

PREDICTING POSITIVE CAREER PLANNING ATTITUDES AMONG
DIVISION I COLLEGE STUDENT-ATHLETES

by

Shaun Clifton Tyrance

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Approved by:

Dr. Henry L. Harris

Dr. Lyndon P. Abrams

Dr. Claudia P. Flowers

Dr. Phyllis B. Post

Dr. Richard A. Zuber

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ABSTRACT

SHAUN CLIFTON TYRANCE. Predicting positive career planning attitudes among Division I college student-athletes. (Under direction of DR. HENRY L. HARRIS)

This study examined the extent that athletic identity, race, gender, sport and expectation to play professionally predict Career Planning Attitudes (Career Optimism, Career Adaptability and Career Knowledge) among Division I college student-athletes. Participants of this study consisted of 538 Division I student-athletes from four Bowl Championship Series institutions, and these student-athletes were given a demographic questionnaire, Athletic Identity Measurement Scale and Career Futures Inventory. Results of this study found that male Division I student-athletes believed they had a better understanding of the job market and employment trends than their female counterparts. Division I student-athletes with higher athletic identities had lower levels of career optimism. Male Division I student-athletes had more career optimism than female Division I student-athletes. Division I student-athletes who participated in revenue-producing sports had lower levels of career optimism. Student-athletes with a higher expectation to play professional sports were more likely to be optimistic regarding their future career. Female Division I student-athletes had higher levels of athletic identity than their male counterparts. Student-athletes with a higher expectation to play professionally displayed higher athletic identities.

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CHAPTER 1: INTRODUCTION

According to the National Collegiate Athletic Association (NCAA), over 400,000 students participate in intercollegiate athletics at the Division I, II and III levels ("Welcome to ncaastudent.org," 2009). Many have aspirations of competing in their sport at the professional level when they begin their playing careers and by the time these athletes make it to the collegiate level, their professional aspirations remain strong. The NCAA recognizes the National Basketball Association (NBA), Women's National Basketball Association (WNBA), National Football League (NFL), Major League Baseball (MLB), National Hockey League (NHL) and Major League Soccer (MLS) as the major professional sports leagues in the United States ("Estimated probability of," 2009). Professional athletes in the United States are not only considered the best athletes in their respective sports, but they are also some of the most financially compensated individuals in the country.

According to the NBA, the average annual salary of NBA players during the 2009-2010 season was 5.58 million dollars (Aldridge, 2009) and the NFL Players Association indicated that the average salary for an NFL player in 2009 was 1.1 million dollars per year ("NFL hopeful faqs," 2009). Major League Baseball players averaged 3.0 million dollars per year in 2009, while the average 2008 NHL salary was 1.9 million dollars per year (Singer, 2009; TSN.CA Staff, 2008). Additionally, data published by USA Today showed the average annual salary for MLS players in 2009 was 147,000 dollars ("2009 MLS salaries," 2009). The maximum salary for a WNBA player in 2008

was 95,000 dollars per year, while the WNBA rookie minimum salary was 34,500 dollars per year (Dixon, 2008).

Despite the fact that many college athletes have a desire to play sports professionally, statistics published by the NCAA state that this likelihood is very remote. According to the NCAA, men's college basketball players have approximately a 1.2% chance of being drafted by a NBA team and women's basketball players have about a 1% chance of being drafted into the WNBA ("Estimated probability of," 2009). College football and men's soccer players have a 1.8% and 1.7% chance respectively, of being drafted by a NFL or MLS team, and men's hockey players have a 3.7% chance of being drafted. College baseball players have the greatest likelihood of being drafted by a MLB team at 9.4%. In addition to the low number of college athletes being drafted into professional sports leagues in their respective sports, simply being drafted by a team does not ensure the players are going to make the team and sign a lucrative contract. It is also important to note that an even smaller percentage of the athletes drafted actually make an opening day roster for a major professional sports franchise ("Estimated Probability of," 2009).

These numbers suggest that the overwhelming majority of college athletes will retire from competitive sport once their college eligibility has expired. Therefore, it is crucial for college student-athletes to adequately prepare themselves for life after athletics. Due to the low number of student-athletes who earn a living playing professional sports, these individuals should use college as a time for formulating career plans outside of sports. "Athletic culture, extreme time demands on student-athletes, and the often uneasy marriage between athletics and academics in the university setting all

contribute to the difficulties that many student-athletes face in ‘making it’ academically” (Jolly, 2008, p. 145). For example, college student-athletes spend 20 hours per week training, practicing and playing their sport, and when these athletes are not physically participating, they are spending a number of hours watching game film and studying scouting reports. With these demands and the lure of professional sports, many student-athletes allow their identity as a student-athlete to overshadow the need to explore viable career options (Brown, Glastetter-Fender & Shelton, 2000).

According to Brewer, Van Raalte and Linder (1993), athletic identity is defined as the degree to which someone identifies with the athletic role. Athletic identity is a self-image with a social definition expressing the extent to which an individual labels oneself an athlete (Astle, 1986). The time commitment and physical demands placed on college athletes suggests that athletes must identify greatly with their role as an athlete. In order to meet the physical and mental expectations placed on Division I athletes, individuals must forgo other activities and focus their attention on their sport. Athletic identity can be influenced by environmental factors including coaches, friends, family members and the media (Brewer et al., 1993).

It has been suggested that one’s athletic identity becomes more important than other self-identities. Webb, Nasco, Riley, and Headrick (1998) contend this occurs for two reasons; first, an individual’s athletic identity usually begins forming early in life. Athletic talent (especially extraordinary athletic talent) is usually recognizable by elementary school. In many instances, once this talent is identified, the athlete and his/her family become totally absorbed in developing this athletic talent. The second reason athletic identity seems to dominate one’s self-identity is its public nature. An individual’s

athletic identity is more visible than most other self-identities one possesses, thus a wider audience of people contribute to molding the athletic identity (Webb, Nasco, Riley & Headrick, 1998).

There are both positive and negative consequences associated with high athletic identity. “Research has shown that individuals who highly value the athletic component of the self are more likely to engage in exercise behavior than those who place less value on the athletic component of self-identity” (Brewer et al., 1993, p. 239). Thus, these individuals tend to be in better physical shape and overall health as a result of their athletic involvement. Another positive effect of having a high athletic identity is the development of a prominent sense of self. Athletics provides individuals with the opportunity to build confidence through developing athletic skill, measuring ability and engaging in social interactions (Brewer et al., 1993). Individuals with a high athletic identity are better prepared for competition, and these athletes are more willing to forgo other activities in order to train for and compete in athletic competition (Danish, 1983). Thus, a high athletic identity may lead to an improvement in athletic performance.

High athletic identity may also have negative consequences for athletes, and these negative consequences are often thought to overshadow the positive effects. Athletes with a high athletic identity are more vulnerable to emotional difficulties after suffering an injury that hinders their ability to perform athletically (Brewer et al, 1993). The injury takes away the athlete’s self-identity, thus making the injured athlete at risk for emotional disturbance. Another risk factor for individuals with high athletic identity is dysfunctional practices within sport. An over-commitment to the athletic role may lead to over-training, anxiety and or use of performance enhancement drugs (Cohen & Ogles, 1993; Hughes &

Coakley, 1991). Relative to this investigation, Murphy, Petitpas and Brewer (1996) found athletic identity to be inversely related to career maturity, thus an athlete's identification with the athletic role hinders them from making career decisions or exploring alternative identities. In addition, Grove, Lavallee and Gordon (1997) discovered that athletes with high athletic identity failed to engage in pre-retirement career planning.

It is imperative that college student-athletes engage in positive career planning and exploration due to the low percentage of athletes who make a living playing their sport at the professional ranks. Career development is defined as the creation of realistic and mature career plans based on one's interests, goals, aptitude and awareness of vocational options and requirements (Crites, 1978). Crites (1978) further implied that in order to develop mature career plans, individuals must engage in self-exploration in order to identify available career options. Similarly, Chickering and Reisser (1993) stated that concentrated introspection and personal assessment is needed to develop strong occupational purpose. This is important to this investigation because Division I student-athletes spend a considerable amount of time and energy every week participating in their sport and these athletes are susceptible to having a strong, exclusive athletic identity, thus leaving little time for the self-exploration needed to develop mature career plans (Blann, 1985).

Every sport has a life cycle and each student-athlete experiences transitions as they move through this life cycle which starts at the age they begin competing and lasts until retirement (Petitpas, Champagne, Chartrand, Danish & Murphy, 1997). The typical sports life cycle for many professional athletes lasts about 20 to 30 years, while the life cycle for most college athletes lasts approximately 10 to 15 years. Thus, most college

(and professional) athlete's work career will be longer than their athletic career. "Many athletes have been able to adjust to their transition out of sport by learning about or working in another career while still competing" (Petitpas, Champagne, Chartrand, Danish & Murphy, 1997, p. 7).

Race is important in every aspect of society and each institution in the United States is impacted by issues surrounding race. College athletics are highly valued at many colleges and universities, and race is one element of society that impacts the experiences of college student-athletes. Sports and society remained virtually racially segregated throughout the late 19th and 20th centuries and student-athletes of color did not become integrated into college athletics until the massive commercialization of sports occurred. Predominately White colleges and universities realized that they could benefit financially by integrating student-athletes of color into their sports teams (Sage, 2000). The more successful an institutions athletic department, the more revenue the college or university generates.

The NCAA released the 2008 – 2009 Student-Athlete Ethnicity Report, and 63.8% of Division I male athletes are Caucasian and 71.3% of Division I females are Caucasian. African American student-athletes make up the next highest percentage, with 24.8% of Division I male athletes and 16% of Division I female athletes being African American. The percentage of Nonresident Aliens is 6% and 7.4% for Division I male and female athletes respectively. In spite of systematic racial discrimination in the United States, athletes of color have played a significant role in college sports, and today more opportunities exist for athletes of color. However, racism in college sports still exists (Sage, 2000).

According to the NCAA, minority Division I athletes graduate at a lower rate than White student-athletes (“2009 NCAA division,” 2009). Given the number of minorities participating in college athletics, low graduation rates, and the desire to participate in sports professionally, it is imperative that minority student-athletes do not solely identify themselves as an athlete as it could negatively impact their career development. Black student-athletes are over-represented in Division I college football and basketball, and these individuals are subject to having a high expectation to compete in professional sports (Kennedy & Dimick, 1987). Thus, minority student-athletes may be more likely to forgo developing mature career plans due to an expectation to play professionally. The likelihood that any student-athlete makes it to professional sports is slim, and minority student-athletes may suffer some of the negative symptoms of over-identifying with the athletic role.

Gender issues and discrimination have been prevalent in collegiate sports throughout our country’s history. Title IX of the Education Amendment was established in 1972, and in 1988 the United States Congress passed the Civil Rights Restoration Act. This legislation was created to help ensure that programs (including athletics) exist for both males and females (Schubert & Schubert, 1993). According to statistics published by the NCAA, 45% of Division I student-athletes are female. The passing of Title IX has caused Division I athletic departments to increase funding for women’s athletic programs, thus the female student-athlete experience has evolved over the last 40 years. Scholarship opportunities in female sports have changed the recruiting process for female athletes, and higher salaries earned by head coaches of women’s teams has increased the pressures associated with female sports. Today, the experiences of female Division I

athletes mirrors those of their male athlete counterparts in many respects. Male student-athletes make up 55% of Division I athletes, and the expectations associated with competing at the Division I level cause male athletes to have a unique athletic experience. Professional sports lure many male athletes into focusing all of their attention on their sport, thus forgoing other social and career related activities

With the increased value that society and today's athletes place on college athletics, the counseling and developmental needs of college student-athletes has received more attention in recent years (Chartrand & Lent, 1987; Fletcher, Benschhoff & Richburg, 2003; Hinkle, 1994a, b; Miller & Wooten, 1995; Petitpas & Buntrock, 1995; Petitpas & Champagne, 1988; Smith & Milliner, 1994; Sowa & Gressard, 1983; Valentine & Taub, 1999; Watson, 2006; Wooten, 1994). The negative consequences associated with a high athletic identity (i.e. poor career development, depression, drug misuse, over-training and anxiety) increase the need for mental health professionals to understand the needs of student-athletes. Thus, career counseling and developmental programming is essential for college student-athletes as a result of the false lure of professional sports (Brown & Bohac, 1997; Valentine & Taub, 1999).

In response to the developing needs of college student-athletes, the NCAA developed the CHAMPS/Life Skills Program (Challenging Athletes' Minds for Personal Success). The program was developed in 1994 to enhance the overall student-athlete experience, and the primary mission of the program is to empower athletes to take ownership over their athletic and personal well-being. The program promotes diversity and inclusion among the athletes, and encourages character development and leadership skills. Participating member institutions in the CHAMPS/Life Skills Program are given

materials and supplemental resources designed to aid student-athlete's development in five key areas: academics, athletics, personal development, career development and community service ("Welcome to the," 2009).

Of the 348 NCAA Division I institutions, 335 athletic departments offer CHAMPS/Life Skills Programs. Institutions with CHAMPS/Life Skills programs have at least one full-time staff person devoted to the initiative; however, each participating institution can manage their CHAMPS/Life Skills program as they see fit. Most participating departments offer mandatory and voluntary programming from each of the five content areas (academics, athletics, personal development, career development and community service). Drug and alcohol abuse, gambling, stress management and career fairs are popular CHAMPS/Life Skills programs that many athletic departments offer. Many CHAMPS/Life Skills programs team with other resources on their campuses to offer and develop programming (i.e. career center, counseling center and multicultural affairs), and all of these programs are designed to help educate and prepare student-athletes for life after sports ("Welcome to the," 2009). Athletes who lack interests outside of their sport often struggle to adjust to life after their playing careers have ended (Petitpas, Champagne, Chartrand, Danish & Murphy, 1997). The NCAA and university athletic departments have a responsibility to assist college athletes in their transition through and out of collegiate sports.

Purpose of the Study

Despite the fact that the NCAA and individual athletic departments allocate programming and resources to helping student-athletes develop transferable skills that will help them transition into the world of work, college student-athletes continue to

over-identify with the athletic role and have an unhealthy expectation of extending their playing careers beyond the collegiate level. There have been a number of studies that explored a variety of issues concerning athletic identity (Brewer, Cornelius, Stephan & Van Raalte, 2010; Brewer et al., 1993; Grove, Fish & Eklund, 2004; Phoenix, Faulkner & Sparkes, 2005; Settles, Sellers & Damas, 2002; Webb, Nasco, Riley & Headrick, 1998; Yopyk & Prentice, 2005). However, only a few research studies have investigated the influence of athletic identity on the career development of college student-athletes (Brown, Glastetter-Fender & Shelton, 2000; Brown & Hartley, 1998; Grove, Lavallee, & Gordon, 1997; Lally & Kerr, 2005; Martens & Cox, 2000; Murphy, Petitpas, & Brewer, 1996). Thus, the purpose of this study was to examine how one's athletic identity, race, gender, sport and expectation to play professionally predict the career planning of Division I college student-athletes.

Research Question

The research question for this study is: To what extent do athletic identity, race, gender, sport and expectation to play professionally predict Career Planning Attitudes among Division I college student-athletes?

Hypotheses

H₁: Athletic identity, race, gender, sport and expectation to play professionally will be inversely related to career adaptability among Division I college student-athletes.

H₂: Athletic identity, race, gender, sport and expectation to play professionally will be inversely related to career knowledge among Division I college student-athletes.

H₃: Athletic identity, race, gender, sport and expectation to play professionally will be inversely related to career optimism among Division I college student-athletes.

H₄: Race, gender, sport and expectation to play professionally will be inversely related to athletic identity among Division I college student-athletes.

Delimitations

This study had the following delimitations:

1. The student-athletes identified to participate in this study were a convenience sample selected from various athletic departments across the country.
2. The student-athletes participating in this study attended institutions participating at NCAA Division I level; therefore, student-athletes participating at other collegiate levels (Division II, Division III, junior college, NAIA, etc.) were excluded.
3. Participants were recruited from study halls and academic support facilities for student-athletes.

Limitations

This study had the following limitations:

1. A self-report bias may exist among participants responding to the questionnaire.
2. Athletes who are not required to attend study hall or do not use the academic support services may not be recruited to participate in study.

Assumptions

The following assumptions are applicable to this study:

1. The questionnaire is written at an appropriate level to be understood by all readers.
2. The athletes surveyed participated at institutions with similar athletic and academic environments.

Operational Definitions

1. Positive career planning attitudes was measured by the three subscales (Career Adaptability, Career Optimism and Perceived Knowledge) of the Career Futures Inventory (Rottinghaus, Day & Borgen, 2005).
2. Career adaptability is defined as “the way an individual views his or her capacity to cope with and capitalize on change in the future, level of comfort with new work responsibilities, and ability to recover when unforeseen events alter career plans” (Rottinghaus, Day & Borgen, 2005, p. 11).
3. Career optimism is “a disposition to expect the best possible outcome or to emphasize the most positive aspects of one’s future career development, and comfort in performing career planning tasks” (Rottinghaus, Day & Borgen, 2005, p. 11).
4. Perceived Knowledge “assesses perceptions of how well an individual understands job market and employment trends” (Rottinghaus, Day & Borgen, 2005, p.11).
5. Athletic identity is defined as the degree to which an individual identifies with the athlete role as defined by the total score of the Athletic Identity Measurement Scale (Brewer & Cornelius, 2001).
6. Each sport was placed into one of two categories: revenue or non-revenue. Revenue producing sports are defined as football, men’s basketball, women’s basketball, men’s hockey, baseball, and men’s soccer. The non-revenue sports are men and women’s tennis, men and women’s golf, men and women’s cross

country and track and women's bowling, fencing, field hockey, men and women's gymnastics, women's ice hockey, men and women's lacrosse, rifle, rowing, skiing, women's soccer, softball, men and women's swimming and diving, volleyball, men and women's water polo and wrestling.

7. Gender was self-reported by participants as either male or female.
8. Race was self-reported by participants as African American, Asian/Pacific Islander, Caucasian, Hispanic/Latino, Native American, Multiracial, Other or International.
9. Expectation to play professionally was self-reported by participants, and defined as an athlete's perception of their likelihood of playing their sport professionally once their college career has ended.

In summary, this study examined how one's athletic identity, race, gender, sport and expectation to play professionally predict the career planning of Division I college student-athletes. Career planning is uniquely important for college athletes because the opportunity for college student-athletes to participate in professional sports is sparse. College athletes at any level must possess extraordinary physical gifts; however, Division I college athletes must couple their physical gifts with a high level of dedication and commitment to their sport. Division I college athletes spend at least 20 hours a week participating in their sport. This commitment together with the possibility of fame and fortune creates an environment that allows student-athletes to focus the majority of their attention on their athletic career. Athletic identity and career development both impact the overall wellbeing of Division I student-athletes. Each construct impacts the experiences of college athletes individually, but it is the relationship between these

constructs and one's demographic variables that provides Division I athletes with their unique college experience.

CHAPTER 2: LITERATURE REVIEW

A review of the research literature related to athletic identity, student-athlete career development, race, gender, and desire to play sports professionally provide a basis for understanding career planning attitudes amongst college student-athletes. This chapter discussed (a) the elements of athletic identity (b) issues concerning student-athlete career development, (c) athletic identity and career development, (d) race and gender issues in sports, (e) revenue and nonrevenue sports, and (f) the expectation to play professional sports. These six topic areas were addressed along with a review of relevant literature and concluded with the importance of the study.

Athletic Identity

It has been discovered that the overall wellness of Division I student-athletes is significantly lower than their non-athlete counterparts (Watson & Kissinger, 2007). Athletic identity, career development, race, gender, expectation to play professionally and type of sport each play a unique role in the development and wellbeing of Division I student-athletes. According to Pearson and Petitpas (1990), student-athletes face a number of transitional experiences (injury, retiring and being cut) that impact their ability to develop properly. The time demands and physical preparation needed to excel in collegiate athletics forces some college athletes to focus all of their time and energy on their sport, and this singular focus can be detrimental for some athletes (Grove, Lavallee & Gordon, 1997).

Athletic identity refers to the degree to which an individual identifies with being an athlete, and one's athletic identity may impact their ability to formulate mature career plans. Brown and Bohac (1997) suggest that the opportunities for student-athletes to engage in developmentally appropriate career opportunities may be suppressed by an athletic system that believes winning is of the utmost importance. College athletic programs also contribute to enhancing the athletic identity of student-athletes by protecting them from typical problems that college students encounter as a way to help them maintain focus on their sport. This form of protection may cause some student-athletes to focus specifically on their athletic goals and focus minimal attention on developing other elements of their identity (Pendergrass, Hansen, Newman, & Nutter (2003).

According to Brewer, Van Raalte and Linder (1993), athletic identity is analyzed within the framework of a multidimensional self-concept and although individuals make overall assessments of themselves, they also make domain-specific conclusions regarding their abilities. Family, friends, coaches, teachers and the media all have the capability to influence one's athletic identity. Research indicates that both positive and negative consequences occur as a result of a high athletic identity (Brewer et al., 1993; Danish, 1983; Horton & Mack, 2000; Murphy, Petitpas & Brewer, 1996). The negative consequences of a high athletic identity overshadow the positive. Horton and Mack (2000) found that marathon runners with high athletic identity were more susceptible to financial and occupational difficulties, and these individuals were more likely to become ill. Furthermore, athletic identity in marathon runners was associated with decreased time with family, increased social isolation and decreased social activity. Additional negative

consequences associated with athletic identity were found in Webb, Nasco, Riley and Headrick's (1998) study of athletic identity's impact on one's reaction to retiring from sport. Results of this study found that athletes with a private athletic identity have uncertain feelings about their future, and athletes with high athletic identity were more apt to experience difficulty with retirement from sport.

In today's sports minded society, college student-athletes are not the only individuals who identify with being an athlete. Green and Weinberg (2001) investigated the relationship between athletic identity, coping skills, social support and the impact of injury in individuals who participate in recreational activities. Thirty participants for this study were recruited from physical therapy and orthopedic centers. They all had suffered injuries that had prohibited physical activity for at least six weeks. After completing the Athletic Identity Measurement Scale, Athletic Coping Skills Inventory, Profile of Mood States, Physical Self-Perception Profile and Social Support Questionnaire, the results of this study found that individuals with high athletic identity felt strongly about the amount of exercise they engage in and their overall physical conditioning. A study by Tasiemski, Kennedy, Gardner and Blaikley (2004) examined the athletic identity of individuals with spinal cord injuries. The Athletic Identity Measurement Scale, Sports Participation Questionnaire, Hospital Anxiety and Depression Scale and Life Satisfaction Questionnaire were given to 678 participants. Results of this study found that individuals with spinal cord injuries reported significantly lower athletic identities than able-bodied adults and adolescents with physical disabilities. No significant relationship was found between depression, life satisfaction or anxiety and athletic identity scores.

In another study conducted by Cornelius (1995), the athletic identity of recreational sports participants was examined. Two hundred and twenty-eight college students were given the Athletic Identity Measurement Scale and three developmental tasks from the Student Development Task and Lifestyle Inventory (SDTLI). The results indicated that there was a positive relationship between athletic identity and the Life Management subtask of the SDTLI. Thus, individuals with high athletic identity had the ability to structure their lives in a way that allowed them to manage their personal responsibilities without the support of others.

Athletic identity also impacts constructs outside of career development. Horton and Mack (2000) examined the effect athletic identity had on marathon runners. In this investigation, 236 marathon runners (176 males and 60 females) ranging in age from 19-72 years of age were given the Athletic Identity Measurement Scale (AIMS) and a demographic questionnaire measuring gender, age, social network and athletic experience. The results found that marathon runners with high athletic identity did not neglect other aspects of their life in order to pursue their athletic role. Furthermore, a high athletic identity was also related to better athletic performance, higher athletic commitment and having a larger social network (Horton & Mack, 2000).

Good, Brewer, Petipas, Van Raalte and Mahar (1993) performed another global assessment of athletic identity by examining the differences in athletic identity across three levels of sports participation which included: (1) varsity sport participation, (2) intramural sport participation and (3) no sport participation. The participants consisted of 502 college students that were given the Objective Measure of Ego Identity Status, Athletic Identity Measurement Scale and a demographic questionnaire. Of these

participants, 166 were varsity student-athletes, 90 were intramural student-athletes and 246 were non-athletes. Results of this investigation revealed that athletic identity increased as the level of athletic involvement increased. As expected, varsity student-athletes had significantly higher athletic identities than non-athletes (Good, et al, 1993). In a similar study, Lamont-Mills and Christensen (2006) also studied the relationship between athletic identity and sports participation level (elite, recreational and non-participation). In this study 214 participants were given the Athletic Identity Measurement Scale. This study found that males and females who do not participate in sport scored significantly lower than their elite and recreational athlete counterparts on total AIMS scores and all three factors of the Athletic Identity Measurement Scale (social identity, exclusivity and negative affectivity). This study suggests that the negative effects of having a strong athletic identity may impact recreational athletes, as well as elite athletes.

In another inquiry which analyzed athletic identity's role in the perception of growing old, 179 participants completed the Athletic Identity Measurement Scale, Physical Self-Perception Profile and the General Attitude towards Self-Ageing Scale (Phoenix, Faulkner & Sparkes, 2005). Individuals with a high athletic identity were found to have a negative perception of their bodies when imagining themselves aging. They also lacked fulfilling relationships with older adults; however student-athletes who had a high physical self-image had positive attitude towards aging.

Athletic identity is a construct that is thought to be influenced by many different factors, and researchers have explored an athlete's need to adjust their level of athletic identity due to circumstances that occur during sport. Brewer, Selby, Linder and Petitpas

(1999) conducted two studies to examine the change in athletic identity after a poor athletic season. In the first study, 39 members of a Division II varsity football team were given the Athletic Identity Measurement Scale prior to the beginning of the season and before the last game of the season (approximately 11 weeks later). Participants were also given a season satisfaction scale before the last game of the season. The results of this investigation indicated that student-athletes who perceived their season to be poor decreased their athletic identity significantly more than student-athletes who were satisfied with their athletic performance. Due to the small number of student-athletes in the first study, a second study was performed to test their hypothesis. In the second study, 65 Division I athletes completed both surveys. As in the first inquiry, student-athletes who perceived their season to be poor decreased their athletic identity significantly more than student-athletes who were satisfied with their athletic performance.

In another study that examined change in level of athletic identity, Grove, Fish and Eklund (2004) explored adjustments in athletic identity as a result of positive or negative experiences in sports. Participants were given the Athletic Identity Measurement Scale one week prior to the selection of an all-star team, the day the team was selected and two weeks after the all-star team was selected. The results indicated that athletic identity significantly decreased over time in players who were not selected as an all-star. In addition, it was discovered that injury may also be a traumatic experience for student-athletes, potentially causing them to question their status as athletes.

Injury for some student-athletes is a devastating physical and psychological ordeal that has impacted their identity as an athlete. Researchers exploring this issue examined the self-protected changes in level of athletic identity in 108 individuals after having

anterior cruciate ligament (ACL) surgery (Brewer, Cornelius, Stephan & Van Raalte, 2010). Participants were given the Athletic Identity Measurement Scale and a rehabilitation progress question prior to surgery and 6, 12 and 24-months post-surgery. This investigation revealed that athletic identity significantly decreased over the 24 month period post-surgery, with the greatest decrease occurring between 6 and 12 months post-surgery. Athletic identity was additionally found to significantly decrease when participants were experiencing slow progression in their rehabilitation 6 to 12 months post-surgery.

Another series of four studies examining how injury impacts a student-athlete's identity was conducted by Brewer (1993). Specifically, this study analyzed the link between depression and athletic identity following injury, and all results indicated that athletic identity was linked with depression in injured athletes. More specifically in study 1, athletic identity was positively related to depression in students who were asked to imagine experiencing a career-ending injury, and in study 2 athletic identity had a nearly significant relationship with depression in a hypothetical career-ending injury scenario. In studies 3 and 4, athletic identity was a significant predictor of depression in college athletes (Brewer, 1993).

Making the transition to college is difficult for many students and this transition can be especially complicated for current and former student-athletes. Lubker and Etzel (2007) studied the difference in athletic identity and college adjustment of first-year college students. For this study, 133 former high school athletes, 78 Division I student-athletes and 106 non-athletes were given the Athletic Identity Measurement Scale and the Student Adaption to College Questionnaire. Results indicated that college student-

athletes had significantly higher athletic identity scores than the high school student-athletes and the non-athletes. This investigation also discovered that former high school athletes who were not college varsity student-athletes had significantly higher athletic identity scores than non-athletes.

Similar to injury, retiring from competitive sport is difficult for many student-athletes and one's identification with the athletic role may impact how an athlete deals with retiring from their sport. Webb, Nasco, Riley and Headrick (1998) examined the relationship between athletic identity, reason for retirement and psychological adjustment to retirement. In their investigation, 93 former high school, college or professional athletes from the University of Notre Dame were given a questionnaire to assess athletic identity and retirement variables. The results indicated a positive relationship existed between athletic identity and retirement difficulty. The study also found that athletes who retired due to injury were more likely to experience feelings of uncertainty about the future (Webb, Nasco, Riley & Headrick, 1998).

College athletes are forced to manage various roles and self-identities. It appears that the student role and athlete role contradict one another for some college student-athletes. Settles, Sellers and Damas (2002) examined the relationship and role conflict between athletic and academic identities of 200 Division I athletes who were given the Athletic Identity Measurement Scale, role conflict measures and well-being measures. The results found that athletes receiving athletic scholarships had higher athletic identities, and those athletes with high athletic identity placed less importance on academics. Also, student-athletes with high athletic identities tended to view being an

athlete and a student as one single role, had lower self-esteem and higher levels of stress and symptoms of depression.

In a similar inquiry, Yopyk and Prentice (2005) conducted two studies which examined the effects social identities (including athletic identity) had on task performance, and this study discovered that athletes with high athletic identity had lower GPA's and lower SAT scores than non-athletes. It was also revealed that student-athletes spent fewer hours on school work each week than singers. Student-athletes primed with athletic identity scored significantly lower on academic self-regard.

From a qualitative perspective Miller and Kerr (2003) investigated the role experimentation of college student-athletes. The researchers conducted in-depth interviews with eight Canadian college student-athletes and discovered that the student-athletes over-identified with the athletic role (high athletic identity) during two different periods of their college career. It was also discovered that this over-identification occurred during the first year and a half (1st period) and the second year and a half (2nd period) of college. This over-identification of the athletic role came at the expense of exploring the student role.

Athletic identity is an essential element in the overall athletic success of college athletes. Without some level of athletic identity it would be difficult for athletes to push themselves (physically and mentally) to the levels necessary to achieve their athletic goals. While athletic identity is necessary, researchers have found that one's level of athletic identity can decrease if an athlete suffers and injury or is not selected for a team. This self-protective measure also occurs after athletes feel that they have had a poor season. Role conflict between an athlete's athletic identity and student identity occurs and

it appears that athletes struggle with this role conflict for the first two and a half years of their college careers.

College Student-Athlete Career Development

Coleman and Barker (1993) defined career development as “the acquisition of information and skills about self and the world of work. As a concept, career development differs from the traditional idea of career education and vocational guidance in that the goal of career development is to facilitate the self-actualization of the individual, rather than to simply respond to labor market demands” (p.84). Career development is a lifelong processes beginning at birth and continuing throughout life. Career development in college athletics is imperative due to the low number of athletes who get an opportunity to earn a living playing a sport.

The academic achievement of college student-athletes is related to their career development. Athletes who perform better academically may have a better opportunity to make an easier transition into work. Sellers (1992) examined racial differences in the factors influencing GPA for revenue-producing athletes. The participants for this investigation consisted of 409 male basketball players and 917 football players from 42 Division I schools. The results revealed that Black student-athletes had an average grade point average of 2.12, while White student-athletes had a mean grade point average of 2.46. In addition, it was discovered that both Black and White student-athletes did not differ on their desire to obtain a college degree.

In addition to grade point average, choosing a major is also related to one's overall career development. One would expect that individuals who chose their college major based on their personal and vocational interests would have higher career maturity.

Pendergrass, Hansen, Neuman and Nutter (2003) explored the process of choosing a major for Division I student-athletes. Participants completed the Campbell Interest and Skill Survey and results indicated that 66% of the athletes chose majors in accordance with their interests. Seventy percent of non-athletes picked majors according to their personal interests. There are slight differences between the groups, but the findings were not statistically significant.

Hansen and Sackett (1993) found similar results when they examined the college major choices of Division I student-athletes. The sample consisted of 83 student-athletes, 73 non-athletes enrolled in a career decision-making course, and 81 non-athletes. The college major of each participant was matched with their Occupational Scale score from the Strong Interest Inventory. Although none of the results were significant, 58.3% of the student-athletes were in majors that agreed with their occupational interests and 73.9% of them were in majors that indirectly matched their occupational interests. Overall, 70.4% of the majors of non-athletes agreed with their occupational plans, while 62.7% of the student-athletes' majors were in agreement with their interests. Lastly, 52.1% of the non-athletes in the career decision-making course were in majors that agreed with their occupational interests.

College student-athletes represent their institutions on the athletic fields; however, the expectation for some college student-athletes to perform well academically is low. The "dumb jock" stereotype was examined by Simmons, Bosworth, Fujita and Jenson (2007). Five hundred and thirty-eight division one student-athletes were surveyed regarding their academic experiences and 59.1% of the student-athletes felt they were perceived negatively by non-athlete students, and 33% believed their professors also

perceived them negatively. It is also important to note African American student-athletes felt a significantly higher degree of negative treatment than White student-athletes.

Engstrom, Sedlacek and McEwen (1995) also studied faculty attitudes towards student-athletes. The Revised Athlete Situational Attitude Scale Student-athlete was given to 126 faculty members, and this study found that the faculty held negative attitudes towards athletes (revenue and non-revenue) due to being admitted with lower SAT scores and receiving athletic scholarships. Results also discovered that faculty expressed more surprise and suspicion when athletes (revenue or non-revenue) earned an “A” in a course.

In a similar study, Engstrom & Sedlacek (1991) surveyed 293 college freshmen regarding their prejudice towards student-athletes and found that students were suspicious of student-athletes when they received an “A” in a course. The freshmen non student-athletes also developed a strong sense of worry when a student-athlete was assigned to be their lab partner and less concerned or sad when student-athletes left school.

Blann (1985) explored the relationship that one’s gender, class and competitive level has on the college student-athlete’s ability to formulate mature career and educational plans. In this inquiry, 568 students (350 student-athletes) from two NCAA Division I and two NCAA Division III institutions in the New England area were given Task 2 of the revised Student Developmental Task Inventory. Results found that Division I athletes scored significantly lower than Division III athletes on career and educational planning, and Division III upper-class athletes formulated more mature career and educational plans than Division I upper-class and underclass student-athletes. Sowa and Gressard (1983) discovered similar findings when they explored the relationship between college athletic participation and career development. Forty-eight student-athletes and 43

non-athletes were given the Student Developmental Task Inventory. Non-athletes scored significantly higher than student-athletes in their progress toward achieving career plans.

The experience of being a student-athlete on a college campus is unique. Cox, Sadberry, McGuire and McBride (2009) studied the relationship between student-athlete experiences and career situation awareness. The primary purpose of this investigation was to identify student-athlete experiences that could predict their interests (positive or negative) in career-related issues. The Student-Athlete Experiences Inventory and the Student-Athlete Career Situation Inventory were given to 624 varsity athletes. Results found a predictive relationship between student-athlete experiences and career situations; however, the predictive relationship differed according to the gender of the student-athlete. Male student-athletes who were involved in campus activities lacked interests in career development. However, social involvement was found to be related to higher career development in male athletes. It was also discovered that an athlete's use of the library use had little impact on career situation. Campus involvement resulted in more career confidence for female student-athletes, but social involvement was perceived to be a barrier for career development for female athletes.

Kennedy and Dimick (1987) examined the career maturity and realistic career expectations in male college football and basketball players. A total of 122 male athletes (106 football players and 16 male basketball players) and 80 male non-athletes were given the Career Maturity Inventory. The results indicated that athletes scored significantly lower than non-athletes on career maturity.

In another study of 189 Division I student-athletes focusing on the career development, the relationship between career decision-making self-efficacy, career locus

of control and identity foreclosure, it was revealed that the number of hours spent participating in sport was related to lower career decision-making self-efficacy. The student-athletes reported spending between 20-30 hours or more per week participating in their sport. Identity foreclosure and career locus of control was also found to be inversely related to career decision-making (Brown, Glastetter-Fender & Shelton, 2000). In a similar study, Perna, Zaichkowsky, and Bocknek (1996) did not find any statistical differences between student-athletes and non-athletes regarding career plans, identity score, or intimacy score.

Career Development and Athletic Identity

Athletic identity and career development are issues that independently affect collegiate athletes. However, researchers have analyzed the impact athletic identity has on the career development of college athletes in various sports at various levels. A few studies have found a relationship between athletic identity and career development constructs. Murphy, Petitpas and Brewer (1996) explored the correlation between career maturity and self-identity variables among 124 Division I athletes who participated in a variety of sports which included football, basketball, field hockey, ice hockey, crew, wrestling, and swimming. Each athlete was given the Objective Measure of Ego-Identity Status, the Athletic Identity Measurement Scale, and the Career Maturity Inventory. The results found athletic identity to be inversely related to career maturity, thus, an athlete's identification with the athletic role hindered them from making career decisions or exploring alternative identities. In a similar study, Grove, Lavalley and Gordon (1997) explored the relationship between athletic identity and the coping strategies utilized by athletes during the career transition process. The Athletic Identity Measurement Scale

and the COPE inventory were given to 48 retired members of the Australian national and/or state teams. Results indicated that athletic identity was positively correlated with post-retirement career exploration/decision-making anxiety, and athletic identity was negatively related to pre-retirement career planning.

A qualitative study conducted by Lally and Kerr (2005) examined the relationship between career planning, athletic identity and student role identity. Retrospective in-depth interviews were conducted with 8 student-athletes in their fourth or fifth year of eligibility. The student-athletes participated in men's and women's volleyball, basketball, track and field and swim teams at a large university in Canada. The initial interview lasted between 90 and 120 minutes, and a 30-90 minute follow-up interview was conducted with each participant approximately 4-6 months after the initial interview. Student-athletes' career plans and athletic identity changed as the athletes matured and earlier in their careers they had few career objectives and high athletic identities. It was also discovered that athletic identity decreased and the student role became more important as the athletes neared graduation.

When exploring the relationship between athletic identity and career maturity, Brown and Hartley (1998) found no significant relationships between the two constructs. Similar findings were identified in a study conducted by Brown, Glastetter-Fender and Shelton (2000). They investigated the relationship between athletic identity, career decision-making self-efficacy, career locus of control and identity foreclosure. No significant relationship was discovered between athletic identity and career decision-making self-efficacy.

In another study investigating the relationship between athletic identity and career development in college athletes, Martens and Cox (2000) gave 226 college students the Athletic Identity Measurement Scale, the My Vocational Situation, Sport Commitment Scale and a demographic questionnaire. Results indicated the following; (a) no significant relationship was found between athletic identity and career development, (b) a significant difference was found between athletes and non-athletes on the career development measure, and (c) student-athletes and non-athletes differed in their perceived need for occupational information, with non-athletes experiencing less of a perceived need for occupational information and a stronger vocational identity. While investigating the association between athletic identity and career development in 259 junior college student-athletes, Kornspan and Etzel (2001) found no relationship between athletic identity and career maturity.

Relatively few studies have explored the relationship between athletic identity and career development, and even fewer studies focused on this relationship among Division I athletes (Brown & Hartley, 1998; Grove, Lavalley & Gordon, 1997; Lally & Kerr, 2005; Murphy, Petitpas & Brewer, 1996) Division I athletes at revenue producing athletic programs may be the population most at risk among all college student-athletes because they are more likely to have higher athletic identities. A few studies have shown that athletes with high athletic identities forgo exploring alternative career options; however, more research in this area is needed (Grove, Lavalley & Gordon, 1997; Lally & Kerr, 2005; Murphy, Petitpas & Brewer, 1996). Professional sports are not an option for most college athletes, thus a healthy athletic identity and career development is needed for athletes to make a successful transition out of college sports.

Race

Like their non-athlete counterparts, student-athletes of color deal with issues related to their racial and ethnic identity. In addition to the normal stress and pressure that college student-athletes endure, student-athletes of color have to deal with problems surrounding discrimination and racism. Furthermore these athletes are forced to deal with stereotypes regarding both their race and athlete status (Person & LeNoir, 1997). Researchers have attempted to understand the psychosocial needs of athletes based on their race. Anshel (1990) explored feelings and concerns of 26 Black Division I football players and discovered that Black players felt their coaches lacked overall sensitivity. Black players also (a) lacked trust, (b) felt distant from their White coaches and (c) believed their coaches treated them differently due to their race, which caused them to struggle taking negative feedback from their coaches. In a similar study, Anshel and Sailes (1990) discovered Black student-athletes were not as receptive as White student-athletes to receiving negative feedback from their coaches. Black student-athletes felt that their coaches should earn their respect more so than their White counterparts. Black student-athletes also felt more responsible for winning and losing than Whites and perceived their coaches exerted too much control during pre-game preparation.

In a qualitative examination of prejudice in college athletics, Singer (2005) studied the racism experienced by African American male student-athletes and found that African American football players felt that players of color were denied access to leadership positions and decision-making opportunities in both college and professional sports. It was discovered that the African American student-athletes felt that they were treated differently than their White teammates. In addition African American student-

athletes felt their White teammates were expected to do well academically, while their academic expectation was to remain academically eligible for competition.

In an attempt to understand the identity development of African American athletes, Harrison, Harrison and Moore (2002) used Cross' model of African American racial identity development as a framework for examining Black athlete's relationship with sports. This research suggested that the understanding of the relationship between athletic identity and African American racial identity development can be a valuable tool for individuals working with minority student-athletes. Brown et al. (2003) also investigated the relationship between racial and athletic identity and found that Black student-athletes with high athletic identity reported lower levels of racial identity development. White student-athletes with high athletic identity reported high levels of racial identity. Lastly, Black student-athletes with high athletic identities reported a higher association with the perception that racial and ethnic discrimination is no longer a problem. In a similar study, Steinfeldt, Reed and Steinfeldt (2010) studied the racial and athletic identity of African American football players at historically Black Colleges and predominately White Institutions. Participants for this study consisted of 163 African American football players from five different colleges and universities. Results of this study found that Black football players at predominately White institutions had significantly higher athletic identities than football players at historically Black institutions.

Athletes in general have consistently battled stereotypes regarding their intellectual capabilities and the perception that athletes are "dumb jocks" still persists today. The "dumb jock" stereotype was examined by Simmons, Bosworth, Fujita and

Jenson (2007), and they found that 59.1% of the student-athletes felt that they were perceived negatively by fellow non-athlete students. Also, 33% of the student-athletes believed that their professors perceived them negatively. African American student-athletes reported a significantly higher degree of negative treatment than their White counterparts.

Sellers (1992) examined racial differences in the factors influencing GPA for revenue-producing athletes and discovered that high school GPA and mother's occupation were the only predictors for Black student-athletes. White student-athletes' GPA's was predicted by high school GPA, socioeconomic status and SAT/ACT scores. This study also revealed that Black and White student-athletes did not differ on the stated importance of obtaining a college degree, and both groups also studied for the same amount of time once they entered college.

Athletic identity and career development issues are important for all student-athletes, but these issues may be compounded with the addition of societal and institutional racism that impacts the daily lives of all people of color. Few studies have looked at the impact race has on athletic identity and career development in college student-athletes (Kennedy & Dimick, 1987; Smallman & Sowa, 1996). Smallman and Sowa (1996) examined the career maturity of male Division I college student-athletes. One hundred and twenty-five student-athletes were given the Career Development Inventory (CDI) and the results found no significant difference in career maturity by race. However it was revealed that Caucasian student-athletes reported having significantly more knowledge about their preferred occupations than did minority student-athletes. Similar findings were uncovered when Kennedy and Dimick (1987) examined the career

maturity and realistic career expectations in male college football and basketball players. In this study, 122 male athletes were given the Career Maturity Inventory and the results indicated no significant differences between African American and Caucasian student-athletes in respect to career maturity.

In a study that explored the relationship between psychosocial development and mentoring among male college athletes, Perna, Zaichkowsky and Bocknek (1996) found no significant difference in career plans of African American and Caucasian student-athletes. However, the results did find that Black student-athletes did have significantly lower GPA's than their White counterparts. These findings suggest that race continues to impact the experiences of college athletes, and race's impact on athletic identity and career development suggests that student-athletes of color may be more susceptible to the negative consequences associated with over-identification with the athletic role. The results also imply that athletes of color have a high expectation to play professional sports, which is alarming given the low numbers of student-athletes who actually play professionally.

Gender

Gender may present particular challenges for college student-athletes (Valentine & Taub, 1999). Both male and female student-athletes experience unique issues that impact their college experience. Historically, the stereotype has been that "real women" do not participate in sport, and conventional gender roles have dictated the experiences of both men and women participating in intercollegiate athletics (Parham, 1993; Valentine & Taub, 1999). Practitioners working with student-athletes will have to be vigilant in helping create an environment of acceptance, and "by working with the administration

and coaches, counselors can ensure that respectful language is encouraged as well as modeled by the staff' (Valentine & Taub, 1999, p. 172). Because of Title IX, significantly more women are participating in sports today, and as college athletic departments increase scholarship funding for women's sports, the recruiting process and overall experience for female athletes is changing. Career development and athletic identity issues for female student-athletes is important because even fewer professional sports opportunity exists for female student-athletes.

A qualitative study conducted by Riemer, Beal and Schroeder (2000) examined the influences of university culture on female student-athletes and discovered that female student-athletes viewed their participation in sport as an exchange of services (i.e. sport was a job). Furthermore it was revealed that the campus community gave more status to participants of higher profile sports. In a study comparing the psychopathology of Division I student-athletes, 398 participants (105 athletes) were given the Social Anxiety Scale for Adolescents and the Personality Assessment Inventory (Storch, Storch, Killiany & Roberti, 2005). Female student-athletes scored significantly higher on measures of social anxiety and symptoms of depression than male athletes and non-athletes, and female athletes scored lower on measures of social support than their male counterparts and non-athletes.

Throughout the history of college sports, gender roles have impacted the participation rate of females in athletics and the level of funding that have been allocated for women's athletics. Lantz and Schroeder (1999) explored the relationship between athletic identity and the endorsement of masculine and feminine gender roles. They discovered athletic identity was positively correlated with masculinity and negatively

related to femininity. Women and non-athletes reported a higher relationship between athletic identity and masculinity than athletes and males, and masculine individuals had higher athletic identities than undifferentiated or feminine individuals (Lantz & Schroeder, 1999).

Gender difference in athletic identity was examined by Good, Brewer, Petitpas, Van Raalte and Mahar (1993). The researchers investigated differences in athletic identity and identity foreclosure across three levels of sport participation: (1) varsity sport participation, (2) intramural sport participation and (3) no sport participation. The results indicated no gender differences were found in athletic identity between male and female student-athletes (both varsity and intramural), yet male non-athletes scored significantly higher than female non-athletes on the AIMS (Good et al., 1993).

Lubker and Etzel (2007) explored the difference in athletic identity and college adjustment of first-year college students along with gender differences for 133 former high school athletes, 78 Division I student-athletes and 106 non-athletes. Results found that female student-athletes had significantly higher grade point averages than male non-student-athletes. Female former student-athletes had higher levels of attachment than male former student-athletes. Those who reported high levels of social support stated that they adjusted to and felt more attached to their university. Further exploring this topic Murphy, Petitpas and Brewer (1996) examined the relationship between career maturity and self-identity variables between female and male student-athletes and discovered female student-athletes had significantly higher career maturity than their male counterparts (Murphy, Petitpas & Brewer, 1996). Another study by Smallman and Sowa (1996) also examined gender's role in the career maturity of college student-athletes. For

this investigation, 125 male student-athletes were given a demographic questionnaire and the Career Development Inventory. The results found no significant difference in the career maturity of male student-athletes by race or type of sport (Smallman & Sowa, 1996).

Gender impact on formulating career plans has also been explored as Blann (1985) investigated the relationship between gender, class and competitive level of participation and the college student-athlete's ability to formulate mature career/educational plans. This investigation consisted of 568 students from two NCAA Division I and two NCAA Division III institutions in the New England area. The sample was made up of 203 and 147 male and female athletes respectively, who participated in a variety of team and individual sports. The results indicated freshman and sophomore male student-athletes at both the Division I and III levels did not formulate mature career and educational plans to the extent of freshman and sophomore male non student-athletes (Blann, 1985). In a similar study of 627 student-athletes, the relationship between student-athlete career situations and college experiences was explored (Cox, Sadberry, McGuire & McBride, 2009). The results indicated that campus involvement led to a lack of interest in career development for male student-athletes, and social involvement led to a higher perception of career situation for male athletes. For female student-athletes, campus involvement resulted in more career confidence, while social involvement led to a perception of career barriers.

Male college student-athletes participating in football and basketball may experience additional career development issues due to the lure of professional sports. Kennedy and Dimick (1987) examined the career maturity and realistic career

expectations in male college football and basketball players. A total of 122 male student-athletes (106 football players and 16 male basketball players) and 80 male non-athletes were given the Career Maturity Inventory. Their results revealed that non student-athletes scored significantly higher than student-athletes on the career maturity measure. In a similar study, Sellers and Kuperminc (1997) explored the unrealistic expectations by male African American Division I student-athletes for a career in professional sports. They found that 30.1% of the male student-athletes expected to play professional sports. Those male student-athletes who were not members of the traveling squad were more likely to expect careers in professional sports if they were underclass athletes, athletes from HBCU's, student-athletes from more intense athletic programs, and athletes who attend universities that isolated their student-athletes from the normal student body (Sellers & Kuperminc, 1997).

Academic endeavors may also be impacted by the gender of college student-athletes. Pendergrass, Hansen, Neuman and Nutter (2003) explored the process of choosing a college major for male Division I student-athletes. While no significant differences were found, male student-athletes and non-athletes chose majors that corresponded with their interests 65.9% and 70.9% of the time respectively. In another inquiry, Hansen and Sackett (1993) investigated the college major choices of Division I female student-athletes. Their sample consisted of 83 female student-athletes, 73 non-athletes enrolled in a career decision-making course and 81 non-athletes. The college major of each participant was matched with their Occupational Scale score from the Strong Interest Inventory and the results discovered that 58.3% of the female student-athletes were in majors that directly agreed with their occupational interests. Overall,

70.4% of the majors of non-athletes agreed with their occupational plans, while 62.7% of the female student-athletes' majors were in agreement with their interests. Lastly, 52.1% of the non student-athletes in the career decision-making course were in majors that agreed with their occupational interests.

Revenue and Non-revenue Sports

Men's basketball and football programs have historically been the two college sports that generate revenue for athletic departments, thus many universities spend significant amounts of money upgrading the facilities and coaching staffs of these two sports in hopes of attracting talented athletes to their revenue-producing sports. Some athletic departments attempt to use the money generated by these two programs to pay for the expense of fielding their other athletic programs. The NCAA identifies the National Basketball Association (NBA), Women's National Basketball Association (WNBA), National Football League (NFL), Major League Baseball (MLB), National Hockey League (NHL) and Major League Soccer (MLS) as the major professional sports in the United States. Thus, for the purposes of this study, men's basketball, women's basketball, football, baseball, men's hockey and men's soccer will be considered revenue-producing sports.

Athletes participating in revenue-producing sports experience some prejudicial attitudes from university faculty. Baucom and Lantz (2001) found 119 faculty members at a Division II institution viewed both revenue and non-revenue student-athletes less favorably than non-athletes. They expressed prejudice towards student-athletes due to campus newspaper coverage, specialized academic support services, athletic financial aid and beliefs that student-athletes get special preferences in the admissions process.

Similarly, Engstrom, Sedlacek and McEwen (1995) examined faculty attitudes toward male revenue and non-revenue student-athletes. One hundred and twenty-six faculty members were given the Revised Athlete Situational Attitude Scale Student-athlete and the results indicated that faculty held negative attitudes towards revenue and non-revenue student-athletes due to them receiving athletic scholarships and being admitted with lower SAT scores. Faculty members also expressed more surprise and suspicion when a student-athlete made an “A” in a course. A study by Simmons, Bosworth, Fujita and Jenson (2007) discovered only 15% of the student-athletes reported feeling as though their fellow students and faculty members perceived them positively. Student-athletes participating in revenue-producing sports also felt that students and faculty perceived them negatively significantly more than non-revenue producing student-athletes.

These faculty attitudes may be related to the perception that student-athletes participating in revenue-producing sports are not interested in academics. Sellers (1992) found that Black student-athletes participating in revenue-producing sports come from lower socioeconomic backgrounds and they also entered college with lower high school GPA's and SAT/ACT scores than their White counterparts. White student-athletes in revenue-producing sports also had higher college GPA's than Black student-athletes playing the same sports. However, both groups felt that it was equally as important to obtain a college degree. In a related study, Pendergrass, Hansen, Neuman and Nutter (2003) explored the process of choosing a college major for male Division I student-athletes. They found that 63.4% male student-athletes participating in revenue-generating sports chose majors in accordance with their interests, while 74.1% of non-revenue student-athletes chose majors according to their interests and 70.9% of non student-

athletes selected majors according to their personal interests. Despite the apparent differences, the findings were not statistically significant.

College Athletes' Expectation to Play Professionally

A college athlete's expectation to play professionally plays a role in how much they identify with being an athlete and it may also influence how much they explore viable career options outside of professional sports. Blann (1985) examined the relationship that one's gender, class and level of participation has on the college athlete's ability to formulate mature career and educational plans. Three hundred and fifty student-athletes and 218 students from two NCAA Division I and two NCAA Division III institutions in the New England area comprised the sample. The results indicated that 28% of the Division I male student-athletes and 10% of the Division III male student-athletes indicated that they intended to play professional sports. While 4% of Division I females and 0% of Division III female student-athletes stated that they planned to achieve professional sports status (Blann, 1985). Miller and Kerr (2003) found in their investigation that many of the student-athletes entered the university with a high expectation of continuing their careers at the professional level. Some expressed the belief they would obtain positions on the National and/or Olympic teams upon completion of their college eligibility.

During an examination of the influences of university culture on female student-athletes, Riemer, Beal and Schroeder (2000) found that many of the Division I tennis players interviewed, entered college with an expectation to play professionally. Similarly, Smallman and Sowa (1996) discovered in their study of 125 male student-athletes that 34% of them expected to become a member of a professional sports team or join the

professional tour circuit. Furthermore another study by Perna, Zaichkowsky and Bocknek's (1996) found that 17% of the student-athletes surveyed expected to play professionally. Interestingly, there were no difference between African American and Caucasian student-athletes' expectation to play professionally. Similar results were attained in the Brown, Glastetter-Fender and Shelton (2000) inquiry because of 189 Division I student-athletes included in the study, 37 of them indicated an expectation to compete in their sport at the professional level.

The National Football League and the National Basketball Association use college football and basketball as their training grounds, and many student-athletes participating in these sports have an unhealthy expectation to play professionally. Additional research on the student-athletes expectation to play professionally have discovered; (a) Black student-athletes have higher expectations to play professionally than white student-athletes, (b) student-athletes who expressed an interest in a career to play professional sports and student-athletes who desired a career in professional sports score significantly lower on career maturity than student-athletes who desire other career options, and (c) student-athletes from more intense athletic programs have high aspirations to play professional sports compared to less competitive programs (Brown & Hartley, 1998; Kennedy & Dimick, 1987; Sellers & Kuperminc (1997).

Physical injury can have a major impact on an athlete's ability to compete in professional sports. Kleiber and Brock (1992) explored the effect a career-ending injury had on the well-being of college athletes. Of the 425 athletes surveyed, 54 had suffered a career-ending injury, and of the athletes who had suffered an injury, 24.1% had a high desire to play professionally. The non-injured group consisted of 371 athletes, and 30.7%

of them had a high desire of competing at the professional level. The injured student-athletes who had a high professional sports orientation also had a significantly lower life satisfaction and self-esteem after 5-10 years of finishing their playing careers. Finally, student-athletes with a higher professional sport orientation held significantly lower grade point averages, participation in course selection, perceived value of education after college and perceived success in school.

The lure of professional sports is even prominent for student-athletes who perform well academically and have career aspirations outside of professional sports. Martin and Harris (2006) explored the experiences of high academic achieving African American male student-athletes by conducting individual interviews with 27 Black male student-athletes from four Division I universities. The average grade point average of the participants was 3.07 and the results revealed that “nearly all of the participants expressed an interest in competing professionally in their respective sports after college” (Martin & Harris, 2006, p. 366). In addition to professional sports, seven of the participants stated that they intended to earn doctorate degrees (Ph.D., J.D. or M.D.) once their playing career was completed.

Independently and in conjunction with one another, career development, athletic identity, race, gender, expectation to play professionally and type of sport all influence the college experiences of student-athletes. A high athletic identity can result in positive personal and athletic experiences; however, this over-identification with the athletic role can also lead to negative consequences (Brewer et al, 1993). Athletes with high athletic identities are subject to developing unhealthy career development practices, and this is troubling because most college student-athletes will not participate in professional sports

(Grove, Lavalley & Gordon, 1997). Thus, career development is essential for student-athletes to make a successful transition out of college. Race and gender impact every aspect of life, including the institution of college athletics (McEwen, 1996; Valentine & Taub, 1999). Counselors and athletic department administrators must understand the experiences of student-athletes in order to increase the personal well-being of college athletes and the overall college athletic experience.

CHAPTER 3: METHODOLOGY

This study examined the extent to which athletic identity, race, gender, sport and expectation to play professionally predict Career Planning Attitudes (Career Optimism, Career Adaptability and Career Knowledge) among Division I college student-athletes. As a quantitative study, this research attempted to explore the relationship between athletic identity and career planning attitudes, as well as the impact that race, gender, sport and expectation to play professionally had on the constructs of athletic identity and career planning attitudes. This research was conducted at four Division I institutions in the United States and each athletic department that participated in the study competes in a Bowl Championship Series (BCS) conference. This chapter provides a description of the participants, instruments, method of collecting data, and research procedures.

Participants and Setting

The participants for this study consisted of 538 varsity student-athletes from four NCAA Division I institutions in the United States. Male and female varsity student-athletes from the sports of baseball, basketball, cross country, fencing, football, golf, gymnastics, hockey, rifle, rowing, tennis, soccer, softball, swimming and diving, track and field, volleyball and wrestling participated in this study.

The four institutions that participated in the study were chosen because they compete at the highest level of college athletics. University A is public institution located in the southeast part of the United States and has a total enrollment of 20,000 undergraduate and graduate students. The institution employs over 900 full-time faculty

members, and students can pursue 36 undergraduate degrees, 47 masters' degrees or 30 doctoral degrees. The undergraduate student body consists of 70% male and 30% female students (The Princeton Review, 2009). Also, the racial composition of the undergraduate students is 65% Caucasian, 17% Asian, 7% African American, 5% Hispanic and 5% International.

The athletic department consists of approximately 400 Division I student-athletes, and the department is made up of 8 men's sports (track and field, baseball, basketball, cross country, football, golf, tennis and swimming and diving) and 7 women's sports (basketball, cross country, softball, swimming and diving, tennis, volleyball and track and field). The institution participates in the Atlantic Coast Conference, and the university's football and women's tennis programs have won national championships.

University B is a public land-grant institution located in the Midwestern part of the United States. This institution has 66,000 students (40,500 undergraduate and 25,500 graduate students), and the university employs over 4,000 faculty members. Students may pursue 38 undergraduate degree and 43 graduate degree programs. According to the Princeton Review (2009) 47% of the undergraduates are males, while 53% are female. The racial composition of the undergraduate student body is 76% Caucasian, 10% Asian, 5% African American, 3% International, 2% Hispanic and 1% Native American.

University B's athletic department has approximately 750 Division I athletes, the department houses 11 men's teams (baseball, basketball, cross country, football, golf, gymnastics, hockey, tennis, track, wrestling and swimming and diving) and 12 women's teams (basketball, cross country, golf, gymnastics, hockey, rowing, soccer, softball, tennis, track, volleyball and swimming and diving). University "B" participates in the Big

Ten Conference, and the school has won a total of 24 national championships in baseball, men's basketball, football, men's golf, men's hockey, women's hockey, men's track and field and wrestling.

University C is a public land-grant institution located in Southeastern region of the United States. The institution has over 31,000 students (approximately 23,000 undergraduate and 8,000 graduate) and almost 2,500 full-time faculty members. This university offers 115 undergraduate, 169 masters and 62 doctorate degrees. The school's student body is made up of 57% males and 43% females. The racial composition of the undergraduate students is 79% White, 9% Black, 5% Asian, 3% Hispanic, 1% Native American and 1% International (The Princeton Review, 2010).

The athletic department at University C participates in the Atlantic Coast Conference. In total, the department has 500 student athletes competing in 11 men's sports (baseball, basketball, football, cross country, golf, rifle, soccer, swimming and diving, tennis, track and field and wrestling) and 11 women's sports (basketball, cross country, golf, gymnastics, rifle, soccer, swimming and diving, tennis, track and field, volleyball and softball). University C has won two national championships in men's basketball, and individuals have won national championships in men's swimming, men's outdoor track, wrestling and women's outdoor track.

University D is a public university located in the Southeastern region of the United States. The institution has a total enrollment of almost 29,000 students, with 18,000 being undergraduate students. The university offers 77 undergraduate degrees, 107 master's degrees and 69 doctorate degrees. The gender composition of the school is 41% male and 59% female. The institution's racial make-up is 71% White, 11% Black,

7% Asian, 5% Hispanic, 1% Native American and 1% International (The Princeton Review).

The university's athletic department competes in the Atlantic Coast Conference, and the school has 800 varsity student-athletes. The department houses 12 men's sports (baseball, basketball, cross country, fencing, football, golf, lacrosse, soccer, swimming and diving, tennis, track and field and wrestling) and 14 women's sports (basketball, cross country, fencing, field hockey, golf, gymnastics, lacrosse, rowing, soccer, softball, swimming and diving, tennis, track and field and volleyball). The athletic department has won team national championships in women's and men's basketball, field hockey, men's and women's soccer and men's lacrosse. The department has also housed a number of individual national champions in wrestling, fencing, men's golf, women's gymnastics, men's and women's swimming, men's and women's cross country and track and women's tennis.

Instruments

Three instruments were administered to each participant. A demographic questionnaire (Appendix A) was developed by the principle investigator to assess each participant's age, race, gender, sport, expectation to play professionally, scholarship status and classification. This questionnaire addressed each participant's expectation to play professional sports through a 5 point Likert-type question asking athletes to state his or her expectation (not hope) of competing in their sport at the professional level upon the completion of their college career.

To assess athletic identity, the participants were given the Athletic Identity Measurement Scale (AIMS). The AIMS (Appendix B) is a multidimensional, seven-item

scale that evaluates how much an individual identifies with the athletic role (Brewer & Cornelius, 2001). Items on the AIMS are rated on a 7-point Likert-type scale, and the answers to each item are totaled to create a score ranging from 7 – 49. The AIMS consists of three subscales (social identity, exclusivity and negative affectivity), but for the purposes of this study, the total score will be used to assess an athlete's level of athletic identity. Higher scores on the AIMS indicate a higher athletic identity. Statistical norms set by Brewer and Cornelius (2001) state the mean AIMS score for male athletes is 39, and for female athletes the average score is 38.

The original version of the AIMS was created by Brewer, Van Raalte and Linder (1993) with the help of research assistants and former athletes. The measure was created in order to address the need to have an instrument that identifies the strength and exclusivity of one's identification with the athletic role. The psychometric properties of the original AIMS was investigated in an initial study and two follow-up studies. In the initial study, 124 female and 119 male college students were given the 10-item version of the AIMS, the Perceived Importance Profile (PIP) and the short form of the Marlow-Crowne Social Desirability Scale. The participants self-identified as non-athlete, recreation/fitness athletes, competitive intramural/local/regional athlete or college athlete. Participants were given the AIMS 14 days after the first assessment to examine the test-retest reliability of the measure.

Results of the first study found the corrected item-local correlations for all items were above .45, and all but two items were above .70. Thus, each item contributed effectively to the total AIMS score. Internal consistency for the AIMS was obtained by a .93 coefficient alpha, and the test-retest reliability coefficient for the AIMS was .89; thus

demonstrating that the AIMS scores were stable over a 14-day time period. A significant main effect for level of involvement indicated that one's athletic identity increased with the level of sport involvement. Construct validity was examined by correlating the AIMS to the Perceived Importance Profile and the Marlow-Crowne Social Desirability Scale. AIMS scores were correlated with the PIP's importance of sports competence, importance of physical conditioning, importance of attractive body and importance of physical strength subscales. In this study, Brewer, Van Raalte and Linder (1993) also investigated if individuals were scoring high on the AIMS as a result of the participants giving socially desired answers. Results found that none of the items on the AIMS were significantly correlated with the Marlowe-Crowne Socially Desirability Scale, thus the scores on the AIMS were not due to social desirability.

The results of the initial investigation led to two additional studies by Brewer, Van Raalte and Linder (1993) that explored the validity of the Athletic Identity Measurement Scale. In the second study, the relationship between the AIMS and the Self-Role Scale was examined. The participants for this study were 449 Arizona State University students who were enrolled in an introductory psychology course. The participants were given the AIMS, the Self-Role Scale, the Sport Orientation Questionnaire (SOQ) and the Rosenberg Self-Esteem Scale. Results of the second study found the AIMS to be significantly correlated to the Self-Role Scale. Also, the AIMS was significantly correlated with the SOQ; however, the correlation was only moderate. There was no significant relationship between the AIMS and the Rosenberg Self-Esteem Scale. Thus, individuals who strongly identify with athletic role did not have either a high or

low self-esteem, and this suggests that athletic identity and self-esteem are independent constructs.

The third validity study conducted by Brewer, Van Raalte and Linder (1993) explored the relationship between the AIMS and the importance of sports competence. For this study, 90 varsity football players were given the AIMS, the Physical Self-Perception Profile (PSPP) and the Perceived Importance Profile (PIP). Results of this study found that the AIMS was significantly related to only one subscale (Sport) of the PIP, thus athletic identity is related to the importance one places on performing well in their sport. The non-significant correlations between the AIMS and other subscales of the PIP indicated that athletic identity is independent from physical self-esteem, importance of fitness, importance of body attractiveness, importance of strength and coach-rated sport skill. The result of all three studies provided the necessary evidence the AIMS is a valid instrument.

Brewer and Cornelius (2001) studied the factorial invariance of the AIMS, and developed athletic identity norms for male and female athletes. For this study, the AIMS scores of 2,856 participants were analyzed from ten years of previous research. A confirmatory factor analysis found that three items from the original 10-item scale should be eliminated due to poor performance in the factor analysis. The 7-item version of the AIMS was renumbered 1 – 7, and items 1, 2 and 3 indicate social identity, items 4 and 5 indicate exclusivity, and items 6 and 7 indicate negative affectivity. The 7-item version of the AIMS was reported to have an internal consistency of $\alpha = .81$, and the 7-item version was found to be highly correlated to the original 10-item version that had a test-retest reliability of $r = .89$ and internal consistency ranging from $.81$ to $.93$ (Brewer &

Cornelius, 2001). Visek, Hurst, Maxwell and Watson (2008) studied the psychometric and cross-cultural validity of the 7-item version of the AIMS, and the results of the study found that the AIMS was a sound measure of athletic identity for American and English-speaking Hong Kong Chinese male contact and collision athletes.

Positive career planning attitudes was measured by the Career Futures Inventory (CFI). The CFI (Appendix C) is a 25-item measure with three subscales: Career Adaptability, Career Optimism and Perceived Knowledge (Rottinghaus, Day & Borgen, 2005). Career adaptability is defined as “the way an individual views his or her capacity to cope with and capitalize on change in the future, level of comfort with new work responsibilities, and ability to recover when unforeseen events alter career plans” (Rottinghaus, Day & Borgen, 2005, p. 11). Career optimism is “a disposition to expect the best possible outcome or to emphasize the most positive aspects of one’s future career development, and comfort in performing career planning tasks” (Rottinghaus, Day & Borgen, 2005, p. 11). Perceived Knowledge “assesses perceptions of how well an individual understands job market and employment trends” (Rottinghaus, Day & Borgen, 2005, p.11). Items on the CFI are rated on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree).

For the development and validation of the CFI, 663 college students were assessed using the Career Futures Inventory, demographic and career planning questionnaire, Revised Life Orientation Test (LOT-R), the Problem Solving Inventory (PSI), Positive and Negative Affect Schedule (PANAS), NEO Five-Factor Inventory (NEO-FFI), Skills Confidence Inventory (SCI), Expanded Skills Confidence Inventory (E-SCI), Strong Interest Inventory (SII) and Self-Directed Search (SDS). For this study

participants were given the 69-item version of the CFI. The results of an exploratory factor analysis found that 25 items accounted for 40% of the variance. Concurrent validity of the CFI was established from the finding that people who score high on career optimistic and career adaptability have higher academic aspirations and they are more comfortable with their academic and career-related plans. Incremental validity of career optimism was established when a series of hierarchical regressions were conducted on career optimism after controlling for dispositional optimism, self-efficacy, positive and negative affect and the NEO. Moderate relationships were found between the CFI and the SII, SCI and E-SCI. Dispositional validity of the CFI was established when minimal correlations were found between the CFI and the content scales of the SII. The test-retest reliability for the CFI subscales range from .63 to .85 (Rottinghaus, Day & Borgen, 2005). The validity study indicates that the Career Futures Inventory is a solid measure of career-related adaptability, optimism and knowledge.

Procedure

The principle researcher gained approval for the study from the Institutional Review Board for the Protection of Human Subjects. The principle researcher recruited four universities to participate in the study, and the researcher was granted full access to student-athletes at each of the four Division I athletic departments. A contact person for the project was established at each institution, and these contact people were full-time employees in their respective athletic departments at the time the study was conducted. Each contact person was made aware of this study's research needs, and each individual stated that they would make the survey available to each athlete on their respective campuses. Data was collected for this project from March 3, 2010 – April 20, 2010.

Upon the request of the participating institutions, both an online and hard copy version of the survey was used to collect data. Both versions of the survey consisted of the consent form (Appendix D), demographic questionnaire, Athletic Identity Measurement Scale, Career Futures Inventory. The contact person at University A was mailed 250 hard copies of the survey, and they were also provided with a self-addressed return envelope. The contact person at University B sent the online version of the survey to each of the 750 varsity student-athletes on their campus via email, and this contact person was also mailed 50 hard copies of the survey per their request. University C's contact person also emailed the online version of the survey to each of the 500 varsity athlete on their campus. Lastly, 100 hard copies of the survey were mailed to the contact person at University D. In addition to the online and/or hard copy version of the survey, each contact person was provided detailed instructions for administering and storing the data.

The contact person at each institution where hard copies were mailed selected athletes from each varsity sport on their campus to complete the questionnaire. These participants completed the questionnaire during a team meeting or while they were using the academic support facility. Upon completion of the questionnaire, each athlete returned their packet to the contact person. The contact person stored all completed surveys in a locked and secure area. Once the data collection period ended, each contact person mailed the completed hard copies back to the principle researcher in the self-addressed envelope provided. A 100 dollar gift certificate was given to each contact person for their help in the completion of the research.

Research Design

A correlational research design was used to analyze the extent to which athletic identity, race, gender, type sport and expectation to play professionally predict Career Planning Attitudes (Career Optimism, Career Adaptability and Career Knowledge) among Division I college student-athletes. A standard multiple regression was conducted to test each hypotheses in this study. This analysis is a technique that assesses the relationship between one dependent variable and multiple independent variables (Tabachnick & Fidell, 2007). Multiple regressions can be utilized when a study's independent variables are correlated with one another and the dependent variable. Multiple regression analysis is used when several independent variables combine to predict a dependent variable value. The research question for this study is: To what extent do athletic identity, race, gender, sport and expectation to play professionally predict Career Planning Attitudes among Division I college student-athletes?

There are a few key limitations and assumptions for correlational studies. Correlational studies are sensitive to sample size, and if the cases-ratio is not substantial the results will be meaningless (Tabachnick & Fidell, 2007). An appropriate sample size is dependent on desired power, alpha level, effect sizes and number of predictors. Another limitation to correlational studies is the effect of outliers. Extreme cases have a large impact on correlational studies, thus outliers were thoroughly examined. Singularity and multicollinearity must also be identified and eliminated, and this occurs by screening the study's independent variables for high correlations. Normality was analyzed by screening the variables for univariate and multivariate outliers and further examined through screening the skewness and kurtosis of each variable (Ullman, 2007). Residual

scatterplots were used to test assumptions of linearity, homoscedasticity and normality (Tabachnick & Fidell, 2007).

For this study, the independent variables were race, gender, type of sport and expectation to play professionally, and the dependent variables are athletic identity and the three subscales of career planning attitudes: Career Adaptability, Career Optimism and Perceived Knowledge. Additionally, athletic identity will serve as an independent variable when predicting career planning attitudes. All statistical analysis was performed using SPSS. The results output included descriptive statistics, a correlation table, and R , R^2 , semipartial correlations, unstandardized and standardized regression coefficients, p -values and t -values. Significance was established at .05.

In summary, this study examined the extent to which athletic identity, race, gender, sport and expectation to play professionally predict Career Planning Attitudes among Division I student-athletes. For this study, 539 student-athletes from four BCS institutions were given a demographic questionnaire, the Athletic Identity Measurement Scale and the Career Futures Inventory. A standard multiple regression was used to test this study's four hypotheses. Lastly, the independent variables in this study were race, gender, type of sport and expectation to play professionally, and the dependent variables are athletic identity and the three subscales of career planning attitudes.

CHAPTER 4: RESULTS

The purpose of this chapter is to present the data collected in this investigation that examined the extent to which athletic identity, race, gender, sport and expectation to play professionally predict Career Planning Attitudes (Career Optimism, Career Adaptability and Career Knowledge) among Division I college student-athletes. The first section of this chapter provides an overview of each independent and dependent variable, and the second section contains analysis of the descriptive statistics. The last section presents the results of the analyses used to test each hypothesis.

Variables

Dependent and independent variables in this investigation were analyzed in order to predict Career Planning Attitudes in Division I student-athletes. Positive career planning attitudes was measured by the three subscales (Career Adaptability, Career Optimism and Perceived Knowledge) of the Career Futures Inventory (Rottinghaus, Day & Borgen, 2005). Career adaptability is defined as “the way an individual views his or her capacity to cope with and capitalize on change in the future, level of comfort with new work responsibilities, and ability to recover when unforeseen events alter career plans” (Rottinghaus, Day & Borgen, 2005, p. 11). Career optimism is “a disposition to expect the best possible outcome or to emphasize the most positive aspects of one’s future career development, and comfort in performing career planning tasks” (Rottinghaus, Day & Borgen, 2005, p. 11). Perceived Knowledge “assesses perceptions of how well an individual understands job market and employment trends” (Rottinghaus,

Day & Borgen, 2005, p.11). Athletic identity is defined as the degree to which an individual identifies with the athlete role as defined by the total score of the Athletic Identity Measurement Scale (Brewer & Cornelius, 2001). Each sport will be placed into one of two categories: revenue or non-revenue. Revenue producing sports were defined as football, men's basketball, women's basketball, men's hockey, baseball, and men's soccer. The non-revenue sports are men and women's tennis, men and women's golf, men and women's cross country and track and women's bowling, fencing, field hockey, men and women's gymnastics, women's ice hockey, men and women's lacrosse, rifle, rowing, skiing, women's soccer, softball, men and women's swimming and diving, volleyball, men and women's water polo and wrestling. Gender was self-reported by participants as either male or female. Race was self-reported by participants as African American, Asian/Pacific Islander, Caucasian, Hispanic/Latino, Native American, Multiracial, Other or International. Expectation to play professionally was self-reported by participants, and defined as an athlete's perception of their likelihood of playing their sport professionally once their college career has ended.

Descriptive Statistics

The original sample for this study consisted of 539 varsity Division I student-athletes from four different universities; however, one student-athlete who completed the battery of instruments was under the age of 18, thus the athlete was eliminated, leaving the sample with 538 participants. Of the 538 participants, 52.6% (283) were female and 47.4% (255) were male. The age range of student-athletes participating in this study was 18 – 23, with the average age being 20.07 years. This sample consisted of 30.1% (162) freshmen, 25.3% (136) sophomores, 22.1% (119) juniors, 15.8% (85) seniors, 4.8% (26)

5th Year Seniors and 1.9% (10) graduate students. The racial and ethnic composition of the sample consisted of 73.8% (397) Caucasians, 16.2% (87) African Americans, 2.8% (15) Multi-racial, 2.2% (12) Hispanic/Latin Americans, 1.5% (8) Asian Americans, 1.5% (8) Internationals, 0.4% (2) Native Americans, 1.5% (8) Others and 1 participant who did not complete the question. For the purposes of this study, race was transformed into a dichotomous variable where 73.8% (397) were Caucasians and 26% (140) were Non-Caucasian (1 missing).

The sample furthermore included male and female student-athletes from 17 different sports: 10.2% (55) Baseball, 5.9% (32) Basketball, 6.9% (37) Cross Country, 0.2% (1) Fencing, 17.1% (92) Football, 3.5% (19) Golf, 4.1% (22) Gymnastics, 3.3% (18) Hockey, 1.1% (6) Rifle, 10.8% (58) Rowing, 4.1% (22) Soccer, 3.2% (17) Softball, 8.2% (44) Swimming and Diving, 3.3% (18) Tennis, 12.3% (66) Track and Field, 3.9% (21) Volleyball and 1.9% (10) Wrestling. Each sport was classified as either a revenue or non-revenue sport, and in this sample, 62.3% (335) of the student-athletes participated in non-revenue sports, while 37.7% (203) were members of revenue sports (men's basketball, women's basketball, baseball, men's soccer and men's hockey). Of the 538 Division I student-athletes surveyed for this study, 38.8% (209) received a full athletic scholarship, 35.9% (193) received a partial athletic scholarship and 25.3% (136) received no athletic scholarship. Of the 538 Division I student-athletes in this sample, 12.3% (66) thought that it was "Very Likely" that they were going to participate in their sport at the professional level, and 13.9% (75) of the student-athletes believed that it was "Likely" that they would compete in professional sports. In this sample, 19.7% (106) of the student-athletes surveyed indicated that they were "Unsure" that they would participate at

the professional level. Of the student-athletes surveyed, 16.2% (87) thought that it was “Unlikely” that they would continue their careers at the professional level, and 37.9% (204) of the sample believed that it was “Very Unlikely” that they would participate at the professional level.

Lastly, the career development of Division I student-athletes was assessed using the three subscales of the Career Futures Inventory, and the athletic identity of Division I student-athletes was measured by the Athletic Identity Measurement Scale. The sample’s mean score for the three Career Futures Inventory subscales were: Career Optimism (3.62), Career Adaptability (3.95) and Career Knowledge (3.11), and the Division I student-athletes surveyed for this study had a mean athletic identity of 36.9.

Dummy Coding

In order to analyze the extent to which athletic identity, race, gender, sport and expectation to play professionally predict Career Planning Attitudes (Career Optimism, Career Adaptability and Career Knowledge) among Division I college student-athletes, dummy codes were created for the independent variables race, gender and sport. Race was a dummy variable where respondents who identified as Caucasian equaled one and Non-Caucasian respondents equaled zero. Gender was a dummy variable that equals one if the respondent was male and equals zero if the respondent was female. Lastly, sport was a dummy variable where Revenue sports equaled one and Non-Revenue sports equaled zero.

Data Screening

Before conducting any analysis for this study, the data was screened for missing data, outliers and assumptions. The race variable for one participant is the only missing

data in this data set. Outliers were present in the athletic identity (9), career optimism (9), career adaptability (16) and career knowledge (6) variables. The outliers were included in all data analysis, and the means, standard deviations, skewness and kurtosis for all variables are reported in Table 1. A visual inspection of the frequency distributions and an investigation of the skewness and kurtosis values suggest that the distributions of all variables are approximately normally distributed. An examination of the scatterplots indicates that there are linear relationships between all variables.

Table 1

Variable Means, Standard Deviations, Skewness, Kurtosis, Minimums and Maximums

Variable	Mean	SD	Skewness	Kurtosis	Min	Max
Age	20.07	1.37	.286	-.852	18.00	23.00
Pro Expectation	2.46	1.42	.463	-1.14	1.00	5.00
AIMS	36.92	5.91	-.629	.882	15.00	49.00
Optimism	3.62	.575	-.298	.180	1.82	5.00
Adaptability	3.95	.389	-.219	1.35	2.00	5.00
Knowledge	3.11	.812	-.133	-.236	1.00	5.00

Variable Correlations

There was a positive correlation between gender and sport ($r = .574, p < .01$). This would indicate that males who participated in this study were more likely to participate in revenue sports. There was an inverse relationship between race and gender ($r = -.191, p < .01$). This would also indicate that the male student-athletes in this study were more often non-Caucasian. There was a negative correlation between sport and race ($r = -.263, p < .01$) which indicates that non-Caucasian student-athletes were more likely

to participate in revenue sports. A positive correlation was found between gender and expectation to play professionally ($r = .439, p < .01$) and this discovery revealed that male student-athletes had a higher expectation to play professional sports. There was a positive relationship between sport and expectation to play professionally ($r = .476, p < .01$). This suggests that student-athletes participating in revenue sports were more likely to have an expectation to play professional sports. A negative relationship was found between race and expectation to play professionally ($r = -.373, p < .01$) and this implied that Non-Caucasian student-athletes were more likely have a higher expectation to play professional sports. A positive relationship was found between athletic identity and expectation to play professionally ($r = .255, p < .01$) and this finding suggested that student-athletes with higher athletic identities had a higher expectation to play professional sports.

A positive relationship was discovered between gender and career optimism ($r = .116, p < .01$) which indicates that male student-athletes had a higher belief that their careers were going to turn out positively. A negative relationship was found between career optimism and race ($r = -.085, p < .05$) further suggesting that Non-Caucasian student-athletes had a higher belief that their careers were going to turn out positive. When looking at the relationship between career optimism and expectation to play professionally, a positive relationship was revealed ($r = 1.70, p < .01$); thus indicating student-athletes who expected to play professional sports were optimistic that their careers were going to turn out positive. A negative relationship was found between athletic identity and career adaptability ($r = -.127, p < .01$) and this suggests that student-athletes who identified greatly with being an athlete had a lower belief that they could

cope with change in their career plans. A positive relationship was found between career optimism and career adaptability ($r = .449, p < .01$) indicating that student-athletes who believed their career was going to turn out positively also felt they had the ability to handle change in their career plans.

From a gender and career knowledge perspective a positive relationship was discovered ($r = .186, p < .01$) which implied that male student-athletes had a higher belief that they understood the job market and employment trends. A positive relationship was also found between career knowledge and career optimism ($r = .466, p < .01$) and this finding suggests that student-athletes who felt they understood the job market also believed their careers were going to turn out positively. Finally, a positive relationship was revealed between career knowledge and career adaptability ($r = .296, p < .01$) thereby postulating that student-athletes who feel that they have a good understanding of the job market also believed that they could cope with change in their career plans. The correlation coefficients are reported in Table 2.

Table 2

Correlation Matrix

Variable	Gender	Sport	Race	Pro Exp	AIMS	Optimism	Adapt	Know
1. Gender	-							
2. Sport	.574**	-						
3. Race	-.191**	-.263**	-					
4. Pro Exp	.439**	.476**	-.373**	-				
5. AIMS	-.038	.042	-.076	.255**	-			
6. Optimism	.116**	.007	-.085*	.170	-.057	-		
7. Adaptability	-.040	-.032	.030	-.044	-.127**	.449**	-	
8. Knowledge	.186**	.066	-.017	.004	-.044	.466**	.296**	-

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed)

Hypothesis Testing

At this point, the focus of the discussion will address the results of the specific research question which was: To what extent does athletic identity, race, gender, sport and expectation to play professionally predict Career Planning Attitudes among Division I college student-athletes? Four hypotheses were analyzed in order to answer this research question.

Hypothesis 1

The first hypothesis stated that athletic identity, race, gender, sport and expectation to play professionally would be inversely related to career adaptability among Division I college student-athletes. A standard multiple regression was conducted to predict the Career Futures Inventory subscale Career Adaptability from (a) athletic

identity, (b) race, (c) gender, (d) sport and (e) expectation to play professionally. Analysis was performed using SPSS REGRESSION. The unstandardized regression coefficients (B) and intercept, the standardized regression coefficients (β), semipartial correlations (sr_i), t -values and p -values are reported in Table 3. The variance accounted for (R^2) equaled .02 (adjusted $R^2 = .011$), which was not significantly different from zero ($F = 2.162$, $p = .057$). This suggests that the career adaptability of the sample was not able to be predicted by their level of athletic identity, race, gender, type of sport or expectation to play professionally.

Table 3

Unstandardized regression coefficients (B) and intercept, standardized regression coefficients (β), semipartial correlations (sr_i), t-values and p-values for Career Adaptability

IVs	B	B	sr_i	t -value	p -value
Intercept	4.281			37.18	.000
Gender	-.034	-.044	-.035	-.814	.416
Sport	-.001	-.001	-.001	-.026	.979
Race	.015	.017	.016	.364	.716
Pro Expectation	.004	.016	.013	.292	.770
AIMS	-.009	-.138	-.132	-3.06	.002

Hypothesis 2

The second hypothesis stated that athletic identity, race, gender, sport and expectation to play professionally would be inversely related to career knowledge among Division I college student-athletes. A standard multiple regression was conducted to predict the Career Futures Inventory subscale Career Knowledge from (a) athletic

identity, (b) race, (c) gender, (d) sport and (e) expectation to play professionally. Analysis was performed using SPSS REGRESSION. The unstandardized regression coefficients (B) and intercept, the standardized regression coefficients (β), semipartial correlations (sr_i), t -values and p -values are reported in Table 4. The variance accounted for (R^2) equaled .045 (adjusted $R^2 = .036$), which was significantly different from zero ($F = 4.98$, $p < .001$). Gender is the only predictor variable that contributed significantly to the prediction of career knowledge in Division I student-athletes. Gender had a positive standardized beta and semipartial correlation coefficient. While sport, race, expectation to play professionally and athletic identity were hypothesized to be inversely related to career knowledge, they were not statistically significant. This suggests that male Division I student-athletes believed that they had a better understanding of the job market and employment trends than their female counterparts.

Table 4

Unstandardized regression coefficients (B) and intercept, standardized regression coefficients (β), semipartial correlations (sr_i), t-values and p-values for Career Knowledge

IVs	B	B	sr_i	t -value	p -value
Intercept	3.18			13.39	< .001
Gender	.395	.243	.193	4.52	< .001
Sport	-.053	-.032	-.025	-.577	.564
Race	-.024	-.013	-.012	-.284	.777
Pro Expectation	-.050	-.089	-.071	-1.642	.101
AIMS	-.003	-.018	-.018	-.412	.680

Hypothesis 3

The third hypothesis stated that athletic identity race, gender, sport and expectation to play professionally would be inversely related to career optimism among Division I college student-athletes. A standard multiple regression was conducted to predict the Career Futures Inventory subscale Career Optimism from (a) athletic identity, (b) race, (c) gender, (d) sport and (e) expectation to play professionally. Analysis was performed using SPSS REGRESSION. The unstandardized regression coefficients (B) and intercept, the standardized regression coefficients (β), semipartial correlations (sr_i), t -values and p -values are reported in Table 5. The variance accounted for (R^2) equaled .058 (adjusted $R^2 = .049$), which was significantly different from zero ($F = 6.49, p < .001$). Four of the five independent variables contributed significantly to the prediction of Career Optimism. Expectation to play professionally and gender had positive standardized betas and semipartial correlation coefficients. Athletic identity and sport both had negative standardized betas and semipartial correlations. It was hypothesized that race would be inversely related to Career Optimism; however, it was not found to be statistically significant.

This finding suggests that Division I student-athletes with higher athletic identities had lower levels of career optimism, and male Division I student-athletes had more career optimism than female Division I student-athletes. This finding also demonstrated that Division I student-athletes who participated in revenue-producing sports had lower levels of career optimism. Lastly, this finding suggests student-athletes with a higher expectation to play professional sports were more optimistic regarding their careers.

Table 5

Unstandardized regression coefficients (B) and intercept, standardized regression coefficients (β), semipartial correlations (sr_i), t-values and p-values for Career Optimism

IVs	<i>B</i>	<i>B</i>	sr_i	t-value	p-value
Intercept	3.85			23.15	< .001
Gender	.121	.106	.086	1.98	.048
Sport	-.184	-.156	-.124	-2.87	.004
Race	-.045	-.035	-.033	-.760	.448
Pro Expectation	.086	.213	.170	3.98	< .001
AIMS	-.011	-.112	-.109	-2.54	.011

Hypothesis 4

The fourth and final hypothesis stated that race, gender, sport and expectation to play professionally would be inversely related to athletic identity among Division I college student-athletes. A standard multiple regression was conducted to predict a student-athlete's athletic identity from (a) race, (b) gender, (c) sport and (d) expectation to play professionally. Analysis was performed using SPSS REGRESSION. The unstandardized regression coefficients (*B*) and intercept, the standardized regression coefficients (β), semipartial correlations (sr_i), *t*-values and *p*-values are reported in Table 6. The variance accounted for (R^2) equaled .092 (adjusted $R^2 = .085$), which was significantly different from zero ($F = 13.46$, $p < .001$).

Two of the four predictor variables contributed significantly to the prediction of a Division I student-athlete's athletic identity. Gender had a negative standardized beta and semipartial correlation coefficient, and expectation to play professionally had a positive standardized beta and semipartial correlation coefficient. This suggests that female

Division I student-athletes had higher levels of athletic identity than their male counterparts, and student-athletes with a higher expectation to play professionally displayed higher athletic identities. Despite the fact that sport and race were hypothesized to be inversely related to athletic identity, they were not statistically significant.

Table 6

Unstandardized regression coefficients (B) and intercept, standardized regression coefficients (β), semipartial correlations (sr_i), t-values and p-values for Athletic Identity

IVs	B	β	sr_i	t-value	p-value
Intercept	34.29			43.69	< .001
Gender	-2.06	-.175	-.144	-3.37	.001
Sport	-.192	-.016	-.013	-.297	.766
Race	.195	.014	.014	.324	.746
Pro Expectation	1.42	.344	.284	6.825	< .001

In summary, the extent to which athletic identity, race, gender, sport and expectation to play professionally was examined to predict Career Planning Attitudes (Career Optimism, Career Adaptability and Career Knowledge) among Division I college student-athletes, and 539 male and female Division I student-athletes were given a demographic questionnaire, the Athletic Identity Measurement Scale and the Career Futures Inventory. The sample was collected from four BCS institutions, and the student-athletes participated in 17 different male and female varsity sports. This study has a correlational design, and multiple regression analysis was conducted to test the four hypotheses in this study.

CHAPTER 5: DISCUSSION

The purpose of this study was to investigate how one's career development and athletic identity can be predicted by a Division I student-athlete's race, gender, sport or expectation to play professional sports. This chapter is divided into three major sections. The first section provides a brief discussion of the sample's demographics, as well as an evaluation of the population at which this study can be generalized. The second section discusses the results of the four hypothesis tested. The final section examines practical implications for student-athletes, coaches, counselors and athletic support staff. The strengths, limitations and recommendations for future research in the area of student-athlete career development and personal wellness were also addressed.

Demographics

The constructs of career development and athletic identity both play an integral role in the overall wellbeing of a Division I student-athlete. The results of this study may be unique to Division I student-athletes who participate at Bowl Championship Series (BCS) conference institutions. This study surveyed student-athletes from four BCS institutions, and as a whole these student-athletes were selected as a result of the athletic ability and commitment that it takes to participate at this level. At every other NCAA level of participation various factors could impact the results of the data. At non-BCS institutions, the commitment level of both the university and the student-athlete varies greatly from one university to another. Some non-BCS universities value athletics greatly and require their student-athletes to spend a significant amount of time participating in

and preparing for their sport. While other non-BCS universities choose to spend limited resources on intercollegiate athletics, these institutions tend to consider college athletics as mere extracurricular activities. In order to compete at the Bowl Championship Series level, both the institution and the student-athletes must be extremely committed to athletic excellence. At BCS universities, football and basketball are not the only athletic programs that recruit high level student-athletes. Typically, at the highest NCAA level, the coaches of both revenue and non-revenue teams are expected (if not pressured) to field successful programs.

The results of this study grew out of the responses of 538 student-athletes on a demographic questionnaire, the Athletic Identity Measurement Scale and the Career Futures Inventory. This study consisted of similar numbers of male and female student-athletes (47.4% and 52.6% respectively). The racial and ethnic makeup of this sample was predominantly Caucasian. Almost 74% of the 538 student-athletes who participated in this research were Caucasian and this reflects the latest NCAA Race and Ethnicity Report (2008-2009) which indicated that 67.6% of Division I male and female student-athletes were Caucasian. In order to examine the impact that race plays in the athletic identity and career development of Division I student-athletes, this research grouped student-athletes into two categories consisting of Caucasian or Non-Caucasian. Of the 537 student-athletes who reported their race in this study, 73.8% (397) were Caucasian and 26% (140) were Non-Caucasian. Therefore, the grouping of Caucasian and Non-Caucasian allowed this study to investigate the role of race in student-athletes athletic identity and career development.

This investigation had a variety of student-athletes from each academic classification. Freshmen made up 30.1% of the sample, and sophomores and juniors made up 25.3% and 22.1% of the sample respectively. Seniors, 5th year seniors and graduate students made up 22.5% of the sample collectively. The average age of the sample was 20.07 years of age, with the youngest student-athletes being 18 years old and the oldest being 23 years old. This even distribution of participating student-athletes may have ensured that this study provided an accurate depiction of how one's race, gender, sport and expectation to play professionally impacted athletic identity and career development.

Maturation could impact a student-athlete's level of athletic identity and career development. One could assume that young student-athletes (freshmen and sophomores) who are talented enough to compete in their sport at the BCS level have a high athletic identity and expectation to play professionally. Maturation could also become an issue if a student-athlete's level of athletic identity, career development and expectation to play professionally decreases as a student-athlete ages and begins to realize that professional sports is not a viable career option. An upper-class student-athlete may place a higher value on career development and they may begin to distance themselves from their sport (Blann, 1985; Miller & Kerr, 2003). In order to explore to globally the impact that demographic variables had on athletic identity and career development, this study analyzed a cross-section of athletes from each academic classification. Student-athletes from a particular classification were not targeted for this study in order to reduce the impact that maturation could have on the findings.

A division I student-athletes' scholarship status could also impact their athletic identity and career development. There are three different levels (full scholarship, partial scholarship and non-scholarship) of athletic scholarships that a Division I student-athlete can receive. A full athletic scholarship refers to financial assistance provided by the athletic department that covers a student-athlete's total cost of tuition and living expenses. A student-athlete falls into the partial scholarship category if they receive at least one dollar of athletic scholarship funding, but the amount does not cover the full cost of tuition, room and board. Finally, some Division I athletes compete in their sport without receiving any financial compensation from the athletic department, and these athletes fall into the non-scholarship category.

Division I student-athletes who received full athletic scholarships are generally the most talented athletes in their respective sports and these individuals are typically expected to be major contributors to their team's overall success. Student-athletes who receive partial athletic scholarships are also expected to be contributors to their teams and some varsity sports teams only give partial scholarships. Therefore, the most talented student-athletes on these teams receive partial scholarships. On every Division I sports team, a number of the student-athletes are participating without any financial compensation from the athletic department, and these student-athletes are typically not recruited to participated on the team and they are generally not major contributors to the teams overall success. This study received a varied sample of full (209), partial (193) and non-scholarship (136) student-athletes.

The last demographic variable that was vital to these findings was the type of sports the participating student-athletes played. Male and female varsity student-athletes

from 17 different sports completed the battery of surveys for this research. The NCAA considers the NBA, WNBA, NFL, MLB, NHL and MLS to be the major professional sports leagues in the United States and for the purposes of this study, athletes who participate in the corresponding collegiate sports are considered to be participating in revenue-producing sports. Two hundred and three (37.7%) student-athletes in this research participated in a revenue-producing sport (football, men's and women's basketball, baseball, men's soccer and men's hockey), while 335 (62.3%) participants in the sample competed in non-revenue producing sports.

Regardless of the type of sport, student-athletes who compete at the BCS level have a tremendous amount of athletic ability. The amount of skill, training and dedication that it takes to compete at the BCS level is extraordinary; however student-athletes who compete in revenue-producing sports have the added enticement of professional sports that can impact their athletic identity and career development. Data compiled by the NCAA states that men's college basketball players have a 1.2% chance of being drafted by a NBA team, and women's basketball players have a 1% chance of being drafted into the WNBA ("Estimated probability of," 2009). College football and men's soccer players both have a 2% chance of being drafted by a NFL or MLS team, and men's hockey players have a 3.7% chance of being drafted. College baseball players have the best chance of being drafted by a MLB team at 9.4%. Despite these bleak odds, 26.2% of the student-athletes surveyed thought that it was "likely" or "very likely" that they would participate in professional sports and another 19.7% of the sample did not rule out the possibility of competing at the professional level.

Hypothesis 1

The first hypothesis for this study stated that athletic identity, race, gender, sport and expectation to play professionally would be inversely related to career adaptability among Division I college student-athletes. Career adaptability is defined as the way in which an individual views their ability to deal with and capitalize on future career change. It is also related to one's comfort with new work responsibilities and their ability to recover from unforeseen events that change their career plans (Rottinghous, Day & Borgen, 2005). Results from the standard multiple regression analysis found that athletic identity, race, gender, sport and expectation to play professionally did not predict career adaptability. Thus, the level of career adaptability of this study's Division I student-athletes could not be predicted by their demographic variables or their level of athletic identity.

Despite the fact that the standard multiple regression analysis found that athletic identity, race, gender, sport and expectation to play professionally did not predict career adaptability, the correlation matrix did find a significant inverse relationship between athletic identity and career adaptability. This relationship suggests that as a student-athletes' identification with the athletic role increased, their level of career adaptability decreased. Those student-athletes in this study who greatly valued their athlete self-identity, felt less confident in their ability to handle change in their future career plans. Unfortunately, virtually every Division I student-athletes' playing careers will end once their college eligibility has expired, and many of those student-athletes will be forced to deal with career change as they enter the workforce.

Few researchers have examined the impact that athletic identity, race, gender, sport and expectation to play professionally had on career adaptability, this study's findings of a significant relationship between athletic identity and career adaptability supported previous research. For example Grove, Lavalley and Gordon (1997) found that athletic identity was inversely correlated with pre-retirement career planning. In addition, Murphy, Petipas and Brewer (1996) discovered that athletic identity was inversely related to career maturity among the Division I athletes they surveyed.

The significant inverse relationship between athletic identity and career adaptability revealed in the investigation contradicts previous research findings (Brown, Glastetter-Fender & Shelton, 2000; Brown & Hartley, 1998; Kornspan & Etzel, 2001; Martens & Cox, 2000). In each of these studies, no significant relationship was found between athletic identity and a career development measure.

Hypothesis 2

The second hypothesis predicted that athletic identity, race, gender, sport and expectation to play professionally would be inversely related to career knowledge among Division I student-athletes. This subscale of the Career Futures Inventory assessed an individual's perception of how well they understand the job market and employment trends (Rottinghous, Day & Borgen, 2005). Results of this hypothesis found that gender was the only predictor variable that contributed significantly to the prediction of career knowledge among Division I student-athletes.

Male Division I student-athletes believed they had a better understanding of the job market and employment trends than their female counterparts. This finding suggests that female Division I student-athletes need to become more acquainted with the overall

job market, and the NCAA and Division I institutions need to create programming designed to expose female student-athletes to the job market and employment trends. The results may also reinforce the notion that Division I athletics for females, especially at the BCS level, requires the same level of dedication and commitment of their male counterparts. Female Division I student-athletes (like their male counterparts) may be spending the vast majority of their time preparing and training for their sport and as a result may be neglecting opportunities to gather pertinent career information that will aid them in their post-college career decision-making.

The results contradicted the findings of Murphy, Petitpas and Brewer (1996) as they found that female student-athletes scored significantly higher on career development than male student-athletes. The findings of Hansen and Sackett (1993) were also contradicted because they reported that female student-athletes chose academic majors that coincided with their occupational interests. This investigation revealed that female student-athletes felt they needed more information about viable careers, which could lead to the assumption that the female student-athletes in this study would not be able to choose an academic major based on their career interests. The results of this study did indirectly support the findings of Riemer, Beal and Schroeder (2000); female student-athletes viewed their athletic participation as a job. Thus, supporting this study's findings that female student-athletes felt that they needed additional career knowledge.

Hypothesis 3

The third hypothesis for this study stated that athletic identity, race, gender, sport and expectation to play professionally would be inversely related to career optimism among Division I college student-athletes. Career optimism is "a disposition to expect the

best possible outcome or to emphasize the most positive aspects of one's future career development, and comfort in performing career planning tasks" (Rottinghaus, Day & Bogen, 2005, p. 11). Four of the five independent variables (athletic identity, gender, sport and expectation to play professionally) were significant predictors of career optimism in Division I student-athletes.

Results of this hypothesis revealed that Division I student-athletes with higher athletic identities had lower levels of career optimism. Therefore, those student-athletes who had a significant amount of their identity tied to athletics typically did not expect the best when it came to their future career development and career planning. This finding supports previous research by Grove, Lavalle and Gordon (1997) as they found athletic identity to be inversely related to pre-retirement career planning. Another inquiry by Murphy, Petipas and Brewer (1996) also found that athletic identity was inversely related to career maturity among Division I athletes. No significant relationship was found between athletic identity and a career development measure in research conducted by Brown and Hartley (1998), Brown, Glastetter-Fender and Shelton (2000), Martens and Cox (2000) and Kornspan and Etzel (2001).

It is possible to conclude that student-athletes with lower athletic identities place a higher value on career development, thus spending more time planning and preparing for life after sports. Division I student-athletes with higher athletic identities may spend so much energy preparing and training for their sport that they do not feel optimistic regarding their ability to perform career related tasks and planning. This finding was consistent with Brown and Bohac's (1997) finding that the institution of athletics creates

an environment that suppresses a student-athletes ability to engage in developmentally appropriate career planning.

This hypothesis also discovered that male Division I student-athletes had more career optimism than female Division I student-athletes. Male student-athletes held a stronger belief that their future career plans would end up favorably for them, while their female counterparts felt less optimistic about their future careers. The female student-athletes in this sample appeared uncomfortable with their level of career development and were not optimistic that their future careers would meet their maximum potential. This study's findings supported previous research conducted by Cox, Sadberry, McGuire and McBride (2009) where female student-athletes held more career confidence if they had higher levels of campus involvement. Female student-athletes who participate in Division I athletics may feel disconnected from campus due to the amount of time they spend participating in their sport. Division I athletics does not allow student-athletes a great deal of opportunities to become engaged in their campus communities.

Division I student-athletes who participated in revenue-producing sports had lower levels of career optimism. It is possible to assume that student-athletes participating in non-revenue producing sports spend more time thinking about and planning for careers outside of professional sports; therefore, student-athletes participating in non-revenue producing sports appear more optimistic that their careers will turn out positive. These results also support the findings of Kennedy and Dimick (1987) where student-athletes' participating in revenue-producing sports scored significantly lower on a career development measure.

There are two factors that may contribute to the less optimistic attitudes of student-athletes who participate in revenue-producing sports. First, these student-athletes may be consumed with their sport to the point that they do not consider other possible career opportunities outside of professional sports. An alternative reason that student-athletes participating in revenue-producing sports have lower levels of career optimism may be related to the reality that very few student-athletes matriculate into professional sports. If student-athletes participating in revenue-producing sports only consider careers in professional sports and have an awareness of the low probability of playing professionally, they may be less optimistic that their careers will turn out the way that they would like them to. This study's findings were supported by Kennedy and Dimick's (1987) research where student-athletes participating in revenue-producing sports scored significantly lower on a career development measure.

Finally, a Division I student-athletes' expectation to play professionally significantly predicted their career optimism. Student-athletes who had a higher level of expectation to play professional sports were more likely to be optimistic regarding their future career. For most Division I student-athletes, a career in professional sports would be the best possible career outcome making this plausible to assume that a Division I student-athlete's career optimism would be directly tied to their expectation to play professional sports. Similar to this study, previous research found that many student-athletes expected to compete in their sport at the professional level. This finding directly contradicts the results of Brown and Hartley (1998) where student-athletes who had a high expectation of participating in professional sports scored significantly lower on a career development measure than student-athletes who had non-sport career aspirations.

The career optimism of student-athletes with a high expectation to play professionally may be a false optimism considering the low number of student-athletes who go on to earn a living playing professional sports. If Division I student-athletes truly understood their chances of playing professional sport, their career optimism could decrease as a result of the stark realities.

Hypothesis 4

The final hypothesis for this study predicted that race, gender, sport and expectation to play professionally would be inversely related to athletic identity among Division I college student-athletes. Athletic identity is defined as the amount that an individual identifies with the athletic role (Brewer & Cornelius, 2001). This analysis discovered that gender and expectation to play professionally significantly predicted athletic identity in Division I student-athletes.

The results of this investigation revealed that female Division I student-athletes had higher levels of athletic identity than their male counterparts. This finding contradicted Good, Brewer, Petipas, Van Raalte and Mahar (1993) results because no differences were found between male and female student-athletes athletic identity. This study's results also contradicted statistical norms that were published on the Athletic Identity Measurement Scale. Brewer and Cornelius (2001) found the mean athletic identity score for males were 39 and for females it was 38, suggesting that the athletic identities of males and females are very similar.

The female student-athlete experience has changed dramatically over the last 20 years, and the financial resources and overall commitment dedicated to women's Division I athletics have created an environment where female Division I athletes are

expected to compete at an extraordinarily high level. The only way to meet this expectation is to train and prepare in such a fashion that provides an opportunity for optimal success. This changed environment for female Division I athletes may also have led to this increase in their athletic identity.

A Division I student-athletes' expectation to play professionally significantly predicted athletic identity. This study found that student-athletes with a higher expectation to play professionally displayed higher athletic identities which were opposite of the results discovered by Horton and Mack (2000); student-athletes with higher athletic identity continued to explore other aspects of their lives outside of sport.

While this may seem intuitive, all Division I student-athletes must possess some level of athletic identity in order to compete at this level. Student-athletes who have an expectation to play professionally may be at risk of having an unhealthy over-identification of the athletic role. Athletes who over-identify with the athletic role are more prone to injury, over-training, anxiety, poor career development and drug use than athletes whose athletic identities are closer to average (Brewer et al., 1993; Cohen & Ogles, 1993; Hughes & Coakley, 1991 and Murphy, Petitpas & Brewer, 1996).

Conclusion

The purpose of this study was to examine how one's athletic identity, race, gender, sport and expectation to play professionally predict the career planning attitudes of Division I college student-athletes. The results have practical implications for both individuals and the institutions involved in intercollegiate athletics at the Division I level. Student-athletes, counselors, athletic support staff, Division I institutions and the NCAA

can all use these results to inform the personal and career development decisions that they make.

The results of this investigation indicate that Division I student-athletes must take ownership of their personal and career development. While it is understandable that professional sports is a very attractive and lucrative career option for student-athletes, published statistics regarding the probability of making it to the professional level indicate that virtually no college student-athlete should expect to earn a living in professional sports. Despite the statistics, a little over 26% of the sample expected to continue their careers at the professional level. This number appears extremely high considering the likelihood of playing professional sports in most leagues is less than 2%. Student-athletes must embrace these statistics and create some alternative career opportunities for themselves. Division I student-athletes should use the summer months to build their resumes with meaningful work experience; however, many use this time to concentrate on physical conditioning and mental preparation for their upcoming season.

According to this study's results, female Division I student-athletes should be particularly vigilant in developing personally and occupationally. This study found that female student-athletes felt that they did not have adequate career knowledge. Additionally, female student-athletes also had lower levels of career optimism which suggests that female student-athletes may not be exposed to career opportunities that they feel are truly viable. Female student-athletes should consider taking advantage of career services/career counseling resources that are typically available on a college campus. Most university career centers offer career fairs, career panels, mock interviews, career assessments and networking events. Lastly, it appears that female student-athletes are

failing to develop additional self-identities outside of their athletic identity. Female student-athletes must willingly and purposefully engage in activities outside of athletics in order to create balance within their self-identities. Female student-athletes in this sample could benefit from engaging in sport in a similar fashion as the marathon runners in Horton and Mack's (2000) study. These athletes were able to have high levels of athletic identity without sacrificing their other self-identities. The marathon runners with high athletic identities were more committed to their sport and performed better, while maintaining appropriate balance in their lives. Coaches, counselors and athletic support staff may use these results to inform the programming and the interactions they have with male and female student-athletes. Athletic departments could also benefit by offering specialized life skill trainings and career counseling for athletes depending on their gender.

Implications

This study offers a unique practical application for counselors working with student-athletes. In recent years, the number of counselors working with athletes has increased. Professional, college and high school sports teams have begun utilizing the services of counselors in order to help their athletes excel personally and athletically. Counselors working with Division I student-athletes may use the results of this study to understand the unique circumstances that student-athletes face. Career counseling is especially important for Division I student-athletes, and counselors can help college student-athletes explore their personal interests as they relate to vocational careers. Counselors have the ability to use these findings to provide timely and relevant information to student-athletes regarding the probability that all student-athletes have of

competing in professional sports. This study may also allow counselors to probe female student-athletes, student-athletes with high athletic identities and/or student-athletes who have a high expectation to play professionally about the possibility of exploring viable career options. Additionally, counselors are also in a position to help student-athletes successfully transition out of sports because virtually every college student-athlete will be transitioning out of competitive sports once their college careers have ended.

Division I student-athletes have a number of different resources available to them within their athletic departments. Most Division I institutions have a CHAMPS/Life Skills Coordinator who provides personal and career development opportunities for the student-athletes on their campuses. This study's findings are helpful for CHAMPS/Life Skills Coordinators because they can provide targeted programming to populations who are in danger of over-identifying with the athletic role or at risk for poor career development. Most CHAMPS Life Skills programs are not targeted to any particular audience and the results of this study may help CHAMPS Life Skills Coordinators offer more specialized trainings aimed at enhancing the overall well-being of its student-athletes.

Many Division I student-athletes also have access to academic advisors who are assigned to their particular athletic teams and these advisors may find this information useful in during their interactions with student-athletes. Many student-athletes choose academic majors for reasons other than their vocational relevance, and hopefully this study illustrates the need to select a major that will aid them in developing a viable career. From the time a student-athlete begins their college careers, academic advisors can begin helping student-athletes think about their academic skills, vocational interests,

and how these integral concepts are interrelated. If academic advisors are armed with information regarding student-athlete subgroups that may be at-risk for poor personal and career development, they may be more equipped to positively identify signs of unhealthy behaviors and activities.

In addition to offering more unique CHAMPS Life Skills programming, Division I institutions have a responsibility to help develop the student-athletes they recruit to their campuses. Division I institutions can use the results of this research to create specialized resources for student-athletes at risk of academic failure. Division I athletic departments should collaborate with their campus career services offices to provide year-long programming aimed at helping each student-athlete have a meaningful and healthy transition out of sports and into work. This study identified a number of subgroups within athletic departments that could benefit from specialized help. Additionally, athletic departments could also use this research to facilitate a partnership with their campus counseling center. Student-athletes who have an unhealthy identification with the athletic role face a host of issues, and counseling centers could aid athletic department in identifying athletes who suffer from this over-identification.

At the national level, the NCAA can use this research to inform many of the practices that they employ. The NCAA developed the CHAMPS/Life Skills program as a way to help student-athletes grow off the playing fields; however, the NCAA has yet to establish measures that evaluate the effectiveness of the program. In reality, the NCAA should be conducting research on the topics of career and personal development in order to create timely and appropriate programming for its student-athletes. As it relates to career development and athletic identity, the NCAA could require that all student-athletes

participate in specialized life skills programming aimed at developing these two constructs.

This study also provides the NCAA with information regarding female student-athletes that could change female athletics. Female student-athletes reported low levels of career development and higher levels of athletic identity in this study, and the NCAA should investigate the female student-athlete experience in hopes of uncovering the disconnect that is occurring for female student-athletes. The NCAA has the ability to require student-athletes, coaches and athletic support staff to follow rules they deem appropriate, and the findings from this investigation suggests that female student-athletes, coaches and athletic support staff should be required to attend specialized training around the female student-athlete experience.

Strengths and Limitations

This research study examining the career development and athletic identity of Division I student-athletes had a number of strengths. First, the large sample size of 538 student-athletes allowed the findings to be statistically relevant to similar institutions and minimize the possibility of error (Tabachnick & Fidell, 2007). Another key strength of the study was the wide range of 17 different sports that participated in the research. The mixture of scholarship statuses within the study also helped portray a more accurate picture of the Division I student-athlete population. Every athletic department is filled with teams that consist of student-athletes with full, partial and no athletic scholarships. This diverse collection of student-athletes provides an opportunity to cautiously generalize the results to student-athletes at similar institutions.

Given the number of strengths of this study, there are some limitations that must be addressed. First, student-athletes from only four Division I institutions participated in the study and each of the institutions competed athletically at the Division I BCS level. Thus, this study does not include student-athletes from non-BCS Division I institutions, as well as student-athletes that participate at the NCAA Division II and III levels. A large number of student-athletes participate at non-BCS institutions, and their experiences may be completely different due to their athletic environments. Another limitation of this study was the relatively low number of student-athletes of color that participated in the study. Almost 74% of the sample was Caucasian and any information concerning race should be cautiously interpreted. The final limitation of this study is that the research is based on self-report data. The student-athletes could have been susceptible to self-report bias or answering in a socially desired fashion. Although student-athletes were informed that their responses were confidential, self-report error is always possible.

Future Directions

Research on student-athlete's participating at any NCAA level is limited. Many college and university athletic departments are closed systems that prove challenging places to conduct academic research. In general, future research needs to be conducted on student-athletes at each of the three NCAA levels. All college student-athletes have some shared experience as it relates to competition and athletic participation. However, student-athletes who participate at the Division I level have a very different athletic and social experience than student-athletes participating at the Division II and III levels. Research needs to be conducted on student-athletes at each level of competition. The personal, social, academic, vocational and athletic issues that student-athletes face are

influenced by their student-athlete experience. Many of the studies involving student-athletes use samples with Division I, II and III athletes, and while these studies are exploring issues related to student-athletes, the findings of the research are more difficult to interpret.

The results of this study demonstrate the need for further research in the area of student-athlete career development. This investigation also uncovered that some student-athletes could benefit from additional training and resources around viable career opportunities. Future research in this area should consider exploring the social, political, and other variables that cause some groups of student athletes to focus entirely on the pursuit of a professional sport career. Research on the career development issues experienced by female Division I student-athletes warrants additional exploration as well. This study revealed that female student-athletes experience low levels of career knowledge and optimism, and additional research may prove useful in attempting to understand the origin of this phenomenon.

While studies have been conducted on the athletic identity of student-athletes, the results of this study indicated that additional research should be conducted on female student-athletes' level of athletic identity (Brewer, 1993; Miller & Kerr, 2003; Settles, Sellers & Dumas, 2002). The negative consequences associated with a high athletic identity have been documented in previous research; however, the bulk of that research centered on male athletes and their athletic identity (Horton & Mack, 2000; Webb, Nasco, Riley & Headrick, 1998). Additional research is needed to understand the consequences associated with a high athletic identity for female Division I student-athletes.

In conclusion, the experience of Division I student-athletes is unique. The combination of athletic and academic responsibilities places student-athletes in a position where they could benefit from various types of support. Counselors, coaches and athletic support staff have an opportunity and a responsibility to provide specialized assistance to student-athletes. Career development and one's level of athletic identity are impacted by athletic participation. Division I student-athletes should use athletics as a vehicle for obtaining a college degree and gaining exposure to viable career options. Unfortunately, professional sports are not a feasible option for the vast majority of student-athletes. Therefore Division I student-athletes should view athletics as an opportunity to explore personal and career interests that lay outside of sports. Student-athletes with low career development and high athletic identity are susceptible to a host of difficulties, and student-athletes who have a high expectation to play professional sports set themselves up to place too much emphasis on their athletic role. Both male and female Division I student-athletes in all sports could benefit from specialized career and personal development programmed aimed at helping student-athletes successfully transition out of college.

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APPENDIX A : DEMOGRAPHIC QUESTIONNAIRE

1. Age: _____
2. Gender: _____ Female _____ Male
3. Sport: _____
4. Year in school: _____ Freshman _____ Senior
 _____ Sophomore _____ 5th year Senior
 _____ Junior _____ Graduate Student
5. Race (Check one): _____ African American
 _____ Asian American
 _____ Caucasian
 _____ Hispanic/ Latin American
 _____ Native American
 _____ Multi-Racial
 _____ International
 _____ Other: _____
6. Scholarship Status: _____ Full _____ Partial _____ Non-Scholarship
7. What is your expectation to Play Professional Sports?
- | | | | | | |
|--------------|---------------|---|--------|---|-------------|
| | Very Unlikely | | Unsure | | Very Likely |
| (Circle one) | 1 | 2 | 3 | 4 | 5 |

APPENDIX B: ATHLETIC IDENTITY MEASUREMENT SCALE

INSTRUCTIONS: For each statement below, please circle the number that best reflects the degree to which you agree or disagree with each statement in relation to your own sports participation.

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

Social Identity: 1, 2, 3

Exclusivity: 4, 5

Negative Affectivity: 6, 7

APPENDIX C: CAREER FUTURES INVENTORY

INSTRUCTIONS: This questionnaire assesses critical factors for people considering career transitions. You will be asked a series of questions regarding your current thoughts and feelings about how you plan your career. Please answer the following items as honestly as you can. There are no right or wrong answers. Read each statement carefully, then use the following scale to indicate how strongly you agree or disagree with each statement:

1 Strongly Disagree SD	2 Disagree D	3 Neutral N	4 Agree A	5 Strongly Agree SA
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- _____ 1. I get excited when I think about my career.
- _____ 2. I am eager to pursue my career dreams.
- _____ 3. I am unsure of my future career success.
- _____ 4. Thinking about my career frustrates me.
- _____ 5. It is difficult to relate my abilities to a specific career plan.
- _____ 6. I understand my work-related interests.
- _____ 7. I do not understand job market trends.
- _____ 8. I can overcome potential barriers that may exist in my career.
- _____ 9. It is difficult for me to set career goals.
- _____ 10. I am not in control of my career success.
- _____ 11. I tend to bounce back when my career plans don't work out quite right.
- _____ 12. I am rarely in control of my career.
- _____ 13. Thinking about my career inspires me.
- _____ 14. My career success will be determined by my efforts.
- _____ 15. I will definitely make the right decisions in my career.

1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree
SD	D	N	A	SA

- _____ 16. I enjoy trying new work-related tasks
- _____ 17. I am good at adapting to new work settings.
- _____ 18. I can adapt to change in my career plans.
- _____ 19. It is hard to discover the right career.
- _____ 20. Others would say that I am adaptable to change in my career plans.
- _____ 21. I will adjust easily to shifting demands at work.
- _____ 22. I can adapt to change in the world of work.
- _____ 23. Planning my career is a natural activity.
- _____ 24. I am good at understanding job market trends.
- _____ 25. It is easy to see future employment trends.

Career Optimism: 1, 2, 3, 4, 5, 6, 9, 13, 15, 19, and 23

Career Adaptability: 8, 10, 11, 12, 14, 16, 17, 18, 20, 21, and 22

Career Knowledge: 7, 24, and 25

The following items are reverse-scored: 3, 4, 5, 7, 9, 10, 12, and 19

APPENDIX D: CONSENT FORM



College of Education
Department of Counseling
704/687-8960
Fax 704/687-1033

Informed Consent for **Predicting Positive Career Planning Attitudes Among Division I College Student-Athletes**

You are invited to participate in a research study entitled **Predicting Positive Career Planning Attitudes Among Division I College Student-Athletes**. This is a study to examine how one's athletic identity, race, gender, type of sport and expectation to play professionally predict the career planning of Division I college student-athletes. This study is being conducted by the UNCC Department of Counseling under the direction of Dr. Henry Harris. This research is being conducted in order to fulfill the requirements of a doctoral degree.

You will be asked to fill out two surveys and a demographic questionnaire. Your participation in this project will take 5 – 10 minutes. If you decide to participate, you will be one of 1000 subjects in this study. There are no known risks to participation in this study. However, there may be risks which are currently unforeseeable. There are no apparent direct benefits of participation in this study; however the results this study may be useful to the NCAA in developing current and/or future career development programming for college student-athletes.

All Division I varsity student-athletes over the age of 18 are eligible to participate in this study. You are a volunteer. The decision to participate in this study is completely up to you. If you decide to be in the study, you may stop at any time. You will not be treated any differently if you decide not to participate or if you stop once you have started.

The data collected by the Investigator will not contain any identifying information or any link back to you or your participation in this study. The following steps will be taken to ensure this anonymity: no identifying information will be requested of the participants by the Investigator.

UNC Charlotte wants to make sure that you are treated in a fair and respectful manner. Contact the University's Research Compliance Office (704.687.3309) if you have any questions about how you are treated as a study participant. If you have any questions about the project, please contact Shaun Tyrance at (704) 746-8558 or Dr. Henry Harris at (704) 687-8971.

I have read the information in this consent form. I have had the chance to ask questions about this study, and those questions have been answered to my satisfaction. I am at least 18 years of age or am an emancipated minor, and I agree to participate in this research

project. I understand that I can keep a copy of this form, and I am stating consent to participate by completing the survey.

The University of North Carolina is composed of the sixteen public senior institutions In North Carolina
An Equal Opportunity/Affirmative Action Employer