92 with his sample of high school students, while other subsequent studies have reported internal reliability coefficients ranging from .85-.90 (e.g., Demulier et al., 2013; Patton, Bartrum & Creed, 2004; Rogers et al., 2008). Cronbach's alpha for the present scale was .91.

2.4.6 Perfectionism

As recommended by Gotwals and colleagues (2012), when examining perfectionism it is important to use multidimensional perfectionism instruments that contain subscales suitable as single-indicator measures of perfectionistic strivings and perfectionistic concerns. In addition, given that perfectionism is often domain-specific (Stoeber & Stoeber, 2009), it is recommended to use sport-specific measures of

perfectionism (rather than global measures of perfectionism) in order to capture perfectionistic strivings and concerns in sports (Gotwals, Dunn, Causgrove Dunn, & Gamache, 2010; Stoeber, 2011). Also, in order to keep questionnaires brief, it has been suggested that one may use single measures that represent reliable and valid indicators of the two dimensions of perfectionism (Stoeber, 2011). Therefore, the Sport Multidimensional Perfectionism Scale (Sport MPS-2; Gotwals & Dunn, 2009) was used to measure perfectionistic strivings (i.e., personal standards) as well as perfectionistic concerns (i.e., concern over mistakes and doubts about actions).

The Sport MPS-2 (Gotwals & Dunn, 2009), also called the Competitive Orientations Scale (Gotwals & Dunn, 2009), contains 42 items designed to measure six proposed dimensions of perfectionism in sport: concern over mistakes, personal standards, perceived parental pressures, perceived coach pressure, doubts about actions, and organization. However, for the purposes of the present study only three of the most relevant subscales were used: concern over mistakes (8 items), personal standards (7 items), and doubts about actions (6 items). The personal standards subscale represents perfectionistic strivings, whereas the combination of the concern over mistakes and doubts about actions subscales represents perfectionistic concerns (see Stoeber, 2011). Athletes were asked to indicate their level of agreement with each item on a 5-point Likert scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). A high composite subscale score reflects a higher level of perfectionism on each respective dimension. An example item from the personal standards scale is “I think I expect higher performance and greater results in my daily sport-training than most players”, whereas an example item from the concern over mistakes scale is “If I fail in competition, I feel like a failure

as a person”, and an example item from the doubts about actions scale is “I rarely feel that my training fully prepares me for competition.”

Gotwals and colleagues (2010) reported satisfactory validity data and internal reliability coefficients for all three subscales across samples of university student-athletes: concern over mistakes (Cronbach’s alphas = .78-.79), personal standards (Cronbach’s alphas = .76-.77), and doubts about actions (Cronbach’s alphas = .77-.82). Cronbach’s alphas for concern over mistakes, personal standards, and doubts about actions were .79, .71, and .76, respectively. When the concern over mistakes and doubts about actions subscales were combined to form the perfectionistic concerns subscale, the measure’s validity and reliability were maintained (Cronbach’s alpha =.81).

2.5 Data Analysis

Three steps were followed for the data analysis. First, descriptive statistics and Pearson correlations among the study variables were computed. Second, factor analyses were conducted to test the measurement models of perfectionism (concerns and strivings), decision-making self-efficacy, career goals, outcome expectations, and career planning in order to validate the measures for use in a population of Canadian university student-athletes. Third, path analyses were conducted to test for mediation. According to Preacher and Hayes (2004), the Sobel test with bootstrapping appears to be the best way to test mediation effects. A bootstrapping method with $n = 5000$ bootstrap resample (see Preacher & Hayes, 2008) was employed to test for the multiple mediation model, that is, the indirect contribution of perfectionism (strivings and concerns) via self-efficacy, career goals, and outcome expectancies. This nonparametric resampling procedure involves

repeatedly sampling from the dataset, in this case 5000 samples, and estimating the indirect effects in each resampled dataset (MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2008). In multiple mediation models, this procedure allows to estimate the indirect effect of a mediator while controlling for other direct effects. An empirical approximation of the sampling distribution of indirect effects is generated and used to construct 95% confidence intervals (CI) for the indirect effects. Point estimates of indirect effects are considered significant when zero is not contained in the 95% bias corrected and accelerated CI (see Preacher & Hayes, 2008).

Chapter 3

3. Results

The data was screened for univariate outliers and no missing data or out-of-range values were found. In order to calculate the minimum sample size for the factor analysis, the absolute number of cases (N) was considered and two rules were satisfied from this category. First, the Rule of 100 proposes no sample should be less than 100 (Gorsuch, 1983) even though the number of variables is less than 20 (Gorsuch, 1974, p. 333; in Arrindell & van der Ende, 1985, p. 166). Second, the Rule of 200 (Guilford, 1954, p. 533) suggests that N should be at least 200 cases (in MacCallum, Widaman, Zhang & Hong, 1999, p. 84; in Arrindell & van der Ende, 1985; p. 166). Given that the minimum amount of data for factor analysis was satisfied, with a final sample size of 201, data analysis was conducted.

3.1 Preliminary Analysis of Demographics

Descriptive statistics for participant demographics related to academic studies are presented in Table 1. Descriptive statistics for participant demographics related to sport participation are presented in Table 2. Two hundred and one university student-athletes drawn from eleven CIS sports volunteered to take part in the study at a Canadian university (88 males and 113 females). Ages ranged from 18 to 28 years ($M = 20.31$, $SD = 2.03$). The participants were undergraduate ($n = 194$) and graduate ($n = 7$) students registered in either full-time ($n = 198$) or part-time studies ($n = 3$) in one of 34 different academic programs (refer to Table 1).

The following sports were represented: cross country ($n = 10$), curling ($n = 8$), field hockey ($n = 13$), football ($n = 1$), ice hockey ($n = 33$), rugby ($n = 26$), soccer ($n = 10$), swimming ($n = 22$), track and field ($n = 25$), volleyball ($n = 30$), and wrestling ($n = 18$). Participants' year of university sport competition eligibility ranged from 1 to 5 years: first year ($n = 74$), second year ($n = 41$), third year ($n = 39$), fourth year ($n = 30$), and fifth year ($n = 17$) of CIS eligibility. It is important to note that CIS sport eligibility rules allow for up to a maximum of 5 years of university sport competition. Although participants were recruited from CIS sport programs, which for some ($n = 74$) was the highest competitive level achieved, several of the participants had attained competitive levels that included NCAA ($n = 3$), representative club ($n = 32$), provincial ($n = 35$), semi-professional ($n = 11$), national ($n = 42$), and international ($n = 4$) levels at the time of the study.

Approximately 61% of the participants ($n = 140$) reported that they intended to continue participating in sport post-graduation at the recreational ($n = 59$), competitive

club ($n = 60$), professional ($n = 7$), national ($n = 4$), or international ($n = 2$) levels. Of these 140 participants, approximately 6% ($n = 8$) were unsure as to the competitive level at which they would compete.

3.2 Preliminary Analysis of Social Cognitive Variables

Descriptive statistics and Pearson correlations for all variables included in the social cognitive framework are presented in Table 3. Descriptive statistics revealed that on average: the sample of university student-athletes have undertaken moderate-to-high levels of career planning ($M = 2.97$ on a four-point scale); possess moderate-to-high levels of career decision-making self-efficacy ($M = 3.74$ on a five-point scale); and have high levels of outcome expectancies regarding career decision-making behaviours ($M = 4.04$ on a five-point scale). In addition, descriptive statistics reflect that student-athletes in the present study engage in moderate levels of career-related goal setting ($M = 4.23$ on a six-point scale) and have higher levels of perfectionistic strivings ($M = 3.70$) than perfectionistic concerns ($M = 2.78$ on a five-point scale).

Career planning reveals a strong positive correlation with decision-making self-efficacy ($r = .75, p < .01$) and career goals ($r = .75, p < .01$), and a moderate positive correlation with outcome expectancies ($r = .25, p < .01$). Additionally, perfectionistic strivings indicated a weak positive correlation with perfectionistic concerns ($r = .15, p < .05$), while decision-making self-efficacy revealed a strong positive correlation with career goals ($r = .70, p < .01$), a moderate positive correlation with outcomes expectancies ($r = .37, p < .01$), and a weak negative correlation with perfectionistic concerns ($r = -.23, p < .01$).

3.3 Factor Analysis

The factorability of the six variables included in the social cognitive framework (i.e., perfectionistic strivings and concerns, career planning, self-efficacy, goal setting, and outcome expectancies) was examined. A well-recognised criterion for the factorability of a correlation was used. Specifically, the communalities of the measurement scales were all above .3, confirming that each item shared some common variance with other items within the scale. The exception was for only one item (i.e., item 9, “It is important to me that I am thoroughly competent in everything that I do in my sport”) on the strivings scale of the Sport MPS-2 (Gotwals & Dunn, 2009), for which a communality of .28 was reported. Given that the Sport MPS-2 has been previously validated by the developers of the scale (i.e., Gotwals & Dunn, 2009), it was decided that this item would be retained. Thus, given this overall indicator, a principle-components factor analysis was conducted for all items of the respective scales. In all, six factor analyses were conducted. In addition, internal consistency for each of the scales was examined using Cronbach’s alpha. Cronbach’s alphas were moderate to high and are reported in the methods section for each of the measures. The Communalities range, Eigen Values, and percent of variance for each scale are presented in Table 4.

3.4 Mediation Analysis

Path analyses using bootstrapping were conducted to test for mediation of perfectionism (strivings and concerns) via self-efficacy, career goal setting, and outcome expectancies on career planning. Results revealed that perfectionistic strivings and perfectionistic concerns were significant predictors of career decision-making self-

efficacy, $F(2, 198) = 7.85, p < .001, R^2 = .68, R^2_{Adjusted} = .67$. However, neither perfectionistic strivings nor concerns were found to be a significant predictor of career goal setting or outcome expectancies. Furthermore, bootstrap analysis indicated that the direct effects of perfectionistic strivings and perfectionistic concerns on career planning were non-significant when self-efficacy, goals, and outcome expectancies were included in the regression model. Nevertheless, the paths from self-efficacy and career goal setting to career planning were significant, $F(5, 195) = 79.43, p < .00, R^2 = .67, R^2_{Adjusted} = .66$., whereas the path from outcome expectancies to career planning was not significant. Regression coefficients are shown in Table 5.

The Sobel test (Preacher and Hayes, 2004) was used to test if self-efficacy, career goals, and outcome expectancies mediate the relationship between perfectionism (strivings and concerns) and career planning. Results show that the Sobel test was significant for the path from perfectionistic strivings to career planning via self-efficacy (Sobel = 1.94; $p = .05$) and for the path from perfectionistic concerns to career planning via self-efficacy (Sobel = 3.33; $p < .001$). A diagram of the path analyses is shown in Figure 1.

Taken together, these results suggest that since perfectionistic strivings and perfectionist concerns were not significant predictors of career planning when self-efficacy, career goals, and outcome expectancies were entered into the model, self-efficacy is thus a full mediator between perfectionism (strivings and concerns) and career planning. In addition, the overall findings suggest that perfectionistic strivings positively contributes to career planning as it is associated with higher career decision-making self-efficacy, whereas perfectionistic concerns negatively contributes to career planning as it is associated with lower career decision-making self-efficacy. Finally, although career

goals did not mediate the relationship between perfectionistic strivings or perfectionistic concerns and career planning, career goal setting did predict career planning. This model explained 67% of the variance in career planning.

Chapter 4

4. Discussion

Previous research examining psychological predictors associated with the quality of athletes' career transitions found that career planning is one of the strongest positive indicators of successful athlete out of sport transition (e.g. Warriner & Lavallee, 2008). Research by Demulier and her colleagues (2013) examining the determinants of career planning in the context of athletic career transition reported that athletes who are higher in career decision making self-efficacy, those who set career goals, and those who have positive career outcome expectations, are more likely to plan for their post-sport career. Additionally, recent research has reflected that those cognitive variables are related to, and influenced by personality (Demulier et al., 2013; Rogers & Creed, 2011). However, given that no research was uncovered that focused on the mechanisms underlying post-sport career planning in university student-athletes and that included perfectionism in sport as a factor to be examined, the purpose of the present study was to gain insight into the determinants of student-athletes' career planning using the SCCT, specifically including perfectionism as the dimension of personality.

The present study proposed to extend the research of Demulier and her colleagues (2013) by examining how perfectionism might influence career planning through its relationship with career decision making self-efficacy, career goal setting, and career

outcome expectations in a sample of Canadian university student-athletes. Specifically, the present study addressed two main research questions: Does perfectionism enhance or inhibit career planning in university student-athletes; and is this in turn influenced by the relationship between perfectionism (strivings and concerns) and the social cognitive variables of the SCCT (i.e., career decision making self-efficacy, career goal setting, and career outcome expectations)?

The results of the present study provide important information to the previously stated research questions and suggest that depending on the dimension of perfectionism observed (strivings or concerns) perfectionism either enhances or inhibits post-sport career planning in university student-athletes via the mediating influence of career decision-making self-efficacy. In addition, the results of the present study confirm the interrelationships among the social cognitive career theory variables of career decision-making self-efficacy, career-related goal-setting, career-related outcome expectations, and career planning in a population of Canadian university student-athletes. Lastly, the results of the present study confirm career decision-making self-efficacy and goal setting as mechanisms underlying post-sport career planning in university student-athletes.

4.1 Descriptives

When examined more closely, the findings from the present suggest that university student-athletes report similar levels on all four social cognitive variables (i.e., self-efficacy, career goal setting, career outcome expectations, and career planning) relative to the participants in the study undertaken by Demulier and her colleagues (2013). More specifically, the student-athletes in the present study reported scores that reflect high self-efficacy with respect to their career-related decision-making and high outcome expectations regarding career decision-making behaviours, as well as scores that

reflect that they engaged in moderate levels of career-related goal setting. In addition, student-athletes demonstrated similar, albeit slightly lower, planning behaviours related to their post-sport career relative to the competitive athletes in the study by Demulier and her colleagues (2013).

With respect to perfectionism in sport, student-athletes in the present study appear to possess higher levels of perfectionism strivings than perfectionistic concerns. These results are in line with previous research (Gotwals et al., 2010) that examined the perfectionist tendencies of Canadian intercollegiate athletes. The participants in the study by Gotwals and colleagues (2010) reported very similar levels of both perfectionism strivings and concerns (e.g., $M = 3.72$ and $M = 2.78$, respectively) as the student-athletes in the present study. Gotwals and his colleagues (2010) suggest the finding that student-athletes possessed higher levels of perfectionistic strivings than concerns “makes theoretical sense given that individuals who are capable of reaching the intercollegiate level of sport would be expected to demonstrate healthy (as opposed to unhealthy) achievement motivational orientations in sport”. Gotwals and colleagues go on to say that “it seems less likely that the ‘average athlete’ who reaches this level of sport would do so by possessing maladaptive/unhealthy perfectionist tendencies” (see Gotwals et al., 2010; p. 430).

4.2 Correlations

The results of the present study provide clear evidence that the interrelationships among the variables within the social cognitive career theory framework hold true in a population of Canadian Interuniversity Sport athletes. Specifically, each of the social cognitive variables (i.e., self-efficacy, career goals, outcome expectations, and career

planning) was related to one another, and more precisely shows that student-athletes who were highly efficacious in their career decision-making behaviours, who engaged in high levels of career-related goal setting, and who perceived long-term consequences of success in educational and career behaviours were also likely to report higher levels of career planning behaviours. These results support the previous research by Rodgers et al. (2008) that examined the role of adolescent personality, social supports, and the SCCT variables in explaining the career readiness actions of career planning and found that career planning is associated with career decision-making self-efficacy and high levels of goal-setting.

In the context of perfectionism in sport, results from the present study revealed a positive correlation between the dimensions of strivings and concerns, which suggests that student-athletes who reported high levels of perfectionistic strivings also reported high levels of perfectionistic concerns. Although the relationship between perfectionistic strivings and concerns is weak, this finding supports previous research by Stoeber (2011) that examined the dual nature of perfectionism in sports. Stoeber (2011) suggested that, although the two dimensions of perfectionism often show positive correlations, perfectionistic strivings and perfectionistic concerns show different individual patterns of associations. These differential patterns of association are clearly demonstrated and supported by the findings of the present study. For example, although perfectionistic strivings was not significantly related to career decision-making self-efficacy, the perfectionism dimension relating to concerns was inversely related to career decision making self-efficacy. As well, although not significant, the relationship between perfectionistic strivings and career goal-setting approached significance ($p = .06$),

whereas perfectionistic concerns was clearly not significantly related to career goals ($p = .52$).

Also, student-athletes in the present study who reported high levels of perfectionism associated with concerns also reported being less efficacious when it came to making decisions related to their post-sport career. However, no relationship was found between high levels perfectionism associated setting high standards without negative self-appraisal and decision-making self-efficacy. These results support previous research by Andrews and colleagues (2014) that examined whether perfectionism affected career development and found an inverse relationship between career decision-making self-efficacy and maladaptive perfectionism (i.e., perfectionistic concerns). However, contrary to the results of the present study, Andrews and colleagues (2010) also found a positive relationship between career decision-making self-efficacy and adaptive perfectionism in their sample of college students. Specifically, their findings reflect that adaptive perfectionists had high confidence in completing career decision-making tasks, while maladaptive perfectionists reported lower confidence with respect to the same career decision-making tasks. However, it is unclear as to why the relationship between perfectionistic strivings and self-efficacy was non-significant in this study's sample of student-athletes given the results of the mediation analysis.

4.3 Mediation

Overall, the results from the present study suggest that career decision-making self-efficacy can be considered as a mediator in the relationship between perfectionism (strivings and concerns) and career planning. That is, perfectionistic strivings positively

contributes to career planning, as it is associated with higher career decision-making self-efficacy, whereas perfectionistic concerns negatively contributes to career planning as it is associated with lower career decision-making self-efficacy. These results support prior research (e.g., Ganske & Ashby, 2007) that proposes that multidimensional perfectionism may influence the career development process through its relationship with career-related decision-making self-efficacy. Thus, the findings of the present study suggest that perfectionistic strivings contribute to career planning, as it induces high levels of career decision-making self-efficacy. Stated differently, student-athletes who possess high levels of perfectionism associated with strivings for perfections and setting exceedingly high standards of performance (Stoeber & Otto, 2006) develop beliefs in their capacity to accomplish a task such as making career choices and thus engage in more career planning. These findings support previous research that suggests that adaptive perfectionism (i.e., perfectionistic strivings) influences career development through its positive relationship with self-efficacy (e.g., Andrews et al., 2014; Ganske & Ashby, 2007; Stoeber, 2011). Conversely yet understandably, the present findings propose that perfectionistic concerns inhibits career planning as it reduces levels of career decision-making self-efficacy. In other words, student-athletes who possess high levels of perfectionism associated with concerns over making mistakes and negative reactions to imperfection (Stoeber & Otto, 2006) are less efficacious in their ability to make career-related decisions and therefore will engage less in career planning.

Results from the present study demonstrate that neither perfectionistic strivings nor concerns were found to be a significant predictor of career goal setting or outcome expectancies, which suggests that neither dimension of perfectionism influences to a significant degree student-athletes' engagement in career-related goal setting nor predicts

successful outcome expectations related to career decisions. However, career-related goal setting positively influenced career planning in student-athletes. This finding is in concert with previous research (e.g., Demulier et al., 2013; Rodgers & Creed, 2011) and suggests that student-athletes who are motivated to set career-related goals are likely to engage in career planning behaviours and tasks.

In addition, although social cognitive career theory hypothesises a direct relationship between outcome expectations and career planning (Lent et al., 1994), this association was not supported in the present model. This finding is consistent with previous research (e.g., Demulier et al., 2013; Rodgers & Creed, 2011) in which career-related outcome expectations were not found to play a role in career planning. Rodgers and Creed (2011) offer an explanation for this finding and suggest that perhaps this can be explained by the strong direct relationship between self-efficacy and planning, or because self-efficacy is a precursor to outcome expectations in the SCCT career planning model.

Thus, the results address the original research questions posed in the present study. Specifically, perfectionism can either enhance or inhibit career planning in university student-athletes depending on the dimension of perfectionism examined, which in turn is influenced by the relationship between perfectionism and career decision making self-efficacy. As to how this relationship is influenced, findings reveal that the dimension of perfectionistic strivings is positively related to career planning because it is associated with self-efficacy, whereas the dimension of perfectionistic concerns is negatively related to career planning due to its inverse relationship with self-efficacy. As described earlier, self-efficacy is a concept at the centre of Bandura's (1977) social cognitive theory, and career decision-making self-efficacy stems from this theory.

According to Betz and colleagues (1996), career decision-making self-efficacy can be defined by the beliefs in one's capabilities to complete successfully the tasks necessary to make career decision. Thus, based on social cognitive theory (Bandura, 1977), a student-athlete who is highly efficacious with respect to his or her career decision-making capabilities will approach the career transition process as a challenge to be mastered rather than as a threat to be avoided, and consequently will engage in the courses of actions, such as career planning, necessary to achieve their desired outcomes (i.e., successful career transition).

The present study adds to the existing body of knowledge in drawing on the social cognitive career theory framework in addressing the specific mediating role of self-efficacy in studying the relationships between personality, particularly perfectionistic strivings and concerns, and career planning in Canadian university-student athletes. This is in contrast to the majority of the research in this area that has examined the psychological processes associated with sport career transition with non-student, elite sport athletes (e.g., Demulier et al., 2013; Park et al. 2013; Stambulova et al., 2009), and perfectionistic tendencies in student-athletes (e.g., Ganske & Ashby, 2007; Gotwals et al., 2010) outside of the context of post-sport career transition.

4.4 Limitations and Future Directions

Although the present study offers insights into the associations among perfectionism, self-efficacy and career planning in the student-athlete population, it is not without limitations, which need to be acknowledged and considered. First, the present study was conducted with a relatively small sample of university student-athletes drawn from one Canadian university. The nature of the sample limits the generalizability of the

findings to other student-athlete populations. The findings of the present study need to be replicated on a more diverse population and with more subjects in order to compare how student-athletes at various stages of their university academic career and at other universities across Canada plan for post-sport career transition. Second, social cognitive career theory emphasizes the importance of examining gender differences in the career development process (Lent et al., 1994), thus further research should be undertaken in which gender differences among university student-athletes and their career development behaviours are examined.

A third limitation in the present study is related to the factorial validity the perfectionistic strivings scale of the Sport Multidimensional Perfectionism Scale (Sport MPS-2; Gotwals & Dunn, 2009). It is possible that the validity of the data was impacted given that one item in the scale did not satisfy the criterion for the factorability of a correlation. Therefore, and as suggested by Gotwals and his colleagues (2010), more research is required to determine if this particular criterion is due to a specific characteristic of this particular sample or whether it is a fundamental weakness with this item.

4.5 Conclusions

The present study provides several applied perspectives. The culmination of a student-athlete's university sport career is an important time to explore career decision-making and planfulness for eventual transition into a post-sport career (e.g., Hirschi et al., 2011; Koen et al., 2012). Given the present results, counsellors and sport psychologists should be encouraged to design and implement interventions that focus on increasing career decision self-efficacy and improving goal-setting behaviours early in the university sport career of student-athletes. As well, given that personality plays a role on the

influence of career planning through self-efficacy, counseling practitioners or sport psychologists should use appropriate inventories to evaluate personality traits of student-athletes in order to determine the degree to which athletes' perfectionistic tendencies are comprised of perfectionistic strivings versus perfectionistic concerns. As suggested by Gotwals and colleagues (2012), these results could help counsellors or sport psychologists develop interventions to reduce an athlete's level of perfectionistic concerns, while maintaining levels of perfectionistic strivings. These proactive steps could assist student-athletes in making the jump from university sport to life a successful one.

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Table 1

Descriptive statistics for participant demographics related to academic studies

Variable	N	Variable	N
Academic Studies		Academic Program Year	
Full-time	198	Yr. 1 Undergraduate	63
Part-time	3	Yr. 2 Undergraduate	41
		Yr. 3 Undergraduate	44
		Yr. 4 Undergraduate	35
		Yr. 5 Undergraduate	11
		Graduate	7
Academic Program		Academic Program	
Actuarial Science	1	Humanities	3
Aviation	1	Information/Media Studies	4
Biology/Biological Science	7	Kinesiology	46
Business	9	Linguistics	1
Criminology	10	Management/Organizational Studies	22
Economics	2	Medical Science	8
Education	2	Nursing	4
Engineering	11	Nutrition	6
English	1	Philosophy	2
Environmental Science	1	Physical Therapy	1
Family Studies	2	Physiology/Pharmacology	1
First Nations Studies	1	Political Science	4
French	1	Psychology	9
Genetics	2	Science	4
Geology/Geophysics	2	Social Science	17
Health Science	9	Sociology	2
History	1	Writing	1
		Did not specify	3

Table 2

Descriptive statistics for participant demographics related to sport participation

Variable	<i>M (SD)</i>	<i>N</i>	Male <i>N</i>	Female <i>N</i>
Age / Gender	20.31 (2.03)	201	88	113
Sport				
Cross Country		10	4	6
Curling		8	5	3
Field Hockey		13	0	13
Football		1	1	0
Ice Hockey		33	20	13
Rugby		26	0	26
Soccer		10	10	0
Swimming		22	13	9
Track and Field		25	7	18
Volleyball		30	15	15
Wrestling		18	13	5
Sport Eligibility				
First Year		74	35	39
Second Year		41	16	25
Third Year		39	20	19
Fourth Year		30	9	21
Fifth Year		17	9	8
Highest Competitive Level				
CIS		74	26	48
NCAA		3	1	2
Club		32	12	20
Provincial		35	26	19
Semi-Professional		11	11	0
National		42	23	19
International		4	0	4

Table 3

Descriptive statistics and Pearson correlations for all social cognitive variables

Variable	<i>M</i> (<i>SD</i>)	Sum <i>M</i> (<i>SD</i>)	1.	2.	3.	4.	5.	6.
1. Strivings	3.70 (.58)	25.89 (4.09)	–	.15*	.13	.10	.05	.12
2. Concerns	2.78 (.57)	38.85 (8.01)		–	-.46	-.23**	-.13	-.08
3. Goals	4.23 (1.12)	25.39 (6.72)			–	.70**	.27**	.75**
4. Self-Efficacy	3.74 (.60)	93.42 (14.88)				–	.37**	.75**
5. Outcome Expectancies	4.04 (.47)	56.57 (6.59)					–	.25**
6. Planning	2.97 (.60)	29.74 (5.96)						–

* $p < .05$, ** $p < .01$

Table 4

Ranges for Communalities, Eigenvalues, and percent of variance for each scale

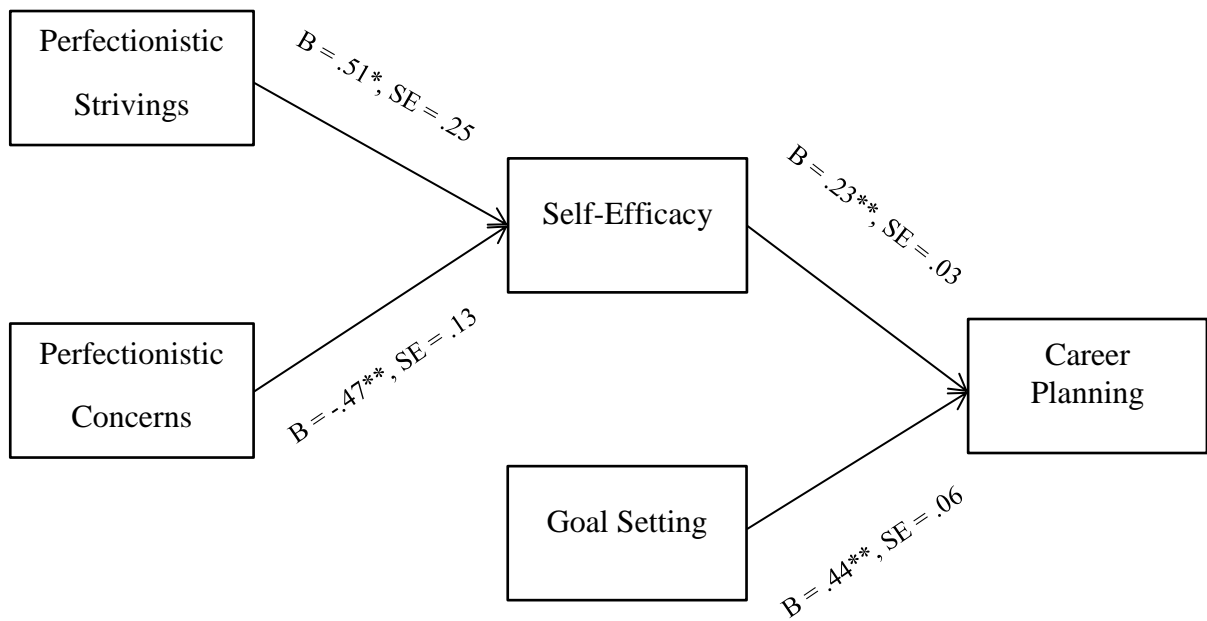
	Communalities	Eigenvalues	% Variance
	Range		
Strivings	.28-.97	2.82	40.23
Concerns	.36-.80	.4.08	29.16
Goals	.65-.78	.4.24	70.59
Self-Efficacy	.49-.73	10.03	40.13
Outcome Expectancies	.33-.71	3.82	27.26
Planning	.50-.80	5.63	56.28

Table 5

Regression coefficients for perfectionistic strivings and concerns on self-efficacy, and for self-efficacy and goal setting on career planning

Predictor	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	95% CI
On Self-Efficacy						
Strivings	.51	.25	.14	2.002	.047	[.039, 1.011]
Concerns	-.47	.13	-.25	-3.678	.000	[-.754, -.207]
On Planning						
Self-Efficacy	.23	.03	.48	7.791	.000	[.163, .297]
Goals	.44	.06	.43	7.726	.000	[.301, .577]

Figure 1 Path Analysis for the relationship between perfectionism (strivings and concerns) and career planning. All coefficients represent unstandardized regression coefficients.



Note. * $p < .05$, ** $p < .01$

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OTHER MANUSCRIPTS:

Wesch, N. N. (2015). *University Athlete Transition: Making the Jump from Sport to Life*. Unpublished Master of Arts thesis, The University of Western Ontario, London, Ontario, Canada.

Wesch, N. N. (1998). *The Effects of Long-Term Exercise Training on SP72 and MHC-I Expressions in Rats*. Unpublished Master of Science thesis, The University of Western Ontario, London, Ontario, Canada.

ACADEMIC CONFERENCE PRESENTATIONS AND POSTERS:

Wesch, N., Hall, C., Polgar, J., & Forwell, L. (2008, June). *An Examination of Imagery Use and Self-Efficacy During Rehabilitation*. Oral presentation at the North American Society for the Psychology of Sport and Physical Activity Conference, Niagara Fall, Ontario, Canada.

Wesch, N., Hall, C., Prapavessis, H., Maddison, R., Bassett, S., Foley, L., Brooks, S., & Forwell, L. (2007, March). *An Examination of Injured Athletes' Self-Efficacy and Imagery Use During Rehabilitation*. Poster presentation at the Society of Behavioral Medicine Conference, Washington, District of Columbia, USA.

Wesch, N., Milne, M.I., Burke, S.M., Hall, C. (2004). *Self-efficacy and imagery use in older adult exercisers*. Oral presentation at the Eastern Canadian Sport and Exercise Psychology Symposium, St. Catharines, Ontario (March) and at the Canadian Society for Psychomotor Learning and Sport Psychology Conference, Saskatoon, Saskatchewan (October).

RELATED WORK EXPERIENCE:

2009-present Mental Performance Consultant, Private Practice

2009-present The University of Western Ontario
 2009-present Assistant Professor, Faculty of Health Sciences
 1998-2008 Lecturer, School of Kinesiology

STUDENT SUPERVISORY EXPERIENCE:

Ruthes, G. (2014). *Imagery Use in Soccer Coaching*. (Supervisory role: Master Coach for degree Master of Arts in Coaching – Kinesiology)

Barr, M. (2008). *The Relationship Between Leg Extensor Strength, Sprinting Speed, and Drop Jump Performance*. (Supervisory role: Master Coach for combined degree Master of Science in Biomechanics and Coaching – Kinesiology)

Carron, C. (2005). *Observational Learning in Team and Individual Sport Athletes*. (Undergraduate independent study)