

FORMER HIGH SCHOOL STUDENT-ATHLETES' ACADEMIC, SOCIAL, AND  
EMOTIONAL ADJUSTMENT TO COMMUNITY COLLEGE

By

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To anyone who has ever played their final game, ran their last race, put on their jersey  
for the last time, or felt the pain of knowing that it is all over

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The end of high school marks the time when the most number of individuals will end their participation playing sports at a competitive level. For those pursuing higher education, it has been viewed as a stressful experience for many freshmen. Former high school athletes that enter college as “students” and not “student-athletes” potentially face a dual adjustment – having to adjust to the college experience and to no longer being a competitive athlete.

Athletic identity is one of the most influential factors relating to the quality of adjustment out of competitive athletics with elite-level athletes. Those with a strong and exclusive athletic identity take longer to adapt, experience more negative emotions, and require more coping upon ending their career. Although the majority of research has focused on elite-level athletes, there has been little research on the adjustment experiences of former high school athletes to higher education. The purposes of this study were to examine (1) whether former high school athletes differ from non-athletes in their academic, social, and emotional adjustment to the college, (2) the extent to which high school athletic identity and academic skills predict college adjustment, (3) the effect athletic identity has on predicting whether former high school athletes miss

multiple aspects of being student-athletes, and (4) whether first-semester and veteran students differ in their adjustment to college.

A total of 420 community college students participated in this study ( $N = 228$  former high school athletes,  $N = 189$  former high school non-athletes). Former high school athletes were found to have better social and emotional adjustment to college in comparison to non-athletes. Gender differences existed, such that females reported better academic adjustment, and males reported better emotional adjustment. High school athletic identity predicted a significant portion of the variance in students' social and emotional adjustment, and high school academic skills predicted academic adjustment. High school athletic identity also predicted roughly a quarter of the variance in former high school athletes' reports of missing multiple aspects of being a student-athlete. No significant differences in adjustment were found between first-time college students and those who had previously been enrolled.

## CHAPTER 1 REVIEW OF THE LITERATURE

### **Introduction**

More students than ever before are participating on a sports team while in high school (NFHS, 2009). Being a member of a sports team provides a means for many students to be recognized (Goldberg & Chandler, 1995); however, some students may over-invest in their role as an athlete at the expense of other role options (e.g., student; Lavallee & Robinson, 2007). In doing so, they may not develop sufficient academic skills, self-efficacy, and perceptions of competence in areas outside of athletics. The transition from high school to college marks the end of competitive sports participation for the majority of students. Thus, for those athletes that pursue college after high school, some may not be adequately prepared. Typically, the adjustment to college has been viewed as a stressful experience for many first-year students (Gall, Evans, & Bellerose, 2000). This adjustment may be even more difficult for those students that have to adjust not only to the rigors of college, especially if they have not developed the academic skills to be successful students, but also to no longer being an athlete. Various research studies have linked athletic identity to elite level athletes' adjustment difficulties out of competitive athletics (Alfermann, Stambulova, & Zemaityte, 2004). However, few researchers have investigated former high school athletes' identification with certain role domains (e.g., athlete, student) and the impact it has on their adjustment to college.

The following literature review begins by addressing high school athletics. It includes information about participation rates and characteristics of high school students

in sports, the personal importance and popularity of being an athlete, and how the nature of students' involvement in sports can impact other areas of their lives, including academic performance and expectations about their future in competitive athletics. Thus, specific factors related to high school sports participation are discussed in relation to athletes' adjustment to college. Next, Taylor and Ogilvie's (1994, 2001) sport-specific conceptual model of athlete termination is presented along with research findings addressing elite level athletes. Both help to better understand how certain factors related to athletes' participation in sports may impact adjustment once they end participation; therefore, such information can help to identify which former high school athletes may experience the most difficulty during this transitional period.

The final section of the literature review addresses high school students' adjustment to college. First, Arnett's (2000, 2006) theory of emerging adulthood is presented as a means to understanding college students during this period of development. Next, research pertaining to the increased stress and demands many first year college students experience, as well as predictors relating to the quality of college adjustment are presented. Also, the few studies which have investigated the adjustment of former high school athletes to college are included. Thus, it appears that some high school athletes face a dual adjustment upon entering college- having to adjust to college as well as to no longer participating in competitive sports. Also, some of the factors that predict college adjustment may be related to students' previous participation in high school athletics. Finally, guided by the research presented in this proposal, specific research questions are identified.

## **High School Athletics**

### **Participation and Athletic Identity**

During the 2008–2009 school year, a total of 7,536,753 students participated in high school athletics, setting an all-time record for rates of participation (NFHS, 2009). This equates to 55.2% of students participating for an athletic team at their high school. Students have many different motives for participating in athletics, such as: developing their athletic skills, having fun, increasing their fitness level, making friends, being affiliated with a team, or having a means for achievement or enhancing one's social status (Ryckman & Hamel, 1993). Researchers have generally found that adolescent athletes have stronger physical self-perceptions (Schumaker, Small, & Wood, 1986) and athletic competence (Todd & Kent, 2003) compared to non-athletes and to other samples such as children and young adults (Welk, Corbin, & Lewis, 1995). Wiechman (1997) evaluated the relationship of athletic identity to gender, competitive level, and ethnicity in a sample of high school athletes. It was found that males had higher athletic identity scores than females. In regards to competitive level, there was a general trend for athletic identity to increase from freshmen to junior varsity to varsity participation levels. In comparisons across ethnicities, Mexican-American athletes had stronger athletic identities than both Caucasian and African American athletes; and Caucasian athletes were stronger in their athletic identification than African-American athletes.

### **Athlete Popularity**

For many high school students, being recognized as an “athlete” provides them with a ready-made and highly visible social status. It allows them an avenue to form social relationships and to obtain popularity with their peers (Goldberg & Chandler, 1995). Specifically, Chandler and Goldberg (1990) found that the popularity of boys

with girls depended more on their athletic ability than their academic capabilities; although, this did not hold true for girls whose popularity with boys was most contingent on their membership as a leader in a group. In addition, Chandler and Goldberg (1990) assessed the perceived importance of various role-identities of high school students. Males perceived being both an athlete and obtaining high grades (labeled by the authors as the “academic all-American” status) as most important; whereas, females perceived earning high grades as most important. When asked what role-identity makes one’s parents most proud, both males and females indicated high grades as most important. The authors concluded that pursuing the “academic all-American” status allows high schoolers to receive recognition from both their peers and parents for their achievements. It also affords them the opportunity to gain acceptance in the present (e.g., by their peers) while at the same time setting the stage for future success (e.g., being able to attend college by getting good grades).

### **Role Restriction**

Many young athletes are beginning to specialize in one sport in hopes of increasing their chances of reaping the benefits (e.g., obtaining a college scholarship, winning/outperforming others). High school varsity coaches even report that they encourage their players to practice and compete in the sport they coach throughout the off-season (Hill & Hansen, 1988). Thus, some students may over-invest in their role as an athlete and devote an extensive amount of time and energy in pursuit of sport excellence while at the same time detaching themselves from other role options (Lavalley & Robinson, 2007). In interviews with former adolescent gymnasts, Lavalley and Robinson (2007) describe how these young girls’ lives were completely taken over by the sport. Many of them reported that they were encouraged to develop a strong and

exclusive athletic identity such that they were to think of themselves as gymnasts above all else. In doing so, they reported making sacrifices in other areas of their lives that seemed irrelevant at the time (Lavalley & Robinson, 2007). Therefore, students that have this single-minded focus and dedication to sports may not consider, try out, and develop other potential roles (e.g., student) and skills (e.g., academic, social, coping) that will be useful in the future (Goldberg & Chandler, 1995).

### **Nature of Athletic Involvement**

It is important to understand how high school students are involved in sports, not simply if they are involved. Understanding the nature of their involvement in sports will lead to more accurate conclusions regarding differences among athletes in their academic performance, behavior, perceptions of competence in areas outside of athletics, and academic efficacy and strategy use. Although research generally shows that high school athletes tend to do better in school than their non-athletic peers (Crosnoe, 2002; Whitley, 1999), few studies have attempted to disaggregate the academic effects of objective athletic participation from that of subjective athletic identity. Miller and colleagues (2005) sought to overcome this issue by evaluating whether high school athletes that labeled themselves as “jocks” differed in self-reported grade point average (GPA) and school misconduct. It was found that female jocks and black jocks had lower GPAs than non-jock females and blacks respectively. Also, jock identity was positively associated with school misconduct. The results may be attributable to the self-labeling of oneself as “jock,” which has usually taken on a negative connotation associated with poor academic performance (e.g., “dumb jock”). Further, the authors indicated that “our dichotomous measure of subjective athlete status could not capture the intensity, frequency, or type of athletic activity, all of which

might condition the relationship between sports participation and educational outcomes” (p. 190). However, these results demonstrate the importance self-identification may have in relation to educational outcomes.

Using data from the High School and Beyond Survey, Synder and Spreitzer (1992) categorized students into one of four scholar-athlete groups proposed by Synder (1985). Students that had a grade point average above a 3.5 and scored above the 50<sup>th</sup> percentile on a cognitive test were classified as scholars; whereas, students who played on a team sport at the school were classified as athletes. It was found that high school senior scholar-athletes and scholars had higher scores in self-esteem, internal locus of control, extracurricular involvement, and leadership activities than those classified as athletes and nonscholar-nonathletes. Thus, it appears that those students that are able to maintain joint roles (those of a scholar and an athlete) or that are academically superior may have better psychosocial functioning and greater participation in school related activities.

In a study by Ryska (2002), hierarchical multiple regression was used to determine how motivational goal orientation (task/ego) moderated the effects of athletic identity on global competence perceptions of high school athletes. According to Duda and Nicholls (1992), task oriented individuals assess personal competence in terms of self-referenced criteria (e.g., task effort, improvement in skills, and learning), whereas, ego oriented individuals define their competence on the basis of norm-referenced standards (e.g., outperforming others, exerting little effort to obtain superior performance). Ryska (2002) found that athletic identity was a negative predictor of academic, social, and behavioral competence of those athletes with a high ego-low task motivational

orientation; whereas, athletic identity was a positive predictor of academic and vocational competence of those athletes with a high task-low ego orientation.

Subsequently, Ryska (2003) evaluated how multiple sport involvement factors may predict competence perceptions of high school athletes. Gender differences were found, such that males were higher in ego orientation, exclusive athletic identity, and perceptions of social acceptance; and females were higher in autonomy and academic competence. Results also indicated that sport involvement reflecting an ego orientation, exclusive athletic identity, and low autonomy was related to lower academic competence and social acceptance among males, and lower academic competence and behavioral conduct among females; whereas, sport involvement reflecting a task orientation, social athletic identity, and sense of autonomy was related to greater academic competence and behavioral conduct among males, and greater perceptions of social acceptance and physical appearance among females.

Collectively, the results by Ryska (2002, 2003) reveal how both athletic identity and motivational goal orientation may impact student-athletes competence perceptions in areas outside of athletics. Specifically, it appears that those high school athletes adopting primarily an exclusive athletic identity and ego orientation towards sport may be at risk for having lower competence perceptions in areas such as academics. Thus, these athletes may disengage from their role as a student if they perceive themselves to not be competent as such; therefore, lowering their competence in this domain even further while at the same time strengthening the importance they place on their role as an athlete and their ego orientation toward sports.

Recently, Ryska and Vestal (2004) investigated how motivational goal orientation toward sport may impact academic self-efficacy and academic strategy use of high school athletes. Those athletes having a mixed goal orientation (high task and high ego) had higher long-term educational goals and academic self-efficacy; whereas, those athletes with primarily an ego orientation had the lowest level of academic self-efficacy. In regards to specific academic strategies, males with an ego orientation made less use of time management and self-testing strategies; and females with a task orientation made the greatest use of self-testing, while females with a mixed orientation had the greatest use of time management. Thus, it appears that the nature of one's participation in sport (e.g., motivational orientation, athletic identity) may be linked to academic self-efficacy and educational goals (Ryska & Vestal, 2004) as well as academic competence (Ryska, 2002, Ryska 2003). This may result in inadequate preparation for college if certain groups of high school athletes do not believe they possess nor use the academic strategies and skills that will lead to success in college.

### **College Expectations**

Research has shown that a large percentage of high school athletes expect to play sports at the college level. Wiechman (1997) found that 75% of males and 60.3% of females in a sample of 389 high school athletes expected to play at the college level and that these athletes had stronger athletic identities than those without such expectations. However, the NCAA estimates (depending on the sport) that on average less than 5% of high school athletes will compete at the college level (NCAA, 2007). This clearly reveals that many high school athletes have unrealistic expectations regarding their future in competitive athletics which could limit their interest in other activities (e.g., academics). Also, the end of high school marks the time when most

individuals will end their participation playing sports at a competitive level. Using data from the High School and Beyond Survey, Snyder and Spreitzer (1990) found that a greater percentage of male high school student-athletes actually matriculated to college as compared to non-athletes, and this relationship was more evident among students with lower cognitive development (measured as a composite score of standardized tests). Although the researchers did not indicate whether students attended college to play a sport, it is likely that some athletes were admitted to college based on their athletic abilities as opposed to their academic credentials. Thus, this could be a possible explanation for the difference in college attendance among male high school athletes and non-athletes with lower cognitive scores.

### **Athletic Career Termination**

Over the past 30 years, researchers have attempted to develop theoretical conceptualizations to explain athletic career termination. Originally, the end of an athlete's participation in competitive sports was viewed as a singular event. However, such models were criticized and other researchers began to characterize athlete retirement as a transitional process (Taylor & Ogilvie, 2001). The majority of these early researchers applied models outside of sports in an attempt to explain athlete retirement. In the mid 1990's, Taylor and Ogilvie (1994) presented a sport-specific conceptual model that examines the entire course of an athlete's adjustment out of competitive sports.

### **Sport-Specific Conceptual Model**

Taylor and Ogilvie's (1994, 2001) domain specific model examines the entire course of the athletic career adjustment process. This model is based upon previous theoretical and empirical work and includes four stages. The first stage includes the

various causes of career termination, such as: age (resulting in deterioration of the athlete's physical capabilities and decline in performance), de-selection (e.g., being cut from the team, not being recruited), injury (resulting in the inability to perform or a decline in skill level), and free choice (e.g., new direction in life, want to spend time with family, loss of sport enjoyment). The second stage includes factors that may make adapting to retirement more or less difficult, which includes: developmental experiences (e.g., level of development in other life domains outside of sports), self-identity (e.g., strength and exclusivity of the athletic role), perceptions of control over the timing of retirement, social identity (e.g., perception regarding loss of status, questioning self-worth), and tertiary contributors (e.g., SES, gender, minority status, health status, years competing, and competitive level). The third stage indicates that athletes' adaptation to retirement will depend upon the resources they have available, such as: coping skills, the amount and quality of social support, and pre-retirement planning. The presence or absence of contributing factors in the first three stages of the model (causes of career termination, factors related to adaptation to retirement, and available resources) will determine the quality of adaptation; thus, two alternative outcomes are predicted: a healthy career adjustment or a retirement crisis. Athletes who experience a retirement crisis may be more likely to experience a number of problems, including: psychopathology, substance abuse, occupational problems, and family/social problems. Athletes experiencing distress as a result of leaving competitive athletics will likely need some sort of cognitive, emotional, behavioral, or social intervention (Taylor & Ogilvie, 1994, 2001).

## **Findings with Elite Athletes**

Although the vast majority of research investigating adjustment out of competitive sports has been conducted with elite level athletes (e.g., college, professional, national), disengagement from athletics at the high school level may elicit similar findings. Not all athletes will experience difficulty by this adjustment; however, many athletes report that their life has changed following the end of their career and that they have had to adapt (Alfermann, Stambulova, & Zemaityte, 2004). Retired athletes report lower ratings in subjective well-being than active athletes (Stephan, Bilard, Ninot, & Delignieres, 2003a) and that they miss the lifestyle of being an athlete; specifically, no longer taking part in sport related social activities and being with friends (Cecic Erpic, Wylleman, & Zupancic, 2004). Thus, they no longer have a network of social support readily provided to them by their teammates. Also, difficulties some athletes experience with their body (e.g., weight gain, loss of muscle, body pain) after retirement has been linked to decreases in their global self-esteem and physical competencies (e.g., physical self-worth, sport competence, physical attractiveness; Stephen, Torregrosa, & Sanchez, 2007; Stephen, Bilard, Ninot, & Delignieres, 2003b). In general, athletes report a range of personal and social difficulties during this adjustment (Sinclair & Orlick, 1993).

Athletes that retire for involuntary reasons tend to have more social and adjustment problems (Lavallee, Grove, & Gordon, 1997), as well as difficulties organizing their post-sports career life (Cecic Erpic et al., 2004). Involuntary transitions pose difficulty because many athletes do not adequately plan (Blinde & Stratta, 1992); and athletes having a strong internal locus of control and belief system that they are “invincible” may find it difficult to cope if the cause of their retirement is untimely and not within their personal control (Blinde & Stratta, 1992). In a recent study by Lally (2007),

athletes that did not think about their retirement until it happened found it more difficult to make appropriate changes, which may be the case for some high school athletes that are unprepared to enter college as typical “students” and not as “athletes.”

One of the most influential factors relating to the quality of adjustment out of competitive athletics with elite-level athletes is the extent to which one’s self is linked to the athlete role, or athletic identity. For example, athletes with a strong and exclusive athletic identity take longer to adapt to ending their sport participation, experience more negative and less positive emotions, express less satisfaction with their former athletic participation, and require more coping following the end of their career (Alfermann et al., 2004). Also, they report more psychosocial difficulties, problems organizing their post-sport life, and increased difficulty with their transition (Cecic Erpic, et al., 2004). Further, Grove, Lavallee, and Gordon (1997) found that athletic identity at the time of retirement correlated positively with the need for emotional and social adjustment, the amount of time required to adjust, and the level of anxiety associated with career exploration; and negatively with pre-retirement planning. Also, athletes higher in athletic identity were more likely to use emotion-focused coping strategies such as mental disengagement, behavioral disengagement, venting, and denial as compared to athletes lower in athletic identity (Grove, et al., 1997). It appears at the time of transition the athlete’s social status as an “athlete” is in flux. Some may begin to question this highly held part of their identity- “Am I still an athlete?” (Stephan et al., 2003a). Thus, termination may prompt athletes to explore previously neglected, abandoned, and novel identity dimensions (Lally, 2007).

The influence of non-athletic factors may also impact athletes' adjustment out of athletics. Athletes who report negative perceptions in regards to non-athletic events occurring at the same time as their retirement have greater difficulties adjusting (Cecic Erpic et al., 2004); whereas, athletes who express other interests or activities to do during their post-sport career handled their adjustment better and were more satisfied with their life (Sinclair & Orlick, 1993). Also, the athlete's environment following their termination from sport may impact adjustment; for example, athletes who remained at the same university after being cut from the team or following the termination of their athletic team/program experienced a more difficult adjustment (Blinde & Stratta, 1992). Thus, the research with elite level athletes sheds light on the difficulties some athletes may experience when transitioning out of this role. One issue still left to consider is that former high school athletes are generally younger at the time of their adjustment out of competitive sport than elite athletes. Also, many high school students will continue on with their education; therefore, they must adapt to this new experience as well.

### **Arnett's Theory of Emerging Adulthood**

At the completion of high school, students have multiple pathways they can pursue- for most this means higher education. Even within higher education, students have many possible options; for instance, they will decide whether to enroll full-time or part-time, attend a 2-year college or 4-year institution, whether to have a job while taking classes, where to live (e.g., home, dormitory, apartment), what classes to enroll in, and which activities to participate in. Nearly 62% of students transition directly from high school to college (Hamilton & Hamilton, 2006); thus, the majority of students will make this transition around the age of 18 years-old. Arnett (2000, 2006) has distinguished the period between adolescence and young adulthood, roughly late teens

through the mid-twenties, as emerging adulthood. There appears to be considerable demographic diversity and heterogeneity among this group of emerging adults that no longer see themselves as adolescents but not quite yet adults. For instance, adolescents tend to live with their parents, attend high school, are members of their school-based peer culture, and are experiencing the physical changes of puberty; all of which does not remain normative after the age of 18. Thus, the end of high school marks the beginning of emerging adulthood for many individuals.

Arnett (2000, 2006) characterizes the period of emerging adulthood as a time of identity exploration in which individuals are able to try out various possibilities or directions for their lives. They begin to learn more about who they are, their likes and dislikes, and what they want out of life. As a result, emerging adults are able to pursue opportunities that will promote their self-knowledge. This is made possible because emerging adults are not constrained by role requirements and normative expectations. Thus, they have relative independence from their parents, social obligations and expectations, and enduring commitments typical of adulthood (e.g., long-term job, marriage, parenthood). Emerging adults also appear to be semi-autonomous- they take on some responsibilities of independent living but also leave others to their parents, college personnel, and other adults. Also, since they are in a period of exploration, there is considerable instability and frequent directional changes (e.g., in regards to education, work, love, and worldviews). For many, emerging adulthood represents a time period in which individuals have high optimism and hope for the future, as well as an opportunity to transform their lives into their own creation; although, emerging adults spend more time in productive activities (e.g., school and work) and more free-time

alone (except for the elderly) in comparison to all others age groups under 40 years-old. Lastly, emerging adults do not list specific transitional/milestone events (e.g., turning 18-years-old, finishing education, obtaining a career, marriage, parenthood) as being the top criteria signaling the transition to adulthood; rather, they include: accepting responsibility for one's self, making independent decisions, and becoming financially independent. Therefore, individuals will reach adulthood at different times in their own lives.

Since the transition from high school to college also signals the beginning of emerging adulthood for many students, it seems important to investigate how students adjust to the new changes in their lives. Arnett (2006) makes the claim that "In our research we should not only look for general patterns but also investigate different patterns among subgroups of emerging adults" (p. 16). One subgroup worth exploring further is college students that formerly played sports while in high school.

### **College Adjustment**

Although the adjustment from high school to higher education has been viewed as a stressful experience for many college freshmen, it may be even more difficult for former high school student-athletes. For instance, former student-athletes that have not adequately prepared or planned for life as a college student in which academic studies will become the new focus will likely have a more difficult adjustment. In addition, those that have not developed the academic skills or confidence in their academic capabilities prior to entering college are at greater risk for experiencing adjustment problems (Chemers, Hu, & Garcia, 2001; Martin, Swart-Kulstad, & Madson, 1999). Also, some students face the challenge of not only adjusting to the increased demands of college but also to no longer being an athlete for their school. As a result, some athletes may

no longer have an incentive to do well academically (e.g., so that he or she can participate in athletics); a means for personal accomplishment, recognition, and enjoyment; an avenue to participate in structured physical activity (e.g., practice, games, competitions); readily available peer support (from teammates) and guidance (from coaches); and a sense of belongingness to the school one might have felt in high school when representing his or her school in athletic competition. All of these changes have the potential to impact the quality of students' adjustment to college.

In the sections that follow, the literature pertaining to college adjustment will be covered. First, an overview of the increased stress and challenges faced by freshmen students is presented. Next, predictors of the quality of adjustment are discussed, including: college expectations and goals, academic capabilities, peer support, physical activity levels, and school belongingness and involvement. Lastly, the few studies investigating former high school athletes' adjustment to college are presented.

### **Increased Stress**

Research indicates that initial entry into the university poses the greatest strain on student's well-being as compared to later times during the first year (Gall, Evans, & Bellerose, 2000). Specifically, students report experiencing a greater number of negative events, less support, and lower levels of physical and mental well-being at the start of their freshmen year (Gall et al., 2000). Also, by the end of the first year, students report more health problems and an increase in negative mood as compared to the time prior to entering the university (Pritchard, Wilson, & Yamnitz, 2007). To measure student development during their first year in college, the Higher Education Research Institute (HERI) along with the Policy Center on the First Year of College at Brevard College developed a national survey, referred to as Your First College Year

(YFCY). It was administered for the sixth time in the spring of 2007 to nearly 31,500 first-time college students across 114 institutions. Results indicate that compared to before they entered college, first-year students report feeling more overwhelmed and depressed, and worry more about finances (Liu, Sharkness, & Pryor, 2008). It has also been found that first year students experience heightened levels of stress, anxiety, and depression as compared to students who have been at the university longer (Bayram & Bilgel, 2008). Also, changes in levels of stress across the first-year have been shown to predict adjustment and symptoms of depression (Friedlander, et al., 2007). Thus, the first year in college can be a stressful time for many students as they must adapt to many new changes (Dyson & Renk, 2006). Those students who participated in sports during high school may find it even more stressful since they also have to adjust to no longer being an athlete in the school setting.

### **Freshmen Challenges**

Students encounter a host of potential changes, challenges, and difficulties during their first year in college. Results from the YFCY study indicate that freshmen students report spending more time studying, partying, and socializing with friends, and less time volunteering and exercising; while more frequently drinking alcoholic beverages in comparison to before college entrance (Liu et al., 2008). Also, the majority of students indicated that their social life had interfered with their schoolwork, and that they had at least occasionally turned in assignments that did not reflect their best work, skipped or came late to class, and even fell asleep in class (Liu et al., 2008). Thus, it appears that not all students are able to adequately balance their academic demands with their personal life and extracurricular activities (Clark, 2005). Over half of students report having difficulty managing their time effectively (Liu et al., 2008); this is consistent with

Thombs (1995) who found 54% of freshmen in his sample of 576 students at a public college had time management problems. Also, Liu et al. (2008) found that nearly two-fifths of students had difficulty developing effective study skills, as well as adjusting to the increased academic demands of college. Likewise, Thombs (1995) found that 57% of students in his sample had poor study habits; and in a qualitative study by Clark (2005) involving interviews with freshmen students, a common challenge among students was managing the demands of studying (e.g., location, schedule, methods). Thus, the common academic challenges first-year students encounter may be heightened for those former student-athletes that are deficient in their academic skills prior to entering college. Therefore, they may not be adequately prepared for the increase in academic demands as well as the personal responsibility to manage academic studies on their own.

Other challenges freshmen students report include: having to adjust to more rigorous academic expectations from their professors (as compared to their high school teachers), learning course material on their own (e.g., rather than directly being taught it in class), dealing with a more flexible class schedule, and navigating and commuting around campus (Clark, 2005). Also, some students in Clark's study (2005) indicated that a personal weakness or skill deficiency became more salient during this first year. For example, some students reported trouble with interpersonal skills and academic knowledge that they had not experienced prior to college. Thus, some former high school student-athletes may have difficulty with academics once the structured support from high school is no longer present, as well as trouble making friends if they have not

had to frequently associate with others outside of their peer group (e.g., athletic teammates).

## **Predictors of Adjustment**

### **College expectations**

Some college freshmen appear to have unrealistically high expectations about college. Gerdes & Mallinckrodt (1994) administered a pre-college scale assessing expectations about adjustment to college and a follow-up scale assessing actual adjustment using the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1999) seven weeks into the first year. The SACQ measures four areas of adjustment, including: academic adjustment (attitude towards academics, effort in meeting course requirements, and satisfaction with one's academic performance), social adjustment (participation in social activities and interactions with others), emotional adjustment (psychological and physical well-being), and attachment to the school (satisfaction with the college environment). It was found that first year college students anticipated making an easier adjustment to college than they actually did. Also, results from the YFCY survey indicate that freshmen students' actual experiences during the first year fell short of the expectations they had at the beginning of the school year (Liu et al., 2008). Specifically, students report overall less satisfaction with college, less regular communication with professors, earning lower grades, and less active and frequent participation in student government, clubs, and groups than they had anticipated to at the start of college (Liu et al., 2008).

Researchers have also found that the type and quality of students' expectations about college can impact actual adjustment. Jackson, Pancer, Pratt, and Hunsberger (2000) found that positive social and academic expectancies predicted a more positive

adjustment as measured by the SACQ (Baker & Siryk, 1999). Students with fearful expectations (apprehensive about college) experienced poorer adjustment, more stress, and more depressive symptoms than students with prepared expectations (those who looked forward to college and had planned for how they would cope with the transition). Similarly, Pancer, Hunsberger, Pratt, and Alisat (2000) found that the interaction between stress at the beginning of the first year and the complexity of students' expectations about university life predicted actual adjustment 6 months later as measured by the SACQ (Baker & Siryk, 1999). Specifically, students experiencing low stress levels showed a relatively good adjustment; whereas, students experiencing high stress levels showed a relatively poor adjustment if their expectations were simple, but a better adjustment if their expectations were more complex. The complexity of students' expectations about the university and students' stress levels were also shown to be linked to the amount of discussion they had about university life with their parents and peers, as well as the amount of information they perceived they had obtained about university life (e.g., information about classes, professors, social life; Pancer et al., 2000). Thus, former high school student-athletes that were not looking forward to college (e.g., since athletic participation is done and academics becomes the new focus) may have a more difficult adjustment to college. Also, the former athlete that is not prepared to attend college, did not anticipate attending college (e.g., anticipated attending as a student-athlete), or has not thought about nor discussed with others what college may be like, will be more likely to have difficulty with adjustment.

Also, students who are motivated to attend college based on personal interest, intellectual development, and desire to obtain a specific career report better overall

adjustment as measured by the SACQ (Dennis, Phinney, & Chuateco, 2005).

Freshmen students that have specific job-related goals make more persistent decisions to stay at the university as compared to freshmen with unknown career goals (Hull-Blanks, Kurpius, Befort, Sollenberger, Nicpon, & Huser, 2005). Given the extra time demands of participating in high school sports, some former athletes may not have had the opportunity to explore areas of interest nor have they made an effort to do so (if they were focused solely on athletics). As a result, this lack of direction prior to attending college may result in less positive adjustment if the student does not begin to develop such interests upon attending college.

### **Academic capabilities**

Several researchers have investigated the impact students' beliefs in their academic capabilities have on adjustment to college during the first year. Chemers, Hu, and Garcia (2001) conducted a longitudinal study examining the impact academic self-efficacy has on students' academic performance, stress, health, and adjustment. To measure academic self-efficacy the researchers developed an eight-item scale to evaluate students' confidence in their ability to perform well academically. Specifically, items reflected academic skills such as: scheduling tasks, note taking, test taking, research/writing papers, and general statements about one's perceived academic ability. Using structural equation modeling (SEM), the researchers found that students high in academic self-efficacy at the beginning of the winter quarter had higher challenge-threat evaluations (perceived that they could adequately cope with the level of academic pressures/demands place upon them), higher expectations regarding their future academic performance, and higher academic performance at the end of the spring quarter. Also, academic self-efficacy, indirectly through challenge-threat

evaluations (moderating variable), was related inversely to stress and physical and mental health symptoms, and positively to a composite score of adjustment (measuring both satisfaction with one's academic progress and an intention to persist at the university). Lastly, students with higher reported high school grade-point averages (GPAs) were more academically efficacious and had better academic performance. The researchers concluded that "the psychological orientations students bring to the transition to university life are critical to their success in the new setting" (p. 62). Thus, former high school athletes who do not develop confidence in their academic abilities before entering college may perceive that they are unable to cope with the academic demands of college which subsequently may have an impact on their performance and adjustment.

To investigate the impact academic, personal, and campus variables have on adjustment to college of first semester students, Martin, Swart-Kulstad, and Madson (1999) conducted studies at two separate universities differing in size and geographic location. The researchers developed an 18-item demographic questionnaire to measure the predictor variables. To measure college adjustment, they used the full-scale score of the SACQ (Baker & Siryk, 1999). In the first study (mid-size university in the southwestern United States), using stepwise multiple regression, they found that academic self-confidence accounted for 26 percent of the total variance in adjustment. In step two, positive attitude toward the university was added which increased the total variance to 58 percent; and in step three, faculty support increased total variance to 64 percent. In the second study (smaller-size university in the mid-western United States) the following variables were entered in consecutive steps into the regression equation:

positive attitude toward the university, personal difficulties, academic self-confidence, and support from friends. Collectively, these variables accounted for 45 percent of the total variance in adjustment to college. Further, the researchers reported students' open-ended comments about their academic self confidence. Specifically, academic self confidence was found to be related to personal effort (e.g., not studying, not working to one's full potential), personal problems in other areas of one's life that interfere with academic success, external pressures (e.g., balancing academics with employment and family), and having a positive attitude towards one's instructors and classes. Thus, academic confidence may be impacted by multiple personal and situational variables at school, and having a belief in one's academic capabilities will predict a better overall adjustment to college.

Friedlander and colleagues (2007) examined the effects of changes in one's scholastic competence from the fall to spring semesters and resulting changes in adjustment to college in a sample of freshmen students. To measure academic competence, students completed items measuring scholastic competence from the Self Perception Profile for College Students (Neemann & Harter, 1986). For instance, students had to rate items on a four-point likert scale as to which of two types of students, anchored at opposite ends, they were most like (e.g., some students feel confident they are mastering their coursework, others do not). It was found that changes in academic competence predicted changes in academic adjustment as measured by the SACQ (Baker & Siryk, 1999); thus, students reporting increases in their academic capabilities from the end of the fall to the beginning of the spring semester also reported increases in academic adjustment. Therefore, self perceptions

regarding one's academic capabilities and adjustment to academic demands seems to be related.

Collectively, these studies highlight the importance of former high school student-athletes feeling competent in their academic capabilities. It appears that the more confident and efficacious students are in their academic abilities prior to entering college will no doubt have an impact on academic adjustment and academic performance. However, some students might not have developed these beliefs while in high school if they viewed the development of athletic talents as being more important than that of academic skills. This is especially important considering that academics will be the primary focus while in college, and that many students do not continue college after the first year. Specifically, Hamilton and Hamilton (2006) indicate that approximately half of students at community colleges and a quarter of students at four-year institutions do not continue their education after the first year. Therefore, it may be hypothesized that a lack of academic skills, past academic failures, and a negative belief in one's abilities may be partly to blame.

### **Peer support**

Peer support has also been shown to be an important factor in predicting college student adjustment. Some students likely experience relational challenges as they move away from their established network of friends and form new friendships. This has been referred to as "friendsickness" by Paul and Brier (2001), and it has been linked to increased concerns about losing old friends and making new friends, as well as to feelings of loneliness in college freshmen. Friedlander et al. (2007) found that increases in social support from friends was a better predictor of college adjustment than increases in social support from family, and that increases in social self-esteem

predicted increases in social adjustment as measured by the SACQ (Baker & Siryk, 1999). Dennis et al. (2005) also found that lack of support from peers predicted a more difficult adjustment as measured by the SACQ (Baker & Siryk, 1999) as well as lower overall grade-point-average (GPA) for ethnic minority first-generation college students. Another potential barrier is that athletes appear to have less positive attitudes toward seeking help from others for problems they may encounter (Watson, 2005). Therefore, a lack of support, inadequate interpersonal skills, and negative attitudes about seeking out support from others may contribute to adjustment difficulties of former high school athletes.

Additionally, the use of specific coping mechanisms has been related to the quality of adjustment. For instance, problem-focused coping strategies (e.g., problem solving, cognitive reinterpretation) as opposed to emotion-focused strategies (e.g., emotional expression, support seeking) has been shown to predict better health outcomes in freshmen students (Sasaki & Yamasaki, 2007). This can be linked to findings by Grove et al. (1997) that found elite athletes higher in athletic identity were more likely to use emotion-focused coping strategies when retiring in comparison to those lower in athletic identity. Thus, former high school student-athletes that identify most strongly with the athlete role may be more likely to use coping strategies that hinder their adjustment to college.

### **Physical activity levels**

During the transition from high school to college there appears to be a decline in students' physical activity levels (Bray & Born, 2004; Bray & Kwan 2006). This decline may be linked to the lack of structure around physical activity and sports in college students' lives. For example, in high school students may have participated in a high

school sport (which included regularly scheduled practices and competitions) or mandatory physical education as part of their high school curriculum. Upon entering college, this structure disappears and students become responsible for maintaining their own regular physical activity routine. Also, given the nature of some sports (e.g., requiring multiple members of a team to play, or an opponent to compete against), students may not have the means available to them that would prompt their participation in college. Additionally, some students may lack the motivation to be physically active (e.g., don't have a workout buddy). Research shows that students who are continuously physically active from high school to college experience a more positive mood (higher vigor, lower tension and fatigue) than those who are either continuously inactive or become inactive upon attending college (Bray & Born 2004); and inactive students are twice as likely to visit a doctor for illness-related concerns (Bray & Kwan, 2006). Thus, it appears that changes in regular physical activity, which may be the result of no longer being a student-athlete in the school setting, has an impact on one's well-being in college.

### **School belongingness and involvement**

Having a positive attitude toward the university one attends has been shown to predict better adjustment to college (Martin et al., 1999). Also, school belongingness, which refers to a sense of connectedness, commitment, and perceived school membership in which one's abilities are recognized by others has been linked to freshmen adjustment. Specifically, Pittman and Richmond (2007) found that a sense of belongingness to both the university one attends and retrospectively to his or her former high school were significant predictors of academic performance, social competence, and feelings of self-worth during students' second semester in college. This finding is

especially important considering that former high school student-athletes may feel a decrease in school belongingness once they begin college and no longer compete in athletics on behalf of the school. In addition, the anonymity that some of the students may face as a result of no longer being known by his or her peers as an athlete may pose difficulties in adjustment as well.

Participation in organized extracurricular activities facilitates a more successful transition for some students (Bohnert, Aikins, & Edidin, 2007) and the development of collective self-esteem regarding the social group to which one belongs has been shown to predict better social and academic adjustment as measured by the SACQ (Bettencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999). These results highlight the importance of participating in an extracurricular activity that one enjoys and is able to derive a sense of well-being from, which could possibly be an intramural sports league at the school. Also, it has been shown that first-semester college students who live on campus as opposed to off-campus apartments have a greater sense of belonging to the university (Thompson, Orr, Thompson, & Grover, 2007). Although, living on campus is a possibility for the majority of students (and a school requirement for some) attending four year institutions, most two year colleges do not have such living arrangements. Thus, these students must make an active effort to get involved in activities at the school and to meet other students, otherwise their sense of school belonging might suffer.

### **Former High School Athletes' Adjustment to College**

There has been little research on former high school athletes' adjustment to higher education. Recently, Lubker and Etzel (2007) investigated the possible differences in athletic identity and adjustment to college of first-year students at a large state

university in the fall semester (weeks 9-10) comprising the following three groups: disengaged high school athletes, high school non-athletes, and first-year college athletes. As measured by the Athletic Identity Measurement Scale (AIMS; Brewer & Cornelius, 2001), males were found to have higher athletic identity scores compared to females, and disengaged high school athletes had lower scores than college athletes and higher scores than high school non-athletes. They also found no differences in adjustment between the three groups on the SACQ.

They also divided the disengaged high school athletes into three groups (high, moderate, low) based on their score on the AIMS (using +/- .5 standard deviations as a cut-off point). Using a 3 (athletic identity) X 2 (gender) MANOVA, they found that the moderate athletic identity group had lower adjustment on the academic subscale of the SACQ than both the low and high athletic identity groups. Also, female disengaged high school athletes reported better attachment to the university than male disengaged high school athletes.

A hierarchical regression analysis was also conducted to examine whether certain athletic experience variables predicted college adjustment in the disengaged athlete group. It was found that control over disengagement (as measured by the statement: "I chose to retire from my high school varsity sport") predicted all four adjustment subscales of the SACQ (academic, social, emotional, and attachment to the university); and level of perceived social support from family and friends (as measured by a single item of a 7-point likert scale) predicted social adjustment and attachment to the university. The following variables did not contribute to the prediction models: intramural sports participation, recreation center use, expectation to play sports in

college, being recruited to play sports in college, and being offered a scholarship to play sports in college. Further, the researchers split the disengaged high school athletes into two groups based on their control over disengagement (chose to disengage or forced to disengage). A 2 (control over disengagement) X 2 (gender) MANOVA revealed that females who chose to disengage reported the highest levels of adjustment on all four subscales of the SACQ. Also, disengaged athletes were split into two groups (high and moderate) based on their level of perceived social support. Again, using a 2 (level of social support) X 2 (gender) MANOVA, the researchers found that females with high social support had better social adjustment and attachment to the university.

Melendez (2007) has also investigated the adjustment of students to college using the SACQ (Baker & Siryk, 1999). Although the research design did not distinguish between former high school athletes and non-athletes, it was found that freshmen and sophomore collegiate athletes had better academic adjustment and attachment to the university than their non-athlete peers. Also, Wilson and Pritchard (2005) found that freshman collegiate non-athletes reported more stress than collegiate athletes in regards to making educational decisions, social isolation, being ignored, and being dissatisfied with their physical appearance. Like Melendez (2007), these researchers did make a distinction as to which students participated in high school athletics.

### **Summary**

Former high school athletes that enter college as “students” and not “student-athletes” face potentially a dual adjustment – having to adjust not only to the college experience but also to no longer being a competitive athlete. The difficulties with this dual adjustment may be heightened by their over emphasis on their identity as an athlete in high school while at the expense of other roles which now will become more

salient to them (e.g., student). Thus, college may mean anonymity for many former high school athletes, as well as the separation from social support (e.g., teammates) and peer recognition (Goldberg & Chandler, 1995). Also, athletes may no longer have the structure (e.g., regular practices/games, coaches) or motivation (e.g., to play at a competitive level) that once prompted their participation in athletics; therefore, they must rely on themselves for the first time in order to maintain their physical activity level.

Although Lubker and Etzel's (2007) study is noteworthy because it was the first to investigate the adjustment of former high school athletes to college, the authors chose to primarily explore college adjustment by measuring college students' former identification with the athlete role and not that of the student role as well. Although athletic identity has been linked to adjustment out of competitive athletics, it has not necessarily been linked to adjustment into new areas of an athlete's life. For instance, athletes that report negative perceptions with regard to non-athletic transitions occurring at the same time as their retirement have greater difficulties with their transition (Cecic, Erpic et al., 2004); whereas, athletes who express other interests or activities to do during their post-sport career handle their transition better and are more satisfied with their life (Sinclair & Orlick, 1993). This highlights the importance of obtaining information about the former athlete's academic skills and capabilities, especially since these will take precedence over the athlete role once he or she begins college. Also, the sample used by Lubker and Etzel (2007) was obtained from a large state university; thus, it may be hypothesized that the disengaged athletes in their sample had at least moderately identified with their role as a student in high school in order to obtain the necessary criteria to be admitted into the university. Therefore, other samples may

need to be considered that potentially identify less with the student role in high school (e.g., community college students). Also, the vast majority of participants (87%) in Lubker and Etzel's (2007) sample were Caucasian; however, research by Wiechman (1997) has shown that high school athletes of different ethnicities differ in their identification with the athlete role. Thus, it will be important to obtain a more diverse sample of college freshmen before making conclusions about the college adjustment experiences of all former high school athletes.

Additional research is needed to better explain the adjustment of former high school athletes into higher education. To date, only one study has investigated athletic identity and the transitional experiences of this population (Lubker & Etzel, 2007). While in high school some students may over-invest in their role as an athlete at the expense of not identifying or identifying minimally with their role as a student. Once these students begin college they may face additional difficulties since their role as a student will probably become more salient than their role as an athlete. Thus, more research is needed to determine how identification with certain role domains in high school impact students' adjustment to college. Therefore, the main purposes of this proposed research study are as follows:

1. To investigate whether former high school athletes differ from former high school non-athletes in their adjustment to community college
2. To investigate the effects high school athletic identity and academic skills have on adjustment to community college of former high school athlete

## CHAPTER 2 METHODS AND PROCEDURES

### **Participants and Settings**

Participants were college students recruited from the student body at Santa Fe College (SFC) in Gainesville, FL. SFC is accredited by the Commission on Colleges of the Southern Association of College and Schools to award Associate and Bachelor degrees (SFC, 2008). SFC has a total enrollment of 16,777 students, which includes students enrolled at the main campus in northwest Gainesville as well as four satellite centers in surrounding cities and via online classes (SFC, 2008). Other demographic characteristics reported by SFC (2008) of its' students include: gender- male: 48.2%, female: 51.8%; age- under 20 years-old: 37.1%, 20-24 years-old: 34.4%, 25 years-old and above: 28.5%; ethnicity- white: 67.8%, African American: 14.6%, Hispanic: 10%, Asian/Pacific Islander: 3%, American Indian: .5%, Non-Resident alien: 2%, other: 2.2%; student hours- part-time: 51.9%, full-time: 48.1%.

The original sample included 441 participants. However, seventeen participants were excluded from the final data analyses because they did not meet the age or high school graduation requirements to participate in this study (were not at least 18 years old and had not yet graduated high school). Also, three participants were excluded due to questionable response patterns and one additional participant did not adequately complete the questionnaire packet. Thus, a total of 21 participants were deleted from the original sample yielding a final sample size of 420 participants.

Demographic information of the final sample is presented in Table 2-1. In regards to gender, the sample was predominantly female (57.9%). The ethnicity breakdown was similar to that reported by the college: 68.1% white; 14.3% Hispanic,

Latino, or Spanish origin, 11.0% African American, 2.9% Asian, and 3.8% other. Participants ranged in age from 18 to 55 years-old, with a mean age of 20.98 ( $SD=5.44$ ). However, the majority of participants (59%) were under 20 years-old, whereas, 30% were 20-25 years-old and 11% were older than 25 years-old. Nearly half (46.4%) of the sample had graduated high school in 2009, with an additional 29.7% graduating within the past two years and 23.9% graduating prior to 2007. Also, 49.5% of participants reported that this was their first semester of college since graduating high school. The majority of the sample (78.5%) was enrolled full-time (enrolled in at least 12 credit hours), and the mean number of credit hours students reported currently being enrolled in was 12.11 ( $SD=2.98$ ). Nearly one-third (31.5%) indicated that they had not earned any college credits previously, and a quarter (25.2%) of participants had dual enrolled in at least one college course during high school. The average high school grade point average reported by participants was 3.38 ( $SD=0.50$ )

Half (51.2%) of participants reported that they currently had a job. In regards to the participants' parents' levels of education the vast majority reported their parents had graduated high school and had completed at least some college, with mothers receiving a slightly higher level of education their fathers. Concerning participants' living arrangements, 41.4% reported living with a friend(s), 37.6% with parents or family members, 11.2% by themselves, and 9.8% with others that were not necessarily considered a friend. The majority of participants (87.8%) indicated that they did not currently participate in an intramural or recreational sports' league.

In regards to participation in high school athletics, over half (54.7%) of the sample reported playing a high school sponsored sport. A complete list of sports

reported being played is presented in Table 2-2. The sports included in the list are categorized according to those the National Federation of State High School Associations (NFHS) uses to report participation rates of various high school sports annually in the United States. A total of thirty different sports were reported by participants in this sample. Table 2-3 includes characteristics of those participants in the sample who played a high school sponsored sport during high school. Former high school athletes were fairly similar to the overall sample on major demographic variables (gender, ethnicity, age, graduation year); although, former high school athletes were more evenly balanced among gender and slightly younger in age. The majority (58.5%) played a sport all four years of high school, whereas, 19.2% played three years, 15.7% played two years, and 6.6% played one year. The total number of different sports participants reported playing during high school were as follows: one (35.4%), two (38.0%), three (20.5%), four (5.2%), and five (0.9%). Almost half (45.0%) of the sample participated or competed in a sport outside of the one they participated in during high school (e.g., club team, recreational league, Olympic Development Program, Amateur Athletic Union). Only 3.9% ( $n=9$ ) of those reporting to have played a sport during high school were currently a member of a sport team representing SFC.

### **Procedures**

The research protocol for this study was approved by both UF and SFC's Institutional Review Boards (IRB). Administration of questionnaires occurred during week 9 through week 13 of the fall 2009 semester (October 18 – November 21). Participants were recruited through individual instructors and classes at SFC. The PI made contact with seven different psychology instructors at SFC that taught multiple

sections of general psychology (PSY 2012) at the main northwest campus who were willing to allow questionnaires to be administered to their students during class time. Upon individual arrangement with each instructor, the PI attended class at the agreed upon day and time to administer the questionnaires. The questionnaires were administered in seventeen separate sections of general psychology, each having approximately twenty-five students present in the class. The professor introduced the PI and then left the room in order to create a setting that was non-coercive. The participants were informed by the PI about the nature of the questionnaires and told that they may withdrawal at anytime without any penalty to them. Students who chose not to participate and students who were not at least 18 years old were asked to wait outside the classroom until surveys were completed. Participants were then given the informed consent. After participants completed the questionnaires they returned them to the PI who put them face down into a larger envelope. Participants were provided with the contact information of the PI (if they have future concerns), the PI's advisor, UF's IRB, and the counseling center at the college. The questionnaire packets took students approximately 10-20 minutes to complete.

### **Measures**

Participants completed questionnaires to assess their level of identification as an athlete and academic skills while in high school, as well as their adaptation to college. Also, participants were asked to provide basic demographic information, and respond to more focused questions pertaining to their high school athletic participation, academic performance, and the extent to which they missed multiple aspects of being a student-athlete.

## **Athletic Identity**

Athletic identity in high school was evaluated using the abbreviated 7-item Athletic Identity Measurement Scale (AIMS; Brewer & Cornelius, 2001). A confirmatory factor analysis conducted on the original 10-item AIMS (Brewer, Van Raalte, & Petitpas, 1993) elicited a 7-item measure with three first order factors (social identity, exclusivity, and negative affectivity) and one higher order athletic identity factor (Brewer & Cornelius, 2001). Participants rated each item retrospectively regarding their sport participation during high school. Items were presented on a 7-point Likert scale that ranges from 1 (*strongly disagree*) to 7 (*strongly agree*), with a higher overall score indicating a stronger identification with the athlete role. Brewer and Cornelius (2001) report that this version of the AIMS is internally consistent ( $\alpha = .81$ ) and has adequate test-retest reliability ( $\alpha = .89$ ). Brewer et al. (1993) also indicate that the AIMS has sound convergent validity with constructs conceptually related to athletic identity (e.g., level of sport involvement, perceived importance of sport competence), and divergent validity with constructs conceptually dissimilar to athletic identity. Also, Brewer and Cornelius (2001) established a set of norms for the 7-item AIMS for both male and female athletes and non-athletes including a sample of 2,856 participants that have previously been administered the AIMS. Further, the AIMS has been used in previous studies to identify retired athletes at risk for adjustment difficulties (Grove et al., 1997; Alfermann et al., 2004; Cecic Erpic et al., 2004) and with college student populations (Lubker & Etzel, 2007; Murphy et al., 1996; Brewer et al., 1993; Brewer, 1993). For this study, the Cronbach alpha obtained was .94, indicating adequate internal consistency.

## **Academic Skills**

A seven-item instrument was developed for the present study to retrospectively measure students' perceptions regarding their academic skills in high school. It is modeled after an academic self-efficacy scale designed by Chemers et al. (2001), and it is designed to reflect a variety of specific skills necessary for academic achievement, including: organization, note taking, paying attention in class, completing assignments, studying, testing taking, and a statement regarding general academic capability. Items are presented on a 7-point likert scale that ranges from 1 (*poor*) to 7 (*excellent*), and items are summed together to obtain an overall academic skills score. Since the intent is to predict overall college adjustment in core domains (e.g., academics), the measure does not focus on highly specific subjects/content areas (e.g., math, science). This measure was found to have adequate internal consistency for the current study ( $\alpha=.87$ ).

## **College Adjustment**

Adjustment to college was measured using the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1999). The SACQ is a 67-item, self-report questionnaire that measures college students' adjustment to college. The SACQ measures four facets of college adjustment: academic (24 items), social (20 items), personal-emotional (15 items), and goal commitment/institutional attachment (15 items). For the current study, the wording of three items was changed because the items may not apply to all students in the sample (e.g., "I expect to stay at this college for a bachelor's degree" was changed to "I expect to stay at this college through the completion of my degree/certificate;" "I enjoy living in a college dormitory" was changed to "I enjoy my current living arrangement;" and "I am getting along very well with my

roommates at college” was changed to “I am getting along very well with other students at college”). All items of the SACQ are presented on a 9-point Likert scale that ranges from *applies very closely to me* to *doesn't apply to me at all*. For each of the four subscales, a higher score indicates better adjustment to college life in that specific domain. Baker and Siryk (1999) report adequate ranges of internal consistency by previous studies using the SACQ. Specifically, the internal consistency coefficient' ranges for each of the subscales are: academic adjustment (.81-.90), social adjustment (.83-.91), personal-emotional adjustment (.77-.86), institutional attachment (.85-.91), and full scale (.92-.95). The Cronbach alphas obtained for the current study are consistent with those previously reported above: academic adjustment (.88), social adjustment (.87), personal-emotional adjustment (.82), institutional attachment (.81), and full scale (.93). With the exception of the institutional attachment subscale, the other three subscales and full scale fall within previously reported ranges. Baker and Siryk (1999) report results from intercorrelations among and between the subscales and full-scale score that support the conceptualization of a common construct having different facets (as represented by the four subscales). Further, Baker & Siryk (1999) provide evidence of criterion validity for the SACQ. For example, significant correlations have been found between the academic adjustment subscale and freshmen GPA, academic standing, and election to an academic honor society; between the social adjustment subscale and participation in social activities, amount of extracurricular activity, and number of visits made home; between the personal-adjustment subscale and visits to the campus counseling center; and between the institutional attachment subscale and attrition rate after the first year (Baker & Siryk, 1999). In addition, Baker

and Siryk (1999) provide evidence for convergent and divergent validity by providing research results of correlations between subscales of the SACQ and measures of personality (e.g., self-efficacy), mental health (e.g., psychological distress, anxiety, self-concept), and environment-related experiences (e.g., social support). Pearson correlations among the various subscales of the SACQ and other scales used in this study are reported in Table 2-4.

### **Questionnaire**

Participants completed a questionnaire developed by the principal investigator (PI). The first section of the questionnaire asked participants to provide basic demographic information including: age, gender, ethnicity, year in college, number of credit hours enrolled, living arrangement, and parents' educational level. The second section obtained information about participants' perceptions regarding their academic performance and skills while in high school as well as the importance they placed on their role as a student. The third and fourth sections were completed only by those students that participated in high school athletics. Specifically, the third section asked about the sports they played, the intensity of their involvement, and the importance they placed on being an athlete. The final section obtained information regarding how participants adjusted from participating in high school athletics to no longer competing in athletics at the college level. In particular, they were asked to indicate whether they missed multiple aspects of being a student-athlete. Items were presented on a 7-point Likert scale ranging from *not at all* (1) to *very much* (7), with higher scores indicating a greater level of missing that aspect. Specifically, the eight items measured the extent to which participants missed the following: being a part of a team, engaging in a competitive activity, having the structure of physical activity or practice, having an

activity to be with friends, being able to represent one's school through sport, the lifestyle of being an athlete, the recognition one received for being an athlete, and having an activity to fill one's time. Scores on these eight items were summed together to obtain an overall score. The internal consistency of this measure was found to be adequate ( $\alpha=.89$ ). A copy of the complete questionnaire packet can be found in Appendix B.

Table 2-1. Demographic information of the entire sample

Variable	Mean (SD)	<i>n</i>	%
Gender			
Male		177	42.1
Female		243	57.9
Ethnicity			
White		286	68.1
African American		46	11.0
Hispanic, Latino, or Spanish origin		60	14.3
Asian		12	2.9
Other		16	3.8
Age (range 18-55)	20.98 (5.44)		
18		150	35.7
19		98	23.3
20		56	13.3
21-25		70	16.7
>25		46	10.9
High School Graduation Year			
2009		194	46.4
2008		86	20.6
2007		38	9.1
Prior to 2007		100	23.9
Dual Enrolled in College During High School			
Yes		106	25.2
No		314	74.8
First semester of College Since Graduating HS			
Yes		208	49.5
No		212	50.5
Number of Credit Hours Currently Enrolled	12.11 (2.98)		
Part-time (<12 credit hours)		85	20.5
Full-time (≥12 credit hours)		329	78.5
Total College Credits Earned	18.75 (23.12)		
0		120	31.5
1-9		58	15.2
10-19		51	13.4
20-29		55	14.4
30-39		43	11.3
>39		54	14.1
Currently Employed			
Yes		215	51.2
No		205	48.8

Table 2-1. Continued

Variable	Mean ( <i>SD</i> )	<i>n</i>	%
Father's Level of Education			
Did not complete high school		34	8.2
High school diploma/GED		115	27.8
Some college		75	18.2
College graduate		100	24.2
Graduate school/professional degree		89	21.5
Mother's Level of Education			
Did not complete high school		19	4.5
High School Diploma/GED		89	21.2
Some college		86	20.5
College graduate		145	34.5
Graduate school/professional degree		81	19.3
Current Living Arrangement			
With parents/family members		158	37.6
By self		47	11.2
With a friend(s)		174	41.4
With others, not necessarily friends		41	9.8
Participate in intramural/rec. sports' league			
Yes		51	12.2
No		367	87.8
Played a high school sport			
Yes		228	54.7
No		189	45.3
H.S. Reported Grade Point Average	3.38 (0.50)		

Note. *N* = 420 participants.

Table 2-2. Sports reported being played during high school

Sport	<i>n</i>
Badminton	4
Baseball	41
Basketball	46
Bowling	2
Competitive Spirit Squads/Cheerleading	38
Crew	1
Cross Country	9
Dance/Drill	3
Equestrian	1
Flag Football	6
Football	58
Frisbee	1
Golf	9
Gymnastics	3
Ice Hockey	1
Kickboxing	1
Lacrosse	5
Roller Hockey	1
Skiing	1
Snowboarding	1
Soccer	45
Softball	29
Swimming and Diving	14
Table Tennis	1
Tennis	19
Track and Field	42
Volleyball	26
Water Polo	4
Weightlifting	22
Wrestling	8

*Note.* Students may have played multiple sports.

Table 2-3. Characteristics of former high school athletes and their sport participation during high school

Variable	Mean (SD)	<i>n</i>	%
Gender			
Males		112	49.1
Females		116	50.9
Ethnicity			
White		158	69.3
African American		26	11.4
Hispanic, Latino, or Spanish Origin		29	12.7
Asian		6	2.6
Other		9	3.9
Age	19.97 (3.17)		
18		87	38.2
19		59	25.8
20		33	14.5
21-25		35	15.4
>25		14	6.1
High School Graduation Year			
2009		114	50.2
2008		49	21.6
2007		20	8.8
Prior to 2007		44	19.4
First Semester of College Since Graduating HS			
Yes		119	52.2
No		109	47.8
Total Number of Grades Played a Sport(s)			
1		15	6.6
2		36	15.7
3		44	19.2
4		134	58.5
Total Sports Played in High School			
1		81	35.4
2		87	38.0
3		47	20.5
4		12	5.2
5		2	0.9
Participated in a Sport Outside of High School			
Yes		103	45.0
No		126	55.0
Currently a College Student-Athlete			
Yes		9	3.9
No		220	96.1

Note. *N* = 228 participants.

Table 2-4. Correlations between study variables

Variables	1	2	3	4	5	6	7	8	9	10
1. AIMS total	--	.94**	.91**	.91**	-.01	.13*	.01	.22**	.16**	.05
2. AIMS social		--	.79**	.77**	.05	.18**	.05	.27**	.21**	.08
3. AIMS exclusivity			--	.76**	-.06	.08	-.03	.17**	.12*	.02
4. AIMS negative affectivity				--	-.03	.07	-.01	.14**	.10*	.00
5. Academic Skills					--	.17**	.25**	.09	.05	.05
6. SACQ total						--	.85**	.82**	.79**	.82**
7. SACQ academic							--	.49**	.54**	.58**
8. SACQ social								--	.54**	.80**
9. SACQ personal-emotional									--	.49**
10. SACQ attachment										--

*Note.*  $N = 409$  participants. AIMS total = Athletic Identity Measurement Scale total score; AIMS social = Athletic Identity Measurement Scale social subscale score; AIMS exclusivity = Athletic Identity Measurement Scale exclusivity subscale score; AIMS negative affectivity = Athletic Identity Measurement Scale negative affectivity subscale score; Academic Skills = Academic Skills total score; SACQ total = Student Adaptation to College Questionnaire total score; SACQ academic = Student Adaptation to College Questionnaire academic subscale score; SACQ social = Student Adaptation to College Questionnaire social subscale; SACQ personal-emotional = Student Adaptation to College Questionnaire personal-emotional subscale score; SACQ attachment = Student Adaptation to College Questionnaire attachment subscale score.

\* $p < .05$ . \*\* $p < .01$

## CHAPTER 3 RESULTS

The purpose of this study was to examine whether former high school athletes differ from non-athletes in their adjustment to community college, and to determine the effects high school athletic identity and academic skills have on predicting adjustment of former high school athletes. Also, two additional analyses were conducted to evaluate the effects high school athletic identity has on predicting the level of missing aspects of being a student-athlete, and to investigate differences in adjustment between first semester college students and veterans. The results of this study will be presented by research question.

### **Question 1**

*Do former high school athletes differ from former high school non-athletes in their adjustment to community college?*

The first analysis conducted was to compare former high school athletes to former high school non-athletes on the four subscales of the SACQ. Separate 2 (high school athletic status- former athletes/non-athletes) X 2 (gender- male/female) MANOVA's were conducted for each of the four SACQ subscales. Table 3-1 displays means and standard deviations for each of the groups. A multivariate effect was found for high school athletic status,  $F(4, 410) = 5.06, p < .01$ , Roy's Largest Root = .049. Table 3-2 displays differences in adjustment across the four subscales of the SACQ according to high school athletic status. Former high school athletes ( $M = 125.96, SD = 25.42$ ) reported better social adjustment to college than former high school non-athletes ( $M = 119.67, SD = 24.41$ ),  $F(1, 413) = 6.02, p = .02$ . Also, athletes ( $M = 87.60, SD = 20.94$ ) reported higher scores than non-athletes ( $M = 81.85, SD = 18.04$ ) in emotional

adjustment to college,  $F(1, 413) = 5.84, p = .02$ . Non-significant differences were found between groups on the following two subscales of the SACQ: academic adjustment,  $F(1, 413) = 1.32, p = .25$ , and attachment,  $F(1, 413) = 0.00, p = .96$ .

A multivariate effect was also found for gender,  $F(4, 410) = 14.07, p < .01$ , Roy's Largest Root = .137. Table 3-3 displays differences in adjustment across the four subscales of the SACQ according to gender. Females ( $M = 148.46, SD = 28.29$ ) reported better academic adjustment to college than males ( $M = 139.93, SD = 26.52$ ),  $F(1, 413) = 10.90, p < .01$ , whereas, males ( $M = 89.53, SD = 19.89$ ) reported higher scores than females ( $M = 81.71, SD = 19.22$ ) in emotional adjustment,  $F(1, 413) = 12.48, p < .01$ . Non-significant differences were found between genders in social adjustment,  $F(1, 413) = 0.76, p = .38$ , and attachment,  $F(1, 413) = 0.22, p = .64$ . Lastly, the interaction between high school athletic status and gender was non-significant,  $F(4, 410) = 0.31, p = .87$ , Roy's Largest Root = .003.

To compare former high school athletes and non-athletes on their overall score on the SACQ, a 2 (high school athletic status- former athletes/non-athletes) X 2 (gender- male/female) analysis of variance (ANOVA) was conducted. The interaction between high school athletic status and gender was non-significant,  $F(1, 413) = 0.19, p = .66$ . A trend-level significant main effect was found for high school athletic status,  $F(1, 413) = 3.52, p = .06$ , with former high school athletes ( $M = 414.01, SD = 69.98$ ) reporting higher overall scores on the SACQ than non-athletes ( $M = 401.77, SD = 64.70$ ). The difference between genders on the overall SACQ score was non-significant,  $F(1, 413) = 0.02, p = .88$ .

## Question 2

*What effect does high school athletic identity and academic skills have on adjustment to community college of former high school athletes?*

The second main purpose of this research was to determine the effects high school athletic identity and academic skills have on adjustment to community college of former high school athletes. This model was tested using multiple regression analysis. Only data from participants who played a sport while in high school were used, and those participants who currently played a sport in college were excluded from the analyses. Five separate analyses were conducted, one for each of the four subscales of the SACQ and one for the total SACQ score. For each analysis, variables were entered in two steps. In the first step, the following control variables were entered: age, gender, and ethnicity. Two of the variables, gender and ethnicity, had to be dummy coded; and ethnicity was divided into two groups- majority (Caucasian) and minority (African American; Hispanic, Latino, or Spanish Origin; Asian; and Other) status to simplify the regression analysis. In the second step, high school academic skills (measured as a total score of the seven items designed to assess academic skills) and high school athletic identity (measured as a total score on the AIMS) were entered. Correlations between major study variables are presented in Table 3-4 and a summary of all regression analyses with standardized beta coefficients are presented in Table 3-5.

To predict academic adjustment, the variables in the full model accounted for 13.5% of the total variance,  $F(5, 210) = 6.53, p < .01$ . In the first block, the control variables accounted for a significant portion of the variance,  $F(3, 212) = 5.39, p < .01, \Delta R^2 = .071$ . Specifically, males reported lower academic adjustment than females ( $p <$

.05), and academic adjustment increased with age ( $p < .01$ ). With the addition of the second block, an additional 6.4% of the variance was explained by adding athletic identity and academic skills to the model. Although gender differences were no longer significant, age remained as a significant predictor. Also, academic skills was found to be a significant predictor ( $p < .01$ ) of academic adjustment, although athletic identity was not.

To predict social adjustment, the variables in the full model accounted for a significant portion of the variance,  $F(5, 210) = 2.61, p < .05, R^2 = .058$ . In the first block, none of the control variables were significant,  $F(3, 212) = 0.97, p = .408, \Delta R^2 = .014$ . With the addition of the second block, a significant portion of the variance was explained,  $\Delta R^2 = .045$ ; athletic identity was the only significant predictor ( $p < .01$ ).

To predict emotional adjustment, the variables in the full model accounted for 10.2% of the total variance,  $F(5, 210) = 4.76, p < .01$ . In the first block, the control variables accounted for a significant portion of the variance,  $F(3, 212) = 5.77, p < .05, \Delta R^2 = .076$ . Specifically, males reported higher emotional adjustment than females ( $p < .01$ ), and emotional adjustment increased with age ( $p < .05$ ). With the addition of the second block, an additional 2.6% of the variance in emotional adjustment was explained. Gender and age remained as significant predictors and athletic identity was added as another significant predictor ( $p < .01$ ) to the model.

To predict attachment, the variables in the full model did not collectively predict a significant portion of the variance,  $F(5, 210) = 2.08, p = .069, R^2 = .047$ . In the first block, the control variables were non-significant,  $F(3, 212) = 2.15, p = .095, \Delta R^2 = .029$ , although age was found to be a significant predictor ( $p < .05$ ). With the addition of the

second block, an additional 1.8% of the variance was explained. Although non-significant, age remained as a significant predictor and athletic identity was also significant ( $p < .05$ ).

Finally, to predict overall adjustment, the variables in the full model accounted for a significant portion of the variance,  $F(5, 210) = 3.76, p < .01, R^2 = .082$ . In the first block, the control variances accounted for 3.7% of the variance,  $F(3, 212) = 2.71, p < .05$ ; however, age was the only significant predictor ( $p < .01$ ). With the addition of the second block, an additional 4.5% of the variance was explained. Age remained as a significant predictor and athletic identity was added ( $p < .01$ ).

### **Question 3**

*What effect does high school athletic identity have on the level of missing multiple aspects of being a student-athlete of former high school athletes?*

Similar to the second analysis, only data from participants who played a sport while in high school and who were not currently a college student-athlete at the college were used. The total score of the eight items measuring the extent to which multiple aspects of being a student-athlete were missed was used as the criterion variable. Means and standard deviations for each item are presented in Table 3-6. For the regression analysis, age, gender, and ethnicity were entered as control variables in the first block. Collectively, they accounted for 8.5% of the variance,  $F(3, 186) = 5.80, p < .01$ . Age was the only significant predictor, with younger aged students missing more aspects of being a student-athlete. High school athletic identity (measured as a total score on the AIMS) was entered in the second block. It accounted for an additional 27.4% of the variance,  $F(4, 185) = 25.94, p < .01, R^2 = .359$ ; thus, 35.9% of the total variance in missing multiple aspects of being a student-athlete were explained by the

control variables and high school athletic identity. A summary of this regression analysis and standardized beta coefficients are presented in Table 3-7.

#### **Question 4**

*Do first semester students differ from veteran students in their adjustment to community college?*

This analysis examined whether first-time college students (first semester in college) differ in their adjustment to community college in comparison to students who have been attending college for longer than one semester (veteran students). A 2 (enrollment status- first timer/veteran) X 2 (gender- male/female) MANOVA was conducted for each of the four subscales of the SACQ. Table 3-8 displays means and standard deviations for each of the groups. The interaction between enrollment status and gender was non-significant,  $F(4, 413) = 1.59, p = .18$ , Roy's Largest Root = .015, as well as the multivariate effect for enrollment status,  $F(4, 413) = 1.14, p = .34$ , Roy's Largest Root = .011. Table 3-9 displays differences in adjustment across the four subscales of the SACQ according to enrollment status. Although the multivariate effect was non-significant, a trend-level significant main effect was found for social adjustment,  $F(1, 416) = 2.91, p = .09$ , with first-time students ( $M = 124.85, SD = 25.14$ ) reporting better social adjustment than veteran students ( $M = 121.37, SD = 24.90$ ).

Identical to the results obtained in question 1, a multivariate effect was found for gender,  $F(4, 413) = 16.01, p < .01$ , Roy's Largest Root = .155. Table 3-10 displays differences in adjustment across the four subscales of the SACQ according to gender. Females ( $M = 148.60, SD = 28.32$ ) reported better academic adjustment to college than males ( $M = 140.11, SD = 26.48$ ),  $F(1, 416) = 9.61, p < .01$ , whereas, males ( $M = 89.56, SD = 19.94$ ) reported higher scores than females ( $M = 81.78, SD = 19.21$ ) in emotional

adjustment,  $F(1, 416) = 16.29, p < .01$ . Non-significant differences were found between gender in social adjustment,  $F(1, 416) = 2.01, p = .16$ , and attachment,  $F(1, 416) = 0.23, p = .63$ .

A 2 (enrollment status- first timer/veteran) X 2 (gender- male/female) ANOVA was conducted with the SACQ total score as the dependent variable. The interaction between enrollment status and gender was non-significant,  $F(1, 416) = 2.28, p = .13$ , as well as the main effects for enrollment status,  $F(1, 416) = 0.72, p = .40$ , and gender,  $F(1, 416) = 0.05, p = .82$ .

Table 3-1. Differences in adjustment to college based on high school athletic status and gender

Variable	Academic	Social	Emotional	Attachment	Total
H.S. Athletes					
Males					
<i>M</i>	141.73	127.93	91.49	99.73	415.01
<i>SD</i>	25.94	23.45	21.07	18.55	68.09
Females					
<i>M</i>	149.21	124.06	83.84	100.35	413.05
<i>SD</i>	29.86	27.15	20.19	19.45	72.04
H.S. Non-Athletes					
Males					
<i>M</i>	136.73	120.05	86.05	99.37	399.06
<i>SD</i>	27.45	21.94	17.21	15.79	59.00
Females					
<i>M</i>	147.77	119.48	79.75	100.52	403.12
<i>SD</i>	26.87	25.64	18.14	19.41	67.12

*Note.* High School Athletes  $N = 228$ ; High School Non-Athletes  $N = 189$ ; Males  $N = 175$ ; Females  $N = 242$ . H.S. Athletes = students who competed on a sports team representing their high school. H.S. Non-Athletes = students who did not compete on a sports team representing their high school. Academic = SACQ academic subscale; Social = SACQ social subscale; Emotional = SACQ personal-emotional subscale; Attachment = SACQ attachment subscale; Total = SACQ total score.

Table 3-2. Differences in adjustment to college based on high school athletic status

Variable	H.S. Athletes		H.S. Non-Athletes		<i>F</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Academic	145.54	28.19	144.09	27.49	1.32
Social	125.96	25.42	119.67	24.41	6.02*
Emotional	87.60	20.94	81.85	18.04	5.84*
Attachment	100.05	18.97	100.13	18.25	0.00
Total	414.01	69.98	401.77	64.70	3.52

*Note.* H.S. Athletes = students who competed on a sports team representing their high school. H.S. Non-Athletes = students who did not compete on a sports team representing their high school. Academic = SACQ academic subscale; Social = SACQ social subscale; Emotional = SACQ personal-emotional subscale; Attachment = SACQ attachment subscale; Total = SACQ total score. H.S. Athletes  $N = 228$ ; H.S. Non-Athletes  $N = 189$ .

\* $p < .05$ . \*\* $p < .01$ .

Table 3-3. Differences in adjustment to college based on gender

Variable	Males		Females		F
	M	SD	M	SD	
Academic	139.93	26.52	148.46	28.29	10.90**
Social	125.09	23.17	121.67	26.42	0.76
Emotional	89.53	19.89	81.71	19.22	12.48**
Attachment	99.60	17.56	100.44	19.39	0.22
Total	409.27	65.57	407.88	67.83	0.02

*Note.* Academic = SACQ academic subscale; Social = SACQ social subscale; Emotional = SACQ personal-emotional subscale; Attachment = SACQ attachment subscale; Total = SACQ total score. Males  $N = 175$ ; Females  $N = 242$ .

\* $p < .05$ . \*\* $p < .01$ .

Table 3-4. Correlations between study variables

Variables	1	2	3	4	5	6	7	8	9	10	11
1. AIMS total	--	.91**	.89**	.87**	-.07	.14*	.01	.24**	.19**	.10	.57**
2. AIMS social		--	.71**	.68**	.04	.23**	.09	.31**	.24**	.18**	.55**
3. AIMS exclusivity			--	.68**	-.14*	.07	-.05	.16*	.12	.03	.46**
4. AIMS negative affectivity				--	-.10	.07	-.04	.14*	.13	.03	.50**
5. Academic Skills					--	.11	.24**	-.00	-.01	-.01	.04
6. SACQ total						--	.85**	.83**	.81**	.81**	.07
7. SACQ academic							--	.51**	.57**	.57**	-.02
8. SACQ social								--	.57**	.80**	.15*
9. SACQ personal-emotional									--	.51**	.06
10. SACQ attachment										--	.11
11. Miss Student-Athlete											--

*Note.*  $N = 217$ . AIMS total = Athletic Identity Measurement Scale total score; AIMS social = Athletic Identity Measurement Scale social subscale score; AIMS exclusivity = Athletic Identity Measurement Scale exclusivity subscale score; AIMS negative affectivity = Athletic Identity Measurement Scale negative affectivity subscale score; Academic Skills = Academic Skills total score; SACQ total = Student Adaptation to College Questionnaire total score; SACQ academic = Student Adaptation to College Questionnaire academic subscale score; SACQ social = Student Adaptation to College Questionnaire social subscale; SACQ personal-emotional = Student Adaptation to College Questionnaire personal-emotional subscale score; SACQ attachment = Student Adaptation to College Questionnaire attachment subscale score; Miss Student-Athlete = Miss Student-Athlete Scale total score.

\* $p < .05$ . \*\* $p < .01$

Table 3-5. Standardized beta coefficients for variables predicting former high school athletes adjustment to college on subscales of the SACQ

Variable	Block 1	Block 2
<b>SACQ Academic</b>		
<i>Control Variables</i>		
Gender (male)	-.127*	-.114
Ethnicity (Caucasian)	.017	.007
Age	.235**	.269**
<i>Study Variables</i>		
Athletic Identity		.110
Academic Skills		.238**
Total $R^2$	.071	.135
$\Delta R^2$	.071**	.064**
$F$	5.39**	6.53**
<b>SACQ Social</b>		
<i>Control Variables</i>		
Gender (male)	.116	.044
Ethnicity (Caucasian)	.011	-.005
Age	.011	.058
<i>Study Variables</i>		
Athletic Identity		.229**
Academic Skills		.023
Total $R^2$	.014	.058
$\Delta R^2$	.014	.045**
$F$	0.97	2.61*
<b>SACQ Emotional</b>		
<i>Control Variables</i>		
Gender (male)	.202**	.155*
Ethnicity (Caucasian)	.112	.100
Age	.160*	.196**
<i>Study Variables</i>		
Athletic Identity		.170**
Academic Skills		.046
Total $R^2$	.076	.102
$\Delta R^2$	.076**	.026*
$F$	5.77**	4.76**

Table 3-5. Continued

Variable	Block 1	Block 2
<b>SACQ Attachment</b>		
<i>Control Variables</i>		
Gender (male)	.007	-.042
Ethnicity (Caucasian)	.016	.005
Age	.171**	.200**
<i>Study Variables</i>		
Athletic Identity		.145*
Academic Skills		-.024
Total $R^2$	.029	.047
$\Delta R^2$	.029	.018
$F$	2.15	2.08
<b>SACQ Total</b>		
<i>Control Variables</i>		
Gender (male)	.039	.002
Ethnicity (Caucasian)	.044	.030
Age	.185**	.229**
<i>Study Variables</i>		
Athletic Identity		.190**
Academic Skills		.126
Total $R^2$	.037	.082
$\Delta R^2$	.037*	.045**
$F$	2.71*	3.76**

Note.  $N = 216$ ; Athletic Identity = Athletic Identity Measurement Scale total score; Academic Skills = Academic Skills total score; SACQ Total = Student Adaptation to College Questionnaire total score; SACQ Academic = Student Adaptation to College Questionnaire academic subscale score; SACQ Social = Student Adaptation to College Questionnaire social subscale; SACQ Emotional = Student Adaptation to College Questionnaire personal-emotional subscale score; SACQ Attachment = Student Adaptation to College Questionnaire attachment subscale score.

\* $p < .05$ . \*\* $p < .01$ .

Table 3-6. Descriptive variables of items measuring the extent to which former high school athletes miss multiple aspects of participating competitively as a student-athlete

Item	Males		Females		Combined	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Miss being a part of a team	5.63	1.61	5.18	1.72	5.40	1.68
Miss engaging in a competitive activity	5.99	1.29	5.48	1.68	5.72	1.52
Miss having the structure of physical activity, practice, or training	5.77	1.48	5.96	1.33	5.87	1.40
Miss having an activity to be with friends	5.76	1.46	5.74	1.37	5.75	1.41
Miss being able to represent your school through sport(s)	5.09	1.90	4.92	2.04	5.00	1.97
Miss the lifestyle of being an athlete	5.45	1.65	5.02	1.90	5.23	1.79
Miss the recognition you received from others for being an athlete	4.99	2.08	5.02	1.97	5.01	2.02
Miss having an activity to fill your time	5.51	1.69	5.34	2.01	5.42	1.86

Note. Participants rated items on a Likert scale from 1 (*Not at all*) – 7 (*Very much*); Males *N* = 93; Females *N* = 101; Combined *N* = 194.

Table 3-7. Standardized beta coefficients for variables predicting the extent to which former high school athletes miss multiple aspects of being a student-athlete

Variable	Block 1	Block 2
<i>Control Variables</i>		
Gender (male)	.084	-.099
Ethnicity (Caucasian)	.065	.002
Age	-.271**	-.162**
<i>Athletic Variable</i>		
Athletic Identity		.567**
Total <i>R</i> <sup>2</sup>	.085	.359
$\Delta R^2$	.085**	.274**
<i>F</i>	5.80**	25.94**

Note. *N* = 190; Athletic Identity = Athletic Identity Measurement Scale total score.  
\**p* < .05. \*\**p* < .01.

Table 3-8. Differences in adjustment to college based on enrollment status and gender

Variable	Academic	Social	Emotional	Attachment	Total
First Time Students					
Males					
<i>M</i>	141.70	129.38	90.47	102.40	417.58
<i>SD</i>	27.30	21.82	18.03	17.04	63.23
Females					
<i>M</i>	147.27	121.66	81.96	98.98	405.95
<i>SD</i>	29.79	26.87	19.04	19.31	72.92
Veteran Students					
Males					
<i>M</i>	138.62	120.95	88.70	96.85	401.78
<i>SD</i>	25.75	23.55	21.66	17.70	67.11
Females					
<i>M</i>	149.95	121.69	81.60	102.03	410.39
<i>SD</i>	26.82	25.95	19.47	19.40	66.20

*Note.* First Time Students = Students who are in their first semester of college. Veteran Students = Students who have been in college for at least one semester. First Time Students *N* = 208; Veteran Students *N* = 212; Males *N* = 177; Females *N* = 243. Academic = SACQ academic subscale; Social = SACQ social subscale; Emotional = SACQ personal-emotional subscale; Attachment = SACQ attachment subscale; Total = SACQ total score

Table 3-9. Differences in adjustment to college based on college enrollment status

Variable	First-Timers		Veterans		<i>F</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Academic	144.97	28.85	145.08	26.90	0.01
Social	124.85	25.14	121.37	24.90	2.91
Emotional	85.48	19.05	84.65	20.69	0.30
Attachment	100.39	18.44	99.81	18.82	0.47
Total	410.76	69.17	406.69	66.57	0.72

*Note.* First Timers = Students who are in their first semester of college. Veteran = Students who have been in college for at least one semester. Academic = SACQ academic subscale; Social = SACQ social subscale; Emotional = SACQ personal-emotional subscale; Attachment = SACQ attachment subscale; Total = SACQ total score. First-Timers *N* = 208; Veterans *N* = 212.

\**p*<.05. \*\**p*<.01.

Table 3-10. Differences in adjustment to college based on gender

Variable	Males		Females		F
	M	SD	M	SD	
Academic	140.11	26.48	148.60	28.32	9.61**
Social	125.05	23.05	121.67	26.36	2.01
Emotional	89.56	19.94	81.78	19.21	16.29**
Attachment	99.54	17.55	100.50	19.38	0.23
Total	409.46	65.55	408.16	69.55	0.05

*Note.* Academic = SACQ academic subscale; Social = SACQ social subscale; Emotional = SACQ personal-emotional subscale; Attachment = SACQ attachment subscale; Total = SACQ total score. Males  $N = 177$ ; Females  $N = 243$ .

\* $p < .05$ . \*\* $p < .01$ .

## CHAPTER 4 DISCUSSION

### **Introduction**

The majority of high school students participate on an athletic team at their school (NFHS, 2009); however, only a small portion of these students will continue participating in college (NCAA, 2007). Thus, the end of high school marks the time when the most number of individuals stop participating in sports at a competitive level. For those pursuing higher education, the transition to college has been viewed as a stressful experience for many freshmen (Dyson & Renk, 2006; Thompson et al., 2007). Former high school athletes that enter college as “students” and not “student-athletes” potentially face a dual adjustment – having to adjust to the college experience and to no longer being a competitive athlete.

Athletic identity, which refers to the extent to which one’s self is linked to the athlete role, is one of the most influential factors relating to the quality of adjustment out of competitive athletics with elite-level athletes. Individuals with a strong athletic identity ascribe great importance and value to their participation in sports, and they often times evaluate themselves based on their athletic performance (e.g., success/failure) which can influence their affect and self-esteem (Brewer et al., 1993). Research has shown that individuals having a strong and exclusive athletic identity take longer to adapt, experience more negative emotions, and require more coping upon ending their career (Alfermann et al., 2004). Although the majority of research has focused on elite-level athletes, there has been little research on the adjustment experiences of former high school athletes to higher education. To date, Lubkner and Etzel (2007) are the only researchers to investigate athletic identity and the adjustment experiences of this

population at a large state university; therefore, more research is needed with other college populations (e.g., community college students).

If differences in adjustment are identified between former high school athletes and non-athletes, and if certain factors (e.g., athletic identity, academic skills) are found to predict adjustment, researchers and practitioners may gain a better understanding as to the impact high school sports' participation has on the future of student-athletes in an academic setting. More importantly, this information can be used to make recommendations to administrators and support personnel in both high school and college to better meet the needs of this unique population.

The purpose of this study was to investigate the adjustment of former high school athletes to community college. Specifically, this study examined (1) whether former high school athletes differ from non-athletes in their academic, social, and emotional adjustment and attachment to college, (2) the extent to which high school athletic identity and academic skills predict adjustment, (3) the effect athletic identity has on predicting whether former high school athletes miss multiple aspects of being a student-athlete, and (4) whether first-semester and veteran students differ in their adjustment. A total of 420 students participated in this study from a large-sized community college in Florida. The student sample was diverse in regards to ethnicity and age, and approximately half of the participants were enrolled in their first semester of college and half had participated on a sports team during high school. In regards to high school sports experiences, the sample represented students that reported playing thirty different individual and team high school sports, and participants varied in their length of high school sports participation (1-4 years), number of different sports played (1-5

sports), and involvement in sports outside of the one(s) they participated in during high school (e.g., club team, recreational league).

### **Summary and Implications of Key Findings**

The majority of high school students make their transition to higher education around eighteen years old (Hamilton & Hamilton, 2006). This period of development between adolescence and young adulthood has been identified by Arnett (2000, 2006) as emerging adulthood. During this period there appears to be considerable diversity among individuals as they further explore their identity and various possibilities for their lives. As a result, this period is characterized by instability and frequent directional changes (Arnett 2000, 2006). Also, individuals are semi-autonomous to the extent that they begin to take on some of the responsibilities of living independently while at the same time still relying on the support of others, such as their parents (Arnett, 2000, 2006). The results of this study highlight the importance participation in high school athletics has on the development of emerging adults as they transition into higher education; therefore, allowing us to better understand this subgroup of emerging adults. Clearly, participation in high school athletics plays a positive role in facilitating the adjustment of students to community college during this period of their development.

A key purpose of the present study was to determine whether students who had participated on a sports team during high school (for any length of time) differed from students who had not participated with regards to their academic, social, and emotional adjustment and attachment to college. It was found that former high school athletes had higher scores in social and emotional adjustment to college in comparison to former high school non-athletes. Thus, former athletes adjusted better to college socially, indicating greater participation in social activities and involvement/relationships with

others on campus, better coping with social relocation and being away from home, and overall higher levels of satisfaction with the social aspects of the college environment. Also, they adjusted better emotionally, indicating higher levels of psychological well-being (e.g., low levels of anxiety, anger, stress, and sadness) and physical well-being (e.g., appetite is good, not feeling tired, getting adequate sleep). The results of the present study are inconsistent with Lubker and Etzel (2007) who found no differences in adjustment between these two groups of students on all four subscales (academic, social, emotional, attachment) of the Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1999). However, Lubker and Etzel (2007) sampled students from a large state university; thus, it could be expected that students had to meet more stringent criteria for admission to the university than would be the case for those entering a community college. Therefore, it may be hypothesized that students in Lubker and Etzel's study were more likely to have positive past experiences (e.g., academic success, involvement in multiple extracurricular activities) that allowed them to develop the necessary skills to adjust adequately to college, in contrast to the experiences obtained by students in community college. As a result, participation in high school sports may have a more positive impact on those students attending community college than those at a university when comparing their levels of adjustment to peers at the same institution. These results may be supported further by Snyder and Spreitzer (1990) who found that the relationship between participation in high school athletics and attendance in college was most evident among students with lower cognitive skills (measured as a composite score of standardized tests). Thus, being a high school student-athlete may give some students the opportunity to develop some of

the skills necessary to attend college in the first place as well as make an easier adjustment once at the college.

Another possible explanation for the differences in findings between this study and Lubker and Etzel (2007) is that the current study involved a more ethnically diverse sample (32% of participants were classified as a minority- African American, Hispanic, Asian, or other, in comparison to 13% in Lubkner & Etzel, 2007). Thus, the results obtained in the current study may be more representative of the actual ethnic breakdown of students attending college. Also, some researchers have found differences in adjustment based on ethnicity; for instance, Melendez (2007) found minority females had better academic adjustment to college when compared to males and those students whose ethnicity was classified as being Caucasian. Additionally, research is needed to better understand the relationship between ethnicity and college adjustment.

When evaluating differences between former high school athletes and non-athletes on the other two domains of adjustment, academic adjustment and attachment to the school, no differences were found. Thus, groups did not differ in their academic adjustment, indicating similar attitudes and motivation towards academic goals and work, academic effort in meeting course requirements, efficacy/success in their abilities as a student, and satisfaction with the academic environment and what it offers. Also, the groups were similar in their attachment to the school, indicating no differences in their degree of satisfaction with being in college in general as well as their feelings about attending this college in particular. These results can be compared to those of Melendez (2007) who found that collegiate athletes had better academic adjustment

and attachment to the university than their non-athlete peers. Although the researcher did not make a distinction between former high school athletes and non-athletes who comprised the “non-athlete peer” group, these results highlight several possible concerns. First, upon attending college, former high school athletes no longer have the structures and incentives that may have prompted their academic performance in high school. Specifically, they do not have a coach or teammates present to reinforce certain academic skills or behaviors (e.g., studying, completing assignments). Also, while in high school they may have been motivated to do well academically in order to meet certain grade point average requirements to compete athletically, which are no longer in effect. As a result, former high school athletes must identify alternative means of motivation as well as take individual responsibility over their academic work. Second, former high school athletes may feel a sense of isolation or lack of connectedness to the institution they are attending since they are no longer competing as an athlete for the school. Research supports participation in organized extracurricular activities as a means to facilitate a more successful adjustment to college (Bohnert, et al., 2007). Therefore, it is especially important that these students identify and pursue another activity that will provide a sense of belongingness and attachment that they may have had during high school.

The present study found no significant interactions between high school athletic status and gender when investigating differences in adjustment to college; however, a significant main effect was found for gender. Specifically, females reported better academic adjustment to college than males. This finding is consistent with previous research that has shown females scored higher than males on the same instrument

(Student Adaptation to College Questionnaire; Baker & Siryk, 1999) measuring academic adjustment (Lubker & Etzel, 2007; Melendez, 2007), and have higher grade point averages (Burke, 1989; Miller et al., 2005) and other positive academic behaviors (e.g., better class attendance, note taking, reading; Zusman, Knox, & Lieberman, 2005). Also, the present study found that males reported better emotional adjustment to college than females which has not necessarily been reported by past research. In particular, Lubker and Etzel (2007) and Melendez (2007) sampled both athletes and non-athletes from larger state universities and found no gender difference in emotional adjustment (as measured by the SACQ). The findings of the present study indicated no gender differences in social adjustment or attachment to the college.

The second main purpose of the study was to use regression analysis to determine the effect high school athletic identity and academic skills have on predicting academic, social, and emotional adjustment to college and attachment to the college after controlling for gender, ethnicity, and age. Only students who had participated in a high school sponsored sport ( $N = 228$ ) were included in these analyses. Results showed that athletic identity was a significant predictor of former high school athletes' social, emotional, and overall adjustment to college. Thus, having an athlete role that is more central and important to the student was shown to predict better social and emotional adjustment; therefore, indicating more social interaction and participation in campus activities as well as greater psychological and physical well-being. These results are somewhat inconsistent with past research results. Specifically, Lubker and Etzel (2007) found that former high school athletes with different ratings of athletic identity in high school (high, moderate, low) did not differ in their social or emotional

adjustment to college. Further, results by Miller and colleagues (2005) indicated that high school students who labeled themselves as “jocks” (which could be considered a form of athlete identification) had lower grade point averages and higher occurrences of school misconduct, which could be considered an outcome of a social or emotional problem. However, results by Ryska (2002) are mixed, in that the effect athletic identity has on competence ratings outside of sports is dependent upon the motivational goal orientation of the high school student-athlete. Specifically, athletic identity was found to be a negative predictor of academic, social, and behavioral competence of those athletes with a high ego-low task motivational orientation; and a positive predictor of academic and vocational competence of those with a high task-low ego orientation (Ryska, 2002). Task oriented individuals assess personal competence in terms of self-referenced criteria (e.g., effort, improvement in skills, and learning), whereas, ego oriented individuals define their competence on the basis of norm-referenced standards (e.g., outperforming others, exerting little effort to obtain superior performance; Duda & Nicholls, 1992). Thus, former high school athletes in the present study may be hypothesized to have had a lower ego and a higher task motivational orientation towards sports during high school. Nonetheless, there appears to be positive outcomes associated with identifying as an athlete in high school. Participation in sports has been viewed as a context in which adolescents can learn skills that can be applied later in life (Danish, Petitpas, & Hale, 2007). Athletics provides the opportunity for many students to participate in a meaningful activity and engage in social interactions with their peers. For many this means a chance to make friends and become affiliated with a group or team (Ryckman & Hamel, 1993). Also, student-athletes may learn from sports how to

manage their emotions effectively by having to cope with disappointment or defeat (e.g., losing a game or competition, trying to earn a starting position). All of these skills developed through participation in high school sports may later help the athlete adjust successfully to the demands of attending college.

In regards to predicting academic adjustment to college, high school athletic identity was not found to be a significant predictor; however, high school academic skills was noted as a significant predictor. High school academic skills reflect a variety of specific skills necessary for academic achievement, including: organization, note taking, paying attention in class, completing assignments, studying, and testing taking. Thus, it makes sense that having these skills would predict better attitudes and effort toward academic work, as well as greater success in and satisfaction with academics. This result is consistent with past research that has shown academic self-efficacy, academic confidence, and scholastic competence to be a significant predictor of academic adjustment and actual performance in the first year of college (Chemers et al., 2001; Martin et al., 1999; Friedlander et al., 2007). Although athletic identity was not significant in the regression model, there was a significant negative correlation between exclusivity in one's high school athletic identity and academic adjustment in college. Thus, former athletes who indicated sports as being the primary focus of their life in high school also reported lower scores in academic adjustment. Having this single-minded focus on sports to the exclusion of other areas of one's life (e.g., academics) can no doubt result in later difficulty. For instance, Lavalley and Robinson (2007) described how adolescent gymnasts' lives were taken over by the sport, and many of these athletes reported making sacrifices in other areas of their lives that seemed irrelevant at

the time. Therefore, it is important that high school students have the opportunity to explore other activities and roles in addition to sports that may become more salient once athletic participation ends. Also, Synder and Spreitzer (1992) showed that high school senior *scholar athletes* and *scholars* had higher scores in self-esteem, internal locus of control, extracurricular involvement, and leadership activities than those classified as *athletes* or *nonscholar-nonathletes*; thus, highlighting the importance of identifying with the student role. Therefore, high school coaches, teachers, and administrators should establish high academic standards for student-athletes and facilitate the development of skills that will lead to academic success.

A third goal of this study was to determine the effect athletic identity had on predicting whether former high school athletes would miss multiple aspects of being a student-athlete. As predicted, athletic identity explained a substantial portion of the variance in former high school athletes' self-reports of missing multiple aspects of being a student-athlete, which included: being a part of a team, engaging in a competitive activity, having the structure of physical activity, having an activity to be with friends, being able to represent one's school through sport, the lifestyle of being an athlete, the recognition one received for being an athlete, and having an activity to fill one's time. Age, gender, and ethnicity accounted for 8.5% of the variance in missing multiple aspects of being a student-athlete; while athletic identity could explain an additional 27% of the variance. To date, this result is the first to examine the impact athletic identity has on missing multiple aspects of being a competitive high school student-athlete. The majority of research in this area has investigated the impact athletic identity has on the retirement of elite level athletes and has neglected to study athletes

who retire at lower levels of competition and at an earlier age. Although, it has been found that elite level athletes with a strong athletic identity take longer to adapt, experience more negative emotions, and require more coping (Alfermann et al., 2004; Cecic Erpic et al., 2004; Grove et al., 1997), the present study collected additional information on which aspects former student-athletes report missing most. For instance, males reported their most missed aspect of being a student-athlete was no longer having the opportunity to engage in a competitive activity, whereas, females reported that they missed no longer having the structure of physical activity (see Table 3-6). Thus, it is important that high school coaches, counselors, and administrators know how to effectively work with student-athletes who are ending their participation in competitive sports. For example, it may be beneficial to identify student-athletes that may have difficulties with this adjustment by collecting information about their athletic identity and other factors surrounding their participation in sports (e.g., how long they have played, focus on other activities/interests, desire to compete in college). Student-athletes identified for potential difficulties may then be provided with additional support before they graduate high school (e.g., information about what to expect, help with planning their future, group/individual counseling to deal with their emotions, or meetings with alumni to explain the adjustment process). Also, college support personnel should be aware of the challenges some former high school athletes experience upon entering college not as “student-athletes” but as “students.” Therefore, these former high school athletes may benefit from some of the same intervention mentioned above in addition to helping them to identify potential options available at college to keep themselves active and connected (e.g., joining a sports club,

participating in an intramural sports league, taking a group fitness class, going to the gym to workout).

A final aim of this study was to determine whether those students who were enrolled in college for the first time since attending high school differed in their adjustment to college from students who had already been enrolled in college classes for a least a semester (referred to as “veteran” students). The findings of this study revealed no differences between groups in all four adjustment domains (academic, social, emotional, attachment). This result was unexpected since past research generally shows that first year students experience increased stress and difficulties in comparison to students who have been at school longer (Bayram & Bilgel, 2008; Gall et al., 2000). However, researchers have primarily relied on samples from four year institutions in which students attend directly after completing high school, and a high number of first year students generally live on campus. In contrast, the sample obtained for the present study was vastly different in that students were attending a two year community college in which a high number of students completed high school in the same area, there was no housing on campus, some students took time off before attending college (they begin college at an older age), the majority of students had a job, and a lower percentage of students were enrolled full-time. Therefore, these differences in sampling may have contributed to why no differences were observed between first-time and veteran students in their levels of adjustment to college.

It should also be noted that for this study age was a significant predictor in the regression model when predicting academic adjustment, emotional adjustment, and attachment to the college; thus, as age increased so did adjustment in these areas.

Age was also a negative predictor of missing multiple aspects of being a student-athlete, indicating that younger students who had recently begun college had the highest scores. This is consistent with the findings from Cecic Erpic and colleagues (2004) who found that elite-level athletes reported the most difficulty with their retirement immediately following its onset as opposed to several years later. Therefore, as former high school student-athletes get older and the time since they exited the role increases, the thoughts of missing their participation in athletics may become less salient as they develop new interests or activities to pursue.

### **Limitations**

While this study contributed to the existing literature in the areas of athlete retirement and college adjustment, there are some limitations to the study that should be considered. First, this study sampled students from a single community college. Thus, results may not generalize to students attending other institutions of higher education (e.g., four year universities, private colleges, online degree programs); in particular, those having higher academic requirements for admission. Second, the time frame in which the research questionnaires were administered may pose some issues. In the college adjustment literature, there is no established time period in which to measure adjustment to college. As a result, researchers have defined adjustment differently and have measured it at various times upon students' entry into college (e.g., within the first couple weeks, at the end of the first semester, at the end of the first year, or at times even later). For this study, adjustment was measured toward the end of the fall semester (weeks 9-13) once mid-term examinations were completed. As a result, some students may have shown better adjustment to college than they would have if they were surveyed at the very beginning of the semester. Also, some students may

have dropped out of college due to poor adjustment prior to the questionnaires being administered; thus, they did not have the opportunity to be included in this study. In addition, the fact that students who participated in this study did so during class time shows a certain level of adjustment since they were attending class. A third limitation is that students participating in the study were asked to retrospectively rate their athletic identity and academic skills during high school and remember details about their high school experience. Although other researchers have relied on similar methods, there is the potential for participants to forget or misremember information. Also, approximately half of the sample for this study graduated high school prior to 2009; therefore, they had to recollect high school experiences that occurred more than a year earlier. Lastly, for the data analyses, participants were identified as a high school athlete if they competed in a high school sponsored sport at any time during their high school career. Therefore, this group contained students with varying sports backgrounds and a student may have been classified as a high school athlete if he or she had played only one sport, for one season, during one year of high school. Thus, students who comprised this group should be considered to have a diversity of sports experiences while in high school.

### **Directions for Future Research**

The areas of high school student-athlete disengagement from sports and adjustment to college appear to be deserving of more attention. More than half of high school students participate for an athletic team at their school (NFHS, 2009), and many young athletes are now devoting an extensive amount of time and energy specializing in one sport (Hill & Hansen, 1988). Also, research shows that the majority of high school student-athletes expect to play at the college level (Wiechmann, 1997); however, only a small percentage of athletes will ever get the chance to actually do so (NCAA, 2007).

Thus, the transition from high school to college marks the time when the most number of individuals will end their participation in competitive athletics.

Results from this showed that former high school athletes adjust better socially and emotionally to college than high school non-athletes, and athletic identity predicted social and emotional adjustment; these findings are inconsistent with past research that has shown no differences between groups. Also, athletic identity was found to predict former high school student-athletes self-reports of missing multiple aspects of being a student-athlete, which is similar to findings with elite level athletes. Given the findings of this study, there are a number of directions in which future research can be conducted.

First, this study relied on students retrospectively rating their high school athletic and academic experiences, possibly resulting in students misremembering information. Thus, researchers may consider utilizing a longitudinal methodology. By doing so, information could be collected at multiple points during high school (e.g., while the student is participating in sports, at the end of their final season) and again during college (e.g., initial entry into college, follow-up at the end of the first year) to determine long-term outcomes.

Second, college student-athletes were not included as one of the comparison groups in this research design (although a small percentage of student-athletes did participate) when investigating differences in college adjustment. Therefore, it would interesting to study whether high school student-athletes that continue to play sports at a community college have different adjustment experiences than former high school athletes who no longer participate on an athletic team. Although Lubker and Etzel (2007) found no differences in adjustment between the two groups at a four year

university, results may be different at a community college in which the academic standards for admission differ; thus, being a member of a college sports team may provide certain benefits (e.g., having a social peer group, the opportunity to represent one's school through sports, academic advising/support) that extend beyond that of other students at the school and impact adjustment.

The results of this study only showed how athletic identity and academic skills independently predicted adjustment to college; therefore, researchers may consider looking at how multiple sport and academic variables combine to impact adjustment. For instance, utilizing a categorization similar to Synder (1985) in which participants are classified as *scholars* and *athletes* may be worth exploring further. Research should also investigate how different sports variables impact college adjustment. Participants in the present study were diverse in terms of the types of sports they played, intensity of their involvement, number of sports they played, and the number of years they played them. Thus, the nature of the student-athletes' sports experiences could be used as independent variables to predict adjustment. Also, Ryska (2002, 2003) has shown that motivational goal orientation (task/ego) impacts the relationship athletic identity has on predicting perceptions of competence in domains other than sports. Thus, motivational orientation may be worth including as a variable in future studies.

Lastly, given that this study found athletic identity to predict a substantial portion of the variance in former high school athletes' indication as to whether they missed multiple aspects of being a student-athlete, it may be beneficial to do further analyses on this latter measure. In particular, a factor analysis can be conducted; if it shows to have adequate

psychometric properties and predictive validity, it may have the potential to be used as a college adjustment scale/instrument for former high school athletes.

## APPENDIX A INFORMED CONSENT

### **Informed Consent**

**Protocol Title:** Former High School Athletes' Adjustment to College

Please read this consent document carefully before you decide to participate in this study.

#### **Purpose of the research study:**

The purpose of this study is to assess whether former high school athletes and non-athletes differ in their adjustment to college, as well as investigate the extent to which athletic identity and academic skills predict adjustment to college. This information can be used in future research and for making recommendations to high schools and colleges about the transitional and adjustment experiences of students.

#### **What you will be asked to do in the study:**

If you participate in this study, you will be asked to complete several instruments. You will be asked to answer questions about your adjustment to college and athletic identity, as well as provide information about your background and high school experiences.

#### **Time required:**

20 minutes

#### **Risks and Benefits:**

This study involves very few discomforts or risks. You will be asked to answer questions that require some thinking. Some of the questions may be challenging for you to answer or you may have emotional feelings towards some of the questions. You will not necessarily benefit directly by participating in this study. If you experience any discomforts from participating please contact the Santa Fe College Counseling Center at (352) 395-5508, Building S, Room 254.

#### **Compensation:**

No compensation is offered for participation in this study.

#### **Confidentiality:**

Your responses will be kept confidential to the extent provided by law. You will not be asked to put your name anywhere on the study materials. Therefore, your name will not, and cannot, be linked to any of your responses. Your name will not be used in any report.

**Voluntary participation:**

Your participation in this study is completely voluntary. You must be at least 18 years old to participate in this study. There is no penalty for not participating.

**Right to withdraw from the study:**

You have the right to withdraw from the study at anytime without consequence.

**Whom to contact if you have questions about the study:**

Christopher M. Raye, M.Ed., Doctoral Candidate, School Psychology, University of Florida, 1403 Norman Hall, P.O. Box 117047, Gainesville, FL 32611 (352) 273-4284

Nancy Waldron, Ph.D., Associate Professor, School Psychology, University of Florida, 1403 Norman Hall, P.O. Box 117047, Gainesville, FL 32611 (352) 273-4284

**Whom to contact about your rights as a research participant in the study:**

UFIRB Office, Box 112250, University of Florida, Gainesville, FL 32611 (352) 392-0433.

**Agreement:**

I have read the procedure described above. I voluntarily agree to participate in the procedure and I have received a copy of this description. I am at least 18 years old.

Participant: \_\_\_\_\_ Date: \_\_\_\_\_

APPENDIX B  
QUESTIONNAIRE

**COLLEGE QUESTIONNAIRE**

**Directions:** Please answer the following questions about your current experiences in college. Read each question carefully and mark a (✓) in the box or circle the number corresponding to your answer. In some questions, you may be asked to provide a written response.

**1. What is your gender?**

- Male  
 Female

**2. What is your ethnicity?**

- White  
 African American  
 Hispanic, Latino, or Spanish origin  
 Asian  
 Other – please specify \_\_\_\_\_

**3. What is your age?**

\_\_\_\_\_ years-old

**4. What year did you graduate from high school?**

- 2009  
 2008  
 2007  
 Other – please specify \_\_\_\_\_ (year)

**5. While in high school, were you ever dual-enrolled in any college classes?**

- Yes – how many college classes did you take? \_\_\_\_\_ (# of classes)  
 No

**6. Is this your first semester of college since graduating high school?**

- Yes  
 No – when did you first begin college? \_\_\_\_\_ (semester/year)

7. How many credit hours are you currently enrolled in this semester?

\_\_\_\_\_ # of credit hours

8. How many total college credit hours have you earned (not including the credits you are currently taking)?

\_\_\_\_\_ # of credit hours

9. What is your planned major at this time?

\_\_\_\_\_

Undecided

10. Do you currently have a job?

Yes – how many hours per week do you typically work? \_\_\_\_\_ (hours)

No

11. What is your father's highest level of education?

Did not complete high school

High school diploma/GED

Some college

College graduate

Graduate school/professional degree

12. What is your mother's highest level of education?

Did not complete high school

High school diploma/GED

Some college

College graduate

Graduate school/professional degree

13. What is your current living arrangement?

I live with my parents/family members

I live by myself

I live with a friend(s)

I live with others, but they are not necessarily my friends

14. How much emotional support do you feel you have from family while attending college? *None* *Some* *A lot*  
1 2 3 4 5 6 7
15. How much emotional support do you feel you have from friends while attending college? *None* *Some* *A lot*  
1 2 3 4 5 6 7
16. How much emotional support do you feel you need from others while attending college? *None* *Some* *A lot*  
1 2 3 4 5 6 7
17. How willing would you be to seek emotional support from a counselor if you were having difficulties adjusting to college life? *Not at all willing* *Somewhat willing* *Very willing*  
1 2 3 4 5 6 7
18. How would you rate your current feelings of belongingness to your college in comparison to what you felt during high school? *A lot less* *The same* *A lot more*  
1 2 3 4 5 6 7
19. How would you rate your current physical activity level in comparison to what it was during high school? *A lot less* *The same* *A lot more*  
1 2 3 4 5 6 7
20. Do you currently participate in an organized intramural/recreational sports' league?  
 Yes  
 No

**CONTINUE** answering questions on the next page 

## HIGH SCHOOL QUESTIONNAIRE

**Directions:** Please answer the following questions based on your experiences while in high school. Read each question carefully and mark a (✓) in the box or circle the number corresponding to your answer. In some questions, you may be asked to provide a written response.

**21. What was your cumulative high school grade-point average (GPA)?**

\_\_\_\_\_ GPA

**22. What grades did you typically earn in your core academic classes during high school?**

<i>F's</i>	<i>D's</i> ↻ <i>F's</i>	<i>D's</i>	<i>C's</i> ↻ <i>D's</i>	<i>C's</i>	<i>B's</i> ↻ <i>C's</i>	<i>B's</i>	<i>A's</i> ↻ <i>B's</i>	<i>A's</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

*(check one box)* →

**Questions 23-29. Rate your performance in the following academic skills during your SENIOR year in high school:**

	<i>Poor</i>		<i>Average</i>			<i>Excellent</i>	
<b>23. Staying organized</b>	1	2	3	4	5	6	7
<b>24. Taking good class notes</b>	1	2	3	4	5	6	7
<b>25. Paying attention in class</b>	1	2	3	4	5	6	7
<b>26. Completing homework assignments</b>	1	2	3	4	5	6	7
<b>27. Preparing/studying class material</b>	1	2	3	4	5	6	7
<b>28. Doing well on quizzes, tests, and exams</b>	1	2	3	4	5	6	7
<b>29. My overall academic capabilities</b>	1	2	3	4	5	6	7

**30. How important was it to you to be a good STUDENT academically in high school?**

	<i>Not at all</i>		<i>Somewhat</i>			<i>Very much</i>	
	1	2	3	4	5	6	7

**31. While in high school, how interested/motivated were you in pursuing college?**

	<i>Not at all</i>		<i>Somewhat</i>			<i>Very much</i>	
	1	2	3	4	5	6	7

32. While in high school, to what extent did you discuss your expectations about college with family/friends?	<i>Not at all</i>				<i>Somewhat</i>			<i>Very much</i>
	1	2	3	4	5	6	7	
33. At the completion of high school, to what extent did you feel prepared to attend college?	<i>Not at all</i>				<i>Somewhat</i>			<i>Very much</i>
	1	2	3	4	5	6	7	

<b>Questions 34-40. Answer the following questions regarding your athletic identity during your SENIOR year in high school:</b>								
	<i>Strongly disagree</i>				<i>Strongly agree</i>			
34. I considered myself an athlete	1	2	3	4	5	6	7	
35. I had many goals related to sports	1	2	3	4	5	6	7	
36. Most of my friends were athletes	1	2	3	4	5	6	7	
37. Sports was the most important part of my life	1	2	3	4	5	6	7	
38. I spent more time thinking about sports than anything else	1	2	3	4	5	6	7	
39. I felt bad about myself when I did poorly in sports	1	2	3	4	5	6	7	
40. I would have been depressed if I were injured and could not compete in sports	1	2	3	4	5	6	7	

41. Did you play a high school sponsored sport during high school?
- No – **STOP HERE!** You are done with the survey – thank you for participating!
  - Yes- **CONTINUE** answering the remaining questions on the next page.

**HIGH SCHOOL SPORT PARTICIPATION QUESTIONNAIRE**

**Directions:** Answer the following questions **ONLY IF** you answered **YES** to question #41. Please answer the questions based on your **participation in sports while in high school**. Read each question carefully and mark a (✓) in the box or circle the number corresponding to your answer. In some questions, you may be asked to provide a written response.

**42. Indicate the grade(s) and sports(s) you played in high school (check all that apply and list all sports):**

- 9<sup>th</sup> grade – sport(s): \_\_\_\_\_
- 10<sup>th</sup> grade – sport(s): \_\_\_\_\_
- 11<sup>th</sup> grade – sport(s): \_\_\_\_\_
- 12<sup>th</sup> grade – sport(s): \_\_\_\_\_

**43. Did you participate/compete in a sport outside of high school (e.g., club team, recreational league, ODP, AAU, etc.)?**

- Yes
- No

<b>44. How intense was your involvement in high school athletics?</b>	<i>Not at all</i>		<i>Somewhat</i>		<i>Very much</i>
	1	2	3	4	5
	6	7			

<b>45. How important was it to you to be a good ATHLETE in high school?</b>	<i>Not at all</i>		<i>Somewhat</i>		<i>Very much</i>
	1	2	3	4	5
	6	7			

<b>46. While in high school, to what extent did you feel that your participation in sport(s) negatively impacted your academic performance?</b>	<i>Not at all</i>		<i>Somewhat</i>		<i>Very much</i>
	1	2	3	4	5
	6	7			

<b>47. While in high school, to what extent did you desire to play a varsity sport in college?</b>	<i>Not at all</i>		<i>Somewhat</i>		<i>Very much</i>
	1	2	3	4	5
	6	7			

**48. Are you currently a member of a school sponsored sport team representing your college?**

- Yes – **STOP HERE!** You are done with the survey – thank you for participating!
- No – **CONTINUE** answering the remaining questions on the next page. 

**SPORT ADJUSTMENT QUESTIONNAIRE**

**Directions:** Answer the following questions **ONLY IF** you answered **NO** to question #48. Please answer the questions based on your **present feelings/circumstances**. Read each question carefully and circle the number corresponding to your answer.

<b>Questions 49-56. As a result of no longer participating competitively as a student-athlete at the school you attend, <u>to what extent do you miss...</u></b>							
	<i>Not at all</i>		<i>Somewhat</i>			<i>Very much</i>	
49. ...being a part of a team	1	2	3	4	5	6	7
50. ...engaging in a competitive activity	1	2	3	4	5	6	7
51. ...having the structure of physical activity, practice, or training	1	2	3	4	5	6	7
52. ...having an activity to be with friends	1	2	3	4	5	6	7
53. ...being able to represent your school through sport(s)	1	2	3	4	5	6	7
54. ...the lifestyle of being an athlete	1	2	3	4	5	6	7
55. ...the recognition you received from others for being an athlete	1	2	3	4	5	6	7
56. ...having an activity to fill your time	1	2	3	4	5	6	7

You are done with this survey – thank you for participating!

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## BIOGRAPHICAL SKETCH

Christopher M. Raye, the oldest of three siblings, grew up in Bradenton, Florida, and graduated from Manatee High School in 2001. He attended the University of South Florida (USF) in Tampa, Florida, and graduated summa cum laude in 2005, earning his B.A. in psychology. While at USF, Christopher was a member of the men's division one soccer team and he was named an ESPN Academic All-American in his final season. He attended graduate school at the University of Florida (UF), earning his M.Ed. in school psychology in 2008, with a specialization in sport and exercise psychology consultation and student-athlete issues. While at UF, Christopher also served on the Intercollegiate Athletic Committee (IAC). A year long school psychology doctoral internship at P.K. Yonge Developmental Research School culminated his formalized clinical training. Christopher also served as the high school varsity head soccer coach at P.K. Yonge during the 2009-2010 school year, and he is an avid triathlete and long distance runner. In the summer of 2008, he married Theresa Williams, and the couple currently resides in Gainesville, Florida. Christopher plans to eventually secure a position providing services to athletes, coaches, and athletic departments as a licensed psychologist.