

COLLEGE ADJUSTMENT OF BLACK/AFRICAN AMERICAN STUDENT-  
ATHLETES AT PREDOMINATELY-WHITE INSTITUTIONS AND HISTORICALLY  
BLACK COLLEGES AND UNIVERSITIES

---

A Dissertation  
presented to  
the Faculty of the  
Department of Educational, School & Counseling Psychology  
at the University of Missouri

---

In Partial Fulfillment  
of the Requirement for the Degree  
Doctor of Philosophy

---

By  
SHERIECE SADBERRY, M.ED.  
Dr. Michael Mobley, Dissertation Co-Advisor  
Dr. P. Puncy Heppner, Dissertation Co-Advisor  
JULY 2010

The undersigned, appointed by the Dean of the Graduate School, have examined the dissertation entitled

COLLEGE ADJUSTMENT OF BLACK/AFRICAN AMERICAN STUDENT-ATHLETES AT PREDOMINATELY-WHITE INSTITUTIONS AND HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

presented by Sheriece Sadberry,  
a doctoral candidate for the degree of Doctor of Philosophy,  
and hereby certify that, in their opinion, it is worthy of acceptance.

---

Professor Michael Mobley

---

Professor Puncy Heppner

---

Professor Keith Herman

---

Professor Richard McGuire

---

Professor Niels Beck

.....Thanks to all those who have supported me throughout my lifetime. I apologize for anyone I may forget: Auntie Leanie, Jeray, Demo, Maren, Frank, Calvin, Fiona, Ash, Cousin Mark, Kristin, Katie, Catherine, Sarah & Marcus, the Ligers, Spencer, and Gerard. Without all your love and support, I may not have made it through the storm with this smile on my face.

Most importantly, the man who made me the person I am today... My Dad

## ACKNOWLEDGEMENTS

When I decided to embark on this academic path, I never could have imagined how many people would be there to guide me along the way. I greatly appreciate how much people believed in my abilities and never once expressed doubt in my pursuit of success. I would first like to thank the professors who encouraged me to study psychology at Nebraska, such as Dr. Ross Thompson and Dr. Gustavo Carlo and, especially, my mentor Dr. Wes Sime. Secondly, I would like to emphasize the immense impact Dr. Richard McGuire had on my growth and development. I am not joking when I say want to be like Dr. McGuire when I grow up. I appreciate the commitment to my academic pursuits Dr. Richard Cox displayed as he continued to work with me far after his retirement. Thank you, Dr. Mobley, for being a consistent supporter, advocate, mentor, teacher, and advisor. There are so many other people who have been a support for me throughout my graduate studies and I would like to thank them as well, especially my fellow graduate students and doctoral cohort.

This study was incredibly challenging, but rewarding all the same. I appreciate the support I received from those who helped me navigate accessing student-athletes and the athletic departments who participated in this study. I would also like to thank my committee members: Dr. Michael Mobley, Dr. Puncky Heppner, Dr. Keith Herman, Dr. Richard McGuire, and Dr. Niels Beck. I would especially like to thank Dr. Herman for his patience and understanding throughout the analysis process!

TABLE OF CONTENTS

ACKNOWLEDGEMENTS ..... ii

LIST OF TABLES ..... v

LIST OF FIGURES ..... vi

ABSTRACT ..... vii

INTRODUCTION ..... 1

    College Student Development ..... 1

    Managing Emotions ..... 5

    Interpersonal Relationships ..... 8

    Establishing Institutional Identity ..... 13

    African-American Student-Athletes ..... 17

    Historically Black Colleges and Universities ..... 24

    Summary ..... 25

    Present Study ..... 28

    Research Questions and Hypotheses ..... 29

METHODS ..... 31

    Participants ..... 31

    Instrumentation ..... 32

    Procedures ..... 35

    Statistical Methods ..... 37

RESULTS ..... 39

Characteristics of the Profiles .....	39
Predicting College Adjustment Scale Subscale Scores .....	41
DISCUSSION .....	42
Recommendations for Program Interventions .....	47
Strengths and Limitations .....	49
Conclusions .....	50
REFERENCES .....	52
APPENDICES .....	67
APPENDIX A - DEMOGRAPHIC BACKGROUND QUESTIONNAIRE .....	67
APPENDIX B - COMMUNICATION ASSESSMENT QUESTIONNAIRE .....	70
APPENDIX C - COLLEGE ADJUSTMENT SCALE .....	72
APPENDIX D - LIFE EVENTS SURVEY FOR COLLEGIATE ATHLETES .....	74
APPENDIX E - MINORITY STUDENT STRESS SCALE .....	78
APPENDIX F - PERCEIVED SOCIAL SUPPORT SCALE .....	80
APPENDIX G - GROUP ENVIRONMENT QUESTIONNAIRE .....	83
APPENDIX H - ATHLETIC DEPARTMENT PERMISSION FORM .....	85
APPENDIX I - RECRUITMENT EMAIL .....	87
APPENDIX J - RECRUITMENT FLYER .....	89
APPENDIX K - CONSENT FORM .....	91
APPENDIX L - COMPENSATION LETTER .....	94
VITA .....	96

## LIST OF TABLES

Table	Page
1. Demographics of Participants .....	61
2. Model Fit Indices for 1–4 Class Solutions of Social Support, Minority Stress, Life Stress, and Team Cohesion .....	62
3. Class Means of Most Likely Class Membership for Three-Class Model .....	63
4. Probabilities for Class Membership .....	64
5. Comparative association between means of class membership and CAS subscales .....	65

## LIST OF FIGURES

Figures	Page
1. Defining Characteristics and Deviations from the Sample Mean of Each Class .....	66



## ABSTRACT

A dearth of research studies has examined the psychosocial experiences of African American college student-athletes. By comparison, numerous studies have examined the adjustment process of African American students at predominately White institutions (PWIs). The literature shows African Americans have a difficult time adjusting at PWIs due to numerous factors, including general stressors (e.g. financial concerns) and race-related stressors (e.g. racial insensitivity by professors) (2004; Prillerman, Myers, & Smedley, 1989; Sedlacek, 1999). In regards to college athletes, research indicates that the structure of the campus environment challenges student-athletes' capacity to fit in and adhere to expectations regardless of their racial background (Cogan & Petrie, 1996; Ridinger & Pastore, 2000). Nonetheless, it is critical to understand how the campus environment at-large and within the sports context influence African American student-athletes' adjustment.

In the current study latent profile analysis (LPA) was employed to better understand the adjustment of African American student-athletes based on perceived social support, perceived campus racial climate, team cohesion, and life events. Results indicated three profile groups of African American student-athletes emerged and can be used to predict college adjustment concerns and campus setting (predominately White institutions and Historically Black Colleges and Universities). Implications are discussed to offer athletic directors, coaches, and practitioners a means to capitalize on identifying facilitators of healthy adjustment, ensuring that the overall campus, and more specifically the sport environment, provides a safe, encouraging place for the success of African American student-athletes.

## **Introduction**

College can be the best years of one's life or some of the most challenging years for students, but especially for collegiate athletes. Incoming freshmen have a new found freedom, but also the mission of navigating unfamiliar territory. This can be particularly difficult for African American students who find themselves in an environment that may be hostile, alienating, and insensitive because of the shortage of minority students at predominately White institutions (PWIs) (Henderson, 1988). Coupled with the additional responsibilities of being a collegiate athlete, African Americans may have an incredibly difficult time adjusting to college, especially during their freshmen year. However, there may be factors that contribute to a healthy adjustment process for African American student-athletes. In this dissertation, Black and African American will be used interchangeably in reference to individuals who identify racially as Black or ethnically as African American (ancestry originating from Africa).

### **College Student Development**

Astin (1993) expressed that young adults, whether they enter college or enter the job force after high school graduation, are in a continuous state of growth and change. Attending college can present a unique experience in the developmental process because environmental factors such as the type of institution, curriculum, faculty, and peers can directly influence the process (Astin, 1993; Chickering & Reisser, 1993; Tinto, 1993). Chickering and Reisser (1993) stated there are seven vectors to college development which include (1) developing competence, (2) managing emotions, (3) moving through autonomy toward interdependence, (4) developing mature interpersonal relationships, (5) establishing identity, (6) developing purpose, and (7) developing integrity. Freshmen year is important in

either shaping one's ability to persist in college or leading to difficult adjustment and attrition for all college students, but freshman year can be particularly important for students who face additional adversities such as African American and other minority students (Prillerman et al., 1989; Tinto, 1993) and collegiate athletes. In this research, three aspects of Chickering and Reisser's (1993) theory including managing emotions, developing mature interpersonal relationships, and establishing identity will be examined for their relevance to collegiate experiences of African American student-athletes.

Athletic participation could potentially counteract stressors related to college adjustment and facilitate a healthy developmental process. Participation in intramural and intercollegiate sports can increase the students' overall satisfaction of student life and college experience, provide motivation for attaining a degree, and provide an avenue to develop leadership skills, as well as decreasing alcohol consumption (Astin, 1993). Furthermore, the team environment and the athletic department culture may ease feelings of isolation and stress because it provides a different kind of social network (Miller & Kerr, 2002). Athletic participation can promote developmental, social, emotional, and attitudinal experiences that aide student-athletes in their transition to college despite the new challenges they may face (Melendez, 2006).

Chickering and Reisser (1993) discussed how experiences in athletics aid in developing a sense of competence, interpersonal skills, and increased awareness of emotions and ability to manage them. Student-athletes can cultivate intelligent competence (ability to read a play accurately), physical and manual competence (accomplishment of athletic goals), and interpersonal competence (building relationships with teammates and coaches). Since their performance is highly visible, student-athletes receive constant feedback about their achievements and developmental progress, and also confront their competence or lack

thereof directly. Student-athletes can benefit from the experience of competition by appreciating the challenge and the process of goal attainment, doing their best, playing by the rules, and respecting the opponent. Interpersonal skills can be improved through the constant interaction with coaches and teammates allowing student-athletes to perfect communication skills and accurate empathy. In addition, the team environment can foster an appreciation for difference and diversity because of the constant interaction with individuals from varying cultural backgrounds.

Furthermore, athletics provide an avenue to explore and express a range of emotions a student-athlete can feel, such as rage and delight, which can benefit a student because it may decrease the urge to hide one's feelings. Overall, student-athletes can increase their awareness of emotions, their ability to accurately identify emotions, and their understanding of emotional regulation. To further explain the emotional experience of student-athletes, Chickering and Reisser (1993) suggest that the experience of winning can be satisfying and produce joy or winning can be an anticipated outcome that has little to no effect on an athlete's emotional state. Losing, on the other hand, can produce shame, disappointment, or fear.

Conversely, freshman student-athletes tend to have a challenging time adjusting to social, personal, and emotional situations that are found in the college environment (Chickering & Reisser, 1993). As with all college students, transitioning to college entails increased independence, financial responsibility, exposure to drugs and alcohol, identity development, and establishment of romantic and peer relationships (Parham, 1993). In addition to general student body stressors, freshmen student-athletes have additional time constraints imposed by practice and workouts, competition, study hall, and travel which can make their transition to college more challenging (Cogan & Petrie, 1996; Ridinger & Pastore,

2000). Student-athletes have to find a balance with the expectation to attend classes regularly and complete assignments on-time, while committing time to athletics (Harris, Altekruise, & Engels, 2003; Parham, 1993), which can result in neglecting to take care of other areas of their lives (Cogan & Petrie, 1996).

This can be particularly challenging for freshmen because of the increased demands of college courses in comparison to high school coursework. Moreover, learning to adjust to the demands of college courses can be daunting for student-athletes who are not prepared for college; thus, resulting in overidentification with their athletic role to compensate the lack of academic, interpersonal, and/or sociocultural preparedness. This may inhibit their identification as a student all together. The result could be damaging because failure to succeed in class can lead to academic ineligibility to compete and potential loss of their athletic scholarships (Harris et al., 2003). Some professors may understand the demands that student-athletes encounter and may take travel and game schedules into consideration, but student-athletes can sometimes feel a disconnect with professors especially if the professors are from a different social background and status or require students to address them with title and last name (Adler & Adler, 1991).

In addition, time constraints can be detrimental to the career development process for athletes which college is intended to foster. Chickering and Reisser (1993) believe students change career plans frequently and can benefit from career counselors and career planning in developing future goals. Without clear direction or interest in future career goals, students do not, on the whole, become invested in their college work in order to provide for career development in the future (Chickering & Reisser, 1993). Athletics is not necessarily conducive to career exploration due to progress towards degree requirements and inflexibility in practice and game schedules. Therefore, student-athletes may not be able to

satisfactorily pursue academic majors or career options and may experience confusion, frustration, and indecisiveness in possible careers after athletics or disinterest in academic majors, as well as anxiety at the impending termination of the athletic career.

Student-athletes also have to adjust to the physical demands of collegiate practice (Adler & Adler, 1991), while being aware of their physical health to prevent injury and produce optimal athletic performance (Parham, 1993). On a daily basis, student-athletes are pushing their bodies to the limits, which can make it difficult to get to class or focus during class. Adler & Adler (1991) emphasized that athletics can begin to feel like full-time employment and student-athletes go through a process called “resocialization” as they begin to conceptualize the expectations of “who” they are supposed to be and rebuild the self. This may entail recognizing they play a different role on the team (i.e., not a starter), incorporating different team expectations and plays (Adler & Adler, 1991), learning to manage athletic successes and failures, and terminating their athletic career (Parham, 1993). Furthermore, student-athletes have to learn to confront negative stereotypes held about athletes, such lack of academic ability or preferential treatment.

### **Managing Emotions**

As a result of the development process, college students experience a variety of emotions at varying intensities such as anxiety, anger and aggression, depression, shame, and sexual or romantic attraction. Based on a longitudinal study from 1985-1989, students’ sense of psychological well-being seems to decline during the college years as measured by self-report on a 3-point scale assessing “felt depressed” and “felt overwhelmed by all I had to do” (frequently, occasionally, not at all) (Astin, 1993). The decline in psychological well-being may be expected given the academic and social stressors associated with college; however, several factors may positively affect students (Astin, 1993).

The pressures and demands of athletics, the constant balancing act of roles, and the pressure to grow up faster and make difficult life decisions can lead to high-risk behaviors in other areas of life such as drinking and sexual behaviors (Chickering & Reisser, 1993; Damm & Murray, 1996). Athletes use drugs and alcohol for all the same reasons as other people, but athletes may use drugs and alcohol to enhance performance, mask pain, alleviate the emotional pressure of competing, and socialize with team members (Brower & Rootenberg, 1999). Student-athletes have been found to have significantly higher proportions of risky lifestyle behaviors and alcohol-related problems than nonathletes (Damm & Murray, 1996; Martens, Dams-O'Connor, & Beck, 2006). They may see drinking as another competition and may in turn challenge themselves to out-drink others or challenge themselves to perform while intoxicated or hung over (Brower & Rootenberg, 1999). Survey data indicate high rates of drinking occur in swimming, diving, soccer, baseball, and softball (*NCAA study of substance use habits of college student-athletes*, 2001) and athletes participating in swimming and diving report more heavy episodic drinking, drinking days, and drinks per week than other athletes (Martens, Watson, & Beck, 2006). Intercollegiate athletes also drink more during their off-season than their competitive season (Martens, Dams-O'Connor, & Duffy-Paiement, 2006). In particular, freshmen student-athletes are adjusting to significant changes which may lead to increased alcohol use to cope, escape, or numb themselves (Damm & Murray, 1996). It is important to assess substance use in student-athletes because of the relationship between substance abuse and injuries and problems with substances often go untreated (Brower & Rootenberg, 1999).

Additionally, athletes tend to be less inclined to seek professional help for psychosocial problems such as depression, adjustment, anxiety, and substance use (Hinkle, 1996). Considering the percentage of the general population that experiences psychological

distress, it should be expected that athletes are not immune because their lives do not happen in a vacuum. Furthermore, emotional distress can be exacerbated by stress experienced as an athlete, for instance if competition anxiety is left unchecked, it may develop into problematic generalized anxiety or if disappointment and sadness related to difficulties experienced in the competition arena are not handled, it could lead to depressed mood, both of which can lead to substance use (Hinkle, 1996). Both male and female athletes can face additional issues such as eating disorders, sexual assault, and sexual identity development issues (Cogan & Petrie, 1996).

In a study of 78 ethnically diverse, freshmen student-athletes and 174 freshmen non-athlete students, Downey (2005) compared the adjustment process of the students using the Student Adaption to College Questionnaire at two separate times during their 1<sup>st</sup> semester. Student-athletes represented 13 sports, so some athletes were in-season and some were out-of-season, but this was not accounted for in the analysis. At week seven, student-athletes scored lower than non-athletes on the goal commitment/institutional attachment subscale, but higher on personal/emotional adjustment subscale. However, student-athletes adjustment declined from week 7 to week 15 in academic and personal/emotional adjustment, not just in comparison to their previous levels, but their adjustment scores on these subscales were significantly lower than non-athletes. These results may show the impact of athletic participation on the adjustment process of student-athletes throughout the year.

It is important to consider the impact of time on adjustment which is something not always taken into consideration when examining the adjustment of students or student-athletes. Additionally, it will be beneficial to determine if similar findings are obtained for African American student-athletes as a distinct cultural group. Although Melendez (2008)



did not assess for psychological concerns in a study of the adjustment of African American student-athletes, the researcher stated there was some indication of depression and anxiety, academic difficulties, and health-related issues expressed by the athletes and this would be cause for further investigation.

### **Interpersonal Relationships**

During college students work towards developing mature relationships with peers, family, and faculty. Peer groups seem to be the most influential source of growth and development, especially when affiliated with peers the individual most strongly identifies. Students seek out individuals of similar values, standards, and interest which can amplify their peers influence (Astin, 1993; Chickering & Reisser, 1993). Next to peer groups, faculty represents the most significant aspect of the students' undergraduate academic development. Unfortunately, faculty varies on how they spend their time, their goals and values, and their interest in being accessible and mentoring students. Research-orientated faculty tend to spend less time focusing on effective undergraduate teaching as opposed to student-oriented faculty (Astin, 1993). As a result, many students may have to take on the responsibility of creating a support system, which will aide in their development through their collegiate careers.

**Family and peer support.** Perceived social support from family and friends can also have an impact on college student adjustment. A strong relationship between family members could facilitate adjustment (Tinto, 1993), but if students feel their college attendance is causing a strain on the family or feel disloyal about being away from home, family ties may inhibit adjustment (Arnold, 1993). First-generation college students' families may not be able to relate to the college student experience making it difficult to rely on the family for support (Kenny & Perez, 1996). Boulter (2002) did not find a significant

relationship between family support and academic adjustment among a sample of diverse college students (81% White, 14% African American, 5% other ethnic groups). Such results may have been significantly influenced by the high concentration of White students in this study's sample.

Conversely, peer relationships may have a strong affect on the adjustment of college students. A study conducted by Buote, et al. (2007) at five Canadian universities (N=702) found a significant positive relationship between quality of relationships with new friends and college adjustment for freshmen. Furthermore, their results were particularly true for students living in dormitories rather than off-campus. Dennis, Phinney, & Chuateco (2005) examined the college adjustment of 100 Latino(a) and Asian sophomores at a predominately minority school who were lower-lower/middle class immigrants and 1<sup>st</sup> generation college students. The researchers found that a lack of peer support negatively affected college adjustment and that family support was not related. In addition, by not having supportive peers, GPAs were found to be lower at the end of the 1<sup>st</sup> semester. Furthermore, Friedlander, Reid, Shupak, & Cribbie (2007) examined the adjustment of 115 freshmen psychology students at Canadian university. Support from friends was shown to improve the adjustment of 1<sup>st</sup> generation college students' person-emotional, social, and overall adjustment as measured by the Student Adaption to College Questionnaire (SACQ), while family support only had an effect on overall adjustment.

However, little is known about how family and friends play a role in college adjustment of Black students (Hinderlie & Kenny, 2002), which may be different than other students considering the additional adversities Black students may face. In Hinderlie & Kenny's (2002) study of Black college student adjustment, the results indicated that support from friends, faculty, and student organizations on-campus facilitated adjustment. In

addition, a hierarchical multiple regression analyses revealed parental attachment (maternal and paternal) contributed significant variance to academic, personal-emotional, and institutional adjustment beyond on-campus support. There was no relationship between social adjustment and parental attachment. Levin, Van Laar, & Foote (2006) conducted a longitudinal study over a five year period examining in-group friendships based on a measure created by the authors using different variables to assess in-group friendship, perceived discrimination, ethnic identification, institutional belonging, academic commitment, academic motivation, and academic performance. There were 2,749 students in the first wave (32% White, 36% Asian American, 18% Latino, and 8% African American). Study results showed a positive relationship with same-ethnicity group friendships and academic commitment and motivation at the end of college for African Americans. In addition, a positive relationship was shown between students' perceived discrimination and academic motivation. The authors hypothesized this finding may be due to same-ethnicity group friendships creating a stronger ethnic identity increasing students' attributions of negative experiences to discrimination and not internal causes, protecting their self-worth, because other researchers have explored the benefits of coping skills, such as awareness of racism and barriers, in African American students' ability to successfully navigate college.

**Faculty support.** On-campus supports can aid in the transition to college, specifically faculty and mentors influence student development by helping students clarify purposes, values, aspirations, and career and educational goals (Chickering & Reisser, 1993). Personal encouragement can be especially impactful for minority students (Chickering & Reisser, 1993), but there are few visible Black faculty for support and to serve as mentors (Hinderlie & Kenny, 2002), which can result in feelings of loneliness and alienation (Sedlacek, 1999). Hinderlie & Kenny (2002) studied parental attachment and social support

in the adjustment of 186 African American students at a predominately white institution (PWI) and found that perceived on-campus support for Black students was the most significant factor in adjustment; in particular, support from instructors significantly impacted academic adjustment. Boulter (2002) found that a positive perception of instructors' care and support was a positive predictor of academic adjustment among a diverse sample of college freshmen including African American students.

Nevertheless, Sedlacek's (1999) review indicates that Black students may find it challenging to establish a relationship with White faculty, so they may rely more on off-campus supports such as family and friends. In part, Black students consider feedback from White faculty to be inefficient in allowing them to accurately gauge their performance in class because the feedback tends to foster either low expectations or overly positive reactions to their work. In addition to the challenge of fostering relationships with White faculty, Black students may have difficulty forming relationships with their White peers due to White students' level of discomfort or possible negative stereotypes about Black students (Sedlacek, 1999). In summary, supportive faculty and White peers may have an immense impact for Black students adjustment.

**Support for student-athletes.** As student-athletes become more interdependent, they are trying to find a balance between reliance on parents, mentors, peers, and other campus supports (Chickering & Reisser, 1993). However, the amount of time spent in athletics, with their team, and in study hall, can also result in feeling isolated from the campus population (Adler & Adler, 1991; Harris et al., 2003; Parham, 1993). Student-athletes tend to find themselves in classes with other athletes, pairing up with each other in class, which may limit their interaction with non-athlete students (Adler & Adler, 1991). Isolation may increase a student-athlete's struggle with navigating campus life and becoming familiar

with on-campus resources. Furthermore, increased media attention may cause student-athletes to be less inclined to interact with the general student body (Ridinger & Pastore, 2000; Sellers & Damas, 2002). Adler & Adler (1991) point out that student-athletes have to learn to deal with the media, boosters, and fans, especially when attending high profile universities and participating in revenue-producing sports. As a result of the attention, feelings of isolation and alienation can increase producing conflict between roles as an athlete and socialite, which may lead to less privacy and coaches trying to govern their lives to decrease chances of public scrutiny.

Several studies have explored college student-athletes' experiences in an attempt to understand what factors may be facilitators or barriers to their sociocultural adjustment. A study by Quarforth, Brewer, Petitpas, Champagne, and Cornelius (2003) examined life stress (Life Events Survey for Collegiate Athletes), social support (Social Support Survey), quality of relationships with parents and roommates (Perception of Parental Reciprocity Scale), sports satisfaction (Sport Satisfaction Inventory), athletic identity (Athletic Identity Measurement Scale), and level of adjustment (SACQ) towards the end of the 1<sup>st</sup> semester of 48 Division III college football players. The racial/ethnic background of these football players were not specified in Quarforth et al's research, which is not uncommon in sports psychology literature. All of the examined variables were found to impact the student-athletes' adjustment, with quality of relationship with roommates and sports satisfaction as the most significant predictors. These factors may be integral in facilitating college adjustment for student-athletes.

Jackson & Krane (1993) conducted a qualitative study interviewing four male scholarship basketball players (race/ethnic background not specified) at National Collegiate Athletic Association (NCAA) Division I, National Association of Intercollegiate Athletics

(NAIA), and National Junior College Athletic Association (NJCAA) examining academic, athletic, and social adjustment. All student-athletes reported that academics were important and that they were motivated to succeed academically. They indicated that it was difficult to deal with not being a starter on the team, which affected their athletic motivation and confidence. However, their greatest support came from having close bonds with their teammates, who provided advice in times of need. More importantly, learning how to balance social forces, athletics, and academics allowed them to also be involved in social activities on campus. Such findings offer a perspective on facilitators and barriers to sociocultural adjustment process for athletes. It is also important to consider the impact the institution may have on the adjustment on student-athletes since their sociocultural experience happens in the academic institutional community at large as well.

### **Establishing Institutional Identity**

The institution can positively affect students' satisfaction with student life and social interactions when diversity is strongly emphasized (Astin, 1993; Chickering & Reisser, 1993). Chickering and Reisser (1993) express the importance of a diverse student culture in identity development and sense of self by encouraging explorations and interactions with different kinds of people and situations, observation of others' reactions, testing different roles with varying degrees of investment, and receiving feedback void of others' prejudices. However, if the institutional community lacks diversity or acceptance thereof, thus limiting individuals to a set of roles, such as athlete or intellectual, then the development of identity suffers. Even when the campus has a diverse student population, identity development can suffer when students from different cultures tend to stay in their own groups or insensitivity or intolerance exists beneath a façade of political correctness (Chickering & Reisser, 1993).

Prillerman et al. (1989) contends that socioeconomic background does not buffer the psychosocial vulnerability African American students experience at predominately-White institutions (PWIs). African American students tend to encounter adjustment issues that are relative to most college students such as autonomy, sexual and aggressive feelings, career issues, anxiety, depression, alienation, personal identity, academic performance, but also have to confront interpersonal relationships between Blacks and Whites and racialization and racial identity development (Baum & Lamb, 1983; Burback & Thompson, 1971; Chickering & Reisser, 1993; Gibbs, 1973). There are also racial prejudice or discrimination problems associated with residence halls, campus police, interracial dating, athletics, and other aspects of campus life (Sedlacek, 1999). Chickering and Reisser (1993) state an important developmental aspect during collegiate years is establishing identity, which includes sense of self in social, historical, and cultural context. They further explain how a sense of confidence and self-esteem seem to be critical variables in Black student success. However, racial hostility on campus and a lack of cultural acceptance of African American norms by the dominant group can lead to excessive allegiance with each same-ethnicity peers further isolating Black students from experiences that can foster social and academic development (Chickering & Reisser, 1993; Tatum, 1997).

Race-related stress is defined as “the psychological discomfort that results from a situation or event that an individual appraises as troubling because of racial discrimination or isolation” (Plummer & Slane, 1996, p. 303). Research has found that Black college students at predominately-White institutions (PWIs), on average, experience some sort of race-related stress that affects their adjustment in addition to general stress (Edmunds, 1984; Gibbs, 1973; Henderson, 1988; Neville et al., 2004; Prillerman et al., 1989; Sedlacek, 1999; Smedley, Meyers, & Harrell, 1993). General stress arises from any situation that causes distress, but

racial stress is a specific form of general stress. Most students experience general stressors of college, such as financial concerns, but race-related stressors, such as racial insensitivity by professors, can significantly affect the adjustment of Black students. It has been found that Blacks report more racially stressful situations than Whites at PWIs. Furthermore, race-related stress has been found to be a predictor of 1<sup>st</sup> year GPA for Black students (Prillerman, 1989).

Perceived racism is the system of beliefs and attitudes of individuals and institutional policies that are perceived to pose obstacles to individuals or groups because of their phenotypic characteristics (e.g. skin color, hair texture, width of nose, size of lips) or ethnic group affiliation (Clark, Anderson, Clark, & Williams, 1999). It has been found that 100% of Black male and female college students report experiencing perceived racism in their lifetime (Landrine & Klonoff, 1996), in addition, these findings vary with gender because men reported experiencing more race-related stress than women (Sigelman & Welch, 1991; Utsey, Payne, Jackson, & Jones, 2002; Utsey & Ponterotto, 1996). As a consequence, Black males in comparison to females may experience or perceive themselves as being targets within their environments. Institutional racism, policies that produce negative outcomes for minorities, seems to be more prevalent than individual racism, direct discriminatory acts towards the person (Sedlacek, 1999).

Research has identified numerous important variables related to the success, or failure, of African American students: students' perceived supportiveness of the institutional environment; degree of alienation or social isolation, particularly at PWIs; perceived minority status and minority status-related pressures or problems; racial discrimination; interaction with Black classmates or similar types of students on campus; and the degree and quality of interactions with other members of the institution (Prillerman et al., 1989; Tinto, 1993) for



example, contact with faculty outside of the classroom (Noel, 1985; Tinto, 1993). Tinto (1993) also emphasized the role families may play in the adjustment of freshmen, which can also depend on the families' acceptance of college attendance.

A study conducted by Prelow, Mosher, & Bowman (2006) examined the college experience of 136 African American students at a PWI. The authors found that 98% of the students indicated they experienced a discriminatory event in the past year as measured by Experiences of Discrimination Scale (EDS). Furthermore, experiences of a discriminatory event was positively related to depression, as measured by the Center for Epidemiological Studies Depression Scale (CEDS), and negatively related to life satisfaction, as measured by the Satisfaction with Life Scale (SWLS). Ancis, Sedlacek, & Mohr (2000) examined the perceived cultural campus climate of 578 undergraduates (307 first-years, 271 juniors) at a large PWI (136 African Americans, 130 Asian Americans, 77 Latinos/as, and 235 White). The authors used the Cultural Attitudes and Climate Questionnaire to assess the students' perceptions and experiences of the university's racial/ethnic climate. African Americans, specifically, reported more experiences that were negative than other ethnic groups, such as racial hostility; greater pressure to conform to stereotypes; less equitable treatment by faculty, staff, and teaching assistants; and racism from faculty.

Mounts (2004) examined adjustment concerns (depression, anxiety, substance use, loneliness, parental support, and campus climate) with 87 African American and 232 White freshmen students in their 1<sup>st</sup> semester. Overall, it was found that White students had higher levels of drug and alcohol use than African Americans. When both White and African American students perceived the campus as racially hostile, a relationship was found between adjustment problems and binge drinking for both population of students. Specifically for African American students, a relationship was found between higher levels of

depression, loneliness, and anxiety. Older African American students reported less anxiety than younger students did. However, higher levels of parental support were related to lower levels of depression, loneliness, and anxiety among African American students.

### **African-American Student-Athletes**

A question remains whether the sociocultural adjustment experiences of African American student-athletes are similar to or different from their White counterparts? Previously discussed research indicated that African American students, in general, adjust to college differently than White students (Edmunds, 1984; Gibbs, 1973; Henderson, 1988; Hinderlie & Kenny, 2002; Neville et al., 2004; Plummer & Slane, 1996; Prillerman et al., 1989; Sedlacek, 1999; Smedley et al., 1993). African American student-athletes generally tend to report poorer educational high school backgrounds and thus, difficulty performing in college (Sellers, Kuperminc, & Damas, 1997). Unfortunately, given such poor academic preparations prior to college coupled with the additional constraints of being an athlete, it is plausible that African American student-athletes' adjustment process in college may be challenging. In addition, research shows that African American student-athletes tend to be 1<sup>st</sup> generation college students in comparison to their White student-athlete counterparts (Sellers & Damas, 2002) increasing the difficulty of receiving support about navigating college life from family and friends in their hometown.

It has been found that African American college students, in general feel alienated from the overall college campus life (Adler & Adler, 1991; Allen, 1988). Such feelings of alienation may be amplified for African American student-athletes who may also feel isolated in their athletic environment. Furthermore, African American student-athletes seem to rely more heavily on off-campus supports which can increase these feelings of isolation from general campus life (Sellers & Damas, 2002). In addition, these off-campus supports may be

social cliques that do not always have viewpoints consistent with earning a degree (Adler & Adler, 1991), thereby negating positive facilitation of student-role and associated academic expectations at college. Student-athletes' parents may be able to keep them focused on their academic role, but student-athletes may have little direct contact with their family (Adler & Adler, 1991).

A qualitative study of male athletes conducted by Singer (2005) who interviewed four scholarship football players at a predominately White institution found that Black athletes felt that racism existed in athletics. In general, Black student-athletes indicated that racism manifested as a result of them not being offered major decision-making roles and placed in leadership positions in collegiate and professional sports. Black student-athletes reported feeling that they needed to excel more than others [White student-athlete peers] to gain such positions off-the-field. In addition, Black athletes reported being treated differently than their White counterparts, by being scheduled into classes they did not need in order to maintain eligibility, being singled out for random drug tests, and not given as many chances when they made mistakes. Sellers & Damas (2002) also point out that failures of Black student-athletes are often very public. Nonetheless, Singer (2005) argued his study did not examine possible "cultural mistrust" and "racism reaction" or the participants' individual barriers to success; it mainly examined the overall feeling of racism that Black athletes perceived in their environment. However, the perceived lack of leadership opportunities and racial inequalities may amplify the perception of discrimination and racism and create a racially isolating feeling within the sport environment.

Although racism may be perceived within the overall athletic environment or in the general college climate, on an individual level, there may be potentially less racism actually experienced within the team context. This may act as a buffer to potential racial stressors

since athletes spend a majority of their time within the sport team context. Brown, Brown, Jackson, Sellers, & Manuel (2003) surveyed 375 White incoming college student-athletes at PWIs about the amount of contact they had with Black teammates in high school and their endorsement of covert prejudice items, racial affect towards Blacks, and support policies that benefited Blacks. Among group oriented team sports (i.e., basketball, football, volleyball), Brown et al. (2003) found that contact with Black teammates in high school increased White students' support for government policies for minorities and their level of positive affect towards Blacks, in comparison to peers who played individual team sports (i.e., track, wrestling, swimming). Also, differences in gender were found indicating that White female athletes exhibited less covert prejudice, more positive affect, and support for governmental policy changes than White male athletes. Although this study only looked at the percentage of Blacks on the participants' team and not individual relationships with their teammates, results suggest the possibility that within the team setting White student-athletes may be more accepting of Black student-athletes, potentially countering a perceived racially hostile campus environment and athletic environment during college sports.

Melendez (2006) attempted to further understand the adjustment of both minority and non-minority student-athletes. Data was collected from four PWIs and consisted of 207 students (101 student-athletes and 106 non-athletes) including 52% White (majority) and 48% minority (non-White) students. Using the Student Adaption to College Questionnaire (SACQ), Melendez found that student-athletes reported greater academic adjustment and institutional attachment scores than non-athletes, in contrast to Downey's (2005) study. Females scored higher on academic, social, and institutional adjustment than males, with minority females reporting higher academic scores than both majority and minority males.

There were no significant racial/ethnic differences in adjustment as measured by the SACQ, however, Melendez points out this finding as being inconsistent with statistics that show differences in graduation rates between racial/ethnic groups. Melendez recommended that additional research is needed to understand such discrepancies regarding graduation rates. Campus diversity may play a role in these findings given that the four campuses surveyed had between 17% - 35% minority student populations and were located in four major cities on the East Coast. The diversity of the area may have contributed to positive adjustment to the campus. Ethnic identity and within group variation were not examined in this research study and may further explain the findings (Melendez, 2006).

In a follow-up study, Melendez (2008) studied the experience of 6 African American football players, between the ages 19 and 20, who were in good academic standing at a predominately White institution in northeastern United States. The common themes found in this study were feelings of isolation, being misunderstood, and feeling powerless. More importantly the student-athletes expressed mistrust of teammates and others, as well as feeling judged, having to combat double standards and unwritten rules, feeling pressured to assimilate to different values, being stigmatized as a Black athlete, and living in an inhospitable city. In terms of acculturation, the Black student-athletes felt their attitude, music, culture, and appearance were being judged and in order to be accepted by coaches and non-Black teammates they felt a sense of needing to “sell out” or change to “fit in” the coaches’ world instead of their culture becoming a part of the team’s culture. The student-athletes expressed a desire for better communication about coaches’ expectations and allowance for the team to build cohesion and structure without pressure from the coaches. In discussion with White teammates and coaching staff members, it was indicated that the tendency of Black players to associate with each other during team events was creating the

racial division, although there was not a consensus as to the extent of racial tension on the team. The student-athletes felt valued by their coaches and teammates just misunderstood and pressure to “play the game” of unwritten rules in order to steer clear of social, legal, or economic trouble (Melendez, 2008).

Furthermore in the study, the student-athletes stated they had to combat stereotyping by classmates and faculty as “less than” because of both racial and athletic status. Although they admitted some preferential treatment because of being an athlete, they indicated they probably would not attend that school if they were not an athlete and recognized their status sometimes led to rejection and alienation because of prejudgments. Judgments were not just from White peers but also from non-athlete Black peers as well, who the student-athletes felt harbored some resentment towards athletes. Lastly, the city itself was not culturally accepting as racial incidences (racial slurs being yelled) left the student-athletes feeling unwelcome (Melendez, 2008).

**African-American female student-athletes.** The aforementioned studies address the student-athletes and Black student-athlete experience in a general sense; however, literature has consistently shown that African-American, female student-athletes tend to adjust better to college than their male counterparts. In particular, it has been found that female student-athletes consistently achieve higher GPAs and graduation rates than male student-athletes. Riemer, Beal, & Schroeder (2000) conducted a qualitative study examining female student-athlete college adjustment of 11 tennis players and 19 basketball players at a small private college and found that female student-athletes prioritized athletics and academics equally. Although they experienced social isolation from the school and the community, it did not seem to adversely affect their academic performance.

Unfortunately, research on the experience of African-American female student-athletes is lacking (Sellers & Damas, 2002; Sellers et al., 1997). Additionally, African American female student-athletes may experience both racism and sexism, and possibly classism, in both the general campus life and athletic sport contexts (Bruening, Armstrong, & Pastore, 2005; Foster, 2003). African American female student-athletes comprise approximately 10.4% of all NCAA Division I female student-athletes (Bruening et al., 2005) and this low percentage may lead to feelings of isolation. Foster (2003) explored the racialization of Black female athletes at a Midwestern university discussing how because of their race and sex Black female athletes were prejudged. Members of the athletic department expressed statements implying Black female athletes were immature, academically deficient, and sexually overactive and the athletic department installed policies and measures to monitor these athletes. In addition, Black student-athletes understood that they needed to excel beyond all expectations in their academics and conform to social behaviors desired by coaches and counselors in order to ensure they were not constantly monitored. Such findings are shockingly suggestive of African American female athletes' sense of being under "surveillance" in their sport environment. From an athletic department organizational context research shows that African-American women report being underrepresented in leadership roles off-the-field similar to their African American male counterparts. In addition, images of African-American female athletes are virtually non-existent in print media and where present tend to only focused on certain sports (e.g., basketball, track & field) in television (Bruening et al., 2005).

In their study Sellers, Kuperminc, & Dumas (1997) revealed that African American female student-athletes' college GPA (n=154) was less than White female student-athletes (n=793) and greater than African American males (n=628). African American female

student-athletes indicated lower levels of alienation and experienced less racial tension than African American male counterparts. In comparison to African American female non-athletes, the college experiences of African American female student-athletes were reported as being similar when academic preparation and demographic differences were taken into account for the lower GPAs and academic problems. Overall, African American female student-athletes indicated that they were satisfied with their college experience and their personal development as a result of participating in athletics (Sellers et al., 1997). This indicates that there may be distinctive, meaningful factors influencing the experience of African-American female student-athletes that facilitates college adjustment in comparison to African American male student-athletes.

An additional qualitative research study conducted by Bruening et al. (2005) examined the collegiate experiences of 12 African-American female student-athletes at a large NCAA Division I university. Their findings indicated that these women felt “silenced,” not only in the failure to be noticed but also a failure to have their voices heard in society and in sport. This was related to their racial background in being African-American, but also their gender in terms of being a woman, suggesting that some of their negative experiences may also be experienced by their White female athlete counterparts. Foster (2003) reported a tendency to foster segregation among Black and White female student-athletes on the teams, particularly on the track team studied. This may further the feeling of being “silenced” as the interaction with racially different teammates decreases. In addition, the Black women indicated that they felt sexualized, which resulted in negative comments and degrading remarks by both male student-athletes and non-athletes (Foster, 2003).



## **Historically Black Colleges and Universities**

Most of the aforementioned studies were conducted at PWIs. It is important to understand the experience of African American students at Historically Black Colleges and Universities (HBCUs) as well considering that Black students at PWIs experience lower ethnic unity and ethnic trust (Westbrook, Miyares, & Roberts, 1978). Race-related stress at PWIs may be intergroup (perceived racism between White and Black students) and/or intragroup (colorism in the Black community) (Clark, 2004; Westbrook et al., 1978). It is possible that there is some sense of racism being experienced at a predominately-Black campus or community, as intragroup racism (i.e., colorism). However, Fleming (1984) states that even though at both campuses students have to deal with academic stress, at PWIs Blacks experience more interpersonal stress, as they may face both inter- and intragroup racism (i.e., colorism).

Researchers have identified factors that facilitate adjustment of Black students at predominately-Black campuses or HBCUs. It seems that faculty contact outside of the classroom is important to retention, but this happens more so at HBCUs than PWIs (Sedlacek, 1999). In addition, Black students at Black colleges are better able to make self-assessments, which may be due to ongoing feedback from faculty (Fleming, 2001). It is easier for Black students to feel a sense of community at a Black campus than at White campuses (Sedlacek, 1999). Lastly, it has been shown that racial socialization, the development of a healthy Black identity, positively contributes to the adjustment of Black students (Anglin & Wade, 2007), which may be easier to develop at Black campuses than at PWIs.

In comparative studies, Greer & Chwalisz (2007) examined perceptions of campus racial climate and coping strategies of 101 African American students from a PWI and 102

African American students at an HBCU. They found that African American students at the PWI reported a higher perception of minority stress (Minority Student Stress Scale) than at the HBCU. Yet, students at both campuses used similar coping strategies including approach and avoidance coping strategies.

Flowers (2002) examined data collected by colleges and universities over a ten year period, from 1990-2000. In the analysis, 1385 African American students who attended 1 of 11 HBCUs and 6450 African American students who attended at 1 of 196 PWIs completed the College Student Experiences Questionnaire (CSEQ). The CSEQ is a self-report measure assessing college students' perception of their college experience and how they perceived it helped them to achieve academic success. Results indicated that attendance at an HBCU leads to higher self-reported academic and social gains for African American students.

DeSousa & Kuh (1996) also used the CSEQ in a study examining the experiences of 600 African American students at a HBCU and 600 African Americans at a PWI, 150 students for each class at each campus. Students at the HBCU perceived greater educational gains and devoted more efforts to academic activities than the students at the PWI. Out-of-class experiences and peer interactions were important to student learning and personal development at both campuses and involvement in social and interpersonal activities was not limited because of the type of campus. However, what is missing from these studies is the impact of participating in college athletics. It is important to understand athletic participation as an out-of-class experience since it provides a different means of social integration and interaction and could be a barrier to or a factor in academic gains.

### **Summary**

As seen in the current literature the ability to form supportive family and peer relationships, interaction with faculty, and the campus community have been found to affect

African American students and African-American student-athletes adjustment in varying ways. The aforementioned research studies are not without limitations, however. Lack of diversity in sport, lack of racially diverse populations, and lack of diversity in institutions can limit the generalizability of these findings, but addressing such limitations in future research would give a broader perspective regarding African American student-athletes' experiences. In addition, Downey's study was the only one that assessed multiple periods of adjustment during student-athletes' freshmen year, albeit limited to the 1<sup>st</sup> semester. Adjustment could be the most challenging for students during the 1<sup>st</sup> semester, but their overall adjustment may vary during the school year, and may reflect something entirely different at the end of the first year. Downey (2005) explicitly stated that future research should also include other demographic variables related to adjustment, such as contact with family and friends from home, as these factors may influence adjustment as well. Additionally, these studies examined different factors that may affect student-athletes sociocultural adjustment, but were not capable of explicitly establishing a consensus. It does seem that relationships with others, whether it is roommates or teammates, seem to be a positive, facilitative contributing factor to sociocultural adjustment among both the general student population but also student-athletes.

Overall, findings in the sports research literature seem to be inconsistent and speculative toward increasing our understanding of the sociocultural adjustment process of African American student-athletes. Many previous studies have failed to view adjustment as a process, an interaction that happens over a course of time. Many of the authors indicated that a significant limitation of their research studies was the reliance on a single, one-point assessment of sociocultural adjustment process among student-athletes. Indeed, multiple assessment points over a period of time such as a college academic year would provide a

more inclusive view of the student-athletes' sociocultural adjustment process. As stated previously, the lack of diversity in sport, the noticeable absence of examining racial and ethnic backgrounds among student-athletes, and small sample sizes all contribute to a less than clear empirical understanding of the sociocultural adjustment process not only of student-athletes, but African American student-athletes in particular. Furthermore, the majority of these studies were conducted at predominately-White campuses, even if the campus was located in a diverse city. Research has shown that Historically Black Colleges and Universities have shown significant gains in the academic success of African American students in comparison to PWIs. However, there is no knowledge pertaining to whether or not academic gains or adjustment is different for student-athletes at HBCUs, considering the additional stressor that can be created by participating in athletics. In addition, exploration of the possible effects of campus' racial climate on the adjustment of African American student-athletes has not been considered in research at PWIs.

It is important to understand the facilitators and barriers to adjustment of African American student-athletes in order to implement programs to aid them in becoming successful in college especially during their freshman year. Social and academic integration into the campus community is essential in the academic success of African American students (Allen, 1985; Loo & Rolison, 1986), especially for Black student-athletes. Sellers et al. (1997) state that integration into the campus community can aide in improving academic success for both Black student-athletes and non-athletes, but overall Black student-athletes have higher levels of satisfaction than non-athletes. Athletic participation aides in developing life skills and competencies that would be beneficial in allowing student-athletes to feel responsible and achieve personal goals (Sellers et al., 1997), as well as providing an environment that is supportive and conducive to building institutional pride and a sense of

belonging and attachment that many minority non-student-athletes do not experience (Smedley et al., 1993). Athletic directors, coaches, and practitioners could capitalize on the facilitators of healthy adjustment, ensuring that the overall campus, and more specifically the sport environment, provides a safe, encouraging place for the growth of African American student-athletes.

### **Present Study**

According to the literature, African American have a difficult time adjusting on predominately-White institution (PWI) campuses due to numerous factors, both general stressors and race-related stressors. It is also known that the campus environment is challenging for student-athletes to navigate regardless of their racial background. Research has also shown that the sociocultural adjustment of African American student-athletes is unique in comparison to their White counterparts because of racial identity and perceived racism. However, the sociocultural adjustment process for African American students is perceived to be easier on historically Black colleges and universities (HBCUs); however, very few studies have examined athletes within such campus environments. The purpose of this study is to examine the sociocultural adjustment process of African American student-athletes at both PWIs and HBCUs.

This study will assess adjustment by using the College Adjustment Scale (CAS), which evaluates anxiety, depression, substance use, academic concerns, interpersonal relationships, family problems, academic concerns, and self-esteem. The CAS will measure areas of Chickering and Reisser's (1993) dimensions of adjustment such as one's ability to manage emotions, develop interpersonal relationships, establishing identity, and developing competence. In addition, social support (e.g., friends, family, faculty, and athletic department/coach) will be assessed using the Perceived Social Support Scale. The Group

Environment Questionnaire will assess the student-athletes level of integration into their team environment, an aspect of social adjustment that is unique to athletes during college. Life Events for Collegiate Athlete Survey also allows for the examination of concerns specific to athletics as well as additional life stressors which may or may not be related directly to the college experiences but that may impact psychological well-being. Finally the institutional environment will be assessed using the Minority Student Stress Scale to measure perceived campus racial climate. It is hoped that the research findings of this study will provide critical information to formulate interventions to assist African American student-athletes in their sociocultural adjustment process at PWIs and HBCUs.

The present study expands upon previous literature because it is one of the first studies to use latent profile analysis to understand the co-occurrence of social support, perceived racial campus climate, team cohesion, and life events in the adjustment of African American student-athletes. Prior studies have examined these different adjustment variables in isolation; rarely has African American student-athletes been the primary target sample. Furthermore, variables such as college adjustment scores and campus environment will be used to predict the emerging profiles. Latent profile analysis (LPA) has been used in studies examining patterns of alcohol use (O'Connor & Colder, 2005), characteristics of incarcerated female sexual offenders (Turner, Miller, & Henderson, 2008), profiles from the Weschler Memory Scale-III (Frisby & Kim, 2008), and profiles of attitudes towards school violence (Frisby, Kim, & Wolfmeyer, 2005), but latent profile analysis would be an innovative analysis used to understand the profiles of student-athletes.

### **Research Questions and Hypotheses**

The current study will address the following three research questions (a) Do different profiles exist among African American student-athletes as defined by perceived social

support, perceived racial campus climate, team cohesion, and life events?, (b) Can scores on the College Adjustment Scale subscales be used to predict the profiles, and (c) Do the profiles of African American student-athletes vary as a result of campus environments, Predominately White Institutions (PWI) vs. Historically Black Colleges and Universities (HBCUs)?

Based on the aforementioned research questions, the following hypotheses have been established:

1. Four profiles are hypothesized to emerge:
  - a. Profile 1 scores would indicate strong social support, a lack of minority stress on campus, a sense of good fit with the team, and either few stressful events or positive stressful events in the past 6 months.
  - b. Profile 2 scores would indicate strong social support and sense of good fit on team, experiences of minority stress on campus and moderate-positive stressful events in the past 6 months.
  - c. Profile 3 scores would indicate inadequate social support, little to no minority student stress, a sense of good fit with the team, and either few stressful events or moderate-positive stressful events in the past 6 months.
  - d. Profile 4 scores would indicate inadequate social support, experiences of minority stress on campus, lack of fit on the team, and negative stressful events in the past 6 months.
2. It is hypothesized the scores on the 7 subscales (anxiety, depression, self-esteem, interpersonal relationship, family, academic, and substance abuse) of the College Adjustment Scale (CAS) will predict distinct profiles. Profiles 1 and 3 are hypothesized to have healthy adjustment scores. Profile 2 is hypothesized to have

moderate adjustment scores. Profile 4 is hypothesized to have maladaptive adjustment scores.

3. It is hypothesized that African American student-athletes who attend PWIs will have different profiles emerge in comparison to African American student-athletes who attend HBCUs when using campus type as a predictor. More specifically, it is hypothesized that African-American student-athletes at HBCUs will exhibit profiles showing lower minority student stress and greater perceived social support contrary to hypothesized Profile 2 and Profile 4. In addition, there are no hypothesized differences in the profiles for team cohesion and stressful life events as a function of campus type.

## **Methods**

### **Participants**

The student-athletes in the current sample ( $N = 98$ ) primarily self-identified as African American (55%,  $n = 54$ ), male (64%,  $n = 63$ ), with a mean age of 19 years. Student-athletes from predominately-White institutions (PWIs) represent 70% of the participants and 30% of the participants are student-athletes from Historically Black Colleges and Universities (HBCUs). Student-athletes in this sample were active in Division I-A PWI, Division I-AA PWI, Division I-AA HBCU, and Division II HBCU athletic programs.

The mean high school GPA for the participants was 3.20 and a mean earned collegiate fall GPA of 2.77. Seventy-four percent of the participants indicated they were studying a major they wanted to study. Combined parental education (mother and father) consisted of GED ( $n = 5$ ), some high school ( $n = 6$ ), high school degree ( $n = 41$ ), some college experience ( $n = 46$ ), associate's degree ( $n = 18$ ), bachelor's degree ( $n = 46$ ), master's



degree ( $n = 21$ ), and graduate/professional degree ( $n = 3$ ). Table 1 reports the frequencies and percentages of select demographics for participants.

Participants indicated that, on average, they lived approximately 360 miles from home and visited home 0 times ( $n = 15$ ), 1-2 times ( $n = 32$ ), 3-5 times ( $n = 30$ ), and 6 or more times ( $n = 21$ ). Sixty-seven percent of the participants communicated with their family 11 or more times a month via phone ( $n = 98$ ), email ( $n = 34$ ), text messaging ( $n = 90$ ). Participant reported that on average 9 of their close friends did not attend the same school as them. Forty-seven percent communicated with their close friends 1-5 times a month, 25% communicated 6-10 times a month, and 22% communicated 11 or more times a month via phone ( $n = 80$ ), email ( $n = 23$ ), text messaging ( $n = 91$ ). Other reported modes of communication with family and close friends were Facebook, Skype, and instant messaging.

## **Instruments**

**Demographics.** Participants completed a demographic sheet that asked for information such as age, gender, sport, ethnic identity, scholarship status, eligibility status, high school GPA, hometown information, parent's income and education level, family size, and summer college courses. Please see Appendix A-Demographic Background Questionnaire for the complete questionnaire. In addition, participants were asked the number of times they visited home, frequency and type of communication with family and friends, number of peers from hometown that they remain in contact with while at school, major, and GPA via the Communication Assessment Questionnaire developed by author (see Appendix B).

**College adjustment scale.** Sociocultural adjustment process was measured using the College Adjustment Scale (CAS: (Anton & Reed, 1991); Appendix C). The CAS assesses nine domains of developmental and psychological problems encountered by college

students, however only seven subscales will be used in the current study: anxiety, depression, self-esteem, substance abuse, interpersonal relationships, family problems, and academic concerns. The following two subscales were not used: suicide and career. The combined subscales contain 84 self-report items rated on a 4-point Likert scale, which are comprehensive to a 5<sup>th</sup> grade reading level. Internal consistency ranged from .82-.92, with an average of .86. Normative information was derived from 1146 students at various universities across the United States. The participants included 38% male and 61% female and the ethnicity breakdown was 75% white, 9% black, 6% Hispanic, and 10% other, which is reflective of the national average of college enrollment for gender and ethnicity. The manual reports that there was a weak association of demographic variables to CAS scores, thus there is no separate normative data for gender or ethnicity.

**Life events survey for collegiate athletes.** The Life Events Survey for Collegiate Athletes (LESCA; (Petrie, 1992); Appendix D) was used to assess extraneous stressors experienced by student-athletes. The 69-item LESCA uses an 8-point Likert scale (-4 extremely negative to +4 extremely positive) to measure the impact of life events that may have been experienced in the previous 12-months. Participants only identify life events that have taken place in their life and rate those items. These items include events such as, failing an important exam, major change in sleeping habits, discrimination from teammates-coaches, conflict with roommate, financial problems concerning school, suspended from team for nonacademic reasons, trouble with academic counselor, injury to teammate(s), and unable to find a job. In addition, the researcher has added one item stating “becoming a parent” making the total number of items 70, as well as adding “child” to the list of family members under the statements “death of a close family member” and “serious illness or injury of a close family member.” Test-retest reliabilities range from .76 to .84. The scale is

tallied for either a negative life stress score, or positive life stress score, or a total life stress score (which is a composite of negative and positive scores). Significant correlations between the LESCA NEG score and the Social and Athletic Readjustment Rating Scale and athletic injury, have been reported (Petrie, 1992).

**Minority student stress scale.** The Minority Student Stress Scale (MSS; Smedley et al., 1993; Appendix E) was used to assess participants' experience of minority-related stressors on their campus. The MSSS is a 33-item questionnaire that uses a 6-point Likert scale (0-“does not apply” to 5-“very stressful”) to assess five areas of stress that students of color may experience and attribute to their race/ethnicity. There are two distinctions of stressors identified in the scale, minority-specific stressors (“few students of my race are in my class”) and generic stressors (“the university is an unfriendly place”). The five subscales of the MSS include: (a) Social Climate Stressors (e.g., few professors of my race, few students of my race in my classes); (b) Interracial Stressors (e.g. White-oriented campus culture, negative relationship between different ethnic groups); (c) Intragroup or Within-Group Stressors (e.g., pressure to show loyalty to own race, relationships between males and females of own race); (d) Racism and Discrimination Stresses (e.g. being treated rudely or unfairly due to race, having to prove abilities); and (e) Achievement Stressors (e.g. doubts about abilities, family expectations and pressure due to being a 1<sup>st</sup> generation college student) (Smedley, et. al., 1993). Each subscale is scored to indicate high stress among the various subscales, but also averaged together to produce a total minority-status stress score. Subscale scores range from 0-55, depending on the scale, and the total score ranges from 0-165. Smedley et al., 1993, reported Cronbach alphas for each subscale ranging from .76 to .93 and a Cronbach alpha of .93 for the total score.

**Perceived social support scale.** The Perceived Social Support Scale (PSS; (Procidano & Heller, 1983); Appendix F) was used to measure social support from friends, family, instructors, and coaches/administrators. The scale is comprised of four subscales, each consists of 10 items for a total of 40 items. The items are scored on a 5-point scale with possible subscale totals of 0 to 50. Higher scores indicate a higher level of perceived social support, while lower scores indicate a lower level of perceived social support. The researcher created one of the four subscale domains to assess perceived support from “coaches/administrators” and substituted “instructors” for “teachers.”

**Group environment questionnaire.** The Group Environment Questionnaire (GEQ: (Carron, Brawley, & Widmeyer, 2002); Appendix G) was used to measure perceived team cohesion. There are 18 items that breakdown into four subscales measured on a 9-point Likert scale. Group Integration-Task examines the degree of closeness and bond of the team towards a common goal, and has a Cronbach alpha of .70. Group Integration-Social examines the degree of closeness and bond of the team as a social unit, with an alpha of .76. Interpersonal Attractions to Group-Task examines the individual student-athlete’s personal involvement in working towards the group goals, and has an alpha of .75. Lastly, Interpersonal Attraction to Group-Social examines the student-athlete’s feelings of acceptance and social interaction with the team, and has an alpha of .64. For the purposes of this study, the two social subscales will be combined to form Team Social Cohesion and the two task subscales will be combined to form Team Task Cohesion.

## **Procedures**

Prior to data collection, approval was obtained from the universities Institutional Review Board for the Protection of Human Subjects and the universities’ respective Athletic Departments (See Appendix H). Researcher solicited participants for the study through

several avenues: face-to-face recruitment, email recruitment forwarded by an athletic department staff, and flyers handed out by an athletic department staff to student-athletes in orientation classes and minority student-athlete mentor programs. Research recruitment took place from October 2009 until March 2010.

The purpose of the study was summarized in the email and flyer (See Appendices I & J). Data was collected through an encrypted online survey. In depth information about the study and participant's rights were outlined in the initial screen of the online survey (See Appendix K). Individuals gave consent to participate by choosing "yes" on the consent screen and continuing to the survey. The online survey consisted of the demographic sheet, the communication questionnaire, seven subscales of the CAS, and the complete LESCA, MSSS, PSS, and GEQ. The total number of items was 245 items; however, as stated previously, the LESCA (70 items) only requires students to answer life events that are relative to their experience. The survey administration took approximately 30-60 minutes to complete.

For their participation in the study all participants will be eligible to enter into a drawing at each survey administration to receive one of three incentives: \$25 (5 persons), \$50 (4 persons), or \$100 (5 persons). This compensation is in accordance with NCAA Bylaw 16.11.1.12 and approved by IRB. Participants provided email contact information to be entered into the raffle at the end of the survey. This information was stored in a separate database than survey information. Once the drawing was complete, winners were emailed to request a mailing address for their incentive and a compensation letter to be mailed (see Appendix L). Some institutions requested that if a student-athlete at their institution were to win that the athletic department would be informed so the student-athlete(s) could complete

work compensation paperwork. This information was provided to student-athletes in their respective institutions consent form.

### **Statistical Methods**

Latent profile analysis (LPA) seeks to estimate the probability that an individual belongs to one of several profiles based on social support, minority stress, life stress, and team cohesion. LPA is useful when studying populations with heterogeneous characteristics, such as Black/African American student-athletes. The basic premise of LPA is that within profiles the observations are locally independent. The goal of LPA is to identify the smallest number of profiles that describes the association between social support, minority stress, life stress, and team cohesion. The results for the characteristics of the identified latent profiles are expressed in probabilities for having high/low levels of social support, minority stress, life stress, or team cohesion and the prevalence or proportion of student-athletes in each profile (Tabachnick & Fidell, 2007; Vermunt & Magidson, 2002).

Once the appropriate number of latent profiles was determined, the profiles were used to predict outcomes on the seven College Adjustment Scale (CAS) subscales and institution type (PWI vs. HBCU), utilizing latent profile regression analysis (Guo, Wall, & Amemiya, 2006). Each outcome was modeled separately. Results associated with CAS subscales are presented in the form of odds ratios. All scales and subscale scores were transformed to z-scores for ease of analysis. These analyses must be considered exploratory, and replication with other Black/African American student-athletes is needed to verify any significant relationships found here. Given the exploratory nature of these analyses, alpha was relaxed to .10 in order to identify any marginally significant effects that may be replicable with a larger sample.

**Determining model fit.** All analyses were conducted using MPlus 5.0 (Muthén & Muthén, 2009). As in SEM, with latent profile models, there are multiple statistical indicators of model fit. In LPA, a combination of statistical considerations and substantive theory are used to decide on the best fitting model. In this analysis, more weight was given to the Bayesian Information Criterion (BIC; (Schwartz, 1978) and the Sample Size Adjusted BIC because recent simulation studies suggest it provides the most reliable indicators of true model fit (Nylund, Asparouhov, & Muthén, 2007). Decreases in the BIC suggest better fitting models (Muthén & Shedden, 1999); hence, if the addition of a class lowers the BIC with respect to the previous model, then the latter is preferred. Entropy is also used as an indicator of how well the model profiles participants, where values closer to or exactly 1 indicate better classification. However, entropy should always be examined in conjunction with other model fit indices. Finally, parametric bootstrapping, a repeated sampling technique used to compare hypotheses of class numbers, is examined as another indices of class model fit (Efron, 1993).

**Treatment of missing data.** The MPlus software uses full information maximum likelihood estimation under the assumption that data are missing at random (MAR; (Arbuckle, 1996; Little, 1995), which is a widely accepted way of handling missing data (Muthén & Shedden, 1999; Schafer & Graham, 2002). All subjects were included in the latent profile analyses despite missing data on one or more of the latent class indicators. The covariance coverage (proportion of data present) for all variables ranged from 0.949-1.0, well above minimum thresholds for establishing adequate coverage (e.g., .10; (Muthén & Muthén, 2009). The mixture missing command was used in all analyses to account for missing data.

## Results

Latent Profile Analysis (LPA) of Social Support, Minority and Life Stress, and Cohesion. Initially, a LPA was conducted to determine the optimal number of profiles and the characteristics associated with each profile. Five indicators were included in these analyses: Perceived Social Support Scale, Minority Student Stress Scale, the Life Events Survey for Collegiate Athletes, and the combined Team Social Cohesion and combined Team Task Cohesion subscales of the Group Environment Questionnaire.

LPA fit indices for profile solutions are summarized in Table 2. The two profile solution emerged as the optimal fit for the data as evidenced by the BIC and Adjusted BIC. However, the parametric bootstrap (Efron, 1993) for the three-class solution indicated the three-class solution was better a fit than the two profile solution. In addition, the entropy value for the three-class solution is a more acceptable value in comparison to two-class solution. Finally, based on conceptual understanding, the three-class solution seems to be the better fit.

### Characteristics of the Profiles

The three-class model identified one group with low team cohesion and social support; one group high in minority stress with moderate social support and team cohesion; and a final group with high social support, low minority stress, and high team cohesion. Figure 1 displays the deviations from the mean and characteristics of the three identified latent profiles. The percentages of student-athletes are given for each profile as well. Profile labels were assigned based on the overall pattern and presentation of support, form of stress, and team cohesion for each profile.



Table 3 summarizes the mean z-scores for each profile. Profile 1 (n = 14) was characterized as Low Social Support/Cohesion (14.3%). Student-athletes in this profile had low levels of perceived social support (- 0.538), low levels of minority stress (- 0.549), low levels of team social cohesion (- 1.299) and low levels of team task cohesion (- 0.983) as measured by z-scores distance from the mean. In addition, this profile had a z-score relatively close to the mean for life stressors (- 0.016) which may represent average life stressors.

Profile 2 (n = 36) was labeled as High Minority Stress (37.2%). Student-athletes in this subclass had high levels of minority stress (0.923), possibly negative life stressors (- 0.326) and low levels of team task cohesion (- 0.195) based on z-scores distance from the mean. Z-scores were relatively close to the mean for perceived social support (- 0.080) and team social cohesion (- 0.049).

Profile 3 (n = 48) was labeled as a subclass of student-athletes with High Social Support/Cohesion (48.5%). Student-athletes had high levels of perceived social support (0.219), team social cohesion (0.412), and team task cohesion (0.432). Z-scores represented moderately low levels of minority stress (- 0.545) and possibly positively perceived life stressors (0.242).

The primary distinction between the subclasses identified for PWIs versus HBCUs was the absence of a distinct profile of High Minority Stress for students at HBCUs. Additionally, there was a higher probability of student-athletes in the Low Social Support/Cohesion subclass at HBCUs than at PWIs, although this difference was not significant. Although the probabilities indicated males have higher probabilities to have class membership for the High Minority Stress and High Social Support/Cohesion subclasses and

females have a higher probability of being in the Low Social Support/Cohesion subclass, these findings were not statistically significant. (see Table 4).

### **Predicting College Adjustment Scale Subscale Scores**

**Outcomes Associated with Each Profile.** Table 5 summarizes the odd ratios estimates (OR) for profile membership in relation to CAS subscales as derived with latent profile logistic regression models. Higher z-scores on the CAS subscales indicate a higher prevalence of the problems associated with each subscale.

**Low social support/cohesion vs. high minority stress.** Student-athletes in the Low Social Support/Cohesion subclass ( $M = 1.995$ ,  $SD = .533$ ) were two times more likely to have interpersonal problems than the High Minority Stress subclass ( $M = 0.196$ ,  $SD = .815$ ,  $p < .10$ ). Student-athletes in the Low Social Support/Cohesion subclass ( $M = 1.649$ ,  $SD = 1.269$ ) were more likely to have family problems than the High Minority Stress Subscale ( $M = -0.077$ ,  $SD = .635$ ,  $p < .05$ ).

**High minority stress vs. high social support/cohesion.** Student-athletes in the Minority Stress subclass ( $M = 0.131$ ,  $SD = .898$ ) were more likely to suffer from depression than the High Social Support/Cohesion subclass ( $M = -0.570$ ,  $SD = .367$ ,  $p < .05$ ). High Minority Stress group ( $M = 0.196$ ,  $SD = .815$ ) were more likely to have interpersonal problems than High Social Support/Cohesion ( $M = -0.451$ ,  $SD = .764$ ,  $p < .10$ ). In addition, student-athletes in the High Minority Stress subclass ( $M = 0.422$ ,  $SD = 1.048$ ) were more likely to have lower self-esteem than the High Social Support/Cohesion subclass ( $M = -0.378$ ,  $SD = .727$ ,  $p < .05$ ).

**High social support/cohesion vs. low social support/cohesion.** Student-athletes in the High Social Support/Cohesion subclass ( $M = -0.470$ ,  $SD = .651$ ) were less likely to have anxiety problems compared to student-athletes in the Low Social

Support/Cohesion subclass ( $M = 0.697$ ,  $SD = 1.017$ ,  $p < .05$ ). By comparison student-athletes in the Low Social Support/Cohesion subclass ( $M = 0.679$ ,  $SD = 1.157$ ) were twice as likely to suffer from depression as the High Social Support/Cohesion subclass ( $M = -0.570$ ,  $SD = .367$ ,  $p < .05$ ). Student-athletes in the Low Social Support/Cohesion subclass ( $M = 1.995$ ,  $SD = .533$ ) were three times more likely to have interpersonal problems than High Social Support/Cohesion subclass ( $M = -0.451$ ,  $SD = .764$ ,  $p < .10$ ). Additionally, student-athletes in the Low Social Support/Cohesion subclass ( $M = 1.649$ ,  $SD = 1.269$ ) were four times more likely to have family problems than the High Social Support/Cohesion subclass ( $M = -0.588$ ,  $SD = .335$ ,  $p < .10$ ).

There were no statistically significant differences across profiles for academic problems: Low Social Support/Cohesion ( $M = 0.300$ ,  $SD = .877$ ), High Minority Stress ( $M = -0.003$ ,  $SD = .995$ ), and High Social Support/Cohesion ( $M = -0.075$ ,  $SD = 1.008$ ). In addition, there were no statistically significant differences across profiles for substance use: Low Social Support/Cohesion vs. High Minority Stress ( $OR = 11.126$ ), High Minority Stress vs. High Social Support/Cohesion ( $OR = 0.965$ ), and High Social Support/Cohesion vs. Low Social Support/Cohesion ( $OR = 10.736$ ). The results did reveal that student-athletes had higher probabilities of falling into the normal range for drinking behaviors: Low Social Support/Cohesion = 0.675, High Minority Stress = 0.959 and High Social Support/Cohesion = 0.957.

## **Discussion**

The aim of this study was to identify profiles of social support, minority stress, life stress, and team cohesion for Black/African American student-athletes at predominately-White institutions and Historically Black Colleges and Universities. Results supported the

hypothesis that multiple subclasses of student-athletes would be identified. Additionally, in agreement with one of the hypotheses, a distinct profile characterized by high minority stress was found to only exist at PWIs. Such profile was not evident among Black/African American student-athletes at HBCUs. The probability of this profile was 1.000 at PWIs. This was the only significant difference found in identified profiles between PWIs and HBCUs.

Although the following results were not statistically significant, the probabilities are worth mentioning because the small sample size could have influenced the findings. The Low Social Support/Cohesion profile had a higher probability of being associated with HBCUs. Similarly, Black/African American student-athletes at PWIs had a low probability of being in the Low Social Support/Cohesion profile. At PWIs student-athletes in this sample were more likely to fall into the High Social Support/Cohesion profile. In addition, males had higher probabilities to fall into the High Minority Stress and High Social Support/Cohesion profiles than females, who had a higher probability of being in the Low Social Support/Cohesion profile. Once again, these findings were not significant but could be informative for future studies. For instance, it would be interesting to further examine the gender differences given that females tend to rely heavily on their social support both within their peer/family group but also within their team.

Additionally, the study investigated the extent to which identified subclasses predicted College Adjustment Scale scores, including academic problems, anxiety, interpersonal problems, depression, substance abuse, self-esteem, and family problems. Overall, the High Social Support/Cohesion profile appeared to have little to no psychological concerns in comparison to the Low Social Support/Cohesion and High Minority Stress profiles. It is important to note that the High Social Support/Cohesion profile did not have a statistically significant difference on self-esteem in comparison to the

Low Social Support/Cohesion profile. This could be a reflection of self-esteem being formed as an internal process, independent of interpersonal relationships or it could show that student-athletes may form self-worth in relation to individual athletic performance. This could be highlighted by examining student-athletes' athletic identity with the Athletic Identity Measurement Scale (Brewer & Cornelius, 2001; Brewer, van Raalte, & Linder, 1993) and specific domains of self-esteem (O'Brien & Epstein, 1998).

The Low Social Support/Cohesion profile seemed to have a significantly higher prevalence of anxiety, depression, interpersonal problems, and family problems than the High Social Support/Cohesion profile. This would be an expected result when considering prior research that has shown the impact social support can have on one's emotional well-being (Boulter, 2002; Buote et al., 2007; Dennis et al., 2005; Friedlander et al., 2007; Hinderlie & Kenny, 2002; Jackson & Krane, 1993; Levin et al., 2006; Quarforth et al., 2003). For student-athletes in this study, their perception of available social support was assessed in relationship to friends, family, instructors, and administrators/coaches in the athletic department (subscales of PSSS) and the level of social involvement they experienced within their team (Social Cohesion subscale of the GEQ).

Identifying the specific sources of social support and additional characteristics of the three profiles may enhance the understanding of the difference between these profiles. Peer and family support may influence the student-athletes role identification based on their values system. Depending on their reference group values system, Black/African American students tend to find themselves switching between two worlds, which can be burdensome and increase the feeling of lack of support. Furthermore, first-generation college students can experience survivor's guilt related to being the first in their family to attain something that others had not been able to attain. This guilt can lead to resistance to or fear of success

(Piorkowski, 1983; Thayer, 2000). In addition, the coach's interaction with the team may have a direct effect on the student-athletes feelings of support from the athletic department as a whole since the majority of their time would be spent interacting with their coach. Student-athletes may be more responsive to one style of coaching than another. Student-athletes who feel unsupported may be identified through absenteeism, lateness, social loafing, scapegoating after unsuccessful ventures, and other behaviors that may exhibit detachment from others, such as isolation (Carron et al., 2002). One may also see self-defeating behaviors due to their fears of being successful or fears of failure academically and/or athletically.

In comparison to the High Minority Stress profile, the Low Social Support/Cohesion profile had a significantly higher prevalence of interpersonal problems and family problems. It is evident that interpersonal conflict would lead student-athletes to feel unsupported. However, this finding is not necessarily an indication that interpersonal conflict does not happen for student-athletes in the High Minority Stress profile. The High Minority Stress profile displayed a significantly higher prevalence of depression and interpersonal problems than the High Social Support/Cohesion profile. The kind of interpersonal conflict experienced by student-athletes in the High Minority Stress profile may be related to racism or discrimination. In fact, high rates of depression have been found to be positively related to Black/African American students who experience racism or discrimination (Ancis et al., 2000; Mounts, 2004; Prelow et al., 2006). This finding shows that even with moderate levels of social support, student-athletes are still experiencing psychosocial difficulty due to racism or discrimination. It would be important to consider if increases in social support, possibly to levels similar in the High Social Support/Cohesion profile, would be able to moderate the effects of minority stress. Student-athletes who may

fall into the High Minority Stress profile may exhibit self-segregation to same race/ethnic group, reluctance to form relationships with out-groups, and/or expressed frustration about feelings of being disrespected or attacked because of his/her race.

The findings from this study are consistent with Chickering and Reisser's (1993) theory that highlights the importance of interpersonal relationships (i.e. peer/family support and on-campus support) and institutional identity (i.e. cultural acceptance) on the emotional well-being of students. Research has shown the influence of peers, family, and on-campus supports on college student adjustment (Boulter, 2002; Friedlander et al., 2007; Hinderlie & Kenny, 2002; Levin et al., 2006; Sedlacek, 1999). The findings show a difference in levels of perceived social support for student-athletes and have implications for increasing social support for Black/African American student-athletes in as many areas as an institution can.

The assessment of perceived social support was a composite of support from one's friends, family, instructors, and athletic department/coach. This study did not examine which of the four subscales was leading to low levels of perceived support. However, it can be argued that on-campus support from instructors and the athletic department plays an important role in increasing the overall feelings of support a student-athlete may perceive, especially providing a balance if peer and family support is lacking. This would be a reason for athletic departments to examine how student-athletes perceive the support they do or do not receive within the athletic department. Additionally, improving team cohesion (both social and task cohesion) may increase the level of support and connection a student-athlete would certainly feel among his/her team/coaching staff and also on campus in general. Student-athletes spend the majority of their time within the athletic department and/or with their respective team(s); thus, it seems imperative that the athletic environment provide a safe, supportive space for Black/African American student-athletes.

Furthermore, findings from this study demonstrated that varying psychological dimensions of college student development, as measured by the CAS, were significant within varying profile subclasses of Black/African American student-athletes. However, academic problems were not significantly different between the three profiles groups (Low Social Support/Cohesion; High Minority Stress; High Social Support/Cohesion) in this sample. As a consequence, it seems as though academic problems, or lack thereof, did not contribute to the psychological concerns experienced by student-athletes in this study. This may be related to the academic supports that are offered for student-athletes in the athletic department. Interventions for additional support sometimes rely on GPA, especially if there is concern about student-athletes eligibility status. However, by using GPA as a primary marker, an institution may be missing opportunities to identify and influence the collegiate experience of Black/African American student-athletes who may be struggling with other psychological concerns.

### **Recommendations for Program Interventions**

It is important to take a holistic approach when considering on-campus experiences of student-athletes. Social support, team cohesion and minority student stress may be moderated with mentoring programs with people either in the community or on campus; increased interaction with minority students who are not student-athletes; improved relations with staff, faculty, and administrators; increased understanding of one's cultural background and ethnic identity; and advocacy for social changes at the institution. Overall, these interventions would benefit all Black/African American student-athletes, especially those who may not be able to articulate their concerns. Research has shown the reluctance of people of color to seek out mental health services (Sue & Sue, 2003) and that athletes may be more reluctant to seek mental health services as well (Hinkle, 1996). Thus, it is important to



explore the athletic department's impact on the experiences of the Black/African student-athletes, especially if academics are emphasized and other psychological concerns are not appropriately considered. The following recommendations focus on the Athletic Department given the amount of time spent and influence Athletic Departments have with Black/African American student-athletes.

It is imperative that athletic departments conduct self-studies to ensure the environment provides a supportive environment for Black/African American student-athletes. As stated previously, it is unclear whether or not low perceived social support is a reflection of the athletic department or not, but the athletic department has the power to provide a supportive environment that can counter what student-athletes may be experiencing in other areas of their life. Athletic departments can build connections for student-athletes with faculty and staff on-campus to improve their relations as well. Teams may benefit from interventions that would improve their social cohesion and establish a collaborative goal so student-athletes can have a sense of support or validation within the athletic environment. Furthermore, a constant interaction/communication with the families of student-athletes might assist in helping families learn how to provide sufficient support for their son/daughter. Taking into consideration that many Black/African American students and student-athletes may be first-generation college students, their families may not understand their struggles and may find it difficult to provide appropriate support. A general monthly or semester newsletter home may also strengthen the relationship between the Athletic Department and families.

Furthermore, it is important to examine whether or not the athletic department fosters a racist or discriminatory environment and is sensitive to the needs of student-athletes of color, considering the amount of time spent in athletics and the degree of hostility

they may experience in the community at-large. Social advocacy should be an integral component of the athletic department's commitment to the development of all student-athletes as a means to counteract potential negative treatment experienced by Black/African American student-athletes in athletic and campus environments.

It seems important to offer programming or open forums for Black/African American student-athletes that can address fostering a support system and combating cultural insensitivity (i.e. experiences of real or perceived discrimination). Support groups that provide a safe, confidential environment for Black/African Americans to voice their experiences may be beneficial. It may also be advantageous to strengthen the relationship of Black/African American student-athletes with Black/African American non-athletes as a means to build a larger and stronger community on campus to support each other as they encounter racism or discrimination. This may provide an opportunity for the student-athletes to broaden their social network beyond fellow athletes and establish additional support system of peers who positive influence their academic success and career pursuits. In regards to Black/African American student-athletes it seems important to distinguish between general and culture-specific types of support and validation related to their athlete and student roles as well as race and gender cultural backgrounds.

### **Strengths and Limitations**

The primary strength of this study is the use of an innovative analysis to break away from the assumption that collectively Black/African American student-athletes have a shared experience. To this end, this study explored subclasses among Black/African American student-athletes identifying unique experiences. These subclasses were predictive of psychological concerns that can negatively impact a student-athlete's experience and development at an institution. Additionally, the participants were recruited from

geographically different locations, various upbringings, and representative of different genders, sports, and academic majors. Thus, findings are generalizable and may help institutions to develop interventions.

The present study also has some limitations. This study was only conducted at one point in time and, as the researcher stated earlier, adjustment is a process and should be evaluated as such. In addition, the sample size of 98 was relatively small. However, given the percentages of Black/African American student-athletes nationally and the difficulty gaining access to student-athletes to conduct research in general, especially at HBCU institutions, the ascertained sample reflects improvement in comparison to other studies. Nonetheless, further studies with larger samples sizes are clearly needed. Unique gender differences in athletic experiences and student development in general, were not examined in this study. It is well-known that on PWI campuses, Black/African American women tend to outnumber men by ratios of 2:1, 3:1, or even 4:1. Although this study did not show a significant difference for males and females, it would be important to continue to study gender differences with a larger sample of Black/African American student-athletes.

## **Conclusions**

Very little research has been conducted examining all of the specific indicators examined in this study specifically looking at Black/African American student-athletes. Currently, research tends to focus on comparing student-athletes with non-student-athletes or between races/ethnicities, which tends to leave out the unique experiences of the subgroups within those broader sociocultural identity categories. The purpose of this study was to investigate the subclasses that exist within a heterogeneous group, such as Black/African American student-athletes, in order to understand the psychological impact of their unique experiences, especially at two distinct institution types. Additional research

studies which examine this population's individual characteristics or subclasses seem valuable. Furthermore, research which adopts a holistic perspective in understanding this population's experience would enable athletic programs/departments to develop more culturally relevant institutional interventions to enhance Black/African American student-athlete experiences in a variety of ways. The effectiveness of these interventions would need to be researched as well. This research provides an initial step in understanding contributing factors which affect subgroups of Black/African American student-athletes' psychological well-being and student development at institutions of higher education.

## References

- Adler, P. A., & Adler, P. (1991). *Backboards & blackboards: College athletics and role engulfment*. New York: Columbia University Press.
- Allen, W. R. (1985). Black student, White campus: Structural, interpersonal and psychological correlates of success. *Journal of Negro Education, 54*(2), 134-147.
- Allen, W. R. (1988). Black students in U. S. higher education: Toward improved access, adjustment and achievement. *Urban Review, 20*, 165-188.
- Ancis, J. R., Sedlacek, W. E., & Mohr, J. J. (2000). Student perceptions of campus cultural climate by race. *Journal of Counseling & Development, 78*(2), 180-186.
- Anglin, D. M., & Wade, J. C. (2007). Racial socialization, racial identity, and Black students' adjustment to college. *Cultural Diversity & Ethnic Minority Psychology, 13*(3), 207-215.
- Anton, W. D., & Reed, J. R. (1991). *College adjustment scale*. Rome, CA: Psychological Assessment Resources, Inc.
- Arbuckle, J. L. (Ed.). (1996). *Full information estimation in the presence of incomplete data*. Mahwah, NJ: Erlbaum.
- Arnold, K. D. (1993). The fulfillment of promise: Minority valedictorians and salutatorians. *Review of Higher Education, 16*, 257-283.
- Astin, A. W. (1993). *What matters in college?*. New York: Jossey-Bass.
- Baum, M., & Lamb, D. (1983). A comparison of the concerns presented by Black and White students to a university counseling center. *Journal of College Student Personnel, 24*, 127-131.
- Boulter, L. T. (2002). Self-concept as a predictor of college freshman academic adjustment. *College Student Journal, 36*(2), 234-246.
- Brewer, B. W., & Cornelius, A. E. (2001). Norms and factorial invariance of the Athletic Identity Measurement Scale. *Academic Athletic Journal, 15*, 103-113.

- Brewer, B. W., van Raalte, J. L., & Linder, D. E. (1993). Athletic identity: Hercules' muscle or achilles heel? *International Journal of Sport Psychology*, *24*, 237-254.
- Brower, K. J., & Rootenberg, J. H. (1999). Counseling for substance abuse problems. In R. Ray & D. M. Wiese-Bjornstal (Eds.), *Counseling in sports medicine* (pp. 179-204). Champaign, IL: Human Kinetics.
- Brown, K. T., Brown, T. N., Jackson, J. S., Sellers, R. M., & Manuel, W. J. (2003). Teammates On and Off the Field? Contact With Black Teammates and the Racial Attitudes of White Student Athletes. *Journal of Applied Social Psychology*, *33*(7), 1379-1403.
- Bruening, J. E., Armstrong, K. L., & Pastore, D. L. (2005). Listening to the voices: The experiences of African American female student athletes. *Research Quarterly for Exercise and Sport*, *76*(1), 82-100.
- Buote, V. M., Pancer, S., Pratt, M. W., Adams, G., Birnie-Lefcovitch, S., Polivy, J., et al. (2007). The importance of friends: Friendship and adjustment among 1st-year university students. *Journal of Adolescent Research*, *22*(6), 665-689.
- Burback, H., & Thompson, M. (1971). Alienation among college freshmen: A comparison of Puerto Rican, Black, and White students. *Journal of College Student Personnel*, *12*, 248-252.
- Carron, A. V., Brawley, L. R., & Widmeyer, W. N. (2002). *The Group Environment Questionnaire test manual*. Morgantown, WV: Fitness Information Technology, Inc.
- Chickering, A. W., & Reisser, L. (1993). *Education & identity* (2nd ed.). San Francisco: Jossey-Bass.
- Clark, R. (2004). Interethnic group and intraethnic group racism: Perceptions and coping in Black university students. *Journal of Black Psychology*, *30*(4), 506-526.
- Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, *54*(10), 805-816.
- Cogan, K. D., & Petrie, T. R. (1996). Counseling college women student-athletes. In E. F. Etzel, A. P. Ferrante & J. W. Pinkney (Eds.), *Counseling college student-athletes: Issues and interventions* (2nd ed., pp. 1146-1154). Morgantown, W.V.: Fitness Information Technology.

- Damm, J., & Murray, P. (1996). Alcohol and other drug use among college student-athletes. In E. F. Etzel, A. P. Ferrante & J. W. Pinkney (Eds.), *Counseling college student-athletes: Issues and interventions* (pp. 185-220). Morgantown, WV: Fitness Information Technology, Inc.
- Dennis, J. M., Phinney, J. S., & Chuateco, L. I. (2005). The Role of Motivation, Parental Support, and Peer Support in the Academic Success of Ethnic Minority First-Generation College Students. *Journal of College Student Development, 46*(3), 223-236.
- DeSousa, D. J., & Kuh, G. D. (1996). Does institutional racial composition make a difference in what Black students gain from college? *Journal of College Student Development, 37*(3), 257-267.
- Downey, V. P. (2005). An exploration of the adjustment processes of freshmen student-athletes and non-athlete students. West Virginia University.
- Edmunds, G. J. (1984). Needs assessment strategy for Black students: An examination of stressors and program implications. *Journal of Non-White Concerns, 12*(2), 48-56.
- Efron, B. T., R. J. (1993). *An introduction to the bootstrap*. . New York: Chapman and Hall.
- Fleming, J. (1984). *Blacks in college: A comparative study of students' success in Black and White institutions*. San Francisco: Jossey-Bass.
- Fleming, J. (2001). The impact of a historically Black college on African American students: The case of LeMoyne-Owen College. *Urban Education, 36*(5), 597-610.
- Flowers, L. A. (2002). The impact of college racial composition on African American students' academic and social gains: Additional evidence. *Journal of College Student Development, 43*(3), 403-410.
- Foster, K. M. (2003). Panopticonics: The control and surveillance of Black female athletes in a collegiate athletic program. *Anthropology & Education Quarterly, 34*(3), 300-323.
- Friedlander, L. J., Reid, G. J., Shupak, N., & Cribbie, R. (2007). Social support, self-esteem, and stress as predictors of adjustment to university among first-year undergraduates. *Journal of College Student Development, 48*(3), 259-274.

- Frisby, C. I., & Kim, S. (2008). Using profile analysis via multidimensional scaling (PAMS) to identify core profiles from the WMS-III. *Psychological Assessment* 20(1), 1-9.
- Frisby, C. I., Kim, S., & Wolfmeyer, M. (2005). Identifying core profile attitudes towards school violence. *Journal of School Violence*, 4(4), 5-29.
- Gibbs, J. T. (1973). Black students/White university: Different expectations. *Personnel and Guidance Journal*, 51, 463-469.
- Greer, T. M., & Chwalisz, K. (2007). Minority-related stressors and coping processes among African American college students. *Journal of College Student Development*, 48(4), 388-404.
- Guo, J., Wall, M., & Amemiya, Y. (2006). Latent class regression on latent factors. *Biostatistics*, 7, 145-163.
- Harris, H. L., Altekruze, M. K., & Engels, D. W. (2003). Helping freshman student athletes adjust to college life using psychoeducational groups. *Journal for Specialists in Group Work*, 28(1), 64-81.
- Henderson, P. L. (1988). The invisibility minority: Black students at a southern White university. *Journal of College Student Development*, 29, 349-355.
- Hinderlie, H. H., & Kenny, M. (2002). Attachment, social support, and college adjustment among Black students at predominantly White universities. *Journal of College Student Development*, 43(3), 327-340.
- Hinkle, J. S. (1996). Depression, adjustment disorder, generalized anxiety, and substance abuse: An overview for sport professionals working with college student-athletes. In E. F. Etzel, A. P. Ferrante & J. W. Pinkney (Eds.), *Counseling college-student athletes: Issues and interventions* (pp. 109-136). Morgantown, WV: Fitness Information Technology, Inc.
- Jackson, A., & Krane, V. (1993). Adjustment to college life by freshmen male basketball players. *Research Quarterly for Exercise & Sport Supplement*, 65, A-109.
- Kenny, M. E., & Perez, V. (1996). Attachment & psychological well-being among racially and ethnically diverse first-year college students. *Journal of College Student Development*, 37(5), 527-535.



- Landrine, H., & Klonoff, E. A. (1996). The schedule of racist events: A measure of racial discrimination and a study of its negative physical and mental health consequences. *Journal of Black Psychology, 22*, 144-168.
- Levin, S., Van Laar, C., & Foote, W. (2006). Ethnic Segregation and Perceived Discrimination in College: Mutual Influences and Effects on Social and Academic Life. *Journal of Applied Social Psychology, 36*(6), 1471-1501.
- Little, R. J. (1995). Modeling the dropout mechanism in repeated measures studies. *Journal of the American Statistical Association, 90*, 1112-1121.
- Loo, C. M., & Rolison, G. (1986). Alienation of ethnic minority students at a predominately White university. *Journal of Higher Education, 57*, 58-77.
- Martens, M. P., Dams-O'Connor, K., & Beck, N. C. (2006). A systematic review of college student-athlete drinking: Prevalence rates, sport-related factors, and interventions. *Journal of Substance Abuse Treatment, 31*, 305-316.
- Martens, M. P., Dams-O'Connor, K., & Duffy-Paiement, C. (2006). Comparing off-season with in-season alcohol consumption among intercollegiate athletes. *Journal of Sport and Exercise Psychology, 28*, 502-510.
- Martens, M. P., Watson, J. C., & Beck, N. C. (2006). Sport-type difference in alcohol use among intercollegiate athletes. *Journal of Applied Sport Psychology, 18*, 136-150.
- Melendez, M. C. (2006). The influence of athletic participation on the college adjustment of freshmen and sophomore student athletes. *Journal of College Student Retention: Research, Theory and Practice, 8*(1), 39-55.
- Melendez, M. C. (2008). Black football players on a predominantly White college campus: psychosocial and emotional realities of the Black college athlete experience. *Journal of Black Psychology, 34*, 423-451.
- Miller, P. S., & Kerr, G. (2002). The athletic, academic, and social experiences of intercollegiate student-athletes. *Journal of Sport Behavior, 25*(4), 346-367.
- Mounts, N. S. (2004). Contributions of Parenting and Campus Climate to Freshmen Adjustment in a Multiethnic Sample. *Journal of Adolescent Research, 19*(4), 468-491.

- Muthén, B., & Muthén, L. K. (2009). *Mplus users guide*. Los Angeles: Muthén and Muthén.
- Muthén, B., & Shedden, K. (1999). Finite mixture modeling with mixture outcomes using the EM algorithm. *Biometrics*, *6*, 463-469.
- NCAA study of substance use habits of college student-athletes*. (2001). Indianapolis, IN: NCAAo. Document Number)
- Neville, H. A., Heppner, P. P., Ji, P., & Thye, R. (2004). The relations among general and race-related stressors and psychoeducational adjustment in Black students attending predominately White institutions. *Journal of Black Studies*, *34*(4), 599-618.
- Noel, L. (1985). Increasing student retention: New challenges and potential. In L. Noel, R. Levitz & D. Saluri (Eds.), *Increasing student retention: Effective programs and practices for reducing the dropout rate* (pp. 1-27). San Francisco: Jossey-Bass.
- Nylund, K. L., Asparouhov, T., & Muthén, B. (2007). Deciding on the number of classes in latent class analysis and growth mixture modeling. A Monte Carlo simulation study. *Structural Equation Modeling*, *14*, 535-569.
- O'Brien, E., & Epstein, S. (1998). *The Multidimensional Self-Esteem Inventory Professional Manual*. Lutz, FL: Psychological Assessment Resources, Inc.
- O'Connor, R. M., & Colder, C. R. (2005). Predicting alcohol patterns in first-year college students through motivational systems and reasons for drinking. *Psychology of Addictive Behaviors*, *19*(1), 10-20.
- Parham, W. D. (1993). The intercollegiate athlete: A 1990s profile. *The Counseling Psychologist*, *21*, 411-429.
- Petrie, T. A. (1992). Psychosocial antecedents of athletic injury: The effects of life stress and social support on female collegiate gymnasts. *Behavioral Medicine*, *18*(3), 127-138.
- Piorkowski, G. K. (1983). Survivor guilt in the university setting. *The Personnel and Guidance Journal*, *61*(10), 620-622.
- Plummer, D. L., & Slane, S. (1996). Patterns of coping in racially stressful situations. *Journal of Black Psychology*, *22*(3), 302-315.

- Prelow, H. M., Mosher, C. E., & Bowman, M. A. (2006). Perceived racial discrimination, social support, and psychological adjustment among African American college students. *Journal of Black Psychology, 32*(4), 442-454.
- Prillerman, S. L. (1989). Coping with a stressful transition: A prospective study of Black student adjustment to a predominantly White university. *Dissertation Abstracts International, 49*(6-B), 2384-2385.
- Prillerman, S. L., Myers, H. F., & Smedley, B. D. (1989). Stress, well-being, and academic achievement in college. In G. L. Berry & J. K. Asamen (Eds.), *Black students: Psychosocial issues and academic achievement* (pp. 198-217). Thousand Oaks, CA: Sage.
- Procidano, M. E., & Heller, K. (1983). Measures of perceived social support from friends and from family: Three validation studies. *American Journal of Community Psychology, 11*(1), 1-24.
- Quarforth, S. C., Brewer, B. W., Petitpas, A. J., Champagne, D. E., & Cornelius, A. E. (2003). College adjustment of football players: Predictors of first semester adjustment to college among NCAA division III intercollegiate football players. *Academic Athletic Journal, 17*, 1-14.
- Ridinger, L. L., & Pastore, D. L. (2000). International student-athlete adjustment to college: A preliminary analysis. *NACADA Journal, 20*, 33-41.
- Riemer, B. A., Beal, B., & Schroeder, P. (2000). The influences of peer and university culture on female student athletes' perceptions of career termination, professionalization, and social isolation. *Journal of Sport Behavior, 23*(4), 364-378.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods, 7*, 147-177.
- Schwartz, G. (1978). Estimating the dimensions of a model. *Annals of Statistics, 6*, 461-464.
- Sedlacek, W. E. (1999). Black students on White campuses: 20 years of research. *Journal of College Student Development, 40*(5), 538-550.
- Sellers, R. M., & Damas, A. (2002). The African-American student-athlete experience. In E. F. Etzel, A. P. Ferrante & J. W. Pinkney (Eds.), *Counseling college student-athletes: Issues and interventions* (pp. 55-76). Morgantown, W.V.: Fitness Information Technology.

- Sellers, R. M., Kuperminc, G. P., & Damas, A. (1997). The college life experiences of African American women athletes. *American Journal of Community Psychology*, 25(5), 699-720.
- Sigelman, L., & Welch, S. (1991). *Black Americans' views of racial inequalities: The dream deferred*. New York: Cambridge University Press.
- Singer, J. N. (2005). Understanding racism through the eyes of African American male student-athletes. *Race Ethnicity and Education*, 8(4), 365-386.
- Smedley, B. D., Meyers, H. F., & Harrell, S. P. (1993). Minority-status stresses and the college adjustment of ethnic minority freshmen. *Journal of Higher Education*, 64(4), 434-452.
- Sue, D. W., & Sue, D. (2003). *Counseling the culturally diverse: Theory and practice* (4th ed. ed.). New York: John Wiley & Sons, Inc.
- Tabachnick, B. G., & Fidell, L. S. (2007). Profile analysis: The multivariate approach to repeated measures. In *Using multivariate statistics* (4th ed., pp. 311-371). Boston: Pearson/Allyn & Bacon.
- Tatum, B. D. (1997). *Why are all the Black kids sitting together in the cafeteria?* New York: Basic Books.
- Thayer, P. B. (2000). Retention of students from first generation and low income backgrounds. *Opportunity Outlook*, 2-8.
- Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition*. Chicago: University of Chicago Press.
- Turner, K., Miller, H. A., & Henderson, C. A. (2008). Latent profile analyses of offense and personality characteristics in a sample of incarcerated female sexual offenders. *Criminal Justice and Behavior*, 35(7), 879-894.
- Utsey, S. O., Payne, Y. A., Jackson, E. S., & Jones, A. M. (2002). Race-related stress, quality of life indicators, and life satisfaction among elderly African Americans. *Cultural Diversity & Ethnic Minority Psychology* 8(3), 224-233.

- Utsey, S. O., & Ponterotto, J. G. (1996). Development and validation of the Index of Race-Related Stress (IRRS). *Journal of Counseling Psychology, 43*, 490-501.
- Vermunt, J. K., & Magidson, J. (2002). Latent class cluster analysis. In J. Hagenars & A. McCutcheon (Eds.), *Applied latent class analysis (pp. 89-106)*. Cambridge UK: Cambridge University Press.
- Westbrook, F., Miyares, Y., & Roberts, J. (1978). Perceived problem areas by Black and White students and hints about comparative counseling needs. *Journal of Counseling Psychology, 25*, 119-123.

Table 1

## Demographics of Participants

	n	%	M	SD
Age			19	1.58
Gender:				
Female	35	36%		
Male	63	64%		
Academic Year*:				
Freshmen	45	49%		
Sophomore	22	24%		
Junior	10	11%		
Senior	15	16%		
Ethnicity:				
African American	54	55%		
Black	19	19%		
Biracial/Multiracial	16	16%		
African	2	2%		
Haitian	2	2%		
Jamaican	4	4%		
Central/South American	1	1%		
Sport*:				
Football	41	42%		
Track & Field	28	29%		
Basketball	13	13%		
Other Sports	14	14%		
Financial Aid^:				
Athletic Full Scholarship	53			
Athletic Partial Scholarship	32			
Academic Scholarships	10			
Loans	28			
Grants	22			
Work Study	6			
Hometown:				
Rural	18	18%		
Suburban	35	36%		
Urban	45	46%		
Racial Makeup of High School:				
Virtually All White (over 93%)	15	15%		
Predominately White (over 75% or more)	30	31%		
Multiethnic	34	35%		
Predominately Black (over 75% or more)	12	12%		
Virtually All Black (over 93%)	7	7%		

\* Some participants did not reply

^Participants could choose more than one response

N=98

Table 2

Model fit indices for 1–4 class solutions of social support, minority stress, life stress, and team cohesion

	BIC	Adjusted BIC	Entropy
1 class solution	1400.167	1368.588	---
2 class solution	1393.421	1342.896	0.613
<b>3 class solution</b>	<b>1403.125</b>	<b>1333.652</b>	<b>0.753</b>
4 class solution	1417.506	1329.086	0.779

Bold indicates best fit. Best fit was determined by BIC, adjusted, BIC, and Entropy. Entropy is not calculated for 1 class solutions.

N=98

Table 3

Class means of most likely class membership for three-class model

	Class 1: Low Social Support/Cohesion ( <i>n</i> = 14)	Class 2: High Minority Stress ( <i>n</i> = 36)	Class 3: High Social Support/Cohesion ( <i>n</i> = 48)
Perceived Social Support	- 0.538 (- 1.434, 0.358)	- 0.080 (- 0.447, 0.288)	0.219 (- 0.162, 0.600)
Minority Student Stress	- 0.549 (- 0.929, - 0.170)	0.923 (- 0.121, 1.967)	- 0.545 (- 0.961, - 0.129)
Life Events	- 0.016 (- 0.492, 0.459)	- 0.326 (- 0.864, 0.211)	0.242 (- 0.115, 0.599)
Team Social Cohesion	- 1.299 (- 1.984, - 0.615)	- 0.049 (- 0.546, 0.447)	0.412 (- 0.085, 0.908)
Team Task Cohesion	- 0.983 (- 1.445, - 0.520)	- 0.195 (- 0.772, 0.382)	0.432 (- 0.066, 0.930)

Range indicates 95% confidence interval.



Table 4

Probabilities for class membership (PWI vs. HBCU and Males vs. Females)

	Low Social Support/Cohesion	High Minority Stress	High Social Support/Cohesion
PWI	0.039	1.000*	0.673
HBCU	0.961	0.000	0.327
Males	0.302	0.726	0.680
Females	0.698	0.274	0.320

\* $p < .05$

Table 5

Comparative association between means of class membership and CAS subscales

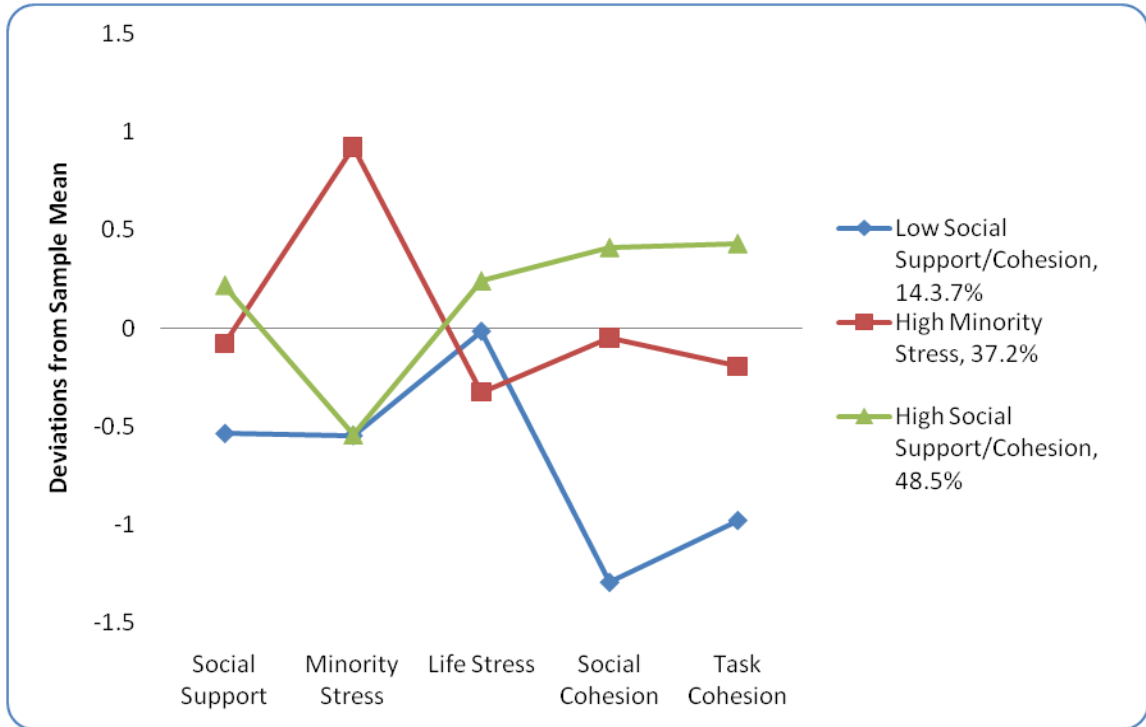
	Low Social Support/Cohesion vs. High Minority Stress	High Social Support/Cohesion vs. High Minority Stress	High Social Support/Cohesion vs. Low Social Support
Academic Problems	0.298	- 0.074	- 0.371
Anxiety	0.557	- 0.918	- 1.475**
Interpersonal Problems	2.348*	- 1.050*	- 3.398*
Depression	0.515	- 1.845**	- 2.360**
Self-Esteem	- 0.021	- 0.965**	- 0.986
Family Problems	- 2.136**	- 2.320	- 4.456*

All associations are given as odds ratios.

\*\* $p < .05$ ; \* $p < .10$ .

Fig. 1

Defining characteristics and deviations from the sample mean of each class



APPENDIX A  
DEMOGRAPHIC BACKGROUND QUESTIONNAIRE

### Demographic Background Questionnaire

1. Age: \_\_\_\_\_
2. Academic Year:            Freshmen          Sophomore          Junior          Senior +
3. Gender:                  Female                                  Male
4. Ethnic Identity (please circle one):
  - a. African American
  - b. Black
  - c. Biracial/Multiracial
  - d. African
  - e. West Indian/Caribbean
  - f. Haitian
  - g. Cuban
  - h. Puerto Rican
  - i. Dominican
  - j. Jamaican
  - k. Central/South American
  - l. Other (please specify): \_\_\_\_\_
5. Sport: \_\_\_\_\_
6. Scholarship Status (please circle all that apply):
  - a. Athletic Partial                          Athletic Full
  - b. Academic Scholarships                  Loans                          Grants                          Work-Study
7. Athletic Eligibility Status:
  - a. True Freshmen
  - b. Red-Shirted
  - c. Academically Eligible
  - d. Academically Ineligible
8. Which state are you from? \_\_\_\_\_
  - a. Distance (approximate miles) between college/university from your home state/city: \_\_\_\_\_
  - b. Description of Home Town (please circle one):  
Rural                          Suburban                          Urban
  - c. Racial Makeup of High School (please circle one):  
Virtually All White (over 93%)  
Predominately White (over 75% or more)  
Multiethnic (Inclusive of Blacks, Whites, Latinos, etc.)  
Predominately Black (over 75% or more)  
Virtually All Black (over 93%)
9. High school GPA: \_\_\_\_\_
10. Family/Parent's Income:
  - a. Under \$20,000
  - b. \$20,000-39,999
  - c. \$40,000-59,999
  - d. \$60,000-79,999
  - e. \$80,000-99,999
  - f. \$100,000-119,999
  - g. \$120,000-139,999

- h. Over \$140,000
11. Parent's Highest Education Attained (please circle):

Mother:

- a. GED
- b. Some High School
- c. High School
- d. Some College
- e. Associate's Degree
- f. Bachelor's Degree
- g. Master's Degree
- h. Graduate/Professional

Father:

- a. GED
- b. Some High School
- c. High School
- d. Some College
- e. Associate's Degree
- f. Bachelor's Degree
- g. Master's Degree
- h. Graduate/Professional

12. Number of Siblings: \_\_\_\_\_

- a. How many are attending or have attended college? \_\_\_\_\_

13. Did you attend summer school before your 1<sup>st</sup> semester?      Yes                  No

14. Were there any significant life events, positive or negative that occurred during the summer before you came to college this year?
-

APPENDIX B  
COMMUNICATION ASSESSMENT QUESTIONNAIRE

Communication Assessment Questionnaire  
(Sadberry, 2009)

Please answer these questions for your experience pertaining to this semester.

1. Number of times visited home: \_\_\_\_\_  
a. 0      b. 1-2      b. 3-5      c. 6 or more
2. Number of times you communicate per month with family (e.g., parents, siblings, grandparents, aunts/uncles, fictive kin):  
a. 0      b. 1-5      b. 6-10      c. 11 or more  
b. Ways in which you communicate with family (Please circle all that apply):  
Phone      Email      Text Messaging
3. Number of **close friends** not at current college with you: \_\_\_\_\_
4. Number of times you communicate per month with **these close friends** who are not at current college with you:  
a. 0      b. 1-5      b. 6-10      c. 11 or more  
b. Ways in which you communicate with **these close friends** (Please circle all that apply): Phone      Email      Text Messaging
5. Please indicate your chosen academic major: \_\_\_\_\_
6. Is this the academic major you wanted to take?      Yes      No
7. Earned Fall semester GPA: \_\_\_\_\_
8. Current/Projected GPA: \_\_\_\_\_



APPENDIX C  
COLLEGE ADJUSTMENT SCALE

College Adjustment Scale (CAS; Anton & Reed, 1991)

\*Note: This instrument is copyrighted. Only a sample of questions can be provided.

**Instructions:** On the accompanying answer sheet, please read each statement carefully and decide whether or not it is an accurate statement about you. For each item, indicate the number on the answer sheet that best represents your opinion.

0 False or Not at all True	1 Slightly True	2 Mainly True	3 Very True
----------------------------------	--------------------	------------------	----------------

1. I have poor study skills.
2. I feel tense much of the time.
3. A lot of people irritate me.

APPENDIX D  
LIFE EVENTS SCALE FOR COLLEGIATE ATHLETES

Life Events Scale for Collegiate Athletes (LESCA; Petrie, 1992)

Listed below are 70 events that sometimes occur in the lives of collegiate athletes. These events often produce change within an individual's life that require some adjustment by the individual. For each event that you have experienced within the last **6 months**:

1. Place a check under the column 0 months to 6 months to indicate that you experienced the event within the 6 months. Please make sure that each check corresponds to the event that has happened to you in that 6-month time-frame. Remember, only respond to those events that you have experienced within the **6 months**. If you have not experienced an event within the 6 months, leave the item blank.
2. Indicate what kind of an effect it had on your life when the event occurred. A rating of -4 would indicate that the event had an extremely negative effect on you. A rating of +4 would indicate that the event had an extremely positive effect on you. For those events that have happened more than once, indicate the average effect across all occurrences.

The events are listed in no particular order, and there are *no* right or wrong answers. Please respond to each event honestly as applies to you.

-4 extremely negative	+4 extremely positive
-3 negative	+3 positive
-2 moderately negative	+2 moderately positive
-1 somewhat negative	+1 somewhat positive

1. Marriage
2. Death of mate (boyfriend, girlfriend, spouse, significant other)
3. Major change in sleeping habits (increase or decrease in amount of sleep)
4. Death of close family member(s)
  - a. Father
  - b. Mother
  - c. Brother
  - d. Sister
  - e. **\*Child**
  - f. Grandfather
  - g. Grandmother
  - h. Other
5. Major change in eating habits (increase or decrease in food intake)
6. Death of close friend(s)
7. Outstanding personal achievement
8. Male: Mate pregnant
9. Female: becoming pregnant
10. Sexual difficulties
11. Being fired from a job
12. Being apart from mate (boy/girlfriend, spouse, etc.) due to sport
13. Serious illness or injury of close family member(s)
  - a. Father

- b. Mother
  - c. Brother
  - d. Sister
  - e. **\*Child**
  - f. Grandfather
  - g. Grandmother
  - h. Other
14. Major change in the number (more or less) of arguments with mate
  15. Major personal injury or illness
  16. Major change in the frequency (increased or decreased) of social activities due to participation in sport
  17. Serious injury or illness of close friend
  18. Breaking up with mate (boy/girlfriend, spouse, etc.)
  19. Beginning a new school experience (beginning college, transferring colleges, etc.)
  20. Engagement
  21. Academic probation/ineligibility
  22. Being dismissed from dorm or other residence
  23. Failing an important exam
  24. Major change in the relationship with coach (better or worse)
  25. Failing a course
  26. Major change in the length and/or conditions of practice/training (better or worse)
  27. Financial problems concerning school
  28. Major change in relationship with family member(s) (better or worse)
  29. Conflict with roommate
  30. Male: mate having an abortion
  31. Female: having an abortion
  32. Major change in the amount (more or less) of academic activity (homework, class time, tutoring hours, etc.)
  33. Pressure to gain/lose weight – due to participation in sports
  34. Discrimination from teammates/coaches
  35. Major change in relationship(s) with teammate(s) (better or worse)
  36. Suspended from team for nonacademic reasons
  37. Trouble with academic counselor
  38. Major change in use of alcohol/drugs (increased or decreased)
  39. Beginning sexual activity
  40. Major change in relationship(s) with friend(s) (better or worse)
  41. Recovery from illness/injury/operation
  42. Major change in level of athletic performance in actual competition (better or worse)
  43. Divorce or separation of your parents
  44. Major change in level of responsibility on team (increased or decreased)
  45. Receiving an athletic scholarship
  46. Not attaining personal goals in sport
  47. Major change in playing status on team
  48. Injury to teammate(s)
  49. Being absent from school (classes) because of participation in sport
  50. Troubles with athletic association and/or athletic director
  51. Difficulties with trainer/physician
  52. Major change in playing time (playing more or less)-due to injury

- 53. Major errors/mistakes in actual competition
- 54. Losing your athletic scholarship
- 55. No recognition/praise of accomplishments from coach staff
- 56. Pressure from family to perform well
- 57. Loss of confidence due to injury
- 58. \*Becoming a parent**
- 59. Unable to find a job
- 60. Change in coaching staff
- 61. Female: menstrual period/PMS
- 62. Major change in level of academic performance (doing better or worse)
- 63. Making career decisions (applying to graduate school, interviewing for jobs, internship, etc.)
- 64. Being cut/dropped from the team
- 65. Continual poor performance of team
- 66. Change in graduation schedule
- 67. Major change in family finances (increased or decreased)
- 68. Major change in attitude toward sport (like/enjoy more or less)
- 69. Victim of harassment/abuse (sexual, emotional, physical)
- 70. Victim of personal attack (rape, robbery, assault, etc.)

Other events might have occurred to you in the past year (and affected you in a positive or negative manner) but were not included in this list. If there were such events, please list them below.

- 71. \_\_\_\_\_
- 72. \_\_\_\_\_
- 73. \_\_\_\_\_
- 74. \_\_\_\_\_
- 75. \_\_\_\_\_

**\* Items added by researcher**

APENDIX E  
MINORITY STUDENT STRESS SCALE





APPENDIX F  
PERCEIVED SOCIAL SUPPORT SCALE

Perceived Social Support Scale (PSS; Procidano & Heller, 1983)

**Instructions:** The statements which follow refer to feelings and experiences which occur to most people at one time or another in their relationships with their **FRIENDS, FAMILY MEMBERS, INSTRUCTORS, and COACHES/ATHLETIC ADMINISTRATORS.**

For each question, please select the one best answer which describes how you feel.

1	2	3	4	5
Strongly Disagree		Neutral		Strongly Agree

**The following questions are about FRIENDS (don't include brothers or sisters):**

1. My friends back me up when I need them.
2. My friends enjoy hearing about what I think.
3. I feel like I am part of the group when I am with my friends.
4. I have a friend I could go to if I were just feeling down, without feeling funny about it later.
5. I find it easy to talk to my friends.
6. My friends notice and help me when I need them to.
7. My friends are good at helping me solve problems.
8. My friends seek me out to do things with them.
9. I have a friend who would call me his/her best friend.
10. I wish my friends were nicer to me.

**The following questions are about MEMBERS OF YOUR FAMILY:**

11. My family members back me up when I need him/her to.
12. I get good ideas about how to do things from my family.
13. When I talk to the family members I am closest to about things that are important to me, I think they like it.
14. My family enjoys hearing about what I think.
15. I can count on my family for emotional support (help with my feelings).
16. My family and I find it easy to talk to each other.
17. My family notices and gives me help when I need him/her to.
18. My family is good at helping me solve problems.
19. There are family members I can trust with personal things on my mind.
20. I wish my family was nicer me.

**The following questions are about INSTRUCTORS:**

21. Instructors at this school back me up when I need them.
22. I get good ideas about how to do things from instructors.
23. When I talk to the instructors I am closest to about things that are important to me, I think they like it.

24. Instructors enjoy hearing about what I think.
25. I can count on instructors for emotional support (help with feelings).
26. Instructors and I find it easy to talk to each other.
27. Instructors notice and give me help when I need them to.
28. Instructors are good at helping me solve problems.
29. There are instructors I can trust with personal things on my mind.
30. I wish instructors were nicer to me.

**The following questions are about your COACH/ATHLETIC ADMINISTRATORS**

31. My coach/athletic administrators back me up when I need him/her to.
32. I get good ideas from my coach/athletic administrators about how to do things.
33. When I talk to my coach/athletic administrators about things that are important to me, I think he/she likes it.
34. My coach/athletic administrators enjoy hearing about what I think.
35. I can count on my coach/athletic administrators for emotional support (help with my feelings.)
36. My coach/athletic administrators and I find it easy to talk to each other.
37. My coach/athletic administrators notice and give me help when I need him/her to.
38. My coach/athletic administrators are good at helping me solve problems.
39. I can trust my coach/athletic administrators with personal things on my mind.
40. I wish my coach/athletic administrators were nicer to me.

APPENDIX G  
GROUP ENVIRONMENT QUESTIONNAIRE

Group Environment Questionnaire (GEQ: Carron, Brawley, & Widmeyer, 1985)

The following questions are designed to assess your feelings about your PERSONAL INVOLVEMENT with this team. Please write a number on the line from 1 (strongly disagree) to 9 (strongly agree) to indicate your level of agreement with each of the statements.

1	2	3	4	5	6	7	8	9
Strongly Disagree				Neutral				Strongly Agree

1. I do not enjoy being a part of the social activities of this team.
2. I'm not happy with the amount of playing time I get.
3. I am not going to miss the members of this team when the season ends.
4. I'm unhappy with my team's level of desire to win.
5. Some of my best friends are on this team.
6. This team does not give me enough opportunities to improve my personal performance.
7. I enjoy other parties more than team parties.
8. I do not like the style of play on this team.
9. For me this team is one of the most important social groups to which I belong.
10. Our team is united in trying to reach its goals for performance.
11. Members of our team would rather go out on their own than together as a team.
12. We all take responsibility for any loss or poor performance by our team.
13. Our team members rarely party together.
14. Our team members have conflicting aspirations for the team's performance.
15. Our team would like to spend time together in the off-season.
16. If members of our team have problems in practice, everyone wants to help them so we can get back together again.
17. Members of our team do not stick together outside of practices and games.
18. Our team members do not communicate freely about each athlete's responsibilities during competition or practice.

APPENDIX H  
ATHLETIC DEPARTMENT  
PERMISSION FORM

## Permission to Recruit Student-Athletes

Ms. Sadberry:

It is our understanding that you are currently completing your dissertation research study entitled: College Adjustment of African American Student-Athletes at Predominately-White Institutions and Historically Black Colleges and Universities. The purpose of your study is to better understand the adjustment of African American student-athletes and the impact of several factors including social support, perceived campus racial climate, team cohesion, and life events.

This dissertation research study is being conducted under the supervision of Dr. Michael Mobley at Rutgers, The State University of New Jersey and Dr. Puncky Heppner at the University of Missouri. This research study has been approved by the MU Campus Institutional Review Board. If we have any questions, we may contact you, as the primary investigator, or contact the University of Missouri Campus Institutional Review Board (573.882.9585).

After reviewing IRB materials (including informed consent form and recruitment letter for student-athletes) related to the recruitment of African American student-athletes at the **[Institution Name]**, it has been determined that our Athletic Department will allow you to recruit student-athletes. Furthermore, we agree, in order to protect the privacy of our student-athletes, it would be best for our department staff to forward your recruitment email to the student-athletes.

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Signature: \_\_\_\_\_

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

APPENDIX I  
RECRUITMENT EMAIL



Dear Black/African American Student-Athletes:

I have received permission from [contact name at Athletic Department] to ask for your voluntary participation in a study to learn more about your experience at college. For your participation, you will be entered into a raffle to win one of five \$25, one of four \$50, or one of five \$100 cash prizes (in accordance with NCAA Bylaws). This study is part of a dissertation research study on African American/Black student-athletes' adjustment to college conducted by Sheriece Sadberry, an African American Ph.D. candidate specializing in sport psychology, and will guide work with athletes of color. Study participants will be asked to fill out several online questionnaires, which will take approximately 30-60 minutes. The study is ***completely confidential*** and the information provided ***will not*** be provided to your Athletic Department.

You can access the study by either clicking the following link or cutting and pasting the URL link into your browser:

The password to the survey is:

\*If you are under the age of 18, you will need to have your parent(s) sign the parental consent form.\* Please have your parent/guardian sign the attached form and fax the form to 352.392.8452.

If you have any questions or concerns regarding this research, please feel free to contact me by email at [slsd3b@mail.missouri.edu](mailto:slsd3b@mail.missouri.edu) or by phone at 573.673.0718 or the University of Missouri Campus Institutional Review Board (573.882.9585). Thank you for your participation.

Sincerely,  
Sheriece Sadberry  
Doctoral Candidate  
Educational, School, and Counseling Psychology  
University of Missouri

APPENDIX J  
RECRUITMENT FLYER

## Seeking African American/Black Student-Athletes

I have received permission to ask for your voluntary participation in a study to learn more about your experience at college. For your participation, you will be entered into a raffle to win one of five \$25, one of four \$50, or one of five \$100 cash prizes (in accordance with NCAA Bylaws). This study is part of a dissertation research study on African American/Black student-athletes' adjustment to college conducted by Sheriece Sadberry, an African American Ph.D. candidate specializing in sport psychology, and will guide work with athletes of color. Study participants will be asked to fill out several online questionnaires, which will take approximately 30-60 minutes. The study is ***completely confidential*** and the information provided ***will not*** be provided to your Athletic Department.

If you are interested please email Sheriece Sadberry at [slsd3b@mail.missouri.edu](mailto:slsd3b@mail.missouri.edu)

APPENDIX K  
CONSENT FORM

## **Consent Form**

### **Black/African American Student-Athletes**

#### Invitation to Participate and Study Description

You are invited to participate in a research study about Black/African American student-athletes. We are interested in studying your experiences at college, your experiences on athletic teams, your social support, potential sources of life stressors, and other demographic variables that may influence your collegiate experience. You will be asked to fill out a survey questionnaire which will take approximately 30-60 minutes to complete. With your consent, you will be entered into a lottery drawing when you complete survey. Please see information below.

#### Confidentiality

The information you provide will be kept strictly confidential. The Athletic Department is NOT affiliated with this research other than assisting with recruitment of participants. The Athletic Department will not have access to the information provided and will not be able to identify individual responses to the questions. The information that you provide in research will be confidential. The information that is gathered about you will not be reported to anyone outside the research team in a manner that personally identifies you.

To protect your privacy, the survey results will be kept in a locked file in the primary investigator's office. All project materials will be kept for three years after the study has ended, and will be accessible only to members of the research team. Your name will not be associated with your survey materials or with the research findings. The information obtained in this study will be published in scientific journals and presented at professional meetings, but only group patterns will be described and your identity will not be revealed. All emails will be destroyed from the researcher's mailbox upon retrieval, if you choose to email the investigator with questions. Despite all necessary steps being taken, there is still a potential risk of being identified even with the researchers protecting against all unforeseen breaches in confidentiality. This is a highly unlikely scenario and one that is not intended by the research investigators.

#### Risks and benefits

The present research study does not involve any type of physical risk; you will be asked to answer questions about your experiences at college, your experiences on athletic teams, your social support, potential sources of life stressors, and other background information. There are some questions that ask about Athletic membership, this may allow for identification even through the use of a coding system. Some of the questions may be embarrassing or remind you of unhappy past experiences. Although you may admit to some drug and alcohol use, it is only used to assess your functioning as you adjust to college and the specific type or quantity will not be assessed. In addition, this information will not be reported to local authorities or your coaches. If you become upset as a result of participating the **[INSTITUTION Counseling Center] (PHONE NUMBER)** or call 911 in case of an emergency.

Although this study is not designed to help you personally, the information you contribute will add to our knowledge about the experiences of Black/African American student-athletes, which can help coaches and athletic administrators/personnel to formulate

interventions to provide a safe, encouraging place for the success and growth of Black/African American student-athletes. The results of this study can be made available to interested research participants. Respondents are encouraged to contact the principal investigator, Sheriece Sadberry for more information.

#### Compensation

As an incentive to participate, there will be a random drawing of those who complete the survey questionnaire and then submit e-mail addresses upon the online prompt. As incentives you could win one of five \$25 cash prizes, one of four \$50 cash prizes, or one of five \$100 cash prizes at each questionnaire administration. The research is being conducted at several institutions with a total of approximately 200 participants, which is an approximate 1/21 chance of winning a prize per questionnaire administration. You are not required to answer every question that might be asked. However, participants who complete majority of research survey questionnaire will be included in the lottery drawing. This means that you are free to stop participating at any point without penalty or loss of privilege, except for benefits directly related to your participation in this study. Drawings will take place approximately two weeks after the questionnaire is administered and winners will be notified by email. If you wish to participate in the drawing for cash prizes, the email address you submit after completing the questionnaires will be sent to a separate online data file apart from your individual questionnaire responses. The email address will be combined with others in a separate and secure composite list, from which the winners will be randomly selected.

#### Right to ask questions

You have the right to ask questions about this research study and to have those questions answered by any of the study investigators (see list below) before, during, or after the research. If you have any other concerns about your rights as a research participant that has not been answered by the investigators, you may contact the **[INSTITUTION IRB INFORMATION]**.

#### Freedom to withdraw

The decision to participate is entirely up to you. You may refuse to take part in the study without affecting your relationship with the investigators of this study or the **[INSTITUTION NAME]** or the Athletic Department. This means that you are free to stop participating at any point without penalty or loss of privilege, except for benefits directly related to your participation in this study.

#### **Study Investigators:**

Sheriece Sadberry, Doctoral Candidate, University of Missouri  
[slds3b@mail.missouri.edu](mailto:slds3b@mail.missouri.edu), 573.673.0718

Michael Mobley, Ph.D., Rutgers, The State University of New Jersey  
[michael.mobley@gse.rutgers.edu](mailto:michael.mobley@gse.rutgers.edu), 732.932.7496 ext. 8102

Puncky Heppner, Ph.D., University of Missouri  
[heppnerp@missouri.edu](mailto:heppnerp@missouri.edu), 573.882.3523

APPENDIX L  
COMPENSATION LETTER

Date

Dear Research Participation:

Once again, thank you for participating in my dissertation study examining the adjustment of Black/African American freshmen student-athletes (MU IRB #1137917). Enclosed is a check for the cash prize you won in the compensatory raffle. I received permission from your athletic department to recruit you for participation and the compensation is in accordance with NCAA Bylaw 16.11.1.12. Please retain this letter for you records.

Please keep an eye on your email in March for a chance to participate in the survey once again with another opportunity to win a cash prize in the raffle.

Sincerely,

Sheriece Sadberry  
[slsd3b@mail.missouri.edu](mailto:slsd3b@mail.missouri.edu)  
573.673.0718



## VITA

Sheriece Sadberry was born in Easton, MA. She attended the University of Nebraska-Lincoln for undergraduate where she majored in Psychology and minored in Business Administration. For graduate school, she attended the University of Missouri for graduate school where she majored in Counseling Psychology with an emphasis in Sports Psychology. She completed her pre-doctoral internship in the “Sunshine” state at the University of Florida and will join the Florida State University’s Counseling Center psychologist staff in August 2010.

Sheriece has taught courses in statistics, African American psychology, social psychology, and sport psychology. She is passionate about working with at-risk youth, students of color, first generation college students, and athletes. As a McNair Fellow, she enjoys giving back to the McNair program and mentoring underrepresented undergraduate and graduate students.

In Sheriece’s spare time, she practices yoga, spends time with her dog, travels, and rides her motorcycle.