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The Impact of Dual Identities of College Student-Athletes on Academic Performance

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THE IMPACT OF DUAL IDENTITIES OF COLLEGE STUDENT-ATHLETES ON
ACADEMIC PERFORMANCE

by

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ABSTRACT

THE IMPACT OF DUAL IDENTITIES OF COLLEGE STUDENT-ATHLETES ON
ACADEMIC PERFORMANCE

Stephen E. Knott
Old Dominion University, 2016
Director: Dr. Lynn L. Ridinger

Maintaining a balance between the dual roles of being both a student and an athlete can be challenging for many college student-athletes. While research has indicated identity conflicts exist for student-athletes because of these two roles, few investigations have analyzed the impact of having dual identities on academic performance. Using identity theory as a theoretical framework, this study sought to determine if relationships exist among athlete identity, student identity, and GPA. In addition, this study examined whether these relationships varied based on gender, race, year in school, major, and sport. A survey instrument that included the Academic and Athletic Identity Scale (Yukhymenko-Lescroart, 2014) was distributed to 469 student-athletes at one NCAA Division I university. Data analyses were conducted from 192 completed surveys. Results revealed a moderate positive correlation between student identity and athlete identity ($r=.45, p<.05$), as well as student identity and GPA ($r=.30, p<.05$). However, there was no correlation between athlete identity and GPA ($r=.06, p>.05$). Few differences were found when examining correlations by gender, race, year in school, major, and sport. The only significant findings were differences in the correlations between student identity and athlete identity based on year in school and major. This correlation was much higher for juniors (.70) in comparison to seniors (.19). Also, the correlation between these two identities was higher for social science majors (.54) than natural science majors (.30). Results are discussed in relation to identity theory and implications for coaches and athletic academic advisors are given.

This dissertation is dedicated to my wife, Laurie, and my two children, Kristin and Kyle, who had the patience, tolerance, and understanding of the process of obtaining a Ph.D. and writing a dissertation. Also, to all my current and past students who encouraged me to go on.

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CHAPTER ONE

INTRODUCTION

In 1905, United States President Theodore Roosevelt held a meeting at the White House with representatives from colleges and universities with major football programs to address concerns over the welfare of college athletes due to numerous injuries and deaths resulting from intercollegiate football. After this meeting, 62 higher education institutions formed the Intercollegiate Athletic Association of the United States (IAAUS) to oversee college athletics. In 1910 the IAAUS changed its name to what is known today as the National Collegiate Athletic Association (NCAA) (Smith, 2000). Originally, the NCAA stressed amateurism of college sports and insisted that college athletes were normal students who participated in sports. However, in 1957, due of the increase in commercialism in college athletics, the NCAA decided to allow athletic scholarships to offset the cost of attending college for college athletes (Staurowsky & Sack, 2005). This decision drew widespread criticism, and to counter that criticism, Walter Byers, the executive director of the NCAA at that time, created the term *student-athlete*. The NCAA hoped this term would suggest that college athletes are students first and athletes second (Staurowsky & Sack, 2005). However, with the pressures to succeed in intercollegiate athletics, it could be argued that athlete-student is a more appropriate term. In either case, the term denotes that college athletes face the challenges of having two separate roles or identities, one as a student and the other as an athlete.

One of the NCAA's core values is the pursuit of excellence in both academics and athletics. However, since the inception of athletic scholarships and the use of the term student-athlete, the NCAA has drawn criticism relating to academics and athletics. In 1990, the Student Right to Know Act was passed by Congress requiring that universities publish their graduation rates in order to hold the universities accountable for academic success (Ferris, 2004). Published

graduation rates in the 1990's revealed that football and basketball players had low graduation rates. Responding to these low graduation rates, the NCAA implemented the Academic Progress Rate (APR) to hold colleges and universities accountable for the academic progress of their student athletes (NCAA, 2015c). The APR is calculated by awarding a maximum of two points per semester for each student-athlete; one point is earned if the student-athlete meets academic eligibility requirements and one point is received if the individual returns to the institution the following semester. An APR score is calculated for each team by totaling the points earned, dividing it by the total possible points, and then multiplying by 1000 (NCAA, 2015a). The NCAA requires that teams meet an APR score of 930, or they may face penalties imposed by the NCAA such as: limited practice time, financial aid reduction, coach suspensions, or loss of post-season eligibility (NCAA, 2015a). Since the implementation of the APR in 2003, all the Power Five conferences (Atlantic Coast Conference, Big Ten, Big 12, PAC-12, and the Southeastern Conference) have had multiple institutions with teams not meeting the APR requirements (NCAA, 2015b). According to data from the 2013-2014 academic year, 89 teams failed to reach the required APR score of 930 (NCAA, 2015d). Clearly, academic support is needed for some college student-athletes.

Recently, Lapchick, Howell, and Simpson (2015) examined the graduation success rate (GSR) and the APR of the men's and women's basketball teams that reached the 2015 NCAA basketball tournament. Lapchick et al. reported that only one men's tournament team did not reach an APR score of 930, Coastal Carolina University. Savannah State University was the only women's tournament team to have an APR score lower than 930. Upon examining the GSR, all but 5 of the 68 men's tournament teams had a graduation rate over 50 percent with 44 teams having a rate over 70 percent. In the women's tournament, no teams had a GSR lower than 50 percent. In a separate study of bowl bound college football teams, Lapchick, Sanders, Fox, and

Van Berlo (2014) noted that the only Brigham Young University had a GSR score under 50 and that none of the 76 bowl-bound teams had an APR under 930. Lapchick et al. (2014) noted that there was a large discrepancy between the GSR scores of white student-athletes and African-American student-athletes in both studies. Despite the recent improvements in APR and GSR, there are still concerns about graduation rates for student-athletes, especially for African-American student-athletes.

One factor that has been shown to have an impact on academics is role identity. Role identity is the personality or character an individual portrays based on their social position (McCall & Simmons, 1978). Numerous research studies have examined the role identity of student-athletes and the impact that role identity has on various factors such as academics and career choices (Adler & Adler, 1991; Miller & Kerr, 2002; Paule & Gilson, 2010; Richards & Aries, 1999; Singer, 2008). Adler and Adler (1991) conducted a longitudinal study of Division I male basketball players in which the researchers examined the basketball players' college athletic experiences. This investigation is considered by many to be a seminal study on athlete identity. From interviews with the male basketball players, Adler and Adler concluded that the players identified with the athlete role much more than the student role. Basketball players often expressed conflict between the two roles and believed that their athlete role often interfered with their academic requirements of being a student.

Recently, there has been increased scrutiny of the role of student-athletes. The leading factor in these discussions has been the amount of time and commitment required of student-athletes at NCAA Division I institutions (Chen, Snyder & Magner, 2010; Marx, Huifmon & Doyle, 2008; Paule & Gilson, 2010; Simons, Bosworth, Fujita, and Jensen, 2007; Singer, 2008), and what impact that has on the identity of student-athletes and their academics. In 2014, the legal system became involved in examining the amount of time spent on collegiate athletics for

Northwestern University football players (Ohr, 2014; Staurowsky, 2014). The Northwestern University athletes claimed that based on the hours they were committed to the university's football program, they should be considered employees and receive workers' compensation if injured. With the claims of these athletes, one may question the true meaning of the word "student-athlete." Prior to the Northwestern University athletes' claims, Staurowsky and Sack (2005) questioned the use of the term student-athlete and suggested the proper term should be athlete-student since the focus is more on the athlete role rather than the student role.

The term student-athlete indicates that college athletes have multiple identities. According to Burke and Stets (2009), multiple identities are common and often do not conflict with each other. However, Adler and Adler (1991) reported that college basketball players often struggled between their roles as students and their roles as athletes because of the social environment student-athletes are placed in during their college athletic careers. Other studies have agreed with Adler and Adler's findings, noting that due to time commitments and other social factors, athletes struggled balancing the two identities of student and athlete (Miller & Kerr, 2002; Singer, 2008). Strykers' (1980) symbolic interactionism theory supports the conclusions of Adler and Adler regarding the influence the social environment plays on role identity. In symbolic interactionism (Stryker, 1980), there is a reciprocal relationship between a person and society. Each person is influenced by their social environment, as well as each person having an influence on the social environment itself. Stryker proposed a framework to understand this relationship between a person and their social environment. To begin with, Stryker claims that the meaning of behavior is based on names, or terms, attached to that behavior by the social environment in which it exists.

For the purpose of this study, the term that will be examined is that of "student-athlete." Next, shared behaviors are attached to the term and these are referred to as "roles." With the

identity of student-athletes, there are dual roles, that of a student and that of an athlete. Each role has expected behaviors placed on it by the social environment that surrounds it. According to Stryker (1980), individuals attached to a role will then behave in a manner expected by the social environment through interactions with others. The roles and the behaviors attached to that role become more solidified by the social environment that encompasses the role. For student-athletes, the salience of each role is dependent on the emphasis their social environment places on each role.

Much of the research on student-athletes has focused on their athletic identity and role. Fewer studies have examined the student role and identity of student-athletes. These studies have largely been qualitative research with participants indicating that athletics has had an impact on their academics, as well as their social life as a student (Adler & Adler, 1991; Lally & Kerr, 2005; Miller & Kerr, 2002, 2003; Paule & Gilson, 2010; Singer, 2008). Surprisingly, there has been limited research that has sought to quantify the impact of athletics on academics (Finch, 2009; Johnson, Wessel, & Pierce, 2010; Richards & Aries, 1999).

Statement of the Problem

The NCAA continues to promote the positive aspects of being a collegiate student-athlete (NCAA, 2015g). However, several researchers have reported a strong conflict between the role of student and the role of athlete for college student-athletes (Adler & Adler, 1991; Chen, et al., 2010; Marx, et al., 2008; Paule & Gilson, 2010; Simons, et al., 2007; Singer, 2008). Some athletes have claimed that this struggle between student identity and athlete identity has a negative impact on their academic performance. However, there has been little research examining if there is a correlation between athlete identity, student identity, and student-athletes' grade point average (GPA).

Purpose of the Study

The purpose of this study was to examine the correlations among athlete identity, student identity, and GPA of Division I college student-athletes. Although there have been numerous studies that have indicated conflict between athletics and academics for college student-athletes, there is a lack of research examining the correlation between student-athlete identity and GPA. This study sought to determine if relationships exist among athlete identity, student identity, and GPA. In addition, this study examined whether these relationships varied based on gender, race, year in school, major, and type of sport.

Significance of the Study

The results of this study may be valuable to institutions of higher education that offer college athletic programs under NCAA authority. With requirements for university teams to meet the NCAA guidelines for academic progress, research is needed to identify variables that may contribute to achieving these requirements. This study provides information on athlete identity, student identity, and how these identities relate to the GPA of student-athletes. Use of this information may be of interest to those who provide academic support to student athletes.

Research Questions

1. Is there a correlation between athlete identity and student identity?
2. Are athlete identity and/or student identity correlated with GPA?
3. Do these correlations vary by gender, race, year in school, major, or sport?

Delimitations

This study was conducted with student-athletes who compete at the NCAA Division I level at one mid-Atlantic university. In addition, this study used only student-athletes that have completed at least one semester of courses at the selected university since a GPA would not be calculated until after the student-athlete had completed at least one semester.

Limitations

The participants for this study were a convenience sample from one large public mid-Atlantic Division I university which will limit the ability to generalize the results to other institutions and other levels of competition. In addition, data were collected online and the GPA was self-reported which could lead to questions of accuracy. The Academic and Athletic Identity Scale is a self-assessed measurement of an individual's identity which may be influenced by one's own perceptions as well as the social environment. Past research has found that errors may occur in expressing certain cognitive processes such as self- assessment (Nisbett & Wilson, 1977).

Definition of Terms

Athlete Identity - the degree that a person identifies with the athlete role and looks to others for acknowledgement of that role (Brewer, Van Raalte, & Linder, 1993)

Grade Point Average (GPA) – a measure of scholastic attainment which is calculated by dividing the total number of grade points received by the total number of credits or hours of course work taken.

National Collegiate Athletic Association (NCAA) - a governing body for intercollegiate athletics in the United States. It is a member-led organization dedicated to the well-being and lifelong success of college athletes. One of its seven core values is the pursuit of excellence both in academics and athletics (NCAA, 2015e).

Student-Athlete – a student enrolled in college who participates in an NCAA sponsored sport.

Student Identity – the degree to which a student identifies with the academic role of a college student (Shields, 1995).

Role Conflict – when there is contradicting behavior expectations between multiple roles. (Stryker, 1980).

Role Salience – the more predominant a role may become based on specific situations (Stryker, 1980).

Overview of the Chapters

This chapter introduced the concepts and issues related to college student-athlete identity and GPA. It addressed the current demands placed on student-athletes and the possible role conflict between the two identities. In addition, Chapter One presented the problem, purpose, and significance of the study along with providing research questions, delimitations, limitations, and definitions of terms. In Chapter Two, past literature related to identity theory and student-athlete identity is reviewed. Chapter Three provides justification of the selected research methodology and a detailed description of the study. Chapter Four reports results from the analysis of data collected for the study, and Chapter Five discusses the findings of the study in relation to past research. Implications and suggestions for future research are also discussed.

CHAPTER TWO

LITERATURE REVIEW

This chapter contains a review of current research related to identity and the intercollegiate sport experience. First, this review discusses identity theory and various factors within identity theory such as identity formation and role salience. Next, the review discusses research related to athlete identity. Within the review of literature on athlete identity, research on the stages of athlete identity, dual identities of being a student-athlete, and the benefits and detriments associated with being a student-athlete are discussed. Then, the review focuses on research related to student identity and academic achievement of student-athletes. Finally, the literature review concludes with a discussion of instruments used to measure athlete identity and student identity.

Identity Theory

Who are we? Our identity is formed from a set of meanings that determine how we define ourselves within society (Burke & Stets, 2009). Each person has a meaning for the roles that they identify themselves with in their social environment, such as a student, a worker, a parent, a sibling, or an athlete. Most individuals find themselves in multiple roles, or identities. Examples of these multiple identities are being both a student and a sibling, or a parent and a worker. For the purpose of this study, the dual identities of being both a student and an athlete, often referred to as a student-athlete, will be examined.

Recently, the legal system in the United States was called upon to examine the dual identity of a student-athlete. Football players at Northwestern University were suing the NCAA asking that they be considered employees of the university and should be compensated as such (Ohr, 2014). The football players argued that, as athletes, they were required to work a specific amount of hours for the benefit of the university and should be considered employees. However,

the NCAA argued that they were students first and athletes second and should not be compensated outside of athletic scholarships. The NCAA permits student-athletes to practice up to 20 hours per week; however, Staurowsky (2014) noted that Northwestern University's football players committed between 40 to 60 hours a week to football. This time commitment to a sport, along with the limited time commitment to academics, has solidified the questioning of the term student-athlete (Staurowsky & Sack, 2005). In addition, other researchers have investigated the salience of both roles, that of student and athlete, and have indicated that role conflict may exist between the two identities (Adler & Adler, 1991; Miller & Kerr, 2002; Singer, 2008). To understand the conflict between being a student and being an athlete, one must understand identity theory and the factors that impact a student-athlete's role that he/she identifies with at various times throughout their college experience.

Identity theory emerged from structural symbolic interactionism (Burke & Stets, 2009). The term "symbolic interactionism" is credited to Hebert Blumer (1969) from the University of Chicago. Symbolic interactionism is a sociological theory whose perspective is based on symbolic meanings that people rely on through social interactions (Crossman, 2015). Symbolic interactionism had its roots developed beginning with the eighteenth-century Scottish moral philosophers David Humes, Frances Hutcheson, and Adam Smith (Bryson, 1945). In the early twentieth century, American George Mead's work led to the beginning of structural symbolic interactionism (Stryker, 1980). Mead believed that self was developed through social interactions. Sheldon Stryker (1980) states that behavior grows based on social interaction and that this behavior is attached to the specific roles in society. Serpe and Stryker (1987) verified the connection between social relationships and identity in a study of college students moving into a new environment. Their findings indicated that if students found a new social environment similar to their past environment their identities did not change. Within structural symbolic

interactionism, society influences self which in turn impacts social behavior (Serpe & Stryker, 2011.) Furthermore, individuals who identify with specific roles and behave in a manner attached to these roles only strengthens their identity with these roles (Burke & Stets, 2009). If a student-athlete identifies more with the athlete role than the student role, his or her behavior will be that of the athlete rather than the student. To understand the identity choices of student-athletes, we must first understand identity formation and the factors that strengthen that role.

Identity Formation

Erik Erikson (1959, 1968) defined identity formation as the process of an individual's personality and social world experiences. Erikson listed eight stages of an age specific theory of identity formation and psychosocial development that include: (a) *hope*: trust vs. mistrust (birth-2 years), (b) *will*: autonomy vs. shame (2-4 years), (c) *purpose*: initiative vs. guilt (4-5 years), (d) *competence*: industry vs. inferiority (5-12 years), (e) *fidelity*: identity vs. role confusion (13-19 years), (f) *love*: intimacy vs. isolation (20-39), (g) *care*: generativity vs. stagnation (40-64 years), and (h) *wisdom*: integrity vs. despair (65-death). Upon examining Erikson's eight stages, based on their age, most college student-athletes would fall in the fidelity stage of identity formation. Erikson claimed that during this stage individuals' identities are influenced by how they appear to others. In Stryker's (1980) discussion of symbolic interactionism, he noted that social structures within society influence an individual's identities, confirming Erikson's belief that there is a strong influence by an individual's social environment on his or her identity especially during the fidelity stage. Based on both Erikson's and Stryker's interpretations of identity formation, the social settings that a student-athlete is placed in will impact the identity that he or she forms of one's self. Adler and Adler (1991) investigated the social impact on student athlete roles by conducting a study of college male basketball players over a period of five years. Through observations and interviews, Adler and Adler's findings suggested that the social

environment that college basketball players were immersed in strengthen the athlete identity over that of the student identity during a player's college career.

Burke and Stets (2009) believe that individuals receive signs and symbols from social interactions with others which determines the meaning of an identity. This identity meaning dictates the behavior that an individual exhibits related to that identity. In Adler and Adler's (1991) research, college basketball players' social contacts with others (i.e., coaches, boosters, fans, other students, and professors) exhibited behaviors towards the players which strengthened behaviors associated with either the student or athlete role. Adler and Adler indicated that those social interactions usually strengthened the athlete role over the student role for the basketball players whom they observed during their study. Adler and Adler's study demonstrated that signs and symbols from the social environment impacts the meaning of an identity and strengthens the behaviors specific to that identity.

Role Salience

When an individual has multiple roles, role salience is the importance an individual places on one role over the other roles. When referring to role salience, Matzeder and Krieschok (1995) stated, "The importance of a role is determined by commitment to the role, which includes attitudes and emotions, participation in the role, and knowledge about the role" (p. 333). There are several factors that influence role salience which McCall and Simmons (1978) refer to as salience hierarchy. McCall and Simmons identified these factors as: *prominence*, *support*, *rewards*, and *perceived opportunity structure*. Prominence is identified as the key factor influencing role salience. Time is one element that demonstrates prominence of a role. The amount of time dedicated to a specific role strengthens that role. Stryker and Serpe (1982) noted that individuals who dedicated more time to religious activities had stronger religious identities. The second factor, support, also has a strong impact on role salience. If an individual did not

receive the expected support for a particular audience, then the individual was more likely to seek a different role identity. Nuttbrock and Freudiger (1983) found that the more new mothers interacted with other mothers, the stronger was their identity as a mother. The third factor in the salience hierarchy is rewards. Receiving rewards connected to a specific identity, or role, did not appear to impact the changing of role identity, but it did demonstrate the likelihood of an individual asserting, or strengthening, that role in the future when they received more rewards than expected. Alder and Adler (1991) indicated that as basketball players received more attention and rewards for their play, their athlete identity became stronger. Finally, the last factor in the salience hierarchy is perceived opportunity structure. Perceived opportunity structure is closely related to rewards because the individual determines what benefits, or rewards, are attached to a specific role. This is usually subjective and based on rewards that the individual perceived that others have achieved in the same role. However, this subjective judgment may not hold true for all individuals in a specific role.

When examining the role salience related to student-athletes, prominence of a role is impacted by the amount of time an individual spends in the role of student or athlete. The NCAA has a 20 hour per week rule (NCAA, 2015f) which limits the amount of time that college teams can participate in athletic related activities. Athletic related activities not only include on the field/court practice time, but also team meetings, competitions, required strength and conditioning workouts and review of game film. However, in her discussion of the Northwestern University's lawsuit against the NCAA, Staurowsky (2014) stated that the football players dedicated 60 hours per week during the preseason and 40 hours during the season to their sport. In the National Labor Relations Board's decision of the Northwestern University's football players claims, regional director Peter Ohr confirmed Staurowsky's claims citing that Northwestern football players often exceeded 40-50 hours of work per week related to their sport

(Ohr, 2014). In an earlier study examining the stigma of being an athlete in higher education, Simons, et al., (2007) noted that college athletes devoted between 30 to 40 hours per week to their sport. In a study on benefits and detriments of being an African American male college football player, Singer (2008) noted that multiple players stated during interviews that due to the time demands of their sport they were not able to participate in activities that are considered part of being a normal college student including academics.

Time commitment for sport is not just a factor in revenue sports such as football and basketball; a study of NCAA non-revenue sport athletes indicated that participation in sport during college consumes a large amount of time for all individuals choosing to participate in sport (Paule & Gilson, 2010). In this qualitative study of 30 athletes who competed in the non-revenue sports of soccer, tennis, golf, swimming and diving, and track and field, athletes indicated that due to their participation in sports, they had less free time to participate in the typical social activities such as hanging out with friends, going to parties, or playing video games. Research has clearly indicated that participation in college athletics requires a time commitment that restricts the ability to participate in activities that non-athlete students partake in during their college career. According to McCall and Simmons (1978), this prominence of time would strengthen the athlete role over that of the student role.

Support, the second factor of McCall and Simmons' (1978) salience hierarchy, influences an individual's role salience based on which role is supported the most by the individual's audience. For an intercollegiate athlete, support would come from coaches, teammates, professors, other students, and other members of the university community. Several studies have identified the impact that certain individuals have on a student-athlete's identity salience. Coaches were identified as a strong influence on a student-athlete's preference to the role of athlete over that of a student (Adler & Adler, 1991; Marx, et al., 2008; Mirabile & Witte, 2013;

Singer, 2008). Adler and Adler claim that the coaches' focus on academics, or the student role, is merely lip service. One participant in Adler and Adler's study claimed that in spite of the coaches' statements that they wanted the players to be strong students their actions indicted otherwise:

Practically all the stuff he talks, that he is more interested in scholarship, scholarship-wise, than he is athletic-wise, is a bunch of bullshit because he's just not interested in it. They don't check with you until the last week of school. (Adler & Adler, 1991, p. 143)

Other individuals who are contributors to the salience of the athlete identity of a student-athlete include parents (Marx, et al., 2008), teammates (Miller & Kerr, 2003) boosters, and fans (Adler & Adler, 1991). Athletes have indicated that professors and other students have negative impressions of them as student-athletes due to their role as an athlete (Adler & Adler, 1991; Simmons et al., 2007; Singer 2008). These negative feelings had some student-athletes looking for support from teammates, thus strengthening the athlete identity (Adler & Adler, 1991; Singer, 2008). Overall, coaches, parents, teammates, boosters, and fans had a tremendous impact on the role salience as an athlete for student-athletes (Adler & Adler, 1991; Marx, et al., 2008; Miller & Kerr, 2003; Mirabile & Witte, 2013; Singer, 2008).

Related to the third factor of role salience, the student-athlete's role salience will be determined by which role the individual receives the most rewards, both intrinsic and extrinsic. Several research studies have shown that college athletes believe that there are benefits of being a college athlete. African American Division I football players acknowledged that playing football in college did have some benefits, such as preparation for life's challenges, financial benefits, and social benefits (Singer, 2008). In another study examining the benefits of sport participation in college, Chen, et al. (2010) surveyed 275 students to determine the effects of

sport participation on students' social life and identity. Of the 275 participants, 163 were athletes that played in sports such as football, basketball, volleyball, baseball, soccer, and track and field. Chen et al. (2010) found that participants believed that sports involvement offered more rewards than detriments. Participants indicated that sport participation developed good health, work habits, creativity, self-esteem, self-confidence, social acceptance, and higher academic performance. Paule and Gilson's (2010) study of nonrevenue college sport athletes supported the findings of both Chen et al. (2010) and Singer (2008). Nonrevenue sport athletes noted that participation in college sports provided academic benefits, taught life skills, improved time management, and provided some tangible benefits such as equipment, travel, and clothing. Although these studies identified both detriments and benefits of athletic participation in college, athletes believed the benefits out-weighed the detriments.

Finally, an individual's perceived opportunity structure will have an impact on role salience as an athlete or a student. If the student athlete perceives that there is a greater opportunity for reward as an athlete rather than a student, that individual will develop the more salient role of an athlete. Adler and Adler (1991) discussed how male basketball players in NCAA Division I schools perceived their identity as athletes, not students, throughout their college careers based on their perceived rewards for being a college basketball player. Even the players who had no hopes of continuing their basketball careers after college still perceived themselves as athletes, not students, because of the perceived benefits after completing their playing career.

Contrary to Adler and Adler's (1991) findings, Miller and Kerr (2003) interviewed eight senior college student-athletes and noted that identity salience changed from the first two years of college to the last two years of college for these Canadian college student-athletes. Miller and Kerr concluded that as student-athlete's progressed through their college sport careers, they

realized the rewards of a successful career after college was a higher priority than their sport careers. This resulted in a more salient student identity rather than an athlete identity for these individuals as they progressed through college. Lally and Kerr (2005) alleged that this change in identity salience was a result of athletic careers ending with little foreseeable rewards coming from continuing in the primary role of an athlete first. The more recent research indicates that role salience changes, favoring student identity as a college career ends and athletic rewards diminish; however, Miller and Kerr did hypothesize that the difference in their findings with Adler and Adler's findings may be due to the specific sport and country. Miller and Kerr believed that the commercialization of basketball in the United States led to a perception of greater rewards for being a basketball player rather than being a student preparing for a lifelong career.

Using McCall and Simmons' (1978) hierarchy of role salience, research has indicated that in the student-athlete role, the athlete identity does appear to be the more salient role. Athletes commit much more time and energy to sport rather than academics (Ohr, 2014; Paule & Gilson, 2010; Simons, et al., 2007; Singer, 2008). Their audience supports the role of athlete more than that of a student (Adler & Adler, 1991; Marx, et al., 2008; Miller & Kerr, 2003; Mirabile & Witte, 2013; Singer, 2008). And, the benefits and rewards are perceived to be greater from sport rather than school (Adler & Adler, 1991; Chen, et al., 2010; Lally & Kerr, 2005; Miller & Kerr, 2002, 2003; Paule & Gilson, 2010; Singer, 2008). Clearly, when examining role salience, the athlete identity appears stronger than student identity especially in the first two years of being a college student-athlete.

Athlete Identity

From examining identity theory, an individual's identity is determined by the value placed on the various roles within a person's life. Athlete identity is described as the degree that a person identifies with the athlete role and looks to others for acknowledgement of that role (Brewer, et al., 1993). The strength, or salience, of athlete identity is influenced by the social environment that the individual is immersed in. Adler and Adler's (1991) field study with Division I male basketball players is considered to be a seminal study on athlete identity. Adler and Adler's longitudinal study over five years provided a fascinating account of all the various social factors that impacted athlete identity. Some of these factors were specific individuals such as coaches, other students, boosters, and fans, but some factors were things like time commitments, benefits, and detriments of being a college student-athlete. As Adler and Adler followed their participants through their college careers, the researchers noted that the strength of the participants' athlete identity fluctuated due to the social factors involved in the salience of their identity. Adler and Adler noted that although most of the male basketball players they interviewed believed that they were entering college both as a student and an athlete, their role salience changed as their college athletic careers evolved. Participants described how the time commitment to basketball, social interactions identifying them as athletes, and their perceived rewards from their athletic identities strengthened their athlete identities over their student identities.

A more recent study on athlete identity was conducted by Miller and Kerr (2002) examining Canadian student-athletes' collegiate experiences. Miller and Kerr interviewed eight 4th and 5th year athletes about their college experience as student-athletes. Participants identified three components of their student-athlete experience: athletic, academic, and social spheres. Miller and Kerr found that the Canadian athletes had strong athlete identities early in their

collegiate experience and developed stronger student identities later in their collegiate experience. This contradicted Adler and Adler's (1991) findings where athlete identity became stronger as student-athletes progressed through their college experience. Miller and Kerr theorized that this difference was due to the commercialization of Division I sports in the United States. However, both Adler and Adler and Miller and Kerr agreed that the environment and culture of college athletics had a direct impact on the salience of the athlete identity of student-athletes.

Role Foreclosure of Athlete Identity

Role foreclosure is when an individual commits prematurely to a specific identity before exploring other opportunities. Past research has shown that student-athletes go through various stages of role identity during their college careers (Blann, 1985; Lally & Kerr, 2005; Miller & Kerr, 2002, 2003). However, role foreclosure appears to be the factor in the formation of these multiple stages of identity. According to Miller and Kerr (2002, 2003), Canadian student-athletes reported that their choice of which college to attend was largely based on academics, but their time commitment to sports contributed to accepting their role as athlete over that of a student. However, Miller and Kerr (2003) noted that the role identity transformed to that of a student the closer the student-athlete came to graduation. Miller and Kerr (2003) referred to the first two years of a student-athlete's college career as *Stage 1: Over-identification with the athlete role*. The final two years of a student-athlete's college career was classified as *Stage 2: Deferred role experimentation*. Based on the definition of role foreclosure, one may conclude that some student-athletes choose the athlete role based on the environment and social factors of being an intercollegiate athlete in spite of their school choice having been based on an academic program that would lead to a desirable career path. In a separate study with Canadian athletes, Lally and Kerr (2005) confirmed the conversion from an athlete identity to a student identity

occurred as student-athletes reached the conclusion of their college careers. Their research showed that freshman and sophomore student-athletes were more committed to the athlete identity. However, as student-athletes reached their junior and senior years of college their role shifted to the student identity. Lally and Kerr attributed this to student-athletes focusing more on career options as they realized their athletic careers were ending. Though all three studies suggested that student-athletes' role salience changed as they progressed through college careers, there has been no research on this identity conformation on American college student-athletes.

There are several studies that have examined athlete identity and career decisions. Finch (2009) examined the relationships between student identity athlete identity and career development of college student-athletes. Using the Student Identity Scale (Shields, 1995), Athlete Identity Measurement Scale (Brewer et al., 1993), and Career Decision-Making Self-Efficacy Scale- Short Form (Betz, Klein, & Taylor, 1996), Finch found that student-athletes who had a more salient student identity possessed greater confidence in their ability to make career decisions than student-athletes who had a more salient athlete identity. Finch's findings indicated that in spite of role foreclosure at the start of an individual's college athletic career, some student-athletes eventually choose an identity based on their own needs and values, not the social setting in which they were immersed. This change in identity between student and athlete supports Burke and Stets' (2009) claim that identities may change when an individual's situation changes. For college student-athletes close to graduation, their athletic careers were ending and their search for a career began, so their social environment changed (Adler & Adler, 1991). This change for many student-athletes indicates role foreclosure may have occurred at the start of their college careers, perhaps identifying with the athlete role based on others' needs and values rather than their own. Adler and Adler mentioned that at the end of the players' college careers many of them became anxious or stressed about deciding on a career path. Adler and Adler

indicated that many of the basketball players were limited in career choices due to a lack of focus on their academics.

A more recent study on athlete identity and career decisions found a positive correlation, $r=.22, p < .01$, between high athlete identity and high levels of career decision-making self-efficacy among college student-athletes (Cabrita, Rosado, Leite, Serpa & Sousa, 2014). Cabrita et al. used the Athlete Identity Scale and the Career-Decision-Making Self-Efficacy Scale of 153 Portuguese athletes to determine if there was a correlation between athlete identity and career decision-making. The researchers found that there was a positive correlation between athlete identity and career decision-making. However, the researchers indicated that the individuals with high athlete identity were more likely to choose sports-related careers. In Adler and Adler's (1991) study, the researchers noted that some of the basketball players found sports-related careers, but they were in the minority. Most of the participants in Adler and Adler's study indicated that they struggled with finding meaningful careers due to high focus on athletics rather than academics.

Student Identity

Reitzes and Burke (1980) were one of the first to examine student identity and how it relates to specific behaviors related to the meaning individuals placed on the identity. Using a questionnaire with 24 adjective terms, Reitzes and Burke identified four meanings, or dimensions, associated with student identity. These four meanings were academic responsibility, intellectual curiosity, sociability, and personal assertiveness. In a later study, Burke and Reitzes (1981) examined college students' behavior related to the meaning placed on the student identity role. The researchers found future plans such as going to graduate school or getting a job, were related to the meaning that students placed on student identity. Burke and Reitzes asked participants about their educational plans, and they found that participants' educational plans

were related to the participant's meaning attached to student identity. These two studies demonstrated that individuals construct meaning of an identity and behavior in a manner related to that meaning.

The majority of research on student identity has examined students at the college level. Weidman, DeAngelo, and Bethea (2014), noted that the focus on student identity development of college students is based on Erikson's (1959, 1968) fifth stage of identity development - fidelity: identity vs. role confusion, occurring during the years of college. Jones and Abes (2013) identified three domains that impacted student identity: cognitive, interpersonal, and intrapersonal. All three of these domains have a high level of importance to college students. Within the realm of student identity research on college students, diversity or race has received substantial attention in recent research (Carter, Locks, & Winkle-Wagner, 2013; Cole, 2011; Davis et al., 2010; Eagan et al, 2011; Espinosa, 2011; Holley & Taylor, 2009). Other areas of research interest have been parental influence on identity (Sax & Wartman, 2010), student retention (Titus, 2004), and social networking (Corwin & Cintrons, 2011).

In regards to student identity and athletics, there has been limited research examining college student-athletes. Sturm, Feltz, and Gilson (2011) compared athlete identity and student identity of Division I student-athletes to that of Division III student-athletes. Researchers used the Athletic Identity Measurement Scale (Brewer et al., 1993) and the Measurement of Student Identity (Shield, 1995) to determine if there was a difference between student-athletes' athlete identity and student identity based on the level of athletic competition. In addition, Sturm et al. examined the differences based on gender and class level of the participants. Sturm et al. found no significant difference between athlete identity and student identity of student-athletes at the Division I level and the Division III level. However, the authors noted that they found a significantly stronger student identity with females compared to males across both divisions.

When analyzing the differences in identity based on the student-athlete's class, Sturm et al. noted that although there were higher levels of athlete identity for juniors than freshmen, and that the student identity was higher for freshmen than juniors, the findings were not significant. In addition, researchers found a negative correlation, $r = -.30$, $p = .001$, between athlete identity and student identity

Pot, Schenk, and van Hilvoorde (2014) studied changes in athlete and student identity of 10 to 12 year old boys and girls after competing in soccer. Participants were 304 students from schools in the Netherlands that had no school sports programs prior to the study. The researchers assessed student identity using the Psychological Sense of School Membership (Goodenow, 1993), and measured the athlete identity using the Athletic Identity Measurement Scale (Brewer et al., 1993). Participants completed these two surveys prior to participating in a soccer program and again after the completion of the soccer program. Findings of the study indicated that athlete identity was higher at the completion of the sports program and student identity was lower at the end of the program, although the difference in student identity was not significant for girls. Pot et al. (2014) did note that student identity decreased for boys through the school year even if they did not participate in the sports program, stating that the sports program had no effect on student identity.

As noted previously, there is little research examining student identity of college student-athletes. Several studies (Adler & Adler, 1991; Miller & Kerr, 2002; Paule & Gilson, 2010; Singer, 2008) indicated through interviews that being an athlete had a negative effect on academics. Sturm, et al. (2011) found a negative correlation between athlete identity and student identity for Division I and Division III student-athletes, $r = -.30$ for both groups. These findings suggest being an athlete may have an adverse effect on student identity.

Student-Athlete Status and Academics

Several studies indicated that being a college student-athlete opened opportunities in the area of academics, such as opportunities to earn a degree, academic support, and academic success (Adler & Adler, 1991; Baum, Ma, & Payea, 2013; Paule & Gilson, 2010). However, it was also noted that student-athletes believed that college athletics interfered with their academic success. Also, some studies indicated that student-athletes listed college athletics both as a benefit and a detriment to their academics (Adler & Adler, 1991; Paule & Gilson, 2010).

One study examined the relationship between college student-athletes' academics and athletics by investigating variables that might impact GPA of first year student-athletes at a midsize Midwestern university (Johnson, et al., 2010). Johnson et al. examined the relationship between GPA and both traditional and athletic variables of 674 first year student-athletes. Traditional variables were identified as: gender, race, distance from home, major, standardized test scores, high school GPA, high school rank, and high school size. Athletic variables examined were: sport, coaching change, playing time, and winning percentage. Findings of this study indicated significant correlations between GPA and the traditional variables of gender ($r = .35$), race ($r = -.33$), major ($r = -.11$), standardized test scores ($r = .7$), high school GPA ($r = .64$), high school rank ($r = -.58$), and high school class size ($r = .15$). Athletic variables that demonstrated a significant correlation with first year student-athletes were sport ($r = .33$) and playing time ($r = .15$). Revenue sport athletes had lower GPAs than non-revenue sports. In regards to playing time, the results revealed that student-athletes with less playing time had a lower first year GPA. Although this study investigated multiple variables that might impact college student-athletes' GPA, Johnson, et al. neglected to include athlete identity and student identity as possible variables relating to GPA.

Although student-athletes in several studies have indicated that college athletics has a negative impact on their academics, little research has been done on the relationship between athlete identity, student identity, and academics. Adler and Adler (1991) claimed that as male basketball players began to struggle academically, the players discarded their student roles thus strengthening their athlete identity. However, Potuto and Hanlon (2007) found that 91.7 % of the student-athletes responding to their survey believed they had received a well-rounded educational experience. Sturm et al. (2011) compared the athlete and student identity of 188 Division I and Division III student-athletes. Although Sturm et al. found no significant difference between the two divisions of collegiate sports in regards to athlete and student identity, they did mention that the athlete roles took priority over the student roles in both divisions. Whether this change in roles impacted student-athletes' academics was not examined in their study.

When examining the relationship between GPA and athlete identity there has been conflicting findings. A study of 219 NCAA Division III seniors found no significant difference between the GPA scores of athletes and non-athletes (Richards & Aries, 1999). Richards and Aries cited little difference between athletes' GPA (3.39) and non-athletes' GPA (3.47) and concluded that athletics had no impact on academic performance in the Division III level, even though athletes felt that athletics took time away from academics. However, in a more recent study of high school athletes, researchers found a negative relationship between individuals with high athlete identity and GPA (Miller, Melnick, Barnes, Farrell, & Sabo, D, 2005). Miller et al. examined the correlation between athlete identity and GPA of 600 New York high school athletes and noted that male and black athletes with high "jock" identity had lower GPAs than non-athletes. However, the researchers found that female athletes with high "jock" identity had higher GPAs than other female non-athletes.

Measuring Student Identity and Athlete Identity

Numerous studies on student identity and athlete identity were qualitative in nature. Interviews were conducted, transcribed, and analyzed for specific themes or meanings (Adler & Adler, 1991; Lally & Kerr, 2005; Miller & Kerr, 2002). Several quantitative survey instruments have been developed to measure either student identity or athlete identity, but only one instrument was designed to assess both identities.

The Measurement of Student Identity (MSI) is an instrument which measures the degree to which an individual identifies themselves with the student role (Shields, 1995). The Measurement of Student Identity is a 15 item survey using a five point Likert scale ranging from “Strongly Agree” (1point) to “Strongly Disagree” (5 points) with the even numbered items being reverse-scored. The MSI was considered reliable with a Coefficient Alpha score of .7 and validity was confirmed by the relationships with other measures into aspects of student identity (Shields, 1995). However, very few studies have used the MSI (Finch, 2009; Sturm et al., 2011) which brings up the question of validity. In a more recent study, Pot et al. (2014) chose not to use the MSI to measure student identity, but instead used two items from the 18 item Psychological Sense of School Membership (Goodenow, 1993). Currently, there is no predominately used tool to quantitatively measure student identity in studies on student-athletes.

The most predominantly used instrument used to measure athlete identity has been the Athletic Identity Measurement Scale (AIMS; Brewer et al., 1993) The AIMS is a seven item survey using a seven point Likert scale ranging from “Strongly Disagree “(1 point) to “Strongly Agree” (7 points). Participants are asked whether they agree or disagree with a statement related to their role as an athlete. The more an individual agrees with a statement, the higher his or her score. Scores ranged on a scale of 10 to 70. The AIMS has been established as a reliable and an internally consistent measure of the construct of athletic identity. Initial validity testing for the

AIMS (Brewer et al., 1993) found a coefficient alpha ranging from .87 to .93 and a test-retest over a 14-day period reliability coefficient of .89. Construct validity was also demonstrated by showing mean scores on the AIMS that increased with level of athletic involvement. However, several studies have raised concerns about the AIMS being a unidimensional model (Brewer, Boin, Van Raalte, & Mahar, 1993; Hale, James, & Stambulova, 1999; Martin, Eklund, & Mushett, 1997; Martin, Mushett, & Eklund, 1995) and have questioned its psychometric properties (Burns, Jasinski, Dunn & Fletcher, 2012; Yuhymenko-Lescroart, 2014).

Yuhymenko-Lescroart (2014)'s study was the first to focus on developing an instrument to assess both the student and athletic dimensions of student-athlete identity. She developed the Academic and Athletic Identity Scale (AAIS), an 11-item instrument designed to measure both student identity and athletic identity. The AAIS includes 5 items to measure student identity and 6 items to measure athletic identity. It incorporates a 6-point Likert type scale ranging from "not central to my sense of self" to "very central to my sense of self." The sum of the items in each category is used to measure each identity. Yuhymenko-Lescroart reported the results of two studies, the first which described the development of the scale and the second which confirmed the validity and reliability of the AAIS as a reasonable measure of both student identity and athlete identity. After development of the AAIS, a study using 596 varsity and club undergraduate student-athletes found statistically significant correlation among the two factors ($r=.44$, $p<.001$). In the second part of this study, it was discovered that varsity college athletes had higher athlete identity than club sport athletes. In addition, Yuhymenko-Lescroart found that gender had no effect on student or athlete identity.

Summary of Literature

There have been mixed findings in the literature on the relationship between athlete identity and academics. Some research has indicated that college student-athletes with strong

athlete identity are still successful academically (Baum, et al., 2013; Paule & Gilson, 2010; Potuto & Hanlon, 2007; Richards & Aries, 1999). However, other studies indicated that individuals with strong athlete identity struggle with their academics (Adler & Adler, 1991; Miller & Kerr, 2002; Miller et al., 2005; Singer, 2008). The majority of the research on athlete and student identity has been qualitative in nature, exploring student-athletes' perceptions of the impact of participating in college athletics on their academic performances. Few studies have used quantitative methodologies to examine the relationship between being a student-athlete and academics.

Although there have been multiple studies that have examined athlete identity and student identity, few studies have examined the relationships among athlete identity, student identity, and GPA for Division I student-athletes. One study compared athlete and student identity to GPA of Division III senior students (Richards & Aries, 1999), and another study examined the relationship of athlete identity and GPA for high school student-athletes (Miller et al., 2005). However, these two studies had conflicting findings in regards to the impact of athlete and student identities on student-athletes' GPA. The purpose of his current study was to examine correlations among athlete identity, student identity, and GPA for Division I student-athletes. In addition, this study investigated whether the relationship between athlete identity, student identity, and GPA varied based on gender, year in school, major, and sport.

CHAPTER THREE

METHODOLOGY

The purpose of this chapter is to describe the methodological procedures for the investigation and testing of the research questions found in Chapter One. The methodology is described in relation to the following aspects of the study: (a) research design, (b) sample, (c) instrumentation, (d) operational definitions, (f) data collection procedures, and (g) data analysis procedures.

Research Design

The present study used a non-experimental correlational research design to examine the relationships among student identity, athlete identity and GPA. In a correlational study, variables are not manipulated and a researcher seeks to observe what is naturally occurring between variables (Field, 2013). The independent variables were student identity and athlete identity and the dependent variable was GPA, The moderating variables examined were gender, race, year in school, major, and type of sport.

Sample

A convenience sample was used for this study. The sample included student-athletes at one large, public Division I university located in the mid-Atlantic region of the United States. All student-athletes at this one institution who had completed at least one semester of classes were invited to participate in this study. First semester student-athletes were excluded since they did not have a calculated GPA. Participants included student-athletes from both men's and women's teams. Sports for the men's teams included baseball, basketball, football, golf, sailing, soccer, swimming and diving, tennis, and wrestling. Sports for the women's teams included basketball, field hockey, golf, lacrosse, rowing, sailing, soccer, swimming and diving, and tennis.

Research Context

In order to understand the results of this study one must know the context in which this study was conducted. The participants were all student-athletes at a public university that is accredited by the Southern Association of Colleges and Schools Commission with an enrollment of approximately 24,000 students and a 21 to 1 ratio between students to faculty. There are seven colleges at the university offering a total of 70 bachelor's degrees, 54 master's degrees, and 42 doctoral degrees. The university has an office of Student Support Services that offers workshops, tutoring, advising, and peer mentoring to assist students with their academics. In addition the university has a Student Success Center that contains a writing center, and a math and science resource center.

Student-athletes have additional services offered to them through the Student Athletic Academic Services division of the athletics department. There are six athletic academic advisors to provide support for student-athletes through services such as study halls, tutoring, and graduation planning. In addition, each athlete is provided with a laptop and wifi hotspots during travel for most competitions. . Each year the athletic department recognizes the male and female senior athletes with the highest cumulative grade point averages, as well as those student-athletes who achieve academic all-American status. The women's field hockey team has consistently had one of the highest team GPAs in the nation. During the 2013-2014 year, all of the university's teams scored above the 930 APR requirement of the NCAA. . The APR score of each team is displayed in Table 1.

Table 1

2013-2013 APR Team Scores

Athletic Team	2013-2014 APR Score
Baseball	963
Field Hockey	993
Football	951
Men's Basketball	960
Women's Basketball	972
Men's Golf	1000
Women's Golf	990
Women's Lacrosse	995
Women's Rowing	991
Men's Soccer	960
Women's Soccer	997
Men's Swimming and Diving	960
Women's Swimming and Diving	981
Men's Tennis	990
Women's Tennis	981
Men's Wrestling	979

Note. APR scores provided by the NCAA.

Instrumentation

An online surveying approach was used to collect data on the variables of interest (see Appendix A). Qualtrics™ platform was used to design the online survey which was comprised of two sections. The first section was designed to collect demographic information regarding gender, race, major, sport, year in school, and GPA. The next section included the Academic and Athletic Identity Scale (AAIS) developed by Yukhymenko-Lescroart (2014). The AAIS is an 11-item instrument designed to measure both student identity and athletic identity. Five of the eleven items measure student identity and six of the eleven items measure athlete identity. The AAIS uses a 6 point Likert scale ranging from “not central to my sense of self” to “very central to my sense of self.” The sum of the items in each category indicated the strength of that identity.

Operational Definitions

Athletic Identity – 6 of the 11 items on the AAIS (Yukhymenko-Lescroart, 2014) were used to

measure athletic identity with participants being asked to rate each item on a scale ranging from “not central to my sense of self” (1 point) to “very central to my sense of self” (6 points). The sum of the following six items were used to determine each participant’s athlete identity score:

- Being a capable athlete.
- Being a good athlete.
- Being athletic.
- Being proud to be an athlete.
- Being satisfied with my athletic achievements.
- Doing well during sport competitions.

Student Identity - 5 of the 11 items on the AAIS (Yukhymenko-Lescroart, 2014) were used to measure student identity with participants being asked to rate each item on a scale ranging from “not central to my sense of self” (1 point) to “very central to my sense of self” (6 points). The sum of the following five items were used to determine each participant’s student identity score:

- Being a capable student.
- Being satisfied with my academic work.
- Doing well in school.
- Getting good grades.
- Having high GPA.

Grade Point Average (GPA) – based on a 4.0 scale and self-reported by the participant.

Gender – self-reported identification of whether the participant was male or female.

Race – the original categories that participants could select from included: Caucasian, African-American, Hispanic, Asian, and other. However, due to small numbers in several of the minority groups, race was divided into two categories and analyzed by Caucasian and minority (African-American, Hispanic, Asian, and other).

Year in School – participants reported their total credit hours earned and then this data was recoded into the following categories to determine year in school: freshmen (under 30 credit hours), sophomore (30 to 59 credit hours), junior (60 to 89 credit hours), and senior (over 90 credit hours).

Major – academic major was self-reported by participants. Majors were originally collected by specific major such as biology, criminal justice, exercise science, etc. Then, each major was recoded into either natural science or social science due to small totals within some majors. Natural sciences were majors that were related to either a life science such as biology, or a physical science such as chemistry. Social sciences were majors that were related to society, or relationships in society. Examples of social sciences are economics, education, sociology, or psychology.

Sport - participants reported their actual sport and then these were recoded as either revenue or non-revenue sports due to small totals in some sports. The revenue sports included football and men's and women's basketball. All other sports were classified as non-revenue sports. These included baseball, field hockey, men's golf, women's golf, women's lacrosse, women's rowing, men's sailing women's sailing, men's soccer, women's soccer, men's swimming and diving, women's swimming and diving, men's tennis, women's tennis, and wrestling. The classification of revenue and non-revenue was based on sport classification from past research (Brecht, 2014; Finch, 2007; Paule & Gilson, 2010).

Data Collection

Following approval of the college's Human Subjects Review Board committee and the university athletic department, convenience sampling occurred by sending an email invitation to recruit current student-athletes at a mid-Atlantic Division I university. This email described the purpose of the study and solicited student-athletes to participate by completing the survey

(Appendix B). A link to the online survey was included in the email invitation. The university's athletic academic director forwarded the email invitation and survey link to the student-athletes using the athletic academic advisors' listserv of all student-athletes at the university. Email invitations were sent to the student-athletes four separate times approximately one week apart. The reminder emails thanked participants who had previously completed the survey and encouraged those who had not yet taken the survey to please do so prior to the deadline.

Data Analysis

For this study, the data analysis incorporated three statistical techniques. First, reliability scores were calculated by computing Cronbach's alpha for athlete identity and student identity from the corresponding questions of AAIS (Yukhymenko-Lescroart, 2014). Second, descriptive statistics were calculated for all variables and moderators using SPSS 22 (NY, IBM). Third, a Pearson correlation was calculated between athlete identity and student identity in order to answer Research Question 1. Fourth, a Pearson correlation was calculated between athlete identity and student identity with GPA in order to answer Research Question 2. In order to answer Research Question 3, the Pearson correlation coefficient was calculated between student identity and athlete identity, student identity and GPA, and athlete identity and GPA. Then the r scores were converted to a z using the Fisher's z transformation to determine if relationships varied based on gender, race, year in school, major, or type of sport. The Fisher's z transformation converts the Pearson's r 's to a normally distributed z score in order to compare multiple correlations.

CHAPTER FOUR

RESULTS

This study examined the relationships among student identity, athlete identity, and student-athletes' GPA. In addition, this study examined the differences of correlation coefficients among these variables based on gender, race, year in school, major, and type of sport. This chapter will present results including sample demographics, instrument reliability, and data analyses to answer the research questions.

Sample Demographics

A link to the survey was emailed to 469 student-athletes. Approximately half of the student-athletes started the survey ($N = 237$), but 45 surveys were eliminated due to missing data resulting in 192 usable surveys which were analyzed for this study for a final response rate of 41%. The surveys were completed by 94 males (49%) and 98 females (51%). The largest group by race was Caucasian with 135 (71%), followed by African-American with 37 (19%), Hispanic with 12 (6%), Asian with 4 (2%), and other with 3 (1%). The age of the participants ranged from 18 to 28 years of age ($M = 20.52$, $SD = 1.54$). In regards to year in school, freshman was the largest group with 66, followed by seniors with 45, juniors with 38, and sophomores with 37. In regards to sport, 38 participants competed in a revenue sport and 149 competed in a nonrevenue sport with five participants not indicating a sport they participated in. Finally, there were 60 participants majoring in a natural science, 122 participants majoring in a social science, and 5 who were undecided in their major. Demographics of the participants are displayed in Table 2.

Table 2

Demographics of Participants

		N	Percent
<hr/>			
Gender			
	Male	94	49%
	Female	98	51%
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Race			
	Caucasian	135	71%
	African-American	37	19%
	Hispanic	12	6%
	Asian	4	2%
	Other	3	2%
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Year in School			
	Freshmen	66	35%
	Sophomores	37	20%
	Juniors	38	20%
	Seniors	45	24%
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Major			
	Natural Science	60	32%
	Social Science	122	65%
	Undecided	5	3%
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Sport			
	Revenue	38	20
	Nonrevenue	149	80
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Reliability of Survey

To determine internal reliability of the Academic and Athlete Identity Scale (AAIS) Cronbach's alpha coefficients were calculated for the entire AAIS, as well as for each of the survey's two subscales: student identity and athlete identity. Student identity was measured with the first five survey questions. Athlete identity was measured with questions six through eleven. The AAIS produced an overall Cronbach's alpha coefficient of .892, demonstrating a high level of reliability. In addition, when analyzing each of the two domains within the survey, the Cronbach's alpha for the student identity subscale was .916 and the Cronbach's alpha for the

athlete identity subscale was .862. Both domains were above .70 suggested by Nunnally (1978) as an acceptable alpha level.

Relationships between Identity and GPA

In order to answer research questions one and two, a Pearson product-moment correlation was performed on the scores obtained from the participants' AAIS scores, as well as their self-reported GPA. The GPA of the participants ranged from 2.00 to 4.00 ($M= 3.29$, $SD=.47$). Student identity ranged from 10.00 to 30.00 ($M= 26.4$, $SD= 3.99$), and an athlete identity ranged from 12 to 36 ($M=31.56$, $SD=4.61$). A Pearson product-moment correlation coefficient was computed to assess the relationship between student identity, athlete identity, and GPA. Based on Pearson product-moment correlation coefficients, student identity was moderately and positively correlated to athlete identity, $r=.45$, $p<.05$. Furthermore, student identity was moderately and positively related to GPA, $r=.30$, $p<.05$. However, athlete identity was not correlated with GPA, $r=.06$, $p>.05$.

Relationships between Identity and GPA within Subgroups

The participants were divided into subgroups by gender, race, major, year in school, and sport in order to answer research question three. The Pearson correlation coefficient was calculated for the relationships between student identity and athlete identity, student identity and GPA, and athlete identity and GPA within each subgroup. Next, the r values were then converted to z scoring using Fisher's z transformation. Finally, a z test was conducted based on the subgroup sample size and z scores (Field, 2013). The complete z and p values for gender, race, major and type of sport for each subgroup are displayed in Table 3.

Table 3

Gender, Race, Major and Sport z and p values

		<i>z</i>	<i>p</i>
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Gender			
<hr/>			
	Student Identity & Athlete Identity	-.51	.35
	Student Identity & GPA	-1.80	.08
	Athlete Identity & GPA	.24	.39
Race			
<hr/>			
	Student Identity & Athlete Identity	-.93	.26
	Student Identity & GPA	-.16	.40
	Athlete Identity & GPA	-.80	.29
Major			
<hr/>			
	Student Identity & Athlete Identity	-2.03	.05*
	Student Identity & GPA	-.94	.26
	Athlete Identity & GPA	-.78	.29
Sport			
<hr/>			
	Student Identity & Athlete Identity	-1.19	.20
	Student Identity & GPA	-.61	.33
	Athlete Identity & GPA	.42	.37
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Note. * $p < .05$.**Gender.**

Table 4 displays male and female student identity, athlete identity and GPA scores. Female student-athletes had a higher student identity ($M = 26.81$, $SD = 3079$) than male student-athletes ($M = 26.05$, $SD = 4.21$). Females student-athletes had a higher athlete identity ($M = 31.63$, $SD = 4.59$) than male student-athletes ($M = 31.49$, $SD = 4.73$). Also, female student-athletes had a higher GPA ($M = 3.37$, $SD = .42$) than male student-athletes ($M = 3.22$, $SD = .47$).

Table 4

Student Identity, Athlete Identity and GPA Scores by Gender

	Student Identity	Athlete Identity	GPA
Male (N=94)	26.05	31.49	3.22*
Female (N=98)	26.81	31.63	3.37*

Note. * $p < .05$.

Female student-athletes had a higher correlation coefficient ($r = .53$, $p < .05$) between student identity and athlete identity than male student-athletes ($r = .45$, $p < .05$). However, there was no statistically significant difference in the correlation of student identity and athlete identity between genders, $z = -.51$, $p > .05$. When examining the correlation between student identity and GPA, female student-athletes had a greater correlation coefficient than male student-athletes with $r = .42$, $p < .05$ compared to $r = .18$, $p > .05$. Furthermore, there was no statistically significant difference in the correlation of student identity and GPA between genders, $z = -1.81$, $p > .05$. Finally, female student-athletes and male student-athletes had no correlation between athlete identity and GPA, $r = .04$, $p > .05$ and $r = .07$, $p > .05$ respectively. There was no significant difference in correlation of athlete identity and GPA between genders $z = .24$, $p > .05$. In summary, even though the correlation coefficients of student identity, athlete identity and GPA varied between male and female student athletes, the z scores of each relationship indicated that there was no significant difference in the correlations across gender.

Race.

Due to small numbers in the categories of African-American, Hispanic, Asian, and other, participants in these race categories were grouped together in a new category titled minority. This study examined the differences between Caucasian and minority students regarding the relationship between identity and GPA. The sample size consisted of 135 Caucasian student-

athletes and 56 minority student athletes, and one participate who choose not to indicate race.

Table 5 displays student identity, athlete identity and GPA scores based on race status.

Examining student identity, Caucasian student-athletes ($M= 26.43$, $SD= 4.06$) and minority student-athletes ($M=26.41$, $SD=4.00$) had similar scores. However, minority student-athletes had a slightly higher athlete identity ($M=31.88$, $SD=4.15$) than Caucasian student-athletes ($M=31.43$, $SD=4.87$). Also, Caucasian student-athletes had a higher GPA ($M=3.39$, $SD=.04$) compared to the minority student-athletes ($M=3.07$, $SD=.47$).

Table 5

Student Identity, Athlete Identity and GPA Scores by Race

	Student Identity	Athlete Identity	GPA
Caucasian ($N=135$)	26.43	31.43	3.39*
Minority ($N=56$)	26.41	31.88	3.07*

Note. * $p < .05$.

Minority student-athletes ($r = .54$, $p < .05$) had a higher correlation coefficient between student identity and athlete identity compared to Caucasian student-athletes ($r = .42$, $p < .05$). However, there was no statistically significant difference in the correlation of student identity and athlete identity between races, $z = -.92$, $p > .05$. When examining the relationship between student identity and GPA, minority student-athletes had a similar correlation coefficient $r = .32$, $p < .05$ compared to Caucasian student-athletes with $r = .32$, $p < .05$. In addition, there was no statistically significant difference in the correlation of student identity and GPA between races, $z = -.06$, $p > .05$. Finally, there was no statistically significant correlation between athlete identity and GPA for both minority student-athletes ($r = .18$, $p > .05$) and Caucasian student-athletes ($r = .05$, $p > .05$). There was no statistically significant difference in the correlation of athlete identity and GPA between races, $z = -.80$, $p > .05$. In summary, even though the correlation coefficients of

student identity, athlete identity and GPA varied slightly between Caucasian and minority student athletes, the z scores of each relationship indicated that there was no significant difference in the correlations between the two race categories.

Year in School.

The participants for this study included 66 freshmen, 37 sophomores, 38 juniors, 45 seniors, and 6 participants who did not indicate their year in school. Examining student identity, senior student-athletes had the highest student identity ($M= 27.11$, $SD= 2.65$) followed by juniors ($M= 26.32$, $SD= 4.42$), freshmen ($M= 26.61$, $SD= 4.05$), and sophomores ($M= 25.73$, $SD= 4.58$). In regards to athlete identity, freshmen student-athletes indicated the highest athlete identity ($M= 32.53$, $SD= 3.54$) followed by juniors ($M= 31.45$, $SD= 4.45$), seniors ($M= 31.40$, $SD= 4.58$), and sophomores ($M= 30.32$, $SD= 6.08$). Finally, sophomore student-athletes had the highest GPA ($M= 3.39$, $SD= .45$) followed by seniors ($M= 3.32$, $SD= .37$), juniors ($M= 3.24$, $SD= .47$), and freshmen ($M= 3.29$, $SD= .45$). Table 6 displays student identity, athlete identity and GPA scores by year in school.

Table 6

Student Identity, Athlete Identity and GPA Scores by Year in School

	Student Identity	Athlete Identity	GPA
Freshmen ($N=66$)	26.61	32.53	3.29
Sophomores ($N=37$)	25.73	30.32	3.39
Juniors ($N=38$)	26.32	31.45	3.24
Seniors ($N=45$)	27.11	31.40	3.32

When examining the correlations between student identity and athlete identity, juniors had the highest correlation ($r= .70$, $p<.05$), followed by freshmen ($r = .40$, $p<.05$), sophomores (r

= .40, $p < .05$), and seniors ($r = .19$, $p > .05$). In regards to the correlations between student identity and GPA, freshmen had the highest correlation ($r = .32$, $p < .05$) followed by juniors ($r = .30$, $p < .05$), seniors ($r = .28$, $p > .05$), and sophomores ($r = .22$, $p > .05$). Examining the correlations between athlete identity and GPA there were no significant correlations regardless of the year in school. However, although the correlation coefficients of student identity, athlete identity and GPA varied between the different years in school of the student athletes (Table 7), the z scores of each relationship indicated that there was no significant difference in the correlations across year in school except for the correlations of student identity and athlete identity between juniors and seniors ($z = 3.01$, $p \leq .05$).

Table 7

Student Identity, Athlete Identity and GPA Correlations by Year in School

		Pearson's r
Freshmen	Student Identity & Athlete Identity	.44
	Student Identity & GPA	.32
	Athlete Identity & GPA	-.07
Sophomores	Student Identity & Athlete Identity	.40
	Student Identity & GPA	.22
	Athlete Identity & GPA	.08
Juniors	Student Identity & Athlete Identity	.70
	Student Identity & GPA	.30
	Athlete Identity & GPA	.15
Seniors	Student Identity & Athlete Identity	.19
	Student Identity & GPA	.28
	Athlete Identity & GPA	.07

Major.

This study divided the academic majors between natural science and social science majors. There were 60 participants categorized as natural science majors, 122 student-athletes categorized as social science majors, and 10 participants who indicated they were undecided or

did not select a major. Table 8 displays student identity, athlete identity and GPA scores by major. Natural science major student-athletes expressed higher student identity ($M=27.20$, $SD=3.43$) than social science major student-athletes ($M=26.27$, $SD=4.01$). Examining athlete identity, social science major student-athletes indicated a higher athlete identity ($M=31.96$, $SD=4.30$) than natural science major student-athletes ($M=30.98$, $SD=5.26$). Also, natural science major student-athletes had a higher GPA ($M=3.47$, $SD=.431$) than social science major student-athletes ($M=3.23$, $SD=.431$).

Table 8

Student Identity, Athlete Identity and GPA Scores by Major

	Student Identity*	Athlete Identity	GPA
Natural Sciences ($N=60$)	27.20	30.98	3.47*
Social Sciences ($N=122$)	26.27	31.96	3.23*

Note. * $p < .05$.

Student-athletes in the social science majors had a higher correlation coefficient ($r = .56$, $p < .05$) between student identity and athlete identity compared to student-athletes majoring in the natural sciences ($r = .30$, $p < .05$). There was a statistically significant difference in the correlation between student identity and athlete identity between majors, $z = -2.4$, $p \leq .05$. When examining the relationship between student identity and GPA, student-athletes majoring in the social sciences had a greater correlation coefficient ($r = .32$, $p < .05$) than student-athletes majoring in the natural sciences ($r = .18$, $p > .05$); however, there was no statistically significant difference in the correlation of student identity and GPA between majors, $z = -.94$, $p > .05$. Upon examining the correlation between athlete identity and GPA, student-athletes majoring in both natural sciences ($r = .00$, $p > .05$) and social sciences ($r = .13$, $p > .05$) had no statistical correlation between athlete identity and GPA. There was no statistically significant difference in the correlation of athlete

and GPA relationship between majors, $z = -.77$, $p > .05$. In summary, even though the correlation coefficients of student identity, athlete identity and GPA varied between majors of student athletes, the z scores of the relationship between identity and GPA indicated that there was no significant difference in the correlations between the two categories of majors. However, there was a significant difference in the correlations between student identity and athlete identity between majors.

Sport.

There were 38 participants who indicated they were members of a revenue sport, 149 participants indicated they were members of a nonrevenue sport team, while 5 participants did not indicate what sport they participated in. Nonrevenue sport student-athletes had a higher student identity ($M=26.45$, $SD=4.06$) compared to revenue sport student-athletes ($M=26.26$, $SD=3.85$). Also, nonrevenue sport student-athletes had a higher athlete identity ($M=31.88$, $SD=4.53$) compared to revenue sport student-athletes ($M=30.18$, $SD=4.94$). Finally, nonrevenue sport student-athletes had a higher GPA ($M=3.37$, $SD=.40$) compared to revenue sport student-athletes ($M=3.01$, $SD=.50$). Table 9 displays student identity, athlete identity and GPA scores by type of sport.

Table 9

Sport Student Identity, Athlete Identity and GPA Scores by Type of Sport

	Student Identity	Athlete Identity	GPA
Revenue ($N=38$)	26.26	30.18	3.01*
Nonrevenue ($N=149$)	26.45	31.88	3.37*

Note. * $p < .05$.

When comparing revenue and nonrevenue sports, nonrevenue sport student-athletes ($r = .33$, $p < .05$) had a higher correlation coefficient between student identity and athlete identity than

revenue sport student-athletes ($r = .30, p > .05$). But, there was no statistically significant difference in the correlation coefficient of student identity and athlete identity between sports, $z = -1.18, p > .05$. Examining the relationship between student identity and GPA, revenue sport student-athletes ($r = .25, p > .05$) had a lower correlation coefficient between student identity and GPA compared to nonrevenue sport student-athletes, ($r = .38, p < .05$) However, there was no statistically significant difference in the correlation coefficient of student identity and GPA between type of sport, $z = -.61, p > .05$. Examining the correlation between athlete identity and GPA, revenue sport student-athletes ($r = .01, p > .05$) and nonrevenue sport student-athletes ($r = -.02, p > .05$) had no statistically significant correlation between athlete identity and GPA. There was no significant difference in the correlation between athlete and GPA relationship of revenue and nonrevenue sport student-athletes, $z = -.42, p > .05$. In summary, even though the correlation coefficients of student, athlete identity and GPA varied between revenue and nonrevenue sports of the student athletes, the z scores of each relationship indicated that there was no significant difference in the correlations across sport.

Summary

This study found a significant relationship between student identity and athlete identity of the study's participants, $r = .45, p = .00$. When examining the correlation between student identity, athlete identity, and GPA, data analyses indicated a moderately significant correlation between student identity and GPA, $r = .30, p = .00$; however, athlete identity was not significantly correlated to GPA, $r = .06, p = .41$.

Analyses of the relationships between student identity, athlete identity, and GPA based on gender, race, major, year in school, and sport revealed no significant difference between student identity and GPA based on gender, race, major, year in school, or sport. In addition, no significant difference between athlete identity and GPA was found based on gender, race, major,

year in school, or type of sport. However, data analysis did discover a significant difference in the relationship between student identity and athlete identity between majors, as well as between junior and senior student-athletes.

CHAPTER FIVE

DISCUSSION

This chapter provides a discussion of how findings from this study relate to past research. Also, implications from this study are discussed along with recommendations for further research. The NCAA holds university athletic programs responsible for ensuring that their student-athletes are making progress towards earning a degree by using a formula known as the Academic Progress Rate (APR). One element of this formula is student-athletes' GPA. The purpose of this study was to examine the relationship between student identity, athlete identity and GPA of NCAA Division I student-athletes. While there have been numerous studies investigating athlete identity and academics, there is limited research on the relationship between identity and academic performance as measured by GPA. This study utilized the Academic and Athletic Identity Scale (AAIS; Yukhymenko-Lescroart, 2014) to determine student identity and athlete identity of participants. The study included data collected from 192 NCAA Division I student-athletes from a Mid-Atlantic university. First semester student-athletes were excluded from this study since they had no GPA. Upon collection of identity scores from the AAIS, analyses of the relationships between student identity, athlete identity, and GPA were conducted. In addition, this study investigated differences in the relationships between student identity, athlete identity, and GPA of various subgroups of student-athletes. The subgroups consisted of gender, race, year in school, major, and sport.

The Relationship between Student Identity and Athlete Identity

The participants of this study indicated a positive correlation between student identity and athlete identity ($r=.45, p<.05$). This positive correlation indicates that as the strength of student identity increased, athlete identity increased as well. These findings support the statement by Burke and Stets (2009) that multiple identities may not conflict with each other. For student-

athletes in this study, their identity as a student corresponded with their identity as an athlete, suggesting these two roles can coexist without one being a detriment to the other.

However, several qualitative studies indicated that the relationship between student identity and athlete identity was one of conflict (Adler & Adler, 1991; Miller & Kerr, 2002; Singer, 2008). Men's basketball players indicated constant conflict between being a student and athlete (Adler & Adler, 1991). Miller and Kerr (2002) noted similar findings stating that their participants indicated a conflict between student identity and athlete identity through their interviews with Canadian student-athletes. Also, in a study of African-American football collegiate student-athletes (Singer, 2008), participants expressed a conflict between student identity and athlete identity. When there is a conflict between the two identities, one identity can become more salient than the other. Adler and Adler (1991), and Singer (2008) indicated that the participants in their studies had more salient athlete identity than student identity. Miller and Kerr (2002) indicated that student-athletes had one identity stronger than the other, but that it varied based on the year in school. In a quantitative study of the relationship between student identity, athlete identity, and career development, Finch (2009), found a negative correlation ($r = -.26, p < .001$) between student identity and athlete identity suggesting a conflict between identities. Sturm et al. (2011) also indicated in their study between Division I and Division III student-athletes that there was a negative correlation between student identity and athlete identity. Some past quantitative studies found a negative correlation between student identity and athlete identity indicating a conflict between the two identities (Finch, 2009; Sturm, et al., 2011).

Although the findings of this study do not support the identity conflict found in past research, some of those studies were qualitative in nature compared to the quantitative analyses conducted in this study. Future research using a mixed methods research design could give

additional insight about the conflict, or lack of conflict, between student identity and athlete identity.

Upon examining the conflicting results of this study with two past quantitative studies (Finch, 2009; Sturm et al., 2011), there were two major difference in the research design which could have influenced the findings. The sample sizes were different in this study compared the Finch and Sturm et al.; this study had a small sample size (n=192) and was from one university, compared to Finch's study with a larger sample size (n= 395) from three universities. In addition, the Sturm et al. study had a similar sample size, but the data were collected from participants from two universities in different NCAA divisions. In addition, both Finch and Sturm et al. used different instruments, the SIS to measure student identity and the AIMS to measure athlete identity. This study, however, used the AAIS to determine the strength of both student identity and athlete identity. The AAIS is the only instrument that measures both student identity and athlete identity which suited this study better than two separate instruments to measure each identity. These conflicting results suggest that more research is needed in the area of conflicts between student identity and athlete identity. Exploring the relationship between these two identities will aid university athletic programs in their support for student-athletes being successful both on the field and in the classroom.

The Relationship between Student Identity, Athlete Identity and GPA

This study investigated the correlations between student identity, athlete identity, and GPA. There was a low-to-moderate correlation found between student identity and GPA. This would suggest that if a student-athlete's student identity is improved it could have a positive impact on GPA. Many universities have academic athletic advising services which provide programs to aid student-athletes with academics. Some programs provided by these athletic advising services are study halls and tutoring. Based on McCall and Simmons' (1978) salience

hierarchy, this support should strengthen student identity which based on the findings of this study could have a positive impact on GPA. Currently, there is limited research on the relationship between student identity and GPA of student-athletes, so it is suggested that future research is needed to confirm the findings in this study.

When investigating the correlation between athlete identity and GPA, this study found no correlation between these two variables. There has been previous research that investigated the relationship between athletes and GPA (Johnson, et al., 2010; Richards & Aries, 1999). However, those studies compared athlete GPA to non-athlete GPA. This study examined the correlation between identity and GPA which mirrored a study conducted by Miller et al. (2005). Miller et al. investigated the correlation between athlete identity and GPA of 600 New York high school student-athletes. Miller et al. discovered that there was a negative correlation between athlete identity and GPA ($\beta = -.14, p < .01$). However, this study could not confirm the findings of Miller et al. Perhaps the difference between the findings of the two studies could be the fact that Miller et al. examined identity and GPA for high school student-athletes while this study examined identity and GPA of college student-athletes. Research on the difference between high school student-athletes' relationship with identity and GPA compared to that of college student-athletes may provide insight on the variance of the Miller et al. study and this study. However, based on the findings of this study, there appears to be no impact on GPA based on the strength of athlete identity. So, when coaches offer activities which could strengthen athlete identity, such as teambuilding activities, rewarding athletic performance, and encouraging a strong focus on athletic futures, these behaviors should not have a negative impact on GPA.

Gender Differences.

This study found that female student athletes had a slightly higher student identity and athlete identity compared to male student athletes. Yet, there was no significant difference in the

correlations between identity and GPA based on gender within this study. When examining student identity, the findings of this study agreed with the previous research by Finch (2009), Sturm et al. (2011), and Pot et al. (2014). Those studies indicated that female student athletes had higher student identity than male athletes. Also, Sturm et al. (2011) found a significantly stronger student identity with female student-athletes compared to male student-athletes across both NCAA Division I and Division III sports. In addition, Pot et al. (2014) discovered that after completing a sports program, girls had a higher student identity than boys, but the difference was not significant.

Although female student-athletes had a stronger student identity than male student-athletes in this study, the difference was not significant which supports the findings of Pot et al. Also, when examining GPA, this study found that female student-athletes had a higher GPA than male student-athletes agreeing with the findings of Miller et al. (2005). In addition, this study found no significant difference in the correlations between student identity, athlete identity, and GPA when conducting a Fisher's transformation z . However, Finch, (2009) using a hierarchical multiple regression analysis, discovered that there was a significant difference between gender and the association with student identity ($\beta=.01$, $t=0.06$, $p=.95$).

The findings from this study, as well as previous studies, suggest that athletic departments may need to invest in strategies that would improve male student-athletes' student identity and academic performance. One aspect of athletics that may influence the salience of student identity for male student-athletes is the fact that rewards and perceived opportunities appear stronger for males than females. Male athletes receive higher public recognition and have greater sport opportunities after college. With this in mind, university coaches of male student-athletes need to stress the importance of academics and strengthen student identity by

recognizing and rewarding those athletes who perform well in the classroom. In addition, coaches and advisors may need to offer stronger advice on career opportunities after college.

Race Differences.

This study found that the student identity and athlete identity between Caucasians and minority student-athletes had no significant difference; however, there was a slight difference in GPA between Caucasian (3.39) and minorities (3.07). Several other studies have found a difference in GPA between Caucasians and minorities. Examining the Graduation Success Rate of NCAA Division I teams, Lapchick et al. (2014) noted that there was a large discrepancy between white student-athletes and African-American student-athletes. African-American college athletes have been found to have lower graduation rates and retention rates than those of white athletes (Sack & Staurowsky, 1998; Sellers, 2000). More specifically, Snyder (1985) suggested minority groups may place greater emphasis on the athletic role while de-emphasizing the student role which could impact academic performance.

In spite of the difference in GPA, this study's analyses showed no significant difference in the correlations of student identity, athlete identity, and GPA between Caucasians and minorities. These findings echo the findings of Finch (2009) in his investigation of student identity, athlete identity, and career. Finch's study failed to show any significant relationship based on race for student identity, athlete identity, or career decision making.

It is well known that in the K-12 school settings that minority students often struggle academically compared to Caucasian students (Bohrstedt, Kimitto, Ogut, Sherman, & Chan, 2015). Although no significant differences were found in this study, further research is needed to better understand relationships between identity and academic outcomes based on race. Both in this study and in past research, minority students have had lower GPAs, so the possible causes and solutions need to be explored.

Year in School Differences.

When examining the strength of student identity and athlete identity based on the year in school of student-athletes, there were some differences in the raw scores of identity. Seniors had the highest student identity, but only the third highest athlete identity. Freshmen had the highest athlete identity, but only the third highest student identity. These findings are similar to past research where student identity increased and athlete identity decreased with upperclassmen (Finch, 2009; Miller & Kerr, 2003; Pot et al., 2014; Sack & Staurowsky, 1998; Sellers, 2000; Sturm et al., 2011). The occurrence of an increase in student identity and a decrease in athlete identity for upperclassmen has been theorized as realization that student-athletes' athletic careers are ending and that the student-athletes are beginning to focus on their professional careers.

Also, this study noted that the lowest student and athlete identity was the sophomore student-athletes. Adler and Adler (1991) found the same results in their qualitative study. With the sophomore year having the lowest student and athlete identity, Adler and Adler stated that this change in identity occurred because participants in their study entered college with high expectations of academic success, but by the time they were sophomores they realized that was not always the case due to the high demands of being a student-athlete. Noting this change in identity during the sophomore year, coaches and athletic advisors may need to stress academics more over the sophomore year. Often athletic study halls are mandatory for freshmen, but not sophomores. Perhaps the mandatory athletic study halls should be continued through the sophomore year to stress the importance of academic performance.

Upon reviewing the correlations between student identity, athlete identity, and GPA, juniors had the strongest correlation between student identity and athlete identity which may be a result of juniors reaching a higher performance level in athletics, yet realizing that they may be reaching the end of their athletic careers and needing to begin focus on their professional careers.

Freshman also had a positive correlation between student identity and athlete identity which could be explained by the findings of Adler and Adler (1991) who stated that freshmen enter college believing that their athletic skills got them into college and that they would be able to be successful students based on their high school experience. Seniors and sophomores had no significant correlation between student and athlete identity. For sophomores this may occur due to the realization that athletics is often more time consuming than they anticipated as they entered college, and that dreams of being both a successful athlete and student may not happen. As for seniors, the lack of a correlation between student identity and athlete identity may be a result of the fact stated earlier; their athletic careers are ending and they are preparing for their professional careers.

Based on the analyses of this study the only significant difference of correlations among year in school between identities and GPA was the correlation between student identity and athlete identity among juniors and seniors. Again, this could be due to the fact that seniors are beginning to look at their futures beyond college athletics. Future research may want to investigate if there is a drop in athletic performance by seniors who have a large increase in student identity and a large decrease in athlete identity. In order to prevent a possible drop in performance coaches may need to recognize this drop in athlete identity of seniors and encourage their seniors to finish their athletic careers on a positive note.

Major Differences.

When reviewing the results of this study, some differences between student identity, athlete identity and GPA emerged. Student-athletes majoring in a natural science had a higher student identity (27.20) compared to student-athletes majoring in a social science (26.27). However, when comparing athlete identity scores, student-athletes majoring in a social science had a higher athlete identity (31.96) compared to student-athletes majoring in a natural science

(30.98). In addition, there was a significant difference in the correlations of student and athlete identity among student-athletes majoring in a social science compared to student-athletes majoring in a natural science ($z = -2.4, p \leq .05$). However, there was no significant difference in the correlations of student identity and GPA, and athlete identity and GPA. This would suggest that student-athletes majoring in the natural sciences place more emphasis on academics rather than athletics. Also, most natural science majors have multiple courses requiring labs, and this may discourage student-athletes with lower student identity from choosing a major with more academic requirements. In addition, there was a significant difference in the correlations of student and athlete identity between student-athletes majoring in a social science compared to student-athletes majoring in a natural science ($z = -2.4, p \leq .05$). However, there was no significant difference in the correlations of student identity and GPA, and athlete identity and GPA.

During the literature review for this study, no research was found that specifically examined student-athletes' majors with identity or GPA. Adler and Adler (1991) did mention that male basketball players were often placed in majors that their coaches and advisors believed to have less academic rigor, and worked around their athletic schedules. This fact may not be verified in research, but often students enter college not sure about their intended major. Athletic advisors may wish to examine student identity and athlete identity before suggesting possible majors for student-athletes who are unsure of what to major in. One limitation of this study in regards to majors was the fact that the majors were re-classified into just two categories. A suggestion for future research in this area would be to explore differences in specific majors such as biology, business, exercise science, sport management, communication, or education in order to aid athletic academic advisors when suggesting possible majors for student-athletes who need direction in their selection of a major.

Sport Differences.

For participants in this study, there were few differences when analyzing student identity, athlete identity, and GPA based on type of sport. Even the raw scores of student identity, athlete identity, and GPA were very similar for revenue sport student-athletes and nonrevenue sport student-athletes. An earlier study by Finch (2009), noted that revenue sport student-athletes had lower student identity than nonrevenue sport student-athletes. However, this study could not confirm that difference in student identity noted by Finch, finding little difference in student identity between revenue (26.26) and nonrevenue (26.45) sports. Even the correlations between student identity and athlete identity were very similar, and there were no significant differences in the correlations between student identity and athlete identity between the two types of sports ($z = -.61, p > .05$).

A past study by Johnson et al. (2010) noted that there was a difference in GPA between revenue and nonrevenue sport student-athletes with revenue sport student athletes having lower GPA than nonrevenue sport student-athletes during their first year in school ($r = .33, p < .01$). This study had a similar finding as Johnson et al. with student-athletes in revenue sports having a lower GPA than student-athletes in nonrevenue sports. However, there were no significant differences in the correlations of student identity, athlete identity, and GPA between revenue and nonrevenue sport participants. Although the relationships between identities and GPA did not differ for student-athletes in revenue and nonrevenue sports, their actual GPA did differ significantly. Further research is needed to explore the reasons why GPA might vary based on sport,

Conclusion

There are both theoretical and practical implications associated with this study. First, it adds to the body of knowledge on student-athlete identity as s one of the few quantitative studies

that has examined the relationship between identities of student-athletes and their GPA. In addition, this study employed the AAIS (Yukhymenko-Lescroart, 2014), the only survey instrument to date designed to measure both student identity and athlete identity. Further research utilizing the AAIS is needed to better understand the dual identities of student-athletes and their relationship to various outcome variables.

When individuals possess multiple identities, such as student and athlete identity, conflict may occur and one identity may become more salient than the other identities (Adler & Adler, 1991; Miller & Kerr, 2002; Singer, 2008). However, Burke and Stets (2009) stated that even though an individual may have multiple identities, these identities may not conflict. Burke and Stets gave examples of being a parent, being an employee, and being a sibling may not conflict as long as each identity emerges in the proper setting. This study found that the student-athletes at one Division I university had a positive correlation between student identity and athlete identity which indicates that student-athletes who had strong student identity usually had strong athlete identities as well. These findings suggest that student identity and athlete identity may not conflict with each other. From a practical standpoint, coaches may focus on developing a strong athlete identity and academic advisors may focus on developing a stronger student identity without negatively impacting the other identity. However, one should use caution in generalizing these findings since the study was limited to a small population at only one institution. Perhaps this relationship between student identity and athlete identity exists at this one university due to the emphasis by the coaches, athletic academic advisors, and the university community to support both identities. Future research on the student identity and athlete identity relationship should examine support systems in place that promote each identity at various universities, and how these strategies affect the relationship between student and athlete identities.

In regards to the relationships among student identity, athlete identity, and GPA, the findings of this study suggest there is a positive correlation between student identity and GPA, but no correlation between athlete identity and GPA. It could be assumed that an individual with a strong student identity would focus more on academics which would result in better grades. On the other hand, it might be assumed if an individual has a strong athlete identity that academics would suffer; however, this study found no relationship between the strength of athlete identity and GPA. Again, these findings must be interpreted with caution since the study was limited to one university and GPA was self-reported. Nevertheless, this study did find that having a strong athlete identity did not necessarily indicate that a student-athlete may struggle academically. For college coaches who reinforce the athlete identity side of being a student athlete, this appears not to have a negative impact on academic performance. In addition, this study found that student-athletes with a strong student identity had a higher GPA. These results taken together suggest that coaches and athletic academic advisors need to support both identities to ensure that their student-athletes are successful in both their sport and the classroom.

Finally, this study explored the relationships among student identity, athlete identity, and GPA based on gender, race, year in school, major, and sport. Although there were some relative differences in the relationships between identity and GPA, many of the differences were not significant. Several studies on student-athletes have indicated differences both in identity and GPA based on gender (Finch, 2009; Pot et al., 2014; Sturm et al., 2011) race (Sack & Staurowsky, 1998; Sellers, 2000; Synder, 1985), and year in school (Finch, 2009; Miller & Kerr, 2003; Pot et al., 2014; Sack & Staurowsky, 1998; Sellers, 2000; Sturm et al., 2011); however, when this study examined the correlations among student identity, athlete identity and GPA there were no significant differences between the correlations of these subgroups. This would

suggest that further research is needed to determine if differences do exist based on these demographic subgroups.

Since the findings of this study found a positive correlation between student identity and athlete identity, college and university athletic programs may want to evaluate the student-athlete experiences on their own campuses to ensure that both student identity and athlete identity are being developed. The development of these identities is related to role salience which is based on prominence, support, rewards, and perceived opportunity (McCall & Simmons, 1978). Athletics holds a place of prominence at most Division I schools with numerous support systems in place, as well as many rewards given to student-athletes (e.g., scholarships, clothing, travel, allowances). For some student-athletes, college athletics provides them with the opportunity to showcase their talent and perhaps become a professional athlete. The salience of the student role for student-athletes may not be so obvious at some Division I schools. If strengthening the student identity of student-athletes is a goal, a similar sense of prominence must be placed on the student role. This type of prominence could be cultivated by providing appropriate academic support for student-athletes and by rewarding behaviors associated with academic success. For example, coaches could provide positive recognition to student-athletes who meet individual and team academic goals. Since perceived opportunities is a factor in role salience, it may also be important that student-athletes are aware of career opportunities and how a college education can expand their career options in order to strengthen student identity.

The NCAA has three levels of athletic competition with Division I schools having a major focus on athletic competition and athletic scholarships which would strengthen the athlete identity. Division II schools offer fewer athletic scholarships than Division I, and Division III schools offer no athletic scholarships and claim to stress academics more than athletics. Research which examines the relationship between identity and GPA among the various levels of

institutions within the NCAA is needed to determine if these relationships vary. In addition, future research on the various support services given to student-athletes by coaches, athletic academic advisors, and the university community may give insight into the means of creating a positive college experience for student-athletes both in the classroom and on the field.

The NCAA continues to stress the importance of both academics and athletics. NCAA instituted the APR to hold universities and colleges academically accountable, and to ensure that their core values were upheld by all members. The findings from this study showed a positive correlation between student identity and athlete identity, supporting the NCAA belief that being a student and being an athlete can be done without sacrificing one identity over another. In addition, this study found that student-athletes with higher student identity generally had a higher GPA, but there was no relationship between athlete identity and GPA. So, those who are striving for excellence on the athletic field can achieve success in the classroom as well. Nevertheless, this is just one study and overall, the literature on student-athlete identity has revealed mixed results. Thus, additional research is needed to more fully understand the impact of dual identities of college student-athletes on academic performance.

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APPENDIX A

Identity & GPA

The following survey seeks to better understand the relationship between student and athlete identity with the academic success of college student-athletes. Please complete all of the following questions. The survey should take approximately 5 minutes. At the conclusion of this survey you will be given the opportunity to enter a raffle for a \$100.00 Amazon gift card. Thank you for your time!

AGE: _____

GENDER:

- Male
- Female

RACE:

- Caucasian
- African American
- Hispanic
- Asian

Other (5) _____

SPORT THAT YOU PARTICIPATE IN:

Males

- Baseball
- Basketball
- Football
- Golf
- Sailing
- Soccer
- Swimming & Diving
- Tennis
- Wrestling

Females

- Basketball
- Field Hockey
- Golf
- Lacrosse
- Rowing
- Sailing
- Soccer
- Swimming & Diving
- Tennis

CURRENT GPA: _____

CURRENT EARNED CREDITS:

- 0 -11 credit hours
- 12-29 credit hours
- 30-59 credit hours
- 60-89 credit hours
- Over 90 credit hours

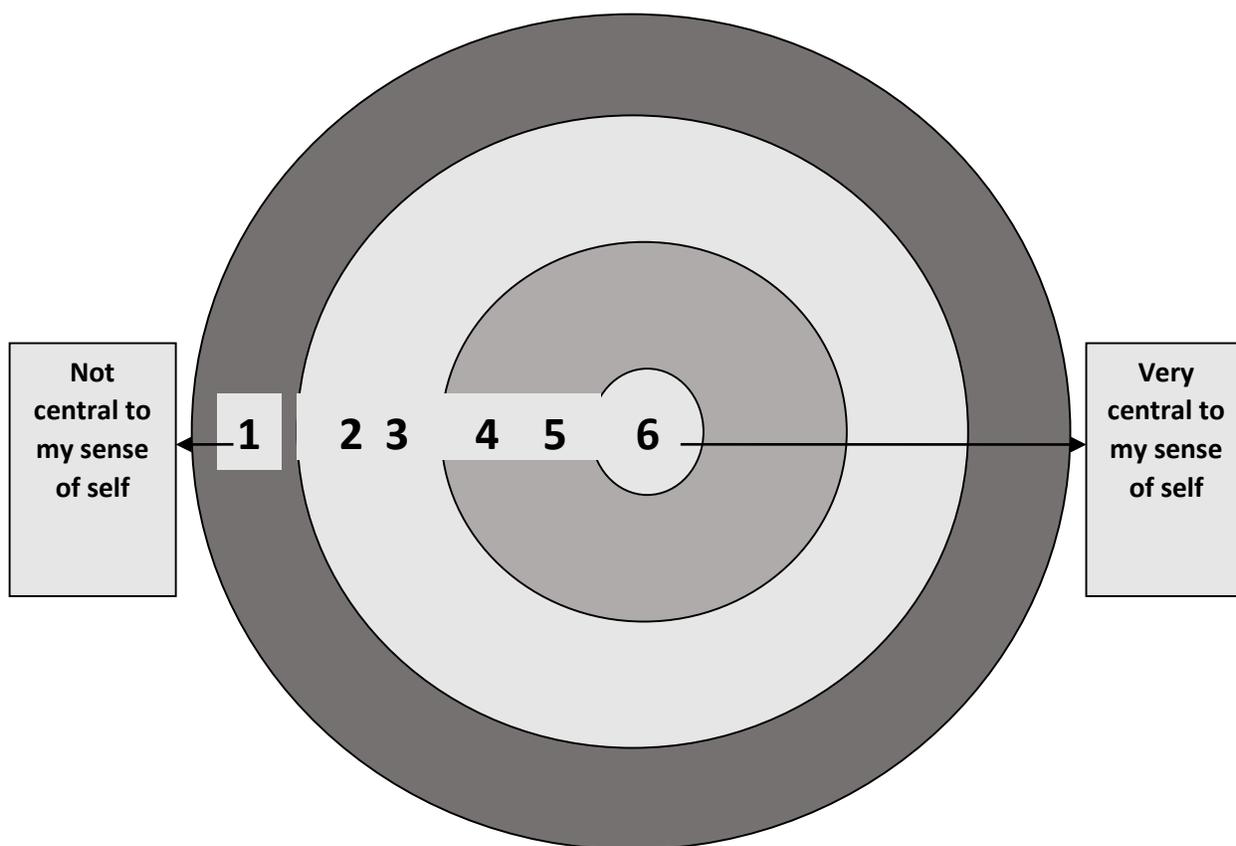
CURRENT MAJOR: _____

Academic and Athletic Identity Scale

Directions: Imagine that the figure below is a diagram of you.

The middle circle (6) is made up of qualities or characteristics that are very central to your sense of who you are as a person. The next circle (5 or 4) is made up of qualities that are quite central to your sense of self, and the outer circle (3 or 2) is made up of qualities that are somewhat important to your sense of self. Qualities that are not part of your sense of identity belong outside the circles (1).

To get a good idea of how you will **compare and rate** the different qualities, please read all of the items before you go back to rate each of them. Please think about this figure as you rate the items below. Most people will use a variety of answers, rating some qualities as very central and others as less central to their sense of self.



Please indicate how central to your sense of who you are is each of the following characteristics or qualities. **If a quality seems good or desirable to you but is not an important part of who you are, you should answer "Not central to my sense of self"**

How central to your sense of who you are is each of the following characteristics or qualities...		Not	Somewhat			Quite central	Very
		central to my sense of self	important to my sense of self (2 or 3)	important to my sense of self (2 or 3)	important to my sense of self (2 or 3)	to my sense of self (4 or 5)	central to my sense of self
1	Being a capable student.	1	2	3	4	5	6
2	Being satisfied with my academic work.	1	2	3	4	5	6
3	Doing well in school.	1	2	3	4	5	6
4	Getting good grades.	1	2	3	4	5	6
5	Having high GPA.	1	2	3	4	5	6
6	Being a capable athlete.	1	2	3	4	5	6
7	Being a good athlete.	1	2	3	4	5	6
8	Being athletic.	1	2	3	4	5	6
9	Being proud to be an athlete.	1	2	3	4	5	6
10	Being satisfied with my athletic achievements.	1	2	3	4	5	6
11	Doing well during sport competitions.	1	2	3	4	5	6

APPENDIX B

Dear Student-Athlete:

You are invited to participate in a research study to better understand the relationship between athlete identity, student identity, and academic success. **Simply by completing this short survey you will have a chance to win a \$100 Amazon gift card.**

The findings from this study may help athletic programs provide better support for student-athletes. If you choose to participate, your involvement will consist of clicking on the link below and completing the online survey which will take approximately 5-10 minutes.

The research team will take the appropriate steps necessary to maximize confidentiality of all participants and your identity will never be revealed. Your participation in this study is completely voluntary. You may refuse to participate or stop answering questions at any time without any consequence. **Upon completing the survey, you will be redirected to another screen where you will be given the option of providing your name and email address to be entered into a drawing for a \$100.00 Amazon gift card.** The information collected for the drawing will be separate from your survey responses so your answers to the survey questions will remain anonymous.

Having read the above, you understand that submitting a completed survey implies your consent to participate in this research.

Questions regarding this study may be directed to Stephen Knott (contact information below). Thank you for your time and feedback.

Please click on the following link to access the survey:

https://odu.co1.qualtrics.com/SE/?SID=SV_6Fkbx5QwZc8zJat

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Professional Experience

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Coordinator of Secondary Health and Physical Education, Virginia Beach City Public Schools.
(2003 - 2006).

Assistant Principal, Fairfield Elementary School. (July 2002 - February 2003).

Assistant Principal, Kempsville Middle School. (July 2000 - June 2002).

Professional Memberships

American Alliance of Health, Physical Education, Health, Recreation, and Dance. (2002 - 2014).

North American Society for the Psychology of Sport and Physical Activity. (2015-present)

Society of Health and Physical Educators. (2014-present)

Virginia Association of Health, Physical Education, Recreation and Dance (2012-present)

Conference Presentations

Knott, S., Ridinger, L., Zhu, X., & Eckhoff, A. (2016, March). Correlation of college student-athlete identity with academic performance. Poster presentation at the College Athletes' Rights & Empowerment Conference, Philadelphia, PA.

Knott, S. (2014, November). Impact of emotional abuse on athletes. Presentation at the Virginia Association of Health, Physical Education, Recreation, and Dance State Convention, Virginia Beach, VA.

Knott, S. (2014, November). Teaching tactical games approach. Presentation at the Virginia Association of Health, Physical Education, Recreation, and Dance State Convention, Virginia Beach, VA.

Knott, S., (2014, June). Development of the VHSL Coaching Efficacy Scale. Poster presentation at the National Coaching Conference, Indianapolis, IN.