

ABSTRACT

PSYCHOLOGICAL AND PHYSICAL HEALTH PREDICTORS OF ACADEMIC ACHIEVEMENT FOR AFRICAN AMERICAN COLLEGE STUDENTS

By

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The purpose of this quantitative study was to identify psychological and physical health factors that influence African American college students' academic achievement using secondary data from the American College Health Association's National College Health Assessment (ACHA-NCHA). Using Bronfenbrenner's ecological systems theory, this study explored the influence of health variables on African American college students' academic experiences. Independent sample *t*-tests were used to analyze gender differences between African American female and male college students. Factor analyses and a logistic regression were used to ascertain the influence of psychological and physical health factors on African American college students' academic achievement. Findings of this study highlight personal health issues, future help-seeking behavior, and impeding emotional experiences as significant predictors of academic achievement for all African American students. Implications for practice and recommendations for future research are reviewed.

PSYCHOLOGICAL AND PHYSICAL HEALTH PREDICTORS OF ACADEMIC
ACHIEVEMENT FOR AFRICAN AMERICAN COLLEGE STUDENTS

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CHAPTER 1

INTRODUCTION

The college experience spurs the development of students physically, psychologically and intellectually. Similar to the academic readiness, ability and capacity that students come to college with, they also bring with them physical and psychological behaviors and attitudes that influence their academic achievement. Whether physically or psychologically, the college experience causes shifts in behaviors and attitudes that also influence their academic achievement.

For some students attending college is their first time away from home and the experience can bring about shifts in independence and responsibility. In college, students are typically responsible for managing their own affairs such as attending class and work, studying, socializing with peers, and even attending to familial responsibilities. Furthermore, students are tasked with the responsibility of navigating the collegiate culture, which includes interacting with faculty, academic and student services personnel, and their peers. While interacting with the faculty and staff, students will also be exposed to the institutional traditions, values and norms, which make up the campus culture. Whether implicit or explicit the culture of the campus will have implications for students' health and their persistence.

As students come to college with different levels of academic readiness and persist at different rates, the implications of their psychological and physical health on

their academic achievement will also vary. African American college students' academic achievement is typically evaluated alongside their White counterparts which yields a gap in achievement between the two groups. This approach to assessing African American college students' success continues to highlight deficit academic outcomes because they come to college with different levels of readiness, ability and capacity than their White peers. This is also the case in their collegiate experiences as African American and White students enter college with different psychological and physical health dispositions. Furthermore, the effects of the college experience (which include but are not limited to campus culture, peers, academic responsibilities, work and housing) on African American college students' physical and psychological health and academic achievement will also differ from their White peers.

African American college students' experiences have evolved from a time where access to education and support services were limited (Flowers & Shuford, 2011; Thelin, 2011). African Americans were restricted to specific degrees and usually were not given financial support. Thelin (2011) highlighted in the historical review of higher education that college campuses were academically and socially isolating for African Americans.

Legislation such as the U.S. Supreme Court ruling of *Brown v. Board of Education* (1954) began to shift higher education from a separate but equal system to an inclusive environment for students of color (Fleming, 1976; Thelin, 2011). With access to institutions of higher education, African Americans still faced the challenge of integrating into the social and academic environment of campus. Issues such as social economic status, academic preparation and self-efficacy were also barriers to the

academic success and retention of African American college students (Harper & Quaye, 2009; Pascarella & Terenzini, 2005).

Today African American college students' enrollment and graduate rates have increased. The four-year graduation rates have increased 13% and the six-year graduation rates have increased 10% ("College Completion", 2010). A 10% and 13% increase is important to highlight in order to further improve efforts to increase graduations rates among African American college students. Namely, to understand what influences positive academic outcomes of African American college students.

College students will collectively experience some level of adjustment to transitioning to college in addition to intellectual, interpersonal and intrapersonal development (Chickering & Reisser, 1993). Each student will also come to college with strategies to navigate their college experience. The strategies they possess will vary and can be an impediment or support to their transition. The coping strategies of African American college students may differ from that of their White peers because of previous exposure and/or access. For example, the utilization of counseling and psychological services in the African American community has not always been a viable option in years past due to financial limitation, spiritual beliefs and lack of knowledge. Improving efforts to inform African American college students' decision to seek and commence in a counseling process can be imperative to their psychological health and academic success.

The inequities in access and the lack of awareness of resources to manage physical and psychological health issues has led African Americans to use other methods of coping. Furthermore, as African American college students matriculate into college they also employ various coping strategies to manage the shifts they experience. The

physical and psychological shifts that occur can have a positive or negative influence on their persistence. Cokley and Moore (2007) postulated that a comprehensive exploration of African American college students' academic achievement, needs include how psychological health influences their academic outcomes.

Statement of the Problem

Previous studies on African American college students have focused on their academic readiness, ability and retention in order to understand their college academic outcomes (Allen, 1992; Cuyjet, 2006). Scholars have looked at African American college students' persistence and retention in college as a byproduct of their successful integration into campus culture, as well as their academic capacity (Kuh, 2001; Pascarella & Terenzini, 2005; Tinto, 1993). In assessing the academic performance of African American college students, previous studies measure their success in comparison to White college students. This dichotomous assessment of graduation or enrollment rates continues to highlight a deficit discourse among African American college students (Harper & Quaye, 2009; Pascarella et al., 2005; Strayhorn, 2010). However, African American college students are in fact enrolling and graduating in higher rates than they were in years past ("College Completion", 2010). Strayhorn (2010) highlighted that there is a need for more research on African American college students within group academic achievement in an effort to accurately assess their persistence.

An exploration of African American college students' academic ability and college outcomes provide insight into improving academic services and programming to support their intellectual development. However, few studies have explored the effects of African American college students' psychological and physical health on their academic

achievement. Scholars have studied the effects of stress, racism, and discrimination on African Americans and college students' psychological health (Aronson, Fried, & Good, 2002; Pierce, 1974; Steele, 1997). Previous studies on African American college students' psychological health (Ayalon & Young, 2005; Boyraz, Horne, Owens, & Armstrong, 2013; Cheng, Kwan, & Sevig, 2013; Cokley & Moore, 2007; Pierce, 1974; Steele, 1997), and physical health (Ajibade, 2011; Adderley-Kelly, 2007; Darden, 2014) have looked at the degree to which their environment influences their psychological and physical habits and behaviors. Extending the research to explore the implications of their psychological and physical health on their academic success can provide more insight on how institutions of higher education can support their well-being and academic success.

Psychological Health

Understanding how African American college students cope with the stress of college and seek help is important in exploring their academic achievement. Going away to college can bring about many first time experiences for college students, specifically for African American students, utilizing psychological counseling services before college is not a common resource or preference. In a study on African Americans' perception of psychotherapy, cultural beliefs such as resolving family issues within the family, cost of services and lack of awareness regarding the signs of mental illness were noted as significant barriers to seeking mental health services (Thompson, Bazile, & Akbar, 2004). Furthermore, studies on the help-seeking behavior of African American college students have found that they have an unfavorable view of seeking professional psychological help (Wallace & Constantine, 2005). Negative views of psychological

services and psychological disorders tend to impact African American colleges students help seeking behavior.

Ayalon and Young (2005) found that African American college students report experiencing higher levels of stress but are less likely to utilize psychological services. Although, stress can prove to be detrimental to any college student's academic career, the effects of stress can be fatal if not addressed. Furthermore, psychological stressors can manifest into physical ailments that can impact African American college students after college (Darden, 2014). Jackson, Knight, and Rafferty (2010) found a positive relationship between mental health stressors and chronic health problems among African Americans. The authors also found that unhealthy behaviors as a means of coping such as poor eating habits and alcohol abuse can lead to chronic conditions. Darden (2014) has similar findings in her study on African American college students' physical health; she highlighted that unhealthy behaviors such as poor eating and sleep habits along with limited physical activity in college can have long term effects on African American college students' physical health.

Physical Health

Psychological health behaviors influence physical health behaviors in African Americans (Darden, 2014; Jackson et al, 2010; Steele, 1997). Exploration of African American college students' physical health can inform interventions and programming that can aim to improve both their psychological and physical health behaviors during and after college. For African American college students, physical health is an area of their life that if not maintained can cause challenges even after college. Darden (2014) found that college namely the workload, social experiences and environmental shifts can

contribute negatively to African American college students' physical behaviors. So, Swearingin, Robbins, Lynch, and Ahmedna (2012) found that African American college students are less likely to engage in physical activity which increases their risk for obesity and other weight related health issues. Poor food choices and inactivity during college also put African American college students at risk for developing chronic illness that can lead to a poor quality of life after college (Ajibade, 2011).

Academic Achievement

Previous studies looking at predictors of academic achievement cited pre-college outcomes such as high school GPA and SAT/ACT scores as significant predictors of grade point average (Taylor, Vatthauer, Bramoweth, Ruggero, & Roane, 2013). Similar studies have found that socioeconomic status, mental health problems, alcohol and drug use influenced grade point average among college students. Neville, Heppner, Ji, and Thye (2004) highlighted that high levels of race-related stressors were significant predictors of psychological wellness for African American college students. Above SAT scores, perceived stressors and coping strategies were found to be significant predictors of first year GPA among college students (Neville et al, 2004).

African American college students tend to face more academic, financial, career related and race related stressors than their White counterparts (Luzzo & McWhirter, 2001). The Black Student Stress Inventory concluded that there are six domains of stressors: financial, academic, environmental, personal, interpersonal and career that impact African American college students (Newton, Ghee, & Langmeyer, 2013). Perceived stressors associated with being an ethnic minority has been found to be a predictor of negative perception toward persistence (Wei, Ku, & Liao, 2011). These six

domains can range from familial responsibilities, personal health problems to working. Students who typically work between 10-19 hours have been found to have strong grades, where as those who work more than 20 hours tend to have lower GPAs (Dundes & Marx, 2006). Newton et al., (2013) found that lack of social support for African American college students has a significant negative influence on their academic integration and achievement. Furthermore, factors such as faulty-student relationships, campus racial composition and out of class encounters influence African American college students' academic achievement and persistence (Cokley, 2000; Kuh, 2001; Rendon, 1994; Tinto, 1993).

Purpose of the Study

Psychological and physical well-being in college affects how students experience their institution and their surrounding environment. The purpose of this study was to explore African American college students' psychological and physical attitudes, behaviors and habits. I used the American College Health Association's (ACHA) National College Health Assessment (NCHA) to identify psychological and physical health factors that predict academic achievement among African American college students. I examined the differences among African American female and male college students. A quantitative analysis of factors that predict self-reported grade point average (academic achievement) among African American college students informed my recommendations for practice and future research on this topic. The following primary research questions guided my exploration of predictors of academic achievement among African American college students.

Research Questions

1. What psychological and physical health factors are positive predictors of academic achievement among African American college students?
2. What gender differences exist for African American male and female college students?
3. Do psychological and physical health behaviors positively predict academic achievement?
4. How do African American college students perceive their campus environment?

Research Design

I employed a quantitative cross sectional research design in this study. Secondary data from the American College Health Association's (ACHA) National College Health Assessment (NCHA) was analyzed to answer research questions. Psychological and physical health variables were identified and examined using descriptive statistics. The dependent variable in this study is academic achievement, which is measured by self-reported grade point average (GPA). *T*-tests were conducted to analyze statistical differences between African American female and male college students' responses. Factor analyses determined reliable factors identified in this population's psychological and physical health behaviors. I conducted a hierarchical multiple regression to determine what independent variables significantly predict academic achievement. Bronfenbrenner's (1994) ecological theory guided my study and analyses. The anticipated outcomes of this study were:

1. Psychological health factors are negative predictors of academic achievement for African American college students.
2. Physical health factors are positive predictors of academic achievement among all African American college students.
3. Psychological health factors are negative predictors of academic achievement for African American female students. Psychological health factors are positive predictors of academic achievement for African American male students.
4. Psychological and physical health behaviors positively predict academic achievement among African American college students.
5. African American college students perceive their college campus environment as safe during the day and night.

Definition of Terms

American College Health Association-(ACHA)- National College Health Assessment (NCHA): The ACHA administers NCHA survey nationally to assist institutions of higher education collect data about their students' health habits, behaviors and perceptions.

African Americans: people that identify as Black or of African descent, which can include but is not limited to racial heritages such as African, Caribbean, Nigerian and Haitian (Flowers & Shuford, 2011).

Academic achievement: for the purpose of this study, academic achievement will be measured by self-reported grade point average.

Grade point average (GPA): a linear combination of grades earned in different courses (Lei et al., 2001). GPA is calculated by adding up all earned grades and dividing the sum

by the number of grades awarded. Most GPAs are based on a 0 to 4.0 scale, with a 4.0 equating to an A (Hidden curriculum, 2014).

Microaggressions: are defined as subtle insults which consist of verbal, nonverbal and or visuals that are directed toward people of color. The subtle insults are often automatic or unconsciously given (Pierce, 1974; Solórzano et al, 2000).

Psychological health: habits and behaviors that influence or contribute to a student's mental and emotional health.

Physical health: habits and behaviors that influence or contribute to the maintenance or destruction a student's physical body.

Stereotype threat: Steele (1999) explains that stereotype threat is a psychological threat of being viewed through a lens of negative stereotype and/or the fear of inadvertently confirming the stereotype through one's actions.

Summary of Study

The aim of my thesis study was to expand the literature on underlining factors that promote the academic achievements of African American college students and shed light on their psychological and physical health. The exploration of these different areas of African American college students' lives helped identify predictors of academic achievement for African American college students. This study will provide practitioners and scholars with data to inform their perspectives on and praxis of supporting African American college students' academic success and health.

Additionally, this study highlighted significant factors of African American college students who are academically successful and the effects of their psychological and physical health on their academic progress. Implications of this study suggested

more research on the collegiate experiences of African American college students that contribute to or impede their overall success. Finally, this research study called for the examination of institutional practices, programming and services targeted at improving and maintaining African American college students' psychological and physical health as they continue through academia.

CHAPTER 2

LITERATURE REVIEW

Overview of African American College Students

Over the past 20 years the college enrollment of African Americans has increased (National Center for Education Statistics [NCES], 2014). Despite increased enrollment rates, their graduation rates are not comparable to their White counterparts. Rodgers (2008) highlighted that although some African American students are entering “college with higher high school grade point averages” (p.172), many report lower academic achievement in college, specifically at predominantly White serving institutions.

African American students who meet pre-collegiate milestones (i.e. high SAT scores and high school gpa) but have lower academic achievement in college provide evidence that factors outside of academic preparation and ability can negatively depress achievement (Maton, Hrabowki, & Schmitt, 2000). Academic and cultural isolation such as low expectations for performance, lack of faculty and peer support and perceived as well as actual discrimination can influence African American college students’ self efficacy and academic success (Maton et al., 2000).

Previous studies have highlighted the lack of ability and preparedness as a contributing factor to low academic success and attrition among African American college students (Pascarella & Terenzini, 2005). Lack of integration into the academic

environment has been found to impede African American college students' self-efficacy and academic achievement. Lack of social integration can be attributed to social isolation and or stereotype threat, which can also influence a student's academic performance (Newton et al., 2013; Steele, 1997). Steele and Aronson (1995) explained that stereotype threat, which is fear of confirming a negative belief about one's group, could inhibit the academic performance of African American students.

There is also a gender divide among African American college students in areas including enrollment, grades and degree attainment. African American female college students enroll and graduate in higher numbers than their male counterparts (Cokley & Moore, 2007). Cuyjet (2006) explained that African American female and male college students perform differently in college. He highlighted that African American males are heavily recruited for intercollegiate athletics yet make up a small percentage of the population. Harper (2012) pointed out that African American males in college make up less than 4% of undergraduates but over 50% of college athletes at NCAA Division I schools. Lack of African American male representation in higher education and deficit perceptions of this population are significant factors contributing to their academic achievement (Strayhorn, 2010; Wood & Turner, 2010).

Strayhorn (2010) explained that there are gender differences among African American college students in how they view themselves in connection to their ethnicity and intellectual development. Factors such as ethnic and racial identity are also influences of academic achievement in African American college students. African American women with high ethnic identity are more likely to have high GPAs whereas

African American men with high ethnic identity are likely to have lower gpa (Cokley, 2000).

Social and academic engagement for both African American female and male college students is imperative to fostering their academic success (Kuh, 2001; Rendon, 1994; Strayhorn, 2012a; 2010). Rendon (1994) highlighted the importance of validation in and outside of the classroom for students of color. She reported that positive peer and faculty interaction along with familial support are imperative in corroborating students' of color academic success in higher education. Locks, Hurtado, Bowman, and Oseguera (2008) explained that students of color experience college transition as a new academic adjustment but also as a new social and cultural context (p. 259). Making sure students of color feel welcome is a key component of validating their presence in these new social and cultural environments (Terenzini et al., 1994). African American college students report that perceived as well as actual mistreatment creates a barrier to their campus engagement outside of class (Harper & Hurtado, 2007).

Previous studies have identified racial/ethnic identity, community involvement, family support and relationships as key influences in students of color transition process (Choi, 2005; Schneider & Ward, 2003; Locks et al., 2008). These studies suggest a closer look the social connections and context to understand the influences of students of color college adjustment and persistence. In addition to positive peer and faculty interaction, African American college students' academic achievement is influenced by their positive self-concept (Seidman, 2005).

African American college students' self-esteem is not typically connected to their GPA (Cokley, 2000). However, African American college students with higher grade

point averages are more likely to persist and have a positive self-concept. Lent, Brown and Gore (1997) define academic self-concept as, attitudes, feelings and perceptions relative to one's intellectual or academic skills," (p. 308). Few studies have explored the effects of African American psychological health on their academic success Previous studies on the influences of psychological factors has focused on the implications of faculty expectations and students internal motivations. Cokley and Moore (2007) highlighted that to further understand African American college students academic outcomes, the influence of psychological and cultural factors have to be considered.

Psychological Health

In a comparison study between African American and White college students Ayalon and Young (2005) found that African American college students reported distress symptoms at the same level if not higher than psychiatric clients. Despite reports of experiencing higher levels of distress in college, African American college students use psychological services less frequently (Ayalon & Young, 2005; Cheng et al, 2013). To further understand African American college students' psychological health further exploration into how and what helps them manage stress in college.

Boyraz et al (2013) found that trauma exposure in African American college students has damaging effects on their academic progress. The authors found that African American college females are at a greater risk for post-traumatic stress syndrome because of the types of traumatic events they experience. Boyraz et al (2013) found that African American female college students often experience more, "interpersonal trauma" which can include physical and sexual abuse or betrayal trauma involving someone close to them. The authors also found that African American male college students tend to

experience or witness physical violence. Tang and Freyd (2012) found that social stigma of some traumas may inhibit the victim from seeking help. Trauma exposed African American college students are less likely to seek mental health services and more likely to have poor self-esteem and academic performance.

Stress

Watkins, Green, Goodson, Guidry, and Stanley (2007) highlighted stressful events for African American college students' as a major influence on their attrition. College students experience different types of stress such as academic stress, which can stem from grades, time management and relationships (Negga, Applewhite & Livingston, 2007). Williams (2003) explained that African American's transition into adulthood may experience an awareness of inequalities and disadvantages. This realization can increase stress levels in young adulthood and cause African Americans to adapt poor coping strategies. Furthermore, African American college students often experience stress related to their college environment and interactions. Sources of stress come from normal academic responsibilities such as studying and finances, but African American college students also experience stress related to their race. Greer and Brown (2011) explained that race-related stress emanates from psychological challenges connected to their race/ethnicity (p.26). Race-related stress for African American college students has been connected to low engagement, motivation and academic outcomes (Greer & Chwalisz, 2007).

African American college students have significantly higher reports of all types of stress compared to other racial groups (Negga et al., 2007). Newton et al (2013) found influenced African American college students' negative attitudes toward college

persistence. Furthermore, African American college students also experience racial discrimination in the form of microaggressions, which are defined as, subtle verbal or nonverbal insults or gesture toward a person of color (Pierce, 1974; Solorzano, Ceja & Yosso, 2000). They also face pressure to conform to racial stereotypes (stereotype threat) more than Whites and other students of color (Steele, 1997).

Left unattended to, stress can lead to attrition (Hudd et al, 2000), unhealthy lifestyle behaviors (Williams, 2003) and a lower quality of life (Darden, 2014). Stress can be mediated through various services on college campuses, which include but are not limited to counseling and psychological services, the health and recreation center and social support. Students of color tend to anticipate academic, race and career related barriers and sometimes lack the appropriate coping strategies to manage their experiences (Cokley & Moore, 2007).

Lacking proper coping strategies or skills to navigate university support services can lead African American college students to unhealthy behaviors to deal with the transition. Some of those unhealthy behaviors include poor dietary options, physical inactivity, the use of legal and illegal substances such as smoking tobacco, drinking alcohol or risky sexual behavior (Darden, 2014). Musa-Turner and Lipscomb (2007) found that students with high levels spirituality and social support (i.e. peers, parental support), were less likely to participate in unhealthy behaviors such as smoking and drinking. This particular study highlights an important antidote to support African American college students' transition and persist in higher education.

Coping

Social, familial, and religious/spiritual support are some of the ways African American college students mitigate different life stressors (Constantine, Lewis, Conner, Sanchez, 2000; Greer-Reed, 2013; Kuh, 2001; Yosso, 2005). Social Support (i.e. family and peer engagement) has been identified as a source of validation and support for African American college students (Kuh, 2001; Rendon, 1994; Tinto, 1993). The lack of social support can also lead to participation in unhealthy behaviors and increase stress in African American college students. Positive student interaction on campus helps foster a sense of belonging for all students (Kuh, 2001; Tinto, 1993). Academic and social integration among African American college students has proven to positively influence their grade point average (Boyras et al, 2013; Cabrera, Nora, Terenzini, Pascarella & Hagedorn, 1999; Rendon, 1994; Tinto, 1993). Peer and faculty interaction are also important contributions to students sense of belonging as well as their academic success. Social integration including participation in on-campus organizations and activities, can significantly improve persistence and academic success among African American college students (Greer-Reed, 2013; Kuh, 2001; Rendon, 1994).

Familial support is another area of support that influences students of color experiences in college. Contrary to other studies, Kao (2004) explains that regular interaction outside of the college environment can potentially hinder the academic success of students of color because it shifts their focus to their roles outside of school. Nonetheless, previous studies on validation found that students of color actually benefit from having familial support in college (Rendon, 1994; Yosso 2005). These studies point

out the reality that connections to family can straddle a fine line between impeding and supportive for African American college students in their academic pursuits.

African American college students also rely on informal social networks as a natural coping strategy, as such additional research and development of these networks can serve as a therapeutic intervention to support their psychological health and wellness (Greer-Reed, 2013). As students of color feel connected on campus, their chances of academic success increase (Kuh, 2001). Strong ethnic networks help students of color integrate into the social and academic systems within college and provide further support in navigating the college environment (Baker, 2013). African American college students do not typically seek mental health services; however, they will get involved with “informal social networks,” as a means to coping with the stress of college life (Greer-Reed, 2013). Informal social networks, such as the Black student union and Black Greek letter organizations, have proven to increase the levels of social integration, and support among African Americans college students. Additionally, students within informal networks tend to be better adjusted the university, earn higher grades and have a more progressive view of themselves (Greer-Reed, 2013).

Help Seeking

Despite the various stressors African American college students’ experience, Cheng, Kwan, and Sevig (2013) found that students of color are less likely to view seeking psychological services positively. Ayalon and Young (2005) controlled for access barriers in their study and found that African American college students use psychological services less frequently. Previous studies have found that internal and

external stigma associated with psychological disorders can contribute to underuse of services for students of color (Cheng et al, 2013; Masuda, Anderson & Edmonds, 2012).

Masuda et al (2012) found that African American college students tend to have less favorable help seeking attitudes due to mental health stigma and self-concealment. Mental health stigma consists of having a negative view of individuals with a psychological disorder. Self-concealment is another attitude that can stifle help seeking behaviors; it is an individual behavioral tendency to not share stressful personal information that an individual feels is embarrassing (Masuda et al, 2012). Consistent with Masuda et al findings, students of color experiencing an increase in psychological stress were more likely to perceive stigmatization by others and further perpetual self-stigma with seeking mental health services (Cheng, Sevig & Kwan, 2013).

Ayalon and Young (2005) found that African American college students use religious practices such as attending church services or praying more frequently than psychological services. Religious practices have traditionally played a major role in the lives of African Americans. Ellison and Taylor (1996) highlighted that several facets of religious involvement have been positive predictors of African Americans well-being (p.112). Prayer is one of the common coping strategies of African American college students (Constantine et al, 2000; Ellison & Taylor 1996). Furthermore, one study found a high usage of religious services but a low usage of clergy services among participants (Ayalon & Young, 2005).

Physical Health

African American college students' physical health plays a part in their ability to be successful and is often impacted by their college experiences (Ajibade, 2011; Darden,

2014). College students tend to engage in unhealthy behaviors as a way to cope with their college experiences. Environmental changes, the academic load and social encounters can influence students exercise, alcohol intake and diet habits which can lead to weight gain and chronic illness (Darden, 2014).

Ajibade (2011) highlighted obesity among college students between the ages of 18 to 29 has increased over the years. African American college students were more likely than White or Latino students to be overweight (Adderley-Kelly, 2007). African American females college students were found to more likely be obese than African American male college students. This may be a result of lack of physical activity in college. Blanchard et al (2008) found that approximately 30% college students participate in the recommended amount of physical activity to maintain a healthy lifestyle. African American college students' physical activity participation has been found to be much lower. So et al (2012) found that low physical activity among African American college students put them at a significant risk for obesity and other health issues.

Weight

Darden (2014) found that African American college students tend to gain weight at a faster rate than other groups, which can lead to chronic health conditions. They are at an even greater danger because they tend to enter college with higher levels of obesity; this is a result of a cultural acceptance of body size and weight as well as decreased access to fitness resources. So et al (2012) explained that African American males tend to identify with a more obese or overweight body type than African American female college students. Weight gain among African American college students can be caused

by a shift in environment, physical behaviors, or emotional stress. For African American college students, being away from home for the first time, can bring about a sense of independence as well as isolation. There is a decrease of fruit and vegetable intake and increase in calorie dense foods as well as alcohol consumption during college. Additionally, poor food choices, stress of transitioning and inactivity can lead to weight gain among college students (Darden, 2014).

Exercise

Ajibade (2011) found that a growing number of African American college students are at risk of weight gain during college due to inactivity. Increased weight gain and physical inactivity among this population can lead to a poor quality of life even after college. The physical environment also influence the physical activity levels and diet of African American college students (Ajibade, 2011; Darden, 2014; So et al, 2012). The physical environments in which African American college students inhabit influence their motivation to be physically active. In the same study, Ajibade (2011) found that for African American women, safety and availability of, “fitness resources” were barriers to physical activity (p.550). She also found that African American college women living on campus were more obese or overweight than students living off-campus. However, students who live on campus participate in physical activity more and exercise more frequent than those students who live off campus. Researchers have found that physical environment has an influence on whether or not people exercise (Sallis, Baurman & Pratt, 1998; Ajibade, 2011). These findings, although inconsistent, provide support for the importance of more research on how campus environment can impede or support the physical activity of African American college students.

Maladaptive Practices

The use or abuse of substances among college students is not uncommon. Dependency on energy drinks or coffee to cope with lack of sleep, the use of diet pills or other substances to manage weight are common practices among college students (Darden, 2014). Flower, Levesque and Fischer (2012) found that although previous studies have highlighted the prevalence of maladaptive eating behaviors among European women, African American females in college have been found to endorse symptoms of an eating disorder due to body image dissatisfaction. Bardone-Cone, Weishuhn, Boyd, (2009) explained that there is growing evidence that factors such as negative affect and stress are associated with bulimic symptoms in African American college women.

Chronic Health Issues

African Americans face a myriad of health issues collectively; habits and behaviors that are developed or continue during college can cause African American college students to be more susceptible to chronic illness after college. Darden (2014) highlighted that a lack of physical activity and poor food choices among African American college students can lead to a lower quality of life after college. In a comprehensive study of African Americans psychological and physical health, Jackson and Sellers (1996) found that African Americans have greater morbidity and mortality at every point of their life span and are more likely to face disability due to stroke or coronary disease.

African Americans are reported to have poorer physical health as a result of exposure to chronic stress caused by social disadvantages which include racial and social

economic discrimination (Williams, 1999; Williams, Yu, Jackson & Anderson, 1997). Despite having higher rates of chronic physical health conditions, African Americans tend to have cases of mood and anxiety disorders (Mezuk et al, 2010). Jackson and Knight (2006) postulated that some African Americans experience short-term relief from psychological and physiological stress by engaging in negative health behaviors such as smoking cigarettes or overeating. Although some African Americans are able to cope with chronic stress, negative coping strategies can lead to chronic physical illness (Johnson-Lawrence, Griffith & Watkins, 2013).

Campus Climate

Campus climate is characterized by the “feel” of the campus, and has a major influence on students’ connection and engagement academically and socially. Locks et al., (2008) highlights that all college students experience some challenge when transitioning to college, however students of color have the added burden of adjusting if they perceive the campus climate as hostile. African American college students tend to perceive hostile racial climates more than their White peers. Racial tension or hostility actually lowers African American college students’ sense of belonging (Cuyjet, 2006; Harper & Hurtado, 2007; Steele, 1997; Strayhorn, 2010).

Campus spaces and administrators can influence barriers of social isolation for students. However for students of color, racial/ethnic identity, community involvement, and familial support are influences in their adjustment. Morley (2003) found several elements that affect the adjustment of African American college students were, “pressure to disclose racial background,” negative reactions to their ethnic background, and microaggressions. A negative perception of campus culture among students of color can

cause disengagement (Cabrera, et al, 1999). Specifically at predominantly White institutions (PWI) feelings of social and cultural marginalization can negatively influence engagement development and persistence among first year students of color (Watkins et al., 2007).

Previous studies have identified psychological and behavioral dimensions of the campus climate as barriers to the, “academic success, retention and graduation,” of students of color (Locks et al, 2008). Pressure to blend or conform to the majority culture often result in feelings of isolation (Hawkins & Larabee, 2009). Factors that cultivate poor campus climate paired with continuous disrespect from peers can lower African American college students’ commitment to persist at their given institution (Solorzano, Villalpando, 2001; Locks et al., 2008). A positive, race-related interactions can influence African American college students to persist (Hausmann, Schofield, & Woods, 2007).

For students of color, involvement in student organizations help them develop environments where they are, “learning through action, contemplation, reflection and emotional engagement” according to the National Association of Students Personnel Administrators and American College Personnel (2004, p.11). Additionally, student organizations provide peer support that aids in their engagement with the campus community. In a qualitative studies of students of color, Guiffrida (2003) found that student participation in ethnic organizations made the larger campus much smaller because they were forming “enclaves”. Once integrated into a smaller group, students of color felt more at ease with the idea of branching out to the larger campus community. This sense of community amongst a larger community enable students of color to feel

connected to their university which helped increase their academic engagement and success (Hawkins & Larabee, 2009).

Cokley (2000) found that campus climate has a great influence on the academic self-concept of African American college students. Few studies have looked at the academic self-concept of African American college students on their academic achievement. Factors such as faculty-students relationships, campus racial composition and out of class encounters influence African American college students' academic achievement and persistence (Watkins et al, 2007). Additionally, African American college students' involvement outside of class can influence their immersion or disengagement in the classroom as well. Students of color who feel academically unprepared when they begin college, may fully immerse themselves in their academics, which can be misunderstood as disengagement (Hawkins & Larabee, 2009).

Theoretical Framework

Bronfenbrenner's (1994) ecological theory will guide the exploration, analysis and evaluations of psychological and physical health factors that influence the academic achievement of African American college students. Using the tenets of his theory, I will identify ways in which African American college students' interaction within their environment influence and promote academic achievement. This theoretical framework guides the exploration of human growth within an individual but it also underscores the reciprocal influence they have within their environment.

Bronfenbrenner (1994) explained that an ecological system is a space and time where growth occurs. Environmental factors influence behavior and growth within that space and time. He postulated that as an individual interacts with and in their

environment, growth occurs. The ecological system is comprised of five socially organized subsystems that help support and guide human development. Bronfenbrenner (1994) explained that the subsystems are contexts of development that include microsystems, mesosystems, exosystems, macrosystems, and chronosystems. The microsystems is the relationship between the individual and their immediate environment which include school, activities, social roles, and interpersonal relationships. The mesosystems include the linkages and processes taking place between two more settings in the microsystem containing the developing person. For example the mesosystem can be characterized by the students' interaction with faculty, peer interactions and health behaviors. The third subsystem, the exosystem focuses on the individual and people, events and objects that are not in their immediate environment, however, those elements have an impact on their growth. For example, laws and the media are processes that influence students' immediate environment. The macrosystems is consist of more overarching ideologies, culture and belief systems that influence the student; for example technology, faith and political affiliation as well as social economic status. And the chronosystems encompass change or consistency over time in the individual and the environment in which they inhabit (Bronfenbrenner, 1994).

Bronfenbrenner (1994) explained that human development happens through processes of reciprocal interaction between an individual and the persons, objects and/or institutions in its immediate environment. These interactions are known as proximal processes, which are characterized by different forms of interactions in the immediate environment of a person (Bronfenbrenner, 1994). Furthermore, Bronfenbrenner (1994)

explained that the form, power, context and direction of the proximal processes effecting growth, vary systematically as a joint function of the developing person.

Renn and Patton (2011) explained that human ecology theory helps explain how students who enter college with similar characteristics can have different academic outcomes based on the processes they experience in their “micro- and mesosystems”. Events such as legislation passing that impacts financial aid policies take place in the exosystem and influences the way they choose to engage in different college activities. And the influence their spirituality, technology or cultural ideologies has on their engagement in campus life. All the interactions are taking place in a specific context (i.e. institution type or state) and period of time that impacts their growth.

In an effort to understand what influence academic achievement among African American college students, I will use Bronfenbrenner’s ecology theory to identify physical and psychological health processes within African American college students’ environment that predict academic achievement.

CHAPTER 3

METHODOLOGY

Recent studies on the collegiate experiences of African Americans have called for more research evaluating their within- group academic achievement rather than comparing their success to that of their White counterparts (Cokley & Moore, 2007; Strayhorn, 2010). The objective of this study is to expand the literature on influences of academic achievement for African American college students and understand how their psychological and physical health effects their academic achievement. Using secondary data from the American College Health Association's (ACHA), Fall 2013 National College Health Assessment (NCHA), I aimed to identify psychological and physical health variables that predict academic achievement. African American college students' responses were extrapolated from a larger sample of student responses to identify psychological and physical health factors. Assessment responses were analyzed to answer the following research questions:

Research Questions

1. What psychological and physical health factors are positive predictors of academic achievement among African American college students?

2. What gender differences exist for African American female and male college students?
3. Do psychological and physical health behaviors positively predict academic achievement?
4. How do African American college students perceive their campus environment?

Data Source

The ACHA provides a national assessment to assist colleges and universities with collecting data on students' health behaviors, habits and perceptions. The assessment covers a broad range of health issues such as drug use, sexual health, physical and mental health and perception of campus environment. The ACHA has administered the assessment nationwide since 1998 to self-selecting institutions. The ACHA reports that over eight million students of 500 plus colleges and universities have taken the assessment. The opinions, findings, and conclusions presented/reported in this article/presentation are those of the author(s), and are in no way meant to represent the corporate opinions, views, or policies of the American College Health Association (ACHA). ACHA does not warrant nor assume any liability or responsibility for the accuracy, completeness, or usefulness of any information presented in this article/presentation. The assessment data has been used by educational institutions, government agencies, national media outlets and public health organizations. Using the NCHA colleges and universities assess the needs of its students and use findings to improve campus practices, health services and education.

Requesting Data

NCHA data was formally requested through a data request proposal via email. The proposal included an objective of data requested, a list of selected survey items and information about both principle investigator and faculty advisor. Additionally, a brief explanation of research questions, hypotheses and planned data analyses were provided with the proposal.

Protection of Data

The ACHA does not include any unique identifiers in data to protect participating institutions' confidentiality. The data for this study was accessed and analyzed on a password protected computer.

Instrument

Specifications of survey: The NCHA consisted of 66 multiple-choice questions, which cover health education and safety, alcohol, tobacco and drugs, sexual behavior and contraception, weight nutrition and exercise, mental health, physical health, impediments to academic performance and student characteristics (demographics). The survey consisted of Likert scale and frequency questions.

Instrument Validity

ACHA-NCHA conducts construct validity analyses to confirm validity of dataset. The analyses are conducted by comparing ACHA-NCHA results with nationally represented data sets. ACHA-NCHA results are also compared to national represented databases to confirm measurement validity. ACHA-NCHA uses specific data sets to evaluate reliability and validity of survey results. The following datasets are used to assess the validity of survey results: *National College Health Risk Behavior Survey CDC*

1995, Harvard School of Public Health 1999 College Alcohol Study (CAS), United States Department of Justice: The National College Women Sexual Victimization Study 2000 (NCWSV), ACHA-National College Health Assessment 1998, Spring 1999 and Fall 1999 Pilots and ACHA-NCHA Spring 2000.

Administration of Survey

Colleges and universities can opt to participate in the assessment and administer the survey during the Fall or Spring. Institutions must identify a surveying method, which includes a paper or online survey. Additionally, schools can survey all students or randomly select student participants. Institutions can also opt to add additional questions specific to their campus and provide an incentive to participants.

All schools must acquire Institutional Review Board approval before requesting the assessment. If the web survey was selected, a list of student emails, a letter of invitation and consent is sent with survey request. NCHA disseminates the web survey to participants. Institutions who choose to use the paper survey are given the surveys and can disseminate based on their selected survey method (which can include all students or randomly selected students). After the institutions designated survey period, NCHA will aggregate data and provide institutions with report and executive summary of their findings. The data requested for this study was collected Fall 2013.

Sample Description

The data sample requested from ACHA included students who describe themselves as Black or African American includes 5,999 respondents. Students who described themselves as Black or African American along with another race or ethnicity were included in the sample for this study. The following respondents were removed

from this sample: graduate students and students who did not identify what academic level (year in school), students who identified as transgender and international students. The final sample included in this analysis was 4,618 African American undergraduate respondents. Additional statistics regarding the sample are discussed in the descriptive statistics section.

Data Analysis

All secondary data was analyzed using the Statistic Package for the Social Sciences (SPSS) version 22. I analyzed the secondary data provided by the ACHA-NCHA running frequencies to ascertain if recoding was necessary to reach normal distribution of distribution. Gender was recoded as 1 and 2 for female and male. Grade point average was recoded to 5, 4,3,2,1. Descriptive statistics were ran to identify missing items from the data set. Missing responses were excluded from the final analyses. Using descriptive statistics, I identified psychological and physical health variables.

I examined the means of all the survey responses specific to psychological and physical health variables. Using a t-test, I compared whether there was significant statistical difference in responses between African American female and male college students. I also conducted factor analyses to determine if there were reliable factors capturing psychological and physical health behaviors for the sample. To answer the study's research questions, I ran a hierarchal multiple regression to identify statistically significant predictors of academic achievement for African American college students.

Descriptive Statistics

Students' background characteristics and demographics will be reviewed in this section. Females accounted for 72.4% of the sample ($n = 3,343$) and males accounted for

27.6 % of the sample (n=1275). The average age of students completing this survey was 21 years old. On average students reported that they worked less than 10 hours per week for pay. Ninety-two percent of students completing this survey reported they were enrolled full-time. Forty-eight percent of students responded that they lived on campus in residence hall, 23% reported that they lived in off-campus housing and 15% responded that they lived with a parent or guardian. Thirteen percent of the students described their general health as excellent. Self-described weight had a mean of 3.43 and a standard deviation of .814, this indicated that most students reported that they were about the right weight. The independent variable, academic achievement measured by self-reported GPA had a mean of 2.33 and a standard deviation of 1.04, this indicated that on average students reported a B average as their grade point average (Table 1).

Descriptive statistics of the factors for African American female and male college students were analyzed for this study. The factors for African American female college students were: disruptive physical experiences and addictions had a mean of 1.05 and a standard deviation of .16 , overall psychological stressors and symptoms had a mean of 1.61 and a standard deviation of .62 , familial/personal psychological stressors had a mean of 1.46 and a standard deviation of .63, impeding emotional experiences had a mean of 2.48 and a standard deviation of .1.16, emotional experiences had a mean of 3.01 and a standard deviation of 1.01, intentions to harm self had a mean of 1.30 and a mean of .65 , impeding health conditions had a mean of 1.02 and a standard deviation of .14, impeding psychological/mental health conditions had a mean of 1.14 and a standard deviation of .47, impeding conditions and addictions had a mean of 1.00 and a standard deviation of

.11, and sense of safety on and surrounding had a mean of 2.96 and a standard deviation of .66 .

The factors for African American male college students were: disruptive physical experiences and addictions had a mean of 1.07 and a standard deviation of .36 , overall psychological stressors and symptoms had a mean of 1.50 and a standard deviation of .62, familial/personal psychological stressors had a mean of 1.41 and a standard deviation of .70, impeding emotional experiences had a mean of 2.11 and a standard deviation of 1.14, emotional experiences had a mean of 2.63 and a standard deviation of 1.16, intentions to harm self had a mean of 1.22 and a standard deviation of .58, impeding health conditions had a mean of 1.04 and a standard deviation of .28, impeding psychological/mental health conditions had a mean of 1.10 and a standard deviation of .46, impeding conditions and addictions had a mean of 1.04 and a standard deviation of .30, and sense of safety on and surrounding had mean of 3.38 and a standard deviation of .63.

Factor Analyses

Factor analyses were conducted for ten factors which include, (a) disruptive physical experiences and addictions, (b) overall psychological stressors and symptoms, (c) familial and personal psychological stressors, (d) impeding emotional experiences, (e) emotional experiences, (f) intentions to harm self, (g) impeding health conditions, (h) impeding psychological/mental health conditions, (i) impeding conditions and addictions, and (j) sense of safety on and surrounding campus. These factors were compiled from items on the (NCHA). Factor analyses were ran on the entire sample and separately on male and female students. I ran factor analysis on select survey items that assessed

students' health and safety, mental health, and impediments to academic performance in order to determine their influence on African American college students' academic achievement. I was not able to factor specific survey items pertaining to physical health because questions were on a dichotomous scale. The following section details the process of computing the final factors that were entered in to the hierarchal regression.

Impediments to Academic Performance

Factor analysis for impediments to academic performance resulting was ran twice. The first run resulted in six factors, however, the Kaiser-Meyer-Olkin (KMO) and Cronbach's alpha for factors three through six were too low to use. The second run of the two factors resulted in three factors: disruptive physical experiences and addictions, overall psychological stressors and symptoms and familial and personal psychological stressors. I ran the first factor, disruptive physical experiences and addictions twice in order to find the appropriate rotation of the factor. I removed the independent variable, discrimination, during the second run because it was coming in as the lowest factor. Once discrimination was removed the Kaiser-Meyer-Olkin (KMO) and Cronbach's alpha of disruptive physical experiences and addictions increased. The second factor, psychological stressors resulted in two factors, overall psychological stressors and symptoms and familial and personal psychological stressors.

Mental Health

Factor analysis was ran three times on survey items assessing students' mental health experiences over the last twelve months. The first run resulted in three factors, impeding emotions, experiences, emotional experiences, and intentions to harm self. During the second run factors were ran as individual factors. I reviewed each factor to

assess the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, Bartlett's test of sphericity, and the significance of level. I also assessed the Cronbach's alpha to determine the reliability statistics for each factor.

I ran factor analysis on survey items assessing students' mental health treatment practices over the last twelve months. The first run resulted in three factors, impeding health conditions, impeding psychological/mental health conditions and impeding conditions and addictions. During the second run factors were ran as individual factors. I reviewed each factor to assess the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, Bartlett's test of sphericity, and the significance of level. I also assessed the Cronbach's alpha to determine the reliability statistics for each factor.

Safety

Factor analysis was ran twice on survey items assessing students' perception of safety on campus. During the second run the independent variable, feel safe on campus during the daytime was removed because Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was below .6, and the factor loading was the lowest of the other variables. Once removed, the factor the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy increased along with the factor loadings and Cronbach's alpha. The independent variable, feel safe on campus during the daytime will be included in the regression analyses. The results of the final factors for this study are reviewed below (Table 2).

Overall Psychological Stressors and Symptoms

All students. The factor overall psychological stressors and symptoms was composed of survey items that assessed impediments to students' academic performance such as stress, sleep difficulties, depression, anxiety, relationship difficulties, work and

roommate difficulties. The Barlett's test of sphericity was $X^2(3) = 7859.095$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.822) with a significance of under .05. The factor explained was 44.428 % of total variance. The factor loadings for the variable were .824 for stress, .712 for sleep difficulties, .712 for depression, .688 for anxiety, .608 for relationship difficulties, .593 for work, and .471 for roommate difficulties. The Cronbach's alpha was .789.

Females. The Barlett's test of sphericity was $X^2(3) = 5461.358$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.814) with a significance of under .05. The factor explained was 43.451 % of total variance. The factor loadings for the variable were .832 for stress, .701 for sleep difficulties, .703 for depression, .689 for anxiety, .595 for relationship difficulties, .592 for work, and .429 for roommate difficulties. The Cronbach's alpha was .784.

Males. The Barlett's test of sphericity was $X^2(3) = 2438.729$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.826) with a significance of under .05. The factor explained was 46.741 % of total variance. The factor loadings for the variable were .800 for stress, .740 for sleep difficulties, .736 for depression, .684 for anxiety, .597 for relationship difficulties, .562 for roommate difficulties. The Cronbach's alpha was .797.

Familial and Personal Psychological Stressors

All students. The factor familial and personal psychological stressors was also made up of survey items that assessed impediments to students' academic performance such as concern for family member/friend, finances, and death of a family member/friend. The Barlett's test of sphericity was $X^2(3) = 1590.592$ and the Kaiser-

Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.610) with a significance of under .05. The factor explained was 56.586 % of total variance. The variables were concern for family member/ friend with a factor load of .819, finances with a factor loading of .727, and death of a family member/friend with a factor loading of .707. The Cronbach's alpha was .611.

Females. The Barlett's test of sphericity was $X^2(3) = 933.759$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was below .6 with a significance of under .05. The factor explained was 53.841 % of total variance. The variables were concern for a family member/ friend with a factor loading of .814, finances with a factor loading .724, and death of a family member/ friend with a factor loading of .655. The Cronbach's alpha was .568.

Males. The Barlett's test of sphericity was $X^2(3) = 733.932$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.651) with a significance of under .05. The factor explained was 63.600 % of total variance. The variables were concern for a family member/ friend with a factor loading of .846, finances with a factor loading of .804, death of family member/friend with a factor loading of .739 The Cronbach's alpha was .702.

The factors impeding emotional experiences, emotional experiences, and intentions to harm self were compiled from survey items that assessed students' experiences with emotion stress.

Impeding Emotional Experiences

All students. The factor impeding emotional experiences was made up of the following variables from the survey, felt overwhelming anxiety, felt so depressed it was

difficult to function, felt overwhelming anger and felt things were hopeless. The Barlett's test of sphericity was $X^2(3) = 5561.965$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy adequate (.792) with a significance of under .05. The factor explained was 63.039% of total variance. The variables were felt overwhelming anxiety with a factor loading of .831, felt so depressed it was difficult to function with a factor loading of .813, feeling overwhelming anger with a factor loading of .789, felt things were hopeless with a factor loading of .740. Cronbach's alpha was .803.

Females. The Barlett's test of sphericity was $X^2(3) = 3787.731$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.787) with a significance of under .05. The factor explained was 61.930% of total variance. The variables were felt overwhelming anxiety with a factor loading of .825, felt so depressed it was difficult to function with a factor loading of .805, felt overwhelming anger with a factor loading of .788, and felt things were hopeless with a factor loading of .727. The Cronbach's alpha was .793.

Males. The Barlett's test of sphericity was $X^2(3) = 1668.641$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.793) with a significance of under .05. The factor explained was 64.480 % of total variance. The variables were felt overwhelming anxiety with a factor loading of .839, felt so depressed it was difficult to function with a factor loading of .830, felt overwhelming anger with a factor loading of .782, and felt things were hopeless with a factor loading of .758. The Cronbach's alpha was .815.

Emotional Experiences

All students. The factor emotional experiences consisted of the following variables, felt very sad, felt very lonely, felt exhausted, and felt overwhelmed. The Barlett's test of sphericity was $X^2(3) = 7631.382$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.720) with a significance of under .05. The factor explained was 66.0744 % of total variance. The factor loadings for the variable were .836 for felt very sad, .818 for felt very lonely, .804 for felt exhausted, and .793 for felt overwhelmed. The Cronbach's alpha was .829.

Females. The Barlett's test of sphericity was $X^2(3) = 5117.402$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.707) with a significance of under .05. The factor explained was 64.254 % of total variance. The factor loadings for the variable were .824 for felt very sad, .810 for felt very lonely, .796 for felt exhausted, and .775 for felt overwhelmed. The Cronbach's alpha was .814.

Males. The Barlett's test of sphericity was $X^2(3) = 2296.788$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.734) with a significance of under .05. The factor explained was 68.219 % of total variance. The factor loadings for the variable were .853 for felt very sad, .828 for felt very lonely, .809 for felt exhausted, and .814 for felt overwhelmed. The Cronbach's alpha was .846.

Intentions to Harm Self

All students. The factor intentions to harm self, consisted of the following seriously considered suicide, attempted suicide and intentionally injured self. The Barlett's test of sphericity was $X^2(3) = 2945.968$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.687) with a significance of under .05. The

factor explained was 65.652 % of total variance. The factor loadings for the variable were .821 for seriously considered suicide, .809 for attempted suicide, and .800 for intentionally injured self. The Cronbach's alpha was .711.

Females. The Barlett's test of sphericity was $X^2(3) = 2162.372$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.686) with a significance of under .05. The factor explained was 65.807 % of total variance. The factor loadings for the variable were .826 for seriously considered suicide, .807 for attempted suicide, and .800 for intentionally injured self. The Cronbach's alpha was .715.

Males. The Barlett's test of sphericity was $X^2(3) = 770.940$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.684) with a significance of under .05. The factor explained was 64.971% of total variance. The factor loadings for the variable were .804 for seriously considered suicide, .815 for attempted suicide, and .799 for intentionally injured self. The Cronbach's alpha was .694.

Disruptive Physical Experiences and Addictions

All students. Disruptive physical experiences and addictions was a factor of impediments to academic performance which included: gambling, sexual transmitted diseases/infections, eating disorder/problem, drug use, physical and sexual assault, and pregnancy (yours or partners). The Barlett's test of sphericity was $X^2(3) = 8502.312$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were both adequate (.859) with a significance under .05. The factor explained was 47.283% of the total variance. The factor loadings for the variable were .795 for gambling as an impediment to academic performance, .705 for sexually transmitted diseases/ infections, .695 for

eating disorder/problem, .662 for drug use, .651 for sexual assault, .648 for pregnancy (yours or partners) and .644 for physical assault. The Cronbach's alpha was .782.

Females. The Barlett's test of sphericity was $X^2(3) = 1717.756$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.709) with a significance of under .05. The factor explained was 29.256 % of total variance. The factor loadings for the variable were .637 for gambling as an impediment to academic performance, .537 for sexually transmitted diseases/infections, .498 for eating disorder/problem, .541 for drug use, .569 for sexual assault, .431 for pregnancy (yours or partners) and .550 for physical assault. The Cronbach's alpha was .523.

Males. The Barlett's test of sphericity was $X^2(3) = 6424.169$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.903) with a significance under .05. The factor explained was 69.585% of the total variance. The factor loadings of the variable were .859 for gambling as an impediment to academic performance, .825 for sexually transmitted diseases/infections, .865 for eating disorder/problem, .755 for drug use, .849 for sexual assault, .875 for pregnancy (yours or partners), and .805 physical assault. The Cronbach's alpha was .919.

The factors impeding health conditions, impeding psychological/mental health conditions and impeding condition and addictions were composed of survey items that assessed students' diagnosis or treatment of mental disorders.

Impeding Health Conditions

All students. The factor impeding health conditions consisted of the following variables phobia, anorexia, obsessive compulsive disorder, bulimia, and attention deficit hyper disorder. The Barlett's test of sphericity was $X^2(3) = 5347.568$ the Kaiser-Meyer-

Olkin (KMO) measure of sampling adequacy was adequate (.756) with a significance of under .05. The factor explained was 51.057% of total variance. The variables were diagnosed or treated for phobia with a factor loading of .762, diagnosed or treated for anorexia with a factor loading of .754, diagnosed or treated for obsessive compulsive disorder (OCD) with a factor loading of .719, diagnosed or treated for bulimia with a factor loading of .707, and diagnosed or treated for attention deficit hyper disorder with a factor loading of .623. Cronbach's alpha was .735.

Females. The Barlett's test of sphericity was $X^2(3) = 1665.996$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.634) with a significance of under .05. The factor explained was 38.146 % of total variance The variables were diagnosed or treated for phobia with a factor loading of .691, diagnosed or treated for anorexia with a factor loading of .614, diagnosed or treated for obsessive compulsive disorder (OCD) with a factor loading of .660, diagnosed or treated for bulimia with a factor loading of .449, and diagnosed or treated for attention deficit hyper disorder with a factor loading of .645. Cronbach's alpha was .577.

Males. The Barlett's test of sphericity was $X^2(3) = 3388.753$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.772) with a significance of under .05. The factor explained was 66.474 % of total variance. The variables were diagnosed or treated for phobia with a factor loading of .842, diagnosed or treated for anorexia with a factor loading of .847, diagnosed or treated for obsessive compulsive disorder (OCD) with a factor loading of .866, diagnosed or treated for bulimia with a factor loading of .855, and diagnosed or treated for attention deficit hyper disorder with a factor loading of .645. Cronbach's alpha was .848.

Impeding Psychological/Mental Health Conditions

All students. The factor impeding psychological/mental health conditions consisted of the following variables anxiety, depression, panic attacks, and insomnia. The Barlett's test of sphericity was $X^2(3) = 4959.019$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.714) with a significance of under .05. The factor explained was 59.194 % of total variance. The factor loadings for the variable were .853 for diagnosed or treated for anxiety, .781 for diagnosed or treated for depression, .746 for diagnosed or treated for panic attacks, and .731 for diagnosed or treated for insomnia. The Cronbach's alpha was .730.

Females. The Barlett's test of sphericity was $X^2(3) = 3334.393$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.681) with a significance of under .05. The factor explained was 57.037 % of total variance. The factor loadings for the variable were .861 for diagnosed or treated for anxiety, .772 for diagnosed or treated for depression, .721 for diagnosed or treated for panic attacks, and .652 for diagnosed or treated for insomnia. The Cronbach's alpha was .736.

Males. The Barlett's test of sphericity was $X^2(3) = 1795.971$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.785) with a significance of under .05. The factor explained was 65.864 % of total variance. The factor loadings for the variable were .834 for diagnosed or treated for anxiety, .820 for diagnosed or treated for depression, .818 for diagnosed or treated for panic attacks, and .772 for diagnosed or treated for insomnia. The Cronbach's alpha was .814.

Impeding Condition and Addictions

All students. Impeding condition and addictions consisted the following variables schizophrenia, other addictions, and substance abuse/addiction. The Barlett's test of sphericity was $X^2(3) = 1721.619$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.648) with a significance of under .05. The factor explained was 58.229% of total variance. The variables were diagnosed or treated for schizophrenia with a factor loading of .781, diagnosed or treated for other conditions with a factor loading of .776, and diagnosed or treated for substance abuse/addictions with a factor loading of .731. Cronbach's alpha was .609.

Females. The Barlett's test of sphericity was $X^2(3) = 858.656$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was below .6 with a significance of under .05. The factor explained was 53.184 % of total variance. The variables were diagnosed or treated for schizophrenia with a factor loading of .797, diagnosed or treated for other conditions with a factor loading of .743, and diagnosed or treated for substance abuse/addictions with a factor loading of .640. Cronbach's alpha was .426.

Males. The Barlett's test of sphericity was $X^2(3) = 606.240$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.669) with a significance of under .05. The factor explained was 61.629 % of total variance. The variables were diagnosed or treated for schizophrenia with a factor loading of .778, diagnosed or treated for other conditions with a factor loading of .798, and diagnosed or treated for substance abuse/addictions with a factor loading of .798. Cronbach's alpha was .676.

Sense of Safety on and Surrounding Campus

All students. The factor sense of safety on and surrounding campus assessed students' perception of safety on campus was compiled of the following variables feel safe in surrounding community at night, feel safe on campus at night, feel safe in surrounding community during the daytime and feel safe on campus during the daytime. The Barlett's test of sphericity was $X^2_{(3)} = 4659.425$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was adequate (.649) with a significance of under .05. The factor explained was 71.153% of total variance. The factor loadings for the variable were .823 for feel safe in surrounding community at night, .817 for feel safe on campus at night, .814 for feel safe in surrounding community during the daytime, and .673 for feel safe on campus during the daytime. The Cronbach's alpha was .735.

Females. The Barlett's test of sphericity was $X^2_{(3)} = 4458.577$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was below .6 with a significance of under .05. The factor explained was 59.412 % of total variance. The factor loadings for the variable were .821 for feel safe in surrounding community at night, .807 for feel safe on campus at night, .792 for feel safe in surrounding community during the daytime, and .651 for feel safe on campus during the daytime. The Cronbach's alpha was .764.

Males. The Barlett's test of sphericity was $X^2_{(3)} = 2245.708$ and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was below .6 with a significance of under .05. The factor explained was 65.871 % of total variance. The factor loadings for the variable were .799 for feel safe in surrounding community at night, .828 for feel safe on campus at night, .863 for feel safe in surrounding community during the daytime, and .752 for feel safe on campus during the daytime. The Cronbach's alpha was .813.

Summary of Factor Analyses

Factor analyses were computed to determine the influence for the (a) disruptive physical experiences and addictions, (b) overall psychological stressors and symptoms, (c) familial and personal psychological stressors, (d) impeding emotional experiences, (e) emotional experiences, (f) intentions to harm self, (g) impeding health conditions, (h) impeding psychological/mental health conditions, and (i) sense of safety on and surrounding campus on African American college students academic achievement. The ten factors for this sample population were valid and reliable and thus were used in the regression analyses which is reported in Chapter 4.

Independent Sample *t*-Tests

To assess any significant mean differences among African American male and female college students independent sample *t*-tests were computed. The sample size for African American female college student ($n = 3343$) was much larger than that of African American males ($n = 1275$). However, there were not significant independent variables in the demographic responses. An independent sample *t*-test was conducted on all survey items by gender. After final factors were computed, an independent sample *t*-test was conducted on final factors to compare disruptive physical experiences and addictions, overall psychological stressors and symptoms, familial and personal psychological stressors, impeding emotional experiences, emotional experiences, intentions to harm self, impeding health conditions, impeding psychological/mental health conditions, impeding conditions and addictions, and sense of safety on and surrounding campus for females and males. Results from *t*-tests are reported in Chapter 4.

Regression

A hierarchical multiple regression was conducted to assess the influence of the independent variables on predicting academic achievement that was measured by self-reported grade point average for African American college students by gender to assess differences between males and females. Background characteristic and demographics such as gender, age, weight, hours worked per week, enrollment status, weight, housing status and students' general, student perceptions of the institution, students' psychological and physical health, and wellness were entered into five blocks to determine the significance of these factors on African American students' academic achievement. I report the results for block five of the final regression model in Chapter 4.

CHAPTER 4

RESULTS

The purpose of this quantitative study was to examine psychological and physical health factors influencing grade point average among African American college students by analyzing secondary data from the American College Health Associations' National College Health Assessment. The following sections will detail the findings of this study in two sections data analysis and discussion. Independent sample t-tests used to ascertain the differences among African American female and male college students will be reviewed. Results from a hierarchical regression are also reported within this section. The final section of this chapter will be a discussion of the results in association with the study's first two research questions:

1. What physical and psychological behaviors and attitudes among African American college students are positive predictors of academic achievement as measured by self-reported grade point average?
2. What gender differences exist for African American female and male college students?

Independent Sample *t*-Tests

Independent sample t-tests assessing gender differences for African American female and male college students are reported below (Table 3).

Females had a mean lower than male ($M=1.05$), whose mean was ($M=1.07$) that was statistically significant ($(t(-1.91))$). ($p < .05$) for the factor *disruptive physical experiences and addictions*. The means t-test for the factor *overall psychological stressors and symptoms* was statistically significant ($p < .001$) for females and males ($t(5.47)$). Females had a higher mean of ($M = 1.61$) and males had lower mean of ($M = 1.07$). The means t-test for the factor *familial and psychological stressors and symptoms* was statistically significant ($p < .05$) for females and males ($t(2.11)$). Females had a higher mean of ($M=1.46$) and males had a lower mean of ($M = 1.41$).

Females had a higher mean of ($M = 2.48$) than males whose mean was ($M=2.11$) that was statistically significant ($t(9.72)$) ($p < .05$) for the factor *impeding emotional experiences*. The means t-test for the factor *emotional experiences* was statistically significant ($p < .001$) for females and males ($t(10.11)$). Females had a higher mean of ($M = 3.01$) and males had a lower mean of ($M = 2.63$). Females had a higher mean of ($M = 1.30$) than males whose mean was ($M = 1.22$) that was statistically significant ($t(3.79)$) ($p < .001$) for the factor *intentions to harm self*.

The means t-test for the factor *impeding health conditions* was statistically significant ($p < .05$) for females and males ($t(-2.349)$). Females had higher a mean of ($M = 1.30$) and males had lower a mean of ($M = 1.04$). The means t-test for the factor *impeding psychological/mental health conditions* was statistically significant ($p > .05$) for females and males ($t(1.14)$). Females had a higher mean of ($M=1.14$) and males had a lower mean of ($M = 1.10$). Females had a lower mean of ($M = 1.00$) than males whose mean was ($M = 1.04$) that was statistically significant ($p < .001$) ($t(-4.03)$) for the factor *impeding conditions and addictions*. The means t-test for the factor *sense of safety on*

and surrounding campus was statistically significant ($p < .001$) for females and males ($t(17.25)$). Females had a lower mean of ($M=2.96$) and males had a higher mean of ($M = 3.33$).

Summary of Independent Sample *t*-Tests

There were significant differences between African American females and males in the findings of the independent sample *t*-tests. Females reported higher levels of overall psychological stressors, familial and personal psychological stressors, emotional experiences, intentions to harm self, impeding health conditions and impeding psychological/mental health conditions than their male counterparts. Males on the other hand reported higher levels of impeding conditions and addictions and sense of safety on and surrounding campus than their female peers.

Regression

For the purpose of this study, block five of the final regression model is presented below (Table 4).

Background Characteristics/Demographics

All Students. Background statistics/ demographics, student perceptions of institution, psychological health, physical health and wellness accounted for 9.0% of the variance for grade point average ($R^2=.090$, $F=5.505$, $p=.000$). The beta coefficients of gender ($\beta=-.047$, $t=-3.090$, $p=.002$), general health ($\beta= -.082$, $t=-5238$, $p=.000$), enrollment status ($\beta=-.036$, $t=-2.484$, $p=.013$), self-described weight ($\beta=-.037$, $t=-2.479$, $p=.013$), current residence ($\beta=-.035$, $t=-2.192$, $p=.028$) were significant negative predictors of GPA. Hours worked per week for pay was not a significant predictor of GPA.

Females. Background statistics/ demographics, student perceptions of institution, psychological health, physical and wellness accounted for 10.4% of the variance for grade point average ($R^2=.104$, $F=4.598$, $p=.000$). The variables that were negative predictors of GPA were general health ($\beta=-.095$, $t=-5.204$, $p=.000$ and, enrollment status ($\beta=-.050$, $t=-2.901$, $p=.004$). Hours worked per week, self-described weight, and current residence were not significant predictors of GPA.

Males. Background statistics/ demographics, student perceptions of institution, psychological health, physical and wellness accounted for 10.6% of the variance for grade point average ($R^2=.106$, $F=1.428$, $p=.162$). Current residence ($\beta=-.077$, $t=-2.509$, $p=.012$) was a negative predictor of GPA. General health, hours worked per week, enrollment status, and self-described weight were not significant predictors of GPA.

Student Perceptions of Institutions

All students. Independent variables feel safe on campus during the daytime and feel safe on campus during the nighttime accounted for 9.0% of the variance for grade point average ($R^2=.090$, $F=5.505$, $p=.000$). These variables were not significant predictors of GPA.

Females. Independent variables, feel safe on campus during the daytime and feel safe of campus during the nighttime accounted for .104% of the variance for grade point average ($R^2=.104$, $F=4.598$, $p=.000$). These variables were not were not significant predictors of GPA for females or males.

Psychological Health

All students. The independent variables and factors in the psychological health block accounted for 9.0% of the variance for grade point average ($R^2=.090$, $F=5.505$,

$p=.000$). The factor overall psychological stressors and symptoms ($\beta=-.094$, $t=-4.437$, $p=.001$) and the independent variable traumatic or difficult to handle situations which included academics ($\beta=-.148$, $t=-8.415$, $p=.000$) and finances ($\beta=-.039$, $t=-2.263$, $p=.024$) were significant negative predictors of GPA. The independent variable traumatic or difficult to handle situations which included personal health issues ($\beta=.049$, $t=2.848$, $p=.004$), students consideration of seeking mental health services in the future ($\beta=.078$, $t=5.335$, $p=.000$) and impeding emotional experiences ($\beta=.039$, $t=2.141$, $p=.032$) were significant positive predictors of GPA.

The variable level of stress over that last 12 months, familial/personal psychological stressors, traumatic or difficult to handle situations which included career related issues, death of a family member/friend, family problems, intimate relationships, other relationships, health problem of family member or partner, personal appearance, sleep difficulties were not significant predictors of GPA. The factor intentions to harm self and the independent variable that inquired about students' usage of university counseling or mental health service was also not a significant predictor of GPA.

Females. The independent variables and factors in the psychological health block accounted for 10.4% of the variance for grade point average ($R^2=.104$, $F=4.598$, $p=.000$). The independent variable traumatic or difficult to handle situations which included academics ($\beta=-.126$, $t=-6.202$, $p=.000$), the factor overall psychological stressors and symptoms ($\beta=-.098$, $t=-3.968$, $p=.000$), finances ($\beta=-.043$, $t=-2.145$, $p=.032$) and students' usage of university counseling or mental health service ($\beta=-.037$, $t=-2.086$, $p=.037$) were significant negative predictor of GPA. The independent variable students consideration of seeking mental health services in the future ($\beta=.090$, $t=5.263$, $p=.000$),

traumatic or difficult to handle situations which included personal health issues ($\beta=.062$, $t=3.104$, $p=.002$) other relationships ($\beta=.042$, $t=2.089$, $p=.037$) and level of stress over that last 12 months ($\beta=.043$, $t=2.088$, $p=.037$) were significant positive predictors of GPA. The factors familial/personal psychological stressors, impeding emotional experiences, intentions to harm self, independent variables traumatic or difficult to handle situations which include career related issues, death of a family member/friend, family problems, intimate relationships, health problem of family member or partner, personal appearance, and sleep difficulties were not significant predictors of GPA.

Males. The independent variables and factors in the psychological health block accounted for 10.6% of the variance for grade point average ($R^2=.106$, $F=1.428$ $p=.162$). The only significant variable for males was traumatic or difficult to handle situations which included academics was a negative predictor of GPA. The following independent variables students' usage of university counseling or mental health service, students' consideration of seeking mental health services in the future, level of stress over that last 12 months, traumatic or difficult to handle situations which included academics, career related issues, death of a family member/friend, family problems, intimate relationships, other relationships, finances, health problem of family member or partner, personal appearance, personal health issue, sleep difficulties and factors overall psychological stressors and symptoms, familial/personal psychological stressors, impeding emotional experiences and intentions to harm self were not significant predictors of GPA.

Physical Health

All students. Independent variables assessed students diagnosis or treatment of physical conditions over the last 12 months which included back pain, chlamydia, high

blood pressure, migraines, sinus infection, and urinary tract infection along with disruptive physical experiences and addictions and fruit and vegetable intake per day accounted for 9.0% of the variance for grade point average ($R^2=.090$, $F=5.505$, $p=.000$). The variables with significant beta coefficients was diagnosed or treatment for chlamydia ($\beta=-.030$, $t=-2.053$, $p=.040$) and was not a positive predictor of GPA.

Fruit and vegetable intake per day had significant beta coefficients and was a positive predictor of GPA. General health, hours worked per week, enrollment status, and self-described weight were not significant predictors of GPA. Independent variables assessing students' diagnosis or treatment of physical conditions over the last 12 months which include back pain, high blood pressure, migraines, sinus infection, urinary tract infection and disruptive physical experiences and addictions were not significant predictors of GPA.

Females. Independent variables assessed students diagnosis or treatment of physical conditions over the last 12 months which include back pain, chlamydia, high blood pressure, migraines, sinus infection, and urinary tract infection along with disruptive physical experiences and addictions and fruit and vegetable intake per day accounted for 10.4% of the variance for grade point average ($R^2=.104$, $F=4.598$, $p=.000$). The variables with significant beta coefficients was disruptive physical experiences and addictions ($\beta=-.039$, $t=-2.153$, $p=.031$), and was not a positive predictor of GPA. Independent variables assessing students' diagnosis or treatment of physical conditions over the last 12 months which include back pain, high blood pressure, migraines, sinus infection, urinary tract infection and fruit and vegetable intake per day were not significant predictors of GPA.

Males. Independent variables assessed students diagnosis or treatment of physical conditions over the last 12 months which included back pain, chlamydia, high blood pressure, migraines, sinus infection, and urinary tract infection along with disruptive physical experiences and addictions and fruit and vegetable intake per day accounted for 10.6% of the variance for grade point average ($R^2=.106$, $F=1.428$, $p=.162$). The fruit and vegetable intake per day had significant beta coefficients ($\beta=.096$, $t=3.390$, $p=.001$), and was a positive predictor of GPA.

Wellness

All. The following independent variables reviewed in this section accounted for 9.0% of the variance for grade point average ($R^2=.090$, $F=5.505$, $p=.000$). Wellness exams such as dental exam/cleaning over the last 12 months ($\beta=.053$, $t=3.632$, $p=.000$) and usage of sunscreen regularly with sun exposure ($\beta=.046$, $t=3.170$, $p=.002$) were significant positive predictors of GPA. Students' sleep habits over the last seven days which included extremely hard time falling asleep ($\beta=-.049$, $t=-2.085$, $p=.005$), was a significant negative predictor of GPA.

Independent variables which inquired about students' sleep habits over the last seven days included got enough sleep to feel rested, problems with sleepiness, awakened too early, felt tired/sleepy during the day, gone to bed because you could not stay awake, the use of diet pills to lose weight over the last 30 days and routine gynecological exam for females were not significant predictors of GPA.

Females The following independent variables reviewed in this section accounted for 10.4% of the variance for grade point average ($R^2=.104$, $F=4.598$, $p=.000$). Wellness exams such as dental exam/cleaning over the last 12 months ($\beta=.056$, $t=3.275$, $p=.001$)

and usage of sunscreen regularly with sun exposure ($\beta=.045, t=2.664, p=.008$) were significant positive predictors of GPA. Students' sleep habits over the last seven days which included awakened too early ($\beta=-.042, t=-2.216, p=.027$) and extremely hard time falling asleep ($\beta=-.056, t=-2.694, p=.007$) were significant negative predictors of GPA. Independent variables which inquired about students' sleep habits over the last seven days included got enough sleep to feel rested, problems with sleepiness, felt tired/sleepy during the day, gone to bed because you could not stay awake, the use of diet pills to lose weight over the last 30 days and routine gynecological exam for females were not significant predictors of GPA.

Males. None of the wellness variables which include about students' sleep habits over the last seven days included got enough sleep to feel rested, problems with sleepiness, awakened too early felt tired/sleepy during the day, gone to bed because you could not stay awake, extremely hard time falling asleep, the use of diet pills to lose weight over the last 30 days, wellness exams such as dental exam/cleaning over the last 12 months and the usage of sunscreen regularly with sun exposure were not significant predictors of GPA for males in this study.

Summary of Regression

For all students in this study a combination of 15 independent variables and factors were significant predictors of GPA for African American college students. General health ,enrollment status, self-described weight , current residence, diagnosis or treatment over the last 12 months of chlamydia, students' sleep habits over the last seven days which included extremely hard time falling asleep, overall psychological stressors and symptoms and traumatic or difficult to handle situations over the last 7 months which

included academics were significant negative predictors of GPA. Fruit and vegetable intake per day, usage of sunscreen regularly with sun exposure, wellness exams such as dental exam/cleaning over the last 12 months, students' consideration of seeking mental health services in the future, impeding emotional experiences and traumatic or difficult to handle situations which include personal health issue were all significant positive predictors of GPA for African American college students.

For African American females' general health, enrollment status, disruptive physical experiences, overall psychological stressors and symptoms, traumatic or difficult to handle situations which included academics and finances and usage of university/mental health services were significant negative predictors of academic achievement. African American male college students had limited significant predictors. Fruit and vegetable intake was a positive predictor of academic achievement whereas traumatic or difficult to handle situations, which included academics, was a negative predictor for this population. The findings of this study are discussed below in relation to the research questions and literature reviewed. Implications for practice and recommendations for future research are discussed in Chapter 5.

Discussion

The aim of this study was to expand the literature on African Americans in college by identify psychological and physical health factors that predict academic achievement. My decision to analyze background characteristics, demographics, and students' perception of institution, psychological and physical health and wellness was informed by the literature on African American college students. I also compared these

independent variables and factors to assess the differences between African American females and males in college.

Using the ACHA-NCHA instrument, I examined psychological and physical health factors that influenced academic achievement in African American college students. Factor analyses for psychological factors overall psychological stressors and symptoms, familial and personal psychological stressors, impeding emotional experiences, emotional experiences and impeding psychological/mental health conditions to be reliable variables for all African American students. Factor analyses for physical health factors disruptive physical experience and addictions, impeding health conditions and impeding conditions and addictions were also reliable factors for all African American students.

The following research questions are addressed in this section of the discussion: What psychological and physical health factors are positive predictors of achievement among African American college students? Do psychological and physical health behaviors positively predict academic achievement? Previous studies have looked at African American college students' academic experiences under the lens of precollege preparation such as SAT scores and high school GPA or their ability to adjust to the college environment in order to assess their academic achievement. Comparison studies of African American and White college students success continues to result in highlighting disproportionately lower rates of enrollment, retention and graduation for African American college students. Several scholars have called for more within group comparisons of African American college students' success in order to ascertain a more accurate portrait of their academic success. Furthermore, few studies have looked at

psychological and physical health factors in relations to African American college students' academic achievement.

The results of this study revealed that the following psychological variables, overall psychological stressors and symptoms that included stress, sleep difficulties, depression, anxiety, relationship difficulties, work and roommates along with traumatic and difficult situations to handle which included academic and finances, are negative predictors of GPA. This finding is consistent with a previous study by Neville (2004) who found that academic stress is a significant predictor of first year GPA among African American college students. This study draws attention to the different types of stressors that influence African American students' academic achievement. Negga et al, (2007) points out a benefit and challenge of college attendance is its new opportunities for students to engage with new people and experiences but that it may further compound stress in their lives. Consistent with the literature on the impediments of stress for African American college students, this finding also underscores some of the adverse effects of pursuing higher education such as sleep difficulties, anxiety, relationship difficulties and financial stress (Boyras et al, 2013; Darden, 2014; Hudd et al, 2000; Negga et al, 2007). *I hypothesized that psychological health factors are a negative predictors of academic achievement among all African American college students.*

This study identified psychological variables that were significant positive predictors of GPA. Traumatic or difficult to handle situations, which included personal health issues along with students' consideration of seeking mental health services in the future and impeding emotional experiences, were significant positive predictors of academic achievement for African American college students. This finding could

indicate African American college students' ability to counter certain forms of stress through familial and social support (Baker, 2013; Greer-Reed, 2013; Rendon, 1994; Yosso, 2005). African American college students' may utilize mental health coping strategies (e.g. social and familial support, spirituality) in managing physical health issues. Likewise, impeding emotional experiences are consistent with the literature on African American students' capacity to manage stressful life situations. African American college students often engage in coping strategies that allow that to achieve academic success despite experiencing high levels of stress (Greer & Chwalisz, 2007). Previous studies on African Americans coping mechanisms, have cited social support, religiosity (e.g. faith, spirituality) and religious practices such as attending church as means of coping with stress and illnesses (Baker, 2013; Ellison, 1996; Mezuk et al, 2010). Constantine et al (2002) highlighted that African American college students also use religious/spiritual beliefs and practices such as prayer and meditation to cope with life stressors. Greer-Reed (2013) also pointed out African American college students' use of informal social networks such as the black student union and Greek letter organizations as outlets to manage stress. Although there is limited research in the area of African American college students' resilience in balancing health related issues and academic success, this finding highlights that African American college students' use a variety of coping mechanisms to deal with different types of stress.

The finding of students' consideration of seeking mental health services in the future is also inconsistent with the broad literature on African American college students. Previous studies suggested that African American college students do not seek or utilize mental health services because of mental health stigma, mistrust or denial of distress

(Ayalon & Young, 2005; Cheng et al., 2013; Masuda et al., 2012). The inconsistency of this finding with previous studies may stem from the limited sample size of African American college students and institutions represented (Hayes et al., (2011).

As indicated by the previous finding African American college students deal with a myriad of stressors. Richman, Kohn-Wood and Williams (2007) found that African Americans use of professional help increased significantly when in psychological distress. This finding may also denote that African American college students in psychological distress will seek mental health support. A previous study noted finances as a significant barrier to African Americans utilization of mental health services. Most universities and colleges subsidize counseling and psychological services for students. Access to university counseling services may be a viable option for African American college students to manage distress, where it was not before college.

Fruit and vegetable intake per day was also a significant positive predictor of academic achievement for African American college students. This finding is not consistent with much of the literature on the coping strategies of African Americans that point to harmful practices such as over or under eating, smoking and/or drinking (Darden, 2014; Jackson & Knight, 2006). However, African American college students who choose to eat healthier may feel better physically and perform better academically. Research on African Americans fruit and vegetable consumption has looked at gender differences and psychosocial dispositions to consumption (Watter, Satia and Galanko, 2007; Moser, Green, Weber and Doyle, 2005). Few studies have explored African American college student academic outcomes in relation to fruit and vegetable intake. /

hypothesized that physical health factors are positive predictors of academic achievement among all African American college students.

The second research question of this study *What gender differences exist for African American female and male college students?* sought to investigate the within-group differences of psychological and physical health implications on academic achievement. For African American female college students overall psychological stressors and symptoms, disruptive physical experiences and addictions, traumatic or difficult to handle situations which included academics and finances, sleep habits in which included awaking too early and extremely hard time falling asleep and university mental services usage were significant negative predictors of academic achievement. Positive predictors of academic achievement among African American female college students were level of stress, traumatic or difficult to handle which included other relationships and personal health issues and consideration of seeking mental health services in the future.

For African American female college students, the types of stress that impede their success are significant. The finding of overall psychological stressors and symptoms and disruptive physical experiences and addictions are consistent with the literature on African American female college students. Managing academic and psychological stress for African American female students can be detrimental to their health and academic progress. Boyraz et al. (2013) found that traumatic experiences among African American female college students have damaging implications on their self-concept and academic achievement. Financial hardship, which can be an adverse effect of pursuing higher education, is also a prevalent source of stress for African

American female college students (Lindsey, et al., 2011). Different forms of stress can lead to poor sleeping and eating habits and set female college students up for chronic health issues beyond college (Negga et al, 2000; Darden, 2014; Dawson, Schneider, Fletcher and Bryden 2007). Getting adequate sleep is important for all students but tends to be the poorest among female college students. Bulboltz, Brown and Soper (2001) found that women in college report higher levels of sleep disturbances. Consistent with this study, sleep difficulties negatively influence female college students' academic achievement (Bulboltz, Brown & Soper, 2001).

The use of university mental health services as a negative predictor of academic achievement is consistent with previous studies on African Americans limited usage of psychological services. However, this finding may indicate that African American female college students in this study had negative counseling experiences that did not help mitigate their stress. Additionally, similar to literature around coping strategies, African American female college students may choose to utilize familial, social or spiritual support to deal with academic and personal stress. *I hypothesized that psychological health factors are negative predictors of academic achievement for African American female students.*

Positive predictors of academic achievement among African American female college students were stress, traumatic or difficult to handle situations, which included other relationships and personal health issues and consideration of seeking mental health services in the future. Previous studies on the academic success of African American female college students found that they experience higher levels of academic stress as of result of having multiple tasks to attend to and making important decisions regarding the

future (Lindsey et al., 201, p.756). Although the level of stress and personal health issues are a positive predictor of academic achievement this is not consistent with the broad literature on stress and academic performance. This finding may point to the social support, peer engagement, parent support and spiritual support that African American college students use to handle stress (Constantine et al., 2002; Kuh, 2001; Musa-Turner & Lipscomb, 2007; Rendon, 1994; Tinto, 1993). Of the literature on African American college students' apprehension against seeking professional help, few studies have found that African American women are more likely to use professional help than men (Sheu & Sedlacek, 2004; Thompson et al., 2002).

For African American male college students there were limited significant factors that predicted academic achievement. Levi, Chan and Pearce (2002) found male college students tend to report health issues, stress and poor nutrition less frequently as a result of masculine societal expectations. Research studies on dominate masculine ideology found that it is typically stronger among younger African American males (Courtenay, 2000). For example, men may deny physical discomfort or admittance of depression for fear of being considered weak (Jarrett, Bellamy, and Adeyemi, 2007). *I hypothesize that psychological health factors are positive predictors of academic achievement for African American male students.*

Fruit and vegetable intake per day was a significant positive predictor of academic achievement. There is limited research specific to African American male college students and their eating habits. This finding may indicate the importance of health to African American male college students. One study found that the energy giving qualities of fruit promoted fruit intake among young adults (Lucan, Barg & Long, 2010).

Though inconsistent with much of the literature on African American males, one study found that college students are more likely than the general population to consume five servings of fruits and vegetables daily (Lowry et al., 2000). Much of the literature on African American males physical health highlighted deleterious eating habits, chronic illnesses and premature mortality due to poor health (Devine, Connors and Bisogni, 2003; James, 2004). Few studies have explored African American physical health behaviors and its implications on their academic success.

A negative predictor of academic achievement for African American male college students was traumatic or difficult handle situation, which included academics. Limited representation of men of color in higher education can be an indication of poor academic performance. Harper (2006a) found that African American males only make up 4.3% of students enrolled. Low representation along with the lack of attention given to their academic achievement can continue a negative discourse that further undermines their sense of belonging in higher education (Harper, 2010). African American male college students may not be aware of or know how to navigate academic support services on campus. Wood and Turner (2010) found that African American male college students were less likely to engage with faculty due to negative perceptions. Furthermore, sense of belonging and identity were also significant factors to academic achievement among men (Cokley & Moore, 2007; Strayhorn, 2012a; Perrakis, 2008). Strayhorn (2010) found that African American male college student involvement in student organizations or black student union positively influenced their academic success. Consistent with literature on African American male college students, involvement increases self-esteem, leadership qualities and interdependence with peers, which improves their academic

achievement (Harper, 2006). This finding although consistent with much of the deficit-oriented literature, it points to the need to further explore and support factors that predict academic success for African American male college students.

Campus perception was not a significant predictor of academic achievement for African American college students. The following background characteristics: general health, enrollment status self-described weight and current residence were negative predictors of academic achievement for all African American college students. This indicates that students' who believe their health is excellent are not performing well academically. This incongruence between health and academics could indicate students' involvement in their academic or the lack thereof. Ninety-two percent of students reported that they were enrolled full time in school. Full time enrollment may indicate that students are possibly taking too many courses at once and performing poorly as a result. Participants' level of involvement was not assessed in this study but this finding could indicate that students may be juggling multiple responsibilities.

On average 42% of respondents reported that they lived on campus. They also reported, on average, that they perceived their campus as somewhat safe. These findings indicate that students may have experiences on campus that negatively impact their academics. Although this survey did not assess students specific experiences with the campus environment; much of the literature around campus climate highlighted that it can create different types of racial and academic stressors for African American college students if it is perceived as hostile (Harper & Hurtado, 2007; Steele, 1997; Watkins et al, 2002).

Findings of this study reaffirm some of the literature on African American college students' psychological habits and behaviors; however, it also underscores the significance of health on their academic achievement. Additionally, this study also highlights the need for more disaggregated studies of African American college students' health outcomes in order to understand specifically what influences their academic success. Gender specific studies are also imperative among African American female and male college students in order to address their specific health outcomes associated with their academic achievement. Implications of the findings from this study for student affairs and recommendations for future research will be discussed in Chapter 5.

CHAPTER 5

CONCLUSION

In Chapter 1 I detailed the purpose of this study and its contribution to the literature on African American college students' academic achievement. I highlighted that this study would use a health lens to understand influences of academic achievement among African American college students. The significance of this study is to expand the literature on predictors of academic achievement for African American college students. In Chapter 2 I reviewed the literature on African American college students, their psychological and physical health and campus climate. I explained how Bronfenbrenner's (1994) ecology theory would guide the analysis of my population and findings of this study. In Chapter 3 I outlined the research questions that guided this study along with the quantitative methods that were used to analyze the secondary data from the Fall 2013 American College Health Association's National College Health Assessment. A detailed description of the ACHA-NCHA instrument, sample population and data analysis was reviewed. In Chapter 4 I presented the findings of the data analyses and discussed each of the study's research questions and anticipated outcomes. Chapter 5 will conclude the review of this study and outline implications for student affairs practices and recommendations for future research.

The purpose of this study was to identify psychological and physical health predictors of academic achievement for African American college students. There is a scarcity of literature on psychological and physical health factors influence on the academic achievement of African American college students. There is even less literature that is specific to African American female and male college students' health and academic outcomes. The findings of this study indicate that psychological and physical health factors are predictors of academic achievement for African American college students. Specific psychological health factors impede the success of African American female college students. Fruit and vegetable intake was a significant positive predictor of academic achievement for African American males.

Theoretical Implications

Bronfenbrenner's (1994) ecology theory explains that the interactions between an individual and their environment promote growth. He highlights that an individual's environment consist of five socially constructed systems that encompass the microsystem (the individual, mesosystem (the individual and their immediate environment), the exosystem (the broader community), the macrosystem (the culture and social conditions) and the chronosystem (the time period) (Bronfenbrenner (1994). The individual's interactions and connections within each of the systems are called proximal processes and are what spur human development. He explains that power, context and direction of the proximal process will vary systematically as a function of a developing person (Bronfenbrenner, 1994).

Renn and Patton (2011) used Bronfenbrenner's (1994) ecology theory to explain how students enter college with seemingly similar background characteristics but based

on their processes that occur in their subsystems, they can have different academic outcomes. Interactions that take place over time in specific contexts influence development. This is consistent with students' development in college as they engage with people, the institutional environment, societal norms, and cultural ideologies prevalent during their matriculation.

In this research study, I identified psychological and physical health factors that predicted academic achievement for African American college students. The findings of this study align with the tenets of ecological theory. Different psychological and physical health factors influenced African American college students' academic achievement. For example, all African American college students in this sample engaged with dietary habits, academics, psychological and physical stress differently. For example, I found that (other) relationships outside of family relationships, is a positive predictor of academic achievement for African American female college students. Whereas dietary habits of African American male college students was a significant positive predictor of academic achievement. African American college students' (microsystem) interactions with peers or health services (mesosystem) take place in the context of the region/state they attend school (exosystem) and amongst the larger cultural ideologies and norms in societal (macrosystem) to promote development (academic achievement). The students' health, beliefs and interactions with their environment bring about negative or positive development. Based on the statistical significance of the factors in this study the interaction either positively or negatively influenced (development) academic achievement in African American college students. The results of this study have implications on institutional practices and strategic programming that can positively

influence African American college students' academic achievement. In the following sections, I will outline some psychological and physical health strategies that student affairs practitioners can use to foster an environment that support African American college students' health and academic outcomes. I will also make recommendations for future research.

Limitations

The sample size of students who identified as African American and another race/ethnicity was removed to include only students who selected only African American on the survey instrument, not African American and another race/ethnicity. Graduate students and those who did not indicate their years in school were also removed which again shifted the same size. The experiences of African American graduates students is another area of necessary research. However, the responses of graduate students was not evaluated in this study. Future research in this area could expand on the experiences of African American college students by looking at graduates and undergraduates.

African American males accounted for a little less than half of the respondents in this sample. Most of the factors identified in this study were not significant predictors for African American men. Reshaping the NCHA instrument to capture the male audience and accurately assess their psychological and physical health is vital. Furthermore, a survey instrument tailored to understand their experiences would contribute to an even larger effort to increase their presence and improve their academic outcomes.

Campus climate was reviewed in the literature to explore the environments in which African American college students can experience different types of stress. There were no variables on the survey to evaluate campus climate and its influence on the

academic achievement of African American college students. These variables might help contextualize the findings in the study and provide further insight in to what influences the academic achievement of African American college students.

Implications for Student Affairs Practices

Psychological Health

Findings of this study highlighted the influence of specific stressors as negative predictors for African American college students. However, the level of stress experienced by African American college students was a positive predictor of academic achievement. This finding highlights the need for faculty and student affairs practitioners to gain an understanding of the types of stress that impede the success of African American college students. To understand the different types of stress that impede or support African American college students' success, faculty and student affairs practitioners will need to look beyond their academic outcomes to understand their sources stress. Student/academic affairs and psychological counseling professionals typically work in silos due to the confidentiality of matters discussed in counseling sessions. However, student and academic affairs are more likely than university mental health services to engage with African American college students. Therefore, student and academic affairs practitioners need culturally relevant training that would give them basic counseling skills to dig a little deeper to understand the different types of stress that impede African American college students' success.

This study found that consideration of psychological or mental health services in the future as a positive predictor of academic achievement for African American college students. However, previous studies found that African American college students tend

to have a negative attitude toward mental health services (Ayalon & Young, 2005; Masuda et al., 2012). Although race of mental health professionals was not a variable explored in this study, previous studies highlighted the lack of diversity in university counseling centers as one of the reasons for low utilization among African American college students (Barksdale & Molock, 2009; Constantine et al., 2002; Thompson et al., 2004). This could speak to the incongruence between a positive attitude toward mental health services but low utilization among African American college students. As universities aim to enroll more students of color, the same effort should be made in hiring people of color in areas such as advising, teaching and mental health services. By hiring more professionals of color, institutions of higher education create an environment where students of color see professional who look like them. This may also encourage students engage in help seeking behaviors.

Furthermore, university counseling centers also need to develop assessment tools to understand African American college students' perception of mental health services and also what encourages them to participate in and continue a counseling experience. Hayes et al., (2011) posited that universities assess the African American utilization and treatment to determine if their psychological needs were met. Universities can conduct a survey of new and continuing African American college students to assess their perception of mental health services and conditions in which they would use services. This data could inform intentional interventions and programming. A survey could also capture students' religious/ spiritual practices. Post counseling assessments can also inform institutions on how they can improve their mental health services. By understanding African American college students' needs, university counseling centers

can better address their needs for mental health treatment specifically when different types of stress impede their academic success.

Previous studies have found religion/spirituality as one of the relevant coping strategies for African American college students (Constantine et al., 2002; Musa-Turner & Lipscomb, 2007). Practices such as prayer, meditation and attending church help mitigate some of the stress that African American college students experience (Constantine, 2000; Ellison, 1993). Universities can support African American college students' psychological health by collaborating with faith communities on and off campus. Creating a physical space that students can gather in groups for prayer, meditation or to study sacred texts can provide them with a culturally relevant outlet to relieve stress. This space would communicate to all students that spirituality is another method to manage stress. A pronounced space also communicates support from the university to African American college students to utilize their faith to persevere through academic or personal challenges. Universities could work with local churches and temples to provide shuttle services for students on weekends to engage with a spiritual community. This could also provide African American college students' with an outlet to cope with the stress of school and expand their community beyond the university.

In looking at negative and positive predictors of academic achievement for African American female college students, this study found that usage of mental health services was negative predictor of academic success. This supports the previous recommendation of assessing African American college students' perception of mental health services, and experiences after they participate in a counseling session. By understanding their perception and experiences, university counseling centers can adjust

their practices and create support groups that address African American female college students' needs.

This study also found that academic stress, overall psychological stressors and symptoms such as sleep difficulties, depression, anxiety and work along with finances were negative predictors of academic achievement for African American female college students. This study also found that level of stress was a positive predictor of academic achievement which speaks to African American female college students' ability to perform under stress. A previous study on the enrollment and graduations rates of African American female college students emphasized their high persistence rates (Cujyet, 2006). This points to a unique reality that despite facing different types of stress, African American female college students continue to persist. This can be considered admirable; however there is cost to persisting amidst dealing with a myriad of stressors. Previous studies have found that stress in college can lead to poor eating, sleeping and coping habits that can negatively impact African American female college students even after college (Darden, 2014; Jackson, et al., 2012). African American female college students can persevere in obtaining their degree and graduate with poorer health than when they started college.

The finding highlights the importance of a program that focuses on African American female college students' overall wellness as they continue their education. The development of a program through the on campus women's resource center can focus workshops for new and continuing female students to learn about caring for their mental and physical health while pursuing their degree. Workshops should be mandatory for

freshman female college students to inform them early on of strategies to manage stress, along with their physical and psychological health.

Organizations such as Black sororities and the black student union can host workshops to address specific stressors and coping strategies for African American female college students. A space where women of color can address the stressors and culturally relevant coping strategies is imperative to shifting the behaviors of African American female college students. Previous studies have highlighted the significance of peer support groups to African American college students in coping with stress (Baker, 2013; Borayz et al., 2013; Greer-Reed, 2013).

Many of the variables evaluated in this study were not significant to African American male college students. This can be attributed to the small sample size represented in this study which underscores a larger issue around low African American male representation in higher education in general (Harper, 2006a; 2010; 2012; Strayhorn, 2010; Wood & Turner, 2010). The low representation of African American males in this study can also be attributed low response rates of health status. Jarrett et al., (2012) found that males are less likely to report their health status due to masculine societal expectations.

Despite the limited findings, this study found that academic stress was a negative predictor of academic achievement for African American male college students. This finding is consistent with broader literature on African American males' success in college which supports the appeal for intentional services to address their academic stress (Cokley & Moore, 2007; Harper, 2006a; 2010; 2012; Perrakis, 2008; Strayhorn, 2010). In an effort to address coping with stress on a broader institutional level, it is important

that African American males in college are able to engage with other men of color through academic advising and in the classroom. Men are able to relate and engage with other men, however more men of color in academic advising and teaching in the classroom is important for the self-efficacy of African American male college students. Support services such as academic advising specifically have to be strategic in building rapport with African American males and approaching their academic ability from an anti-deficit approach. Furthermore, aggressive recruitment of African American male students and professionals is imperative to creating a space where they feel apart and supported in the academic community. Allies are also imperative to this population and need to be intentional about building rapport and connecting regularly with African American male college students to foster their academic success. Culturally relevant training for academic advisors and faculty is essential to equipping them with tools to support African American male college students' success.

Males in college also need a physical space to go to for support. Creating a physical space that African American male college students know they can go to for academic or personal support would also help communicate that they belong. These spaces can house programs targeted at African American male retention and success. Furthermore, programs in place to support African American male college students need to collaborate with psychological services and health centers. These partnerships can foster awareness of strategies to cope with academic stress through exercise (which I will explore in the next section) and engaging in conversation with other men in their support system. Furthermore, utilizing the research of scholars who focus on African American males in college can inform practices that improve the psychological health of African

American male college students as they continue their education and thereafter (Harper, 2012; Strayhorn, 2010; Wood & Luke, 2010).

Physical Health

Fruit and vegetable intake and personal health issues were positive predictors of academic achievement for all African American college students. The fruit and vegetable intake may be attributed to the importance of their physical appearance. This finding is not consistent with the broader literature on African American college students which suggested that they typically have poor eating and physical activity habits in college. This finding can also be an implication of the type of food and physical activity resources available at their university. This finding underscores the importance of universities supporting African American college students' healthy food choices by making sure fruits and vegetables are readily available and accessible on campus. Having access to healthy food options on campus that they can pick up between classes can help them maintain a healthy weight, and have a balanced diet. Developing and maintaining healthy eating habits can also have a great impact on their health after college as well.

Additionally, physical health interventions for African American college students should include social support groups. Scholars highlighted the significance of social support groups as a coping mechanism for African American college students (Baker, 2013; Greer-Reed, 2013; Kuh, 2001; Rendon, 1994). Student affairs practitioners can collaborate with Black Greek letter organizations, Black student union and programs targeted at African American college student retention and success to promote healthy lifestyle practices. For example, gender specific fitness communities for African

American female and male college students can also be a space where psychological and physical health issues are addressed.

Universities must make sure ethnic organizations are visible and supported by the entire campus community. Academic and student affairs professionals should be informed on all ethnic organizations and its benefits in order to refer African American college students. As student leadership amongst student organizations shift from year to year because of graduation, universities should be strategic in identifying a faculty or staff member to ensure the organization remains active and visible. The stability of these ethnic organizations is imperative to African American college students having a community where they discuss strategies to overcome the different types of stress they experience as students.

This study found that fruit and vegetable intake was a positive predictor of academic achievement for African American male college students. This could be attributed to some African American male college students participating in intercollegiate athletics which speaks to their need to maintain their physical health. This finding also highlights an area that may be of importance to males in general and that is their physical health. To build on this area of strength for African American male college students, universities can encourage them to use fitness as a means to manage their academic stress. This would provide African American male college students with an outlet for coping with stress and also continue to help them develop good eating and physical activity habits.

Fruit and vegetable intake was not significant for African American female college students, however, disruptive physical experience which can include experiences

such as gambling, sexually transmitted diseases/ infections, eating disorders/problems, drug use, sexual or physical assault and pregnancy, was a negative predictor of academic achievement for African American female college students. Although many of the experiences are physical in nature, they have great implications on African American female college students' psychological health. The Black student union and Black sororities should be tasked in partnership with university counseling centers to discuss topics such as eating disorders, pregnancy and assault with new and continuing African American female college students in an effort to highlight prevention and coping strategies.

The implications for practices continue to point to the ethnic organizations and social support groups that are on most university campuses. These recommendations also speak to the importance of these ethnic organizations in the life of African American college students. These recommendations also underscores the need for universities and colleges alike, to make sure ethnic organizations such as the Black Greek letter organizations and the Black student union are established, supported by the university and thriving. Additionally, university counseling centers, along with student and academic affairs need to represent its constituents and/or be culturally equipped to address African American college students' psychological and physical health needs.

Recommendations for Future Research

There is limited research on the ways on African Americans college students psychological and physical health influence their academic achievement. This quantitative study explores part of the effects of stress on academic achievement of African American college students. Findings from this study point out African American

college students' resilience in balancing stress and academics. Additional research in this area using a qualitative method would provide insight into how students with personal health issue (psychological and physical) balance their health and academics.

Further research on this topic could examine how African American female and male view their health in relation to academics. Expanding both a quantitative and qualitative study to include a larger sample of women and men would inform institutional practices and programs to mitigate stressors on this population.

The limited representation of African American male college students in this study speaks of an even greater call to scholars and practitioners at every level in education to continue our efforts in understanding and improving their academic experiences. Likewise, additional research in the area of psychological and physical health of African American female college students and the effects of college on their health during and after college is imperative. Several studies found poor physical health behaviors and psychological distress among African American female college students (Adderley-Kelly; 2007; Bardone-Cone et al., 2009; Boyraz et al, 2013; Neville et al, 2004, Thompson et al, 2002).

Finally, additional research is necessary to understand and improve African American college students' motivation to seek and commence in a counseling experience. Much of the research on mental health services and African American college students' help seeking behavior highlight their lack of usage due to stigma, embarrassment and mistrust (Ayalon & Young, 2005; Cheng et al, 2013; Masuda et al, 2012; Thompson et al., 2002). However, there are also studies that detail the coping strategies that African American college students use such as social support (Reed, 2013; Rendon, 1994;) and

spirituality (Constantine et al., 2002); a study and an intervention using culturally relevant coping mechanisms can prove to mitigate mental health stigma and psychological stress of African American college students.

Conclusion

African American college students are persisting, however understanding the implications of their psychological and physical health on their academic achievement is vital. African American female and male college students experience college in very distinct ways and they require specific support to help them thrive in and outside the university. In many respects, it is a community effort requiring family, peers, educators, practitioners, spiritual leaders, politicians, activist and allies to advocate for African American college students' success and health. Advocating for the health and academic success means first understanding what stress is detrimental and how they cope, and secondly employing relevant services and practices to address their psychological and physical health needs. Continued research that explores what supports African American college students' success is imperative to practitioners and administrations implementing practices and strategies that help them complete their degrees and maintain their psychological and physical health.

APPENDICES

APPENDIX A
ACHA-NCHA ASSESSMENT

Instructions:

The following questions ask about various aspects of your health.

To answer the questions, fill in the oval that corresponds to your response.

Select only one response unless instructed otherwise.

Use a No. 2 pencil or blue or black ink pen only. Do not use pens with ink that soaks through the paper. CORRECT: ● INCORRECT: ✗ ☹️ 🚫

This survey is completely voluntary. You may choose not to participate or not to answer any specific question. You may skip any question you are not comfortable in answering.

Please make no marks of any kind on the survey which could identify you individually.

Composite data will then be shared with your campus for use in health promotion activities.

Thank you for taking the time and thought to complete this survey. We appreciate your participation!



American College Health Association

National College Health Assessment

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PAGE ONE

PLEASE DO NOT WRITE IN THIS AREA



SERIAL #

Health, Health Education and Safety

1. How would you describe your general health?

Excellent
 Very good
 Good
 Fair
 Poor
 Don't know

(Please mark the appropriate column for each question to the right)

	2. Have you received information on the following topics from your college or university?		3. Are you interested in receiving information on the following topics from your college or university?	
	No	Yes	No	Yes
Alcohol and other drug use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cold/Flu/Sore throat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depression/Anxiety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eating disorders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grief and loss	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How to help others in distress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injury prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nutrition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pregnancy prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem use of Internet/computer games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relationship difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual assault/Relationship violence prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexually transmitted disease/infection (STD/I) prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suicide prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Violence prevention	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Within the last 12 months, how often did you:

(Please mark the appropriate column for each row)

	N/A, did not do this activity within the last 12 months	Never	Rarely	Sometimes	Most of the time	Always
Wear a seatbelt when you rode in a car?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wear a helmet when you rode a bicycle?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wear a helmet when you rode a motorcycle?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wear a helmet when you were inline skating?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Within the last 12 months:

(Please mark the appropriate column for each row)

	No	Yes
Were you in a physical fight?	<input type="radio"/>	<input type="radio"/>
Were you physically assaulted (do not include sexual assault)?	<input type="radio"/>	<input type="radio"/>
Were you verbally threatened?	<input type="radio"/>	<input type="radio"/>
Were you sexually touched without your consent?	<input type="radio"/>	<input type="radio"/>
Was sexual penetration attempted (vaginal, anal, oral) without your consent?	<input type="radio"/>	<input type="radio"/>
Were you sexually penetrated (vaginal, anal, oral) without your consent?	<input type="radio"/>	<input type="radio"/>
Were you a victim of stalking (e.g., waiting for you outside your classroom, residence, or office; repeated emails/phone calls)?	<input type="radio"/>	<input type="radio"/>

6. Within the last 12 months, have you been in an intimate (coupled/partnered) relationship that was:

(Please mark the appropriate column for each row)

	Yes	No
Emotionally abusive? (e.g., called derogatory names, yelled at, ridiculed)	<input type="radio"/>	<input type="radio"/>
Physically abusive? (e.g., kicked, slapped, punched)	<input type="radio"/>	<input type="radio"/>
Sexually abusive? (e.g., forced to have sex when you didn't want it, forced to perform or have an unwanted sexual act performed on you)	<input type="radio"/>	<input type="radio"/>

7. How safe do you feel:

(Please mark the appropriate column for each row)

	Very safe	Somewhat safe	Somewhat unsafe	Not safe at all
On this campus (daytime)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On this campus (nighttime)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the community surrounding this school (daytime)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In the community surrounding this school (nighttime)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Alcohol, Tobacco, and Drugs

8. Within the last 30 days, on how many days did you use:

(Please mark the appropriate column for each row)

	Never used	1-2 days	3-5 days	6-9 days	10-19 days	20-29 days	Used daily
Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco from a water pipe (hookah)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigars, little cigars, clove cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smokeless tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alcohol (beer, wine, liquor)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marijuana (pot, weed, hashish, hash oil)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine (crack, rock, freebase)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamine (crystal meth, ice, crank)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other amphetamines (diet pills, bennies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sedatives (downers, ludes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hallucinogens (LSD, PCP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anabolic steroids (Testosterone)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opiates (heroin, smack)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inhalants (glue, solvents, gas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MDMA (Ecstasy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other club drugs (GHB, Ketamine, Rohypnol)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other illegal drugs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Within the last 30 days, how often do you think the typical student at your school used:

(State your best estimate; Please mark the appropriate column for each row)

	Never used	1-2 days	3-5 days	6-9 days	10-19 days	20-29 days	Used daily
Cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tobacco from a water pipe (hookah)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cigars, little cigars, clove cigarettes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smokeless tobacco	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alcohol (beer, wine, liquor)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marijuana (pot, weed, hashish, hash oil)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cocaine (crack, rock, freebase)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methamphetamine (crystal meth, ice, crank)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other amphetamines (diet pills, bennies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sedatives (downers, ludes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hallucinogens (LSD, PCP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anabolic steroids (Testosterone)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opiates (heroin, smack)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inhalants (glue, solvents, gas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MDMA (Ecstasy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other club drugs (GHB, Ketamine, Rohypnol)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other illegal drugs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

One drink of alcohol is defined as a 12 oz. can or bottle of beer or wine cooler, a 4 oz. glass of wine, or a shot of liquor straight or in a mixed drink.

10. The last time you "partied"/socialized how many drinks of alcohol did you have? (If you did not drink alcohol, please enter 00. If less than 10, enter 01, 02, 03, etc.)

D	<input type="text"/>
R	<input type="text"/>
I	<input type="text"/>
N	<input type="text"/>
K	<input type="text"/>
S	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
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	<input type="text"/>
	<input type="text"/>

11. The last time you "partied"/socialized over how many hours did you drink alcohol? (If you did not drink alcohol, please enter 00. If less than 10, enter 01, 02, 03, etc.)

H	<input type="text"/>
O	<input type="text"/>
U	<input type="text"/>
R	<input type="text"/>
S	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
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	<input type="text"/>

12. How many drinks of alcohol do you think the typical student at your school had the last time he/she "partied"/socialized? (If you think the typical student at your school does not drink alcohol, please enter 00. If less than 10, enter 01, 02, 03, etc.)

D	<input type="text"/>
R	<input type="text"/>
I	<input type="text"/>
N	<input type="text"/>
K	<input type="text"/>
S	<input type="text"/>
	<input type="text"/>
	<input type="text"/>
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	<input type="text"/>
	<input type="text"/>
	<input type="text"/>

13. Over the last two weeks, how many times have you had five or more drinks of alcohol at a sitting?

- N/A, don't drink
- None
- 1 time
- 2 times
- 3 times
- 4 times
- 5 times
- 6 times
- 7 times
- 8 times
- 9 times
- 10 or more times

14. Within the last 30 days, did you:

(Please mark the appropriate column for each row)

	N/A, don't drink	N/A, don't drive	No	Yes
Drive after drinking any alcohol at all	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive after drinking five or more drinks of alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. During the last 12 months, when you "partied"/socialized, how often did you:
 (Please mark the appropriate column for each row)

	Rarely		Sometimes	
	Never		Most of the time	
	N/A, don't drink		Always	
Alternate non-alcoholic with alcoholic beverages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Avoid drinking games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choose not to drink alcohol	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Determine, in advance, not to exceed a set number of drinks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eat before and/or during drinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have a friend let you know when you have had enough	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keep track of how many drinks you were having	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pace your drinks to 1 or fewer per hour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stay with the same group of friends the entire time you were drinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stick with only one kind of alcohol when drinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use a designated driver	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Within the last 12 months, have you experienced any of the following when drinking alcohol?
 (Please mark the appropriate column for each row)

	Yes	
	No	N/A, don't drink
Did something you later regretted	<input type="radio"/>	<input type="radio"/>
Forgot where you were or what you did	<input type="radio"/>	<input type="radio"/>
Got in trouble with the police	<input type="radio"/>	<input type="radio"/>
Someone had sex with me without my consent	<input type="radio"/>	<input type="radio"/>
Had sex with someone without their consent	<input type="radio"/>	<input type="radio"/>
Had unprotected sex	<input type="radio"/>	<input type="radio"/>
Physically injured yourself	<input type="radio"/>	<input type="radio"/>
Physically injured another person	<input type="radio"/>	<input type="radio"/>
Seriously considered suicide	<input type="radio"/>	<input type="radio"/>

17. Within the last 30 days, what percent of students at your school used:
 State your best estimate. (If less than 10, please enter 00, 01, 02, etc.)

Cigarettes % Used	Alcohol % Used	Marijuana % Used
<input type="text" value="00"/>	<input type="text" value="00"/>	<input type="text" value="00"/>
<input type="text" value="01"/>	<input type="text" value="01"/>	<input type="text" value="01"/>
<input type="text" value="02"/>	<input type="text" value="02"/>	<input type="text" value="02"/>
<input type="text" value="03"/>	<input type="text" value="03"/>	<input type="text" value="03"/>
<input type="text" value="04"/>	<input type="text" value="04"/>	<input type="text" value="04"/>
<input type="text" value="05"/>	<input type="text" value="05"/>	<input type="text" value="05"/>
<input type="text" value="06"/>	<input type="text" value="06"/>	<input type="text" value="06"/>
<input type="text" value="07"/>	<input type="text" value="07"/>	<input type="text" value="07"/>
<input type="text" value="08"/>	<input type="text" value="08"/>	<input type="text" value="08"/>
<input type="text" value="09"/>	<input type="text" value="09"/>	<input type="text" value="09"/>

18. Within the last 12 months, have you taken any of the following prescription drugs that were not prescribed to you?

(Please mark the appropriate column for each row)

	Yes	
	No	
Antidepressants (e.g., Celexa, Lexapro, Prozac, Wellbutrin, Zoloft)	<input type="radio"/>	<input type="radio"/>
Erectile dysfunction drugs (e.g., Viagra, Cialis, Levitra)	<input type="radio"/>	<input type="radio"/>
Pain killers (e.g., OxyContin, Vicodin, Codeine)	<input type="radio"/>	<input type="radio"/>
Sedatives (e.g., Xanax, Valium)	<input type="radio"/>	<input type="radio"/>
Stimulants (e.g., Ritalin, Adderall)	<input type="radio"/>	<input type="radio"/>

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PLEASE DO NOT WRITE IN THIS AREA



SERIAL #

Sex Behavior and Contraception

19. Within the last 12 months, with how many partners have you had oral sex, vaginal intercourse, or anal intercourse? (If you did not have a sex partner within the last 12 months, please enter 00. If less than 10, enter 01, 02, 03, etc.)

P		
A	0	0
R	1	1
T	2	2
N	3	3
E	4	4
R	5	5
S	6	6
	7	7
	8	8
	9	9

20. Within last 12 months, did you have sexual partner(s) who were:

(Please mark the appropriate column for each row)

	Yes	No
Female	<input type="radio"/>	<input type="radio"/>
Male	<input type="radio"/>	<input type="radio"/>
Transgender	<input type="radio"/>	<input type="radio"/>

21. Within the last 30 days, did you have:

(Please mark the appropriate column for each row)

	No, have done this sexual activity in the past but not in the last 30 days	No, have never done this sexual activity	Yes
Oral sex?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaginal intercourse?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anal intercourse?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. Within the last 30 days, how often did you or your partner(s) use a condom or other protective barrier (e.g., male condom, female condom, dam, glove) during:

(Please mark the appropriate column for each row)

	Have not done this sexual activity during the last 30 days	N/A, never did this sexual activity	Never	Rarely	Sometimes	Most of the time	Always	CONDOM/ BARRIER USE
Oral sex?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vaginal intercourse?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anal intercourse?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23A. Did you or your partner use a method of birth control to prevent pregnancy the last time you had vaginal intercourse?

- Yes (continue to item 23B)
- N/A, have not had vaginal intercourse (skip to item 24)
- No, have not had vaginal intercourse that could result in a pregnancy (skip to item 24)
- No, did not want to prevent pregnancy (skip to item 24)
- No, did not use any birth control method (skip to item 24)
- Don't know (skip to item 24)

23B. Please indicate whether or not you or your partner used each of the following methods of birth control to prevent pregnancy the last time you had vaginal intercourse. (Please mark the appropriate column for each row)

	Yes	No		Yes	No
Birth control pills (monthly or extended cycle)	<input type="radio"/>	<input type="radio"/>	Diaphragm or cervical cap	<input type="radio"/>	<input type="radio"/>
Birth control shots	<input type="radio"/>	<input type="radio"/>	Contraceptive sponge	<input type="radio"/>	<input type="radio"/>
Birth control implants	<input type="radio"/>	<input type="radio"/>	Spermicide (e.g., foam, jelly, cream)	<input type="radio"/>	<input type="radio"/>
Birth control patch	<input type="radio"/>	<input type="radio"/>	Fertility awareness (e.g., calendar, mucous, basal body temperature)	<input type="radio"/>	<input type="radio"/>
Vaginal ring	<input type="radio"/>	<input type="radio"/>	Withdrawal	<input type="radio"/>	<input type="radio"/>
Intrauterine device (IUD)	<input type="radio"/>	<input type="radio"/>	Sterilization (e.g., hysterectomy, tubes tied, or vasectomy)	<input type="radio"/>	<input type="radio"/>
Male condom	<input type="radio"/>	<input type="radio"/>	Other method	<input type="radio"/>	<input type="radio"/>
Female condom	<input type="radio"/>	<input type="radio"/>			

24. Within the last 12 months, have you or your partner(s) used emergency contraception ("morning after pill")?

- N/A, have not had vaginal intercourse in the last 12 months
- No
- Yes
- Don't know

25. Within the last 12 months, have you or your partner(s) become pregnant?

- N/A, have not had vaginal intercourse in the last 12 months
- No
- Yes, unintentionally
- Yes, intentionally
- Don't know

Weight, Nutrition, and Exercise

26. How do you describe your weight?

- Very underweight
- Slightly underweight
- About the right weight
- Slightly overweight
- Very overweight

27. Are you trying to do any of the following about your weight?

- I am not trying to do anything about my weight
- Stay the same weight
- Lose weight
- Gain weight

28. How many servings of fruits and vegetables do you usually have per day? (1 serving = 1 medium piece of fruit; 1/2 cup fresh, frozen, or canned fruits/vegetables; 3/4 cup fruit/vegetable juice; 1 cup salad greens; or 1/4 cup dried fruit)

- 0 servings per day
- 1-2 servings per day
- 3-4 servings per day
- 5 or more servings per day

29. On how many of the past 7 days did you:
(Please mark the appropriate column for each row)

- Do moderate-intensity cardio or aerobic exercise (caused a noticeable increase in heart rate, such as a brisk walk) for at least 30 minutes?
- Do vigorous-intensity cardio or aerobic exercise (caused large increases in breathing or heart rate, such as jogging) for at least 20 minutes?
- Do 8-10 strength training exercises (such as resistance weight machines) for 8-12 repetitions each?

	0 days	1 day	2 days	3 days	4 days	5 days	6 days	7 days
Do moderate-intensity cardio or aerobic exercise (caused a noticeable increase in heart rate, such as a brisk walk) for at least 30 minutes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do vigorous-intensity cardio or aerobic exercise (caused large increases in breathing or heart rate, such as jogging) for at least 20 minutes?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Do 8-10 strength training exercises (such as resistance weight machines) for 8-12 repetitions each?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Mental Health

30. Have you ever:
(Please mark the appropriate column for each row)

- Felt things were hopeless
- Felt overwhelmed by all you had to do
- Felt exhausted (not from physical activity)
- Felt very lonely
- Felt very sad
- Felt so depressed that it was difficult to function
- Felt overwhelming anxiety
- Felt overwhelming anger
- Intentionally cut, burned, bruised, or otherwise injured yourself
- Seriously considered suicide
- Attempted suicide

	No, never	No, not in last 12 months	Yes, in the last 2 weeks	Yes, in the last 30 days	Yes, in the last 12 months
Felt things were hopeless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt overwhelmed by all you had to do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt exhausted (not from physical activity)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt very lonely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt very sad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt so depressed that it was difficult to function	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt overwhelming anxiety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt overwhelming anger	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intentionally cut, burned, bruised, or otherwise injured yourself	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seriously considered suicide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attempted suicide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. Within the last 12 months, have you been diagnosed or treated by a professional for any of the following?
(Please mark the appropriate column for each row)

	Yes, diagnosed but not treated	Yes, treated with medication	Yes, treated with psychotherapy	Yes, treated with medication and psychotherapy	Yes, other treatment
Anorexia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxiety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attention Deficit and Hyperactivity Disorder (ADHD)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bipolar Disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bulimia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insomnia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other sleep disorder	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Obsessive Compulsive Disorder (OCD)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Panic attacks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Phobia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Schizophrenia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Substance abuse or addiction (alcohol or other drugs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other addiction (e.g., gambling, internet, sexual)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other mental health condition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32. Have you ever been diagnosed with depression? No Yes

33. Within the last 12 months, have any of the following been traumatic or very difficult for you to handle?
(Please mark the appropriate column for each row)

	No	Yes
Academics	<input type="radio"/>	<input type="radio"/>
Career-related issue	<input type="radio"/>	<input type="radio"/>
Death of a family member or friend	<input type="radio"/>	<input type="radio"/>
Family problems	<input type="radio"/>	<input type="radio"/>
Intimate relationships	<input type="radio"/>	<input type="radio"/>
Other social relationships	<input type="radio"/>	<input type="radio"/>
Finances	<input type="radio"/>	<input type="radio"/>
Health problem of a family member or partner	<input type="radio"/>	<input type="radio"/>
Personal appearance	<input type="radio"/>	<input type="radio"/>
Personal health issue	<input type="radio"/>	<input type="radio"/>
Sleep difficulties	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>

34. Have you ever received psychological or mental health services from any of the following?
(Please mark the appropriate column for each row)

	No	Yes
Counselor/Therapist/Psychologist	<input type="radio"/>	<input type="radio"/>
Psychiatrist	<input type="radio"/>	<input type="radio"/>
Other medical provider (e.g., physician, nurse practitioner)	<input type="radio"/>	<input type="radio"/>
Minister/Priest/Rabbi/Other clergy	<input type="radio"/>	<input type="radio"/>

35. Have you ever received psychological or mental health services from your current college/university's Counseling or Health Service?

- No Yes

36. If in the future you were having a personal problem that was really bothering you, would you consider seeking help from a mental health professional?

- No Yes

37. Within the last 12 months, how would you rate the overall level of stress you have experienced?

- No stress
 Less than average stress
 Average stress
 More than average stress
 Tremendous stress

Physical Health

38. Within the last 30 days, did you do any of the following?

(Please mark the appropriate column for each row)

	Yes	No
Exercise to lose weight	<input type="radio"/>	<input type="radio"/>
Diet to lose weight	<input type="radio"/>	<input type="radio"/>
Vomit or take laxatives to lose weight	<input type="radio"/>	<input type="radio"/>
Take diet pills to lose weight	<input type="radio"/>	<input type="radio"/>

39. Have you:

(Please mark the appropriate column for each row)

	Don't know	Yes	No
Had a dental exam and cleaning in the last 12 months?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(Males) Performed testicular self exam in the last 30 days?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(Females) Performed breast self exam in the last 30 days?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(Females) Had a routine gynecological exam in the last 12 months?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Used sunscreen regularly with sun exposure?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ever been tested for Human Immunodeficiency Virus (HIV) infection?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

40. Have you received the following vaccinations (shots)?

(Please mark the appropriate column for each row)

	Don't know	Yes	No
Hepatitis B	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human Papillomavirus/HPV (cervical cancer vaccine)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Influenza (the flu) in the last 12 months (shot or nasal mist)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Measles, Mumps, Rubella	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meningococcal disease (meningococcal meningitis)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Varicella (chicken pox)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. Within the last 12 months, have you been diagnosed or treated by a professional for any of the following?

(Please mark the appropriate column for each row)

	Yes No	Yes No
Allergies	<input type="radio"/>	<input type="radio"/>
Asthma	<input type="radio"/>	<input type="radio"/>
Back pain	<input type="radio"/>	<input type="radio"/>
Broken bone/Fracture/Sprain	<input type="radio"/>	<input type="radio"/>
Bronchitis	<input type="radio"/>	<input type="radio"/>
Chlamydia	<input type="radio"/>	<input type="radio"/>
Diabetes	<input type="radio"/>	<input type="radio"/>
Ear infection	<input type="radio"/>	<input type="radio"/>
Endometriosis	<input type="radio"/>	<input type="radio"/>
Genital herpes	<input type="radio"/>	<input type="radio"/>
Genital warts/Human Papillomavirus (HPV)	<input type="radio"/>	<input type="radio"/>
Gonorrhea	<input type="radio"/>	<input type="radio"/>
Hepatitis B or C	<input type="radio"/>	<input type="radio"/>
High blood pressure	<input type="radio"/>	<input type="radio"/>
High cholesterol	<input type="radio"/>	<input type="radio"/>
Human Immunodeficiency Virus (HIV)	<input type="radio"/>	<input type="radio"/>
Irritable Bowel Syndrome (IBS)	<input type="radio"/>	<input type="radio"/>
Migraine headache	<input type="radio"/>	<input type="radio"/>
Mononucleosis	<input type="radio"/>	<input type="radio"/>
Pelvic Inflammatory Disease (PID)	<input type="radio"/>	<input type="radio"/>
Repetitive stress injury (e.g., carpal tunnel syndrome)	<input type="radio"/>	<input type="radio"/>
Sinus infection	<input type="radio"/>	<input type="radio"/>
Strep throat	<input type="radio"/>	<input type="radio"/>
Tuberculosis	<input type="radio"/>	<input type="radio"/>
Urinary tract infection	<input type="radio"/>	<input type="radio"/>

42. On how many of the past 7 days did you get enough sleep so that you felt rested when you woke up in the morning?

- 0 days
 1 day
 2 days
 3 days
 4 days
 5 days
 6 days
 7 days

43. People sometimes feel sleepy during the daytime. In the past 7 days, how much of a problem have you had with sleepiness (feeling sleepy, struggling to stay awake) during your daytime activities?

- No problem at all
 A little problem
 More than a little problem
 A big problem
 A very big problem

44. In the past 7 days, how often have you:

(Please mark the appropriate column for each row)

	0 days	1 day	2 days	3 days	4 days	5 days	6 days	7 days
Awakened too early in the morning and couldn't get back to sleep?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Felt tired, dragged out, or sleepy during the day?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gone to bed because you just could not stay awake any longer?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had an extremely hard time falling asleep?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Impediments to Academic Performance

(Please select the most serious outcome for each item below)

Significant disruption in thesis, dissertation, research, or practicum work
 Received an incomplete or dropped the course
 Received a lower grade in the course
 Received a lower grade on an exam or important project
 I have experienced this issue but my academics have not been affected
 This did not happen to me/not applicable

45. Within the last 12 months, have any of the following affected your academic performance?

Alcohol use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Allergies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anxiety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assault (physical)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Assault (sexual)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attention Deficit and Hyperactivity Disorder (ADHD)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cold/Flu/Sore throat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Concern for a troubled friend or family member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chronic health problem or serious illness (e.g., diabetes, asthma, cancer)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Chronic pain	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Death of a friend or family member	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Depression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Discrimination (e.g., homophobia, racism, sexism)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drug use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eating disorder/problem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finances	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gambling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Homesickness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Injury (fracture, sprain, strain, cut)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet use/computer games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Learning disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participation in extracurricular activities (e.g., campus clubs, organizations, athletics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pregnancy (yours or your partner's)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relationship difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Roommate difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexually transmitted disease/infection (STD/I)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sinus infection/Ear infection/Bronchitis/Strep throat	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep difficulties	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify _____)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Demographic Characteristics

46. How old are you? → **Years**

0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

47. What is your gender?

Female

Male

Transgender

48. What is your sexual orientation?

Heterosexual

Gay/Lesbian

Bisexual

Unsure

49. What is your height in feet and inches? →

Ft.	Inch
0	0
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9

50. What is your weight in pounds? →

Pounds
0
1
2
3
4
5
6
7
8
9

51. What is your year in school?

- 1st year undergraduate
- 2nd year undergraduate
- 3rd year undergraduate
- 4th year undergraduate
- 5th year or more undergraduate
- Graduate or professional
- Not seeking a degree
- Other

52. What is your enrollment status?

- Full-time
- Part-time
- Other

53. Have you transferred to this college or university within the last 12 months?

- No
- Yes

54. How do you usually describe yourself?

(Mark all that apply)

- White
- Black or African American
- Hispanic or Latino/a
- Asian or Pacific Islander
- American Indian, Alaskan Native, or Native Hawaiian
- Biracial or Multiracial
- Other

55. Are you an international student?

- No
- Yes

56. What is your relationship status?

- Not in a relationship
- In a relationship but not living together
- In a relationship and living together

57. What is your marital status?

- Single
- Divorced
- Married/Partnered
- Other
- Separated

58. Where do you currently live?

- Campus residence hall
- Fraternity or sorority house
- Other college/university housing
- Parent/guardian's home
- Other off-campus housing
- Other

59. Are you a member of a social fraternity or sorority? (e.g., National Interfraternity Conference, National Panhellenic Conference, National Pan-Hellenic Council, National Association of Latino Fraternal Organizations)

- No
- Yes

60. How many hours a week do you work for pay?

- 0 hours
- 1–9 hours
- 10–19 hours
- 20–29 hours
- 30–39 hours
- 40 hours
- More than 40 hours

61. How many hours a week do you volunteer?

- 0 hours
- 1–9 hours
- 10–19 hours
- 20–29 hours
- 30–39 hours
- 40 hours
- More than 40 hours

62. What is your primary source of health insurance?

- My college/university sponsored plan
- My parents' plan
- Another plan
- I don't have health insurance
- I am not sure if I have health insurance

63. What is your approximate cumulative grade average?

- A
- B
- C
- D/F
- N/A

64. Within the last 12 months, have you participated in organized college athletics at any of the following levels?

	Yes	No
(Please mark the appropriate column for each row)		
Varsity	<input type="radio"/>	<input type="radio"/>
Club sports	<input type="radio"/>	<input type="radio"/>
Intramurals	<input type="radio"/>	<input type="radio"/>

65. Do you have any of the following?

	Yes	No
(Please mark the appropriate column for each row)		
Attention Deficit and Hyperactivity Disorder (ADHD)	<input type="radio"/>	<input type="radio"/>
Chronic illness (e.g., cancer, diabetes, auto-immune disorders)	<input type="radio"/>	<input type="radio"/>
Deafness/Hearing loss	<input type="radio"/>	<input type="radio"/>
Learning disability	<input type="radio"/>	<input type="radio"/>
Mobility/Dexterity disability	<input type="radio"/>	<input type="radio"/>
Partial sightedness/Blindness	<input type="radio"/>	<input type="radio"/>
Psychiatric condition	<input type="radio"/>	<input type="radio"/>
Speech or language disorder	<input type="radio"/>	<input type="radio"/>
Other disability	<input type="radio"/>	<input type="radio"/>

66. Are you currently or have you been a member of the United States Armed Services (Active Duty, Reserve, or National Guard)?

- No
- Yes and I **have** deployed to an area of hazardous duty
- Yes and I **have not** deployed to an area of hazardous duty

THANK YOU FOR COMPLETING THIS SURVEY

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APPENDIX B

MEANS AND STANDARD DEVIATION FOR ALL, FEMALE AND MALE AFRICAN
AMERICAN COLLEGE STUDENTS

TABLE 1. Means and Standard Deviation For all, Female and Male African American College Students

	All			Female			Male		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
RCGENDER Recoded Gender	1.28	.447	4618	1.00	0.000	3343	2.00	0.000	1275
NQ1 General Health	2.53	.942	4480	2.61	.927	3265	2.32	.951	1215
NQ60 Hours per week for pay	2.35	1.561	4575	2.37	1.542	3317	2.31	1.611	1258
NQ52 Enrollment status	1.08	.297	4581	1.08	.294	3324	1.08	.305	1257
NQ26 Self described weight	3.43	.814	4596	3.51	.817	3328	3.23	.771	1268
NQ58 Current residence	2.85	1.893	4596	2.82	1.890	3329	2.93	1.900	1267
NQ46 Age in years	21.90	6.624	4529	21.73	6.364	3294	22.34	7.257	1235
NQ63 Approximate GPA	2.33	1.045	4578	2.31	1.037	3314	2.36	1.068	1264
NQ7A Feel safe on campus-daytime	3.77	.478	4591	3.76	.477	3328	3.80	.480	1263
NQ7B Feel safe on campus-nighttime	3.10	.803	4570	2.97	.810	3316	3.43	.682	1254
NQ41A3 Last 12 months diagnosed/treated: Back pain	1.12	.321	4570	1.12	.323	3312	1.11	.315	1258
NQ41A6 Last 12 months diagnosed/treated: Chlamydia	1.03	.183	4566	1.04	.193	3308	1.02	.153	1258
NQ41B1 Last 12 months diagnosed/treated: High blood pressure	1.06	.243	4537	1.05	.227	3295	1.09	.280	1242

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TABLE 1: Continued

	All			Female			Male		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
NQ41B5 Last 12 months diagnosed/treated: Migraines	1.08	.272	4519	1.09	.293	3282	1.04	.201	1237
NQ41B9 Last 12 months diagnosed/treated: Sinus infection	1.11	.310	4525	1.12	.326	3285	1.07	.262	1240
NQ41B12 Last 12 months diagnosed/treated: Urinary tract infection	1.08	.274	4486	1.11	.307	3260	1.02	.136	1226
disphysexaddNQ45 fac1_1=disphysexaddNQ45	1.06	.227	4618	1.05	.157	3343	1.07	0.350	1275
NQ28 Usual number of fruits/vegetables per day	2.12	.639	4596	2.10	.615	3331	2.15	.699	1265
NQ37 Last 12 months: Level of stress	3.29	.964	4563	3.38	.917	3312	3.04	1.040	1251
overlpsystrsNQ45 Overall Psychological Stressors & Symptoms	1.59	.606	4618	1.62	.604	3343	1.50	0.603	1275
famperpsystrsNQ45 Familial/Personal Psychological Stressors	1.45	.643	4618	1.46	.623	3343	1.41	0.690	1275
NQ33A Last 12 months difficult to handle: Academics	1.46	.498	4563	1.48	.500	3313	1.39	.489	1250
NQ33B Last 12 months difficult to handle: Career related issue	1.24	.428	4544	1.25	.435	3303	1.21	.409	1241

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TABLE 1: Continued

	All			Female			Male		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
NQ33C Last 12 months difficult to handle: Death of family member/friend	1.19	.394	4554	1.20	.401	3302	1.17	.372	1252
NQ33D Last 12 months difficult to handle: Family problems	1.37	.483	4556	1.41	.491	3306	1.27	.446	1250
NQ33E Last 12 months difficult to handle: Intimate relationships	1.33	.469	4532	1.36	.479	3290	1.25	.434	1242
103 NQ33F Last 12 months difficult to handle: Other relationships	1.26	.436	4546	1.27	.446	3301	1.21	.406	1245
NQ33G Last 12 months difficult to handle: Finances	1.47	.499	4547	1.50	.500	3302	1.38	.486	1245
NQ33H Last 12 months difficult to handle: Health problem of family member/partner	1.20	.400	4538	1.22	.411	3292	1.16	.366	1246
NQ33I Last 12 months difficult to handle: Personal appearance	1.25	.431	4541	1.28	.450	3294	1.15	.356	1247
NQ33J Last 12 months difficult to handle: Personal health issue	1.20	.401	4530	1.23	.419	3288	1.13	.340	1242

TABLE 1: Continued

	All			Female			Male		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
NQ33K Last 12 months difficult to handle: Sleep difficulties	1.28	.448	4541	1.30	.458	3298	1.22	.416	1243
impemoexpNQ30 Impeding Emotional Experiences	2.38	1.149	4618	2.48	1.143	3343	2.11	1.123	1275
intenttoharmNQ30 Intentions to Harmself	1.28	.632	4618	1.30	.651	3343	1.23	.577	1275
NQ36 Consider seeking help from mental health professional in future	1.63	.483	4519	1.66	.474	3275	1.56	.497	1244
104 NQ35 Ever received mental health services - University Health/Counseling	1.13	.333	4560	1.14	.346	3308	1.10	.293	1252
NQ42 Last 7 days: Enough sleep to feel rested	3.86	1.986	4575	3.73	1.949	3316	4.21	2.041	1259
NQ43 Last 7 days: Problem with sleepiness	2.57	1.079	4581	2.64	1.089	3316	2.39	1.030	1265
NQ44A Last 7 days: Awakened too early	2.42	1.912	4568	2.49	1.955	3308	2.23	1.778	1260
NQ44B Last 7 days: Felt tired/sleepy during the day	4.29	2.202	4569	4.47	2.201	3310	3.84	2.140	1259
NQ44C Last 7 days: Gone to bed because could not stay awake	3.26	2.243	4565	3.44	2.297	3309	2.77	2.017	1256

TABLE 1: Continued

	All			Female			Male		
	Mean	SD	N	Mean	SD	N	Mean	SD	N
NQ44D Last 7 days: Extremely hard time falling asleep	2.59	2.170	4563	2.66	2.198	3307	2.41	2.087	1256
NQ38D Last 30 days: Diet pills to lose weight	1.04	.204	4501	1.05	.219	3268	1.02	.154	1233
NQ39A Last 12 months: Dental exam/cleaning	1.66	.527	4569	1.66	.520	3323	1.64	.546	1246
NQ39D Females last 12 months: Routine gynecological exam	1.45	.517	3306	1.45	.517	3306			0
NQ39E Used sunscreen regularly with sun exposure	1.28	.484	4539	1.30	.483	3299	1.22	.482	1240

APPENDIX C
FACTOR LOADING AND RELIABILITY

TABLE 2. Factor Loading and Reliability for Independent Variables

Item	All Responses	Female	Male
	n=4,618 (alpha)	n=3343 (alpha)	n=1275 (alpha)
	Factor Loading	Factor Loading	Factor Loading
<i>Disruptive Physical Experiences and Addictions</i>	(.782)	(.523)	(.919)
Academic Performance: Gambling	.795	.637	.859
Academic Performance: STD/I	.705	.537	.825
Academic Performance: Eating disorder/problem	.695	.498	.865
Academic Performance: Drug use	.662	.541	.755
Academic Performance: Assault (sexual)	.651	.569	.849
Academic Performance: Pregnancy (yours or partners)	.648	.431	.875
Academic Performance: Assault (physical)	.644	.550	.805
<i>Overall Psychological Stressors and Symptoms</i>	(.789)	(.784)	(.797)
Academic Performance: Stress	.824	.832	.800
Academic Performance: Sleep difficulties	.712	.701	.740
Academic Performance: Depression	.712	.703	.736
Academic Performance: Anxiety	.688	.689	.684
Academic Performance: Relationship difficulties	.608	.595	.634
Academic Performance: Work	.593	.592	.597
Academic Performance: Roommate difficulties	.471	.429	.562
<i>Familial and Personal Psychological Stressors</i>	(.611)	(.568)	(.702)
Academic Performance: Concern for family member/friend	.819	.814	.846
Academic Performance: Finances	.727	.724	.804
Academic Performance: Death of family member/friend	.707	.655	.739
<i>Impeding Emotional Experiences</i>	(.803)	(.793)	(.815)
Have you ever: Felt overwhelming anxiety	.831	.825	.839
Have you ever: Felt so depressed it was difficult to function	.813	.805	.830
Have you ever: Felt overwhelming anger	.789	.788	.782
Have your ever: Felt things were hopeless	.740	.727	.758

TABLE 2.Continued

Item	All Responses	Female	Male
	n=4,618 (alpha)	n=3343 (alpha)	n=1275 (alpha)
	Factor Loading	Factor Loading	Factor Loading
<i>Emotional Experiences</i>	(.829)	(.814)	(.846)
Have you ever: Felt very sad	.836	.824	.853
Have you ever: Felt very lonely	.818	.810	.828
Have your ever: Felt exhausted	.804	.796	.809
Have your ever: Felt overwhelmed	.793	.775	.814
<i>Intentions to Harm Self</i>	(.711)	(.715)	(.694)
Have you ever: Seriously considered suicide	.821	.826	.804
Have you ever: Attempted suicide	.809	.807	.815
Have you ever: Intentionally injured self	.800	.800	.799
<i>Impeding Health Conditions</i>	(.735)	(.577)	(.848)
Diagnosed or treated for: Phobia	.762	.691	.842
Diagnosed or treated for: Anorexia	.754	.614	.847
Diagnosed or treated for: OCD	.719	.660	.866
Diagnosed or treated for: Bulimia	.707	.449	.855
Diagnosed or treated for: ADHD	.623	.645	.645
<i>Impeding Psychological/ Mental Health Conditions</i>	(.730)	(.736)	(.814)
Diagnosed or treated for: Anxiety	.853	.861	.834
Diagnosed or treated for: Depression	.781	.772	.820
Diagnosed or treated for: Panic attacks	.746	.721	.818
Diagnosed or treated for: Insomnia	.687	.652	.772
<i>Impeding Condition and Addictions</i>	(.609)	(.426)	(.676)
Diagnosed or treated for: Schizophrenia	.781	.797	.778
Diagnosed or treated for: Other addictions	.776	.743	.798
Diagnosed or treated for: Substance abuse/addiction	.731	.640	.798
<i>Sense of Safety on and Surrounding Campus</i>	(.735)	(.764)	(.813)
Feel safe in surrounding community at night	.823	.821	.799
Feel safe on campus at night	.817	.807	.828
Feel safe in surrounding community during the daytime	.814	.792	.863
Feel safe on campus during the daytime	.673	.651	.752

APPENDIX D
INDEPENDENT SAMPLE *T*-TESTS FOR FACTORS

TABLE 3. Independent Sample *t*-Test for Factors

	Female			Males			Group Comparison		
	Means	<i>SD</i>	<i>N</i>	Means	<i>SD</i>	<i>N</i>	<i>t</i>	<i>df</i>	<i>p</i>
110									
disphysexaddNQ45 Disruptive Physical Experiences and Addictions	1.0523	.16156	3157	1.0730	.36075	1200	-1.917	1385.723	NS
overlpsystrsNQ45 Overall Psychological Stressors & Symptoms	1.6178	.62508	3125	1.5005	.62752	1178	5.475	2110.891	***
famperpsystrsNQ45 Familial/Personal Psychological Stressors	1.4630	.63388	3232	1.4141	.70532	1221	2.118	2007.543	*
impemoexpNQ30 Impeding Emotional Experiences	2.4843	1.16216	3235	2.1115	1.14057	1235	9.720	2269.973	***
emofeelNQ30 Emotional Experiences	3.0136	1.01480	3263	2.6323	1.16871	1236	10.118	1980.002	***
intenttoharmNQ30 Intentions to Harmself	1.3048	.65661	3283	1.2283	.58474	1241	3.792	2490.056	***
impedhlthcondNQ31 Impeding Health Conditions	1.0216	.14712	3248	1.0415	.28308	1228	-2.349	1484.567	*
impedpsymenhlthcondNQ31 Impeding Psychological/Mental Health Conditions	1.1426	.47469	3239	1.1058	.46738	1229	2.339	2246.849	*
impedcondaddNQ31 Impeding Condition and Addiction	1.0083	.11558	3253	1.0438	.30060	1234	-4.032	1373.536	***
senseofsafetyNQ31 Sense of Safety on Surrounding Campus	2.9688	.66855	3279	3.3384	.63406	1246	-17.253	2359.221	***

APPENDIX E

REGRESSION MODEL FOR ALL, FEMALE AND MALE AFRICAN AMERICAN COLLEGE STUDENT

TABLE 4. Regression Model for All, Female and Male African American College Students

	All					Females					Males				
	B	SE	β	t	p	B	SE	β	t	p	B	SE	β	t	p
RCGENDER Recoded Gender	-.070	.023	-.047	-3.090	**										
NQ1 General Health	-.058	.011	-.082	-5.238	***	-.068	.013	-.095	-5.204	***	-.027	.021	-.037	-1.256	NS
NQ60 Hours per week for pay	.010	.007	.024	1.507	NS	.005	.008	.011	.587	NS	.023	.013	.054	1.796	NS
NQ52 Enrollment status	-.082	.033	-.036	-2.484	*	-.113	.039	-.050	-2.901	**	-.004	.063	-.002	-.064	NS
NQ26 Self-described weight	-.031	.012	-.037	-2.479	*	-.026	.014	-.032	-1.802	NS	-.038	.025	-.043	-1.520	NS
112 NQ58 Current residence	-.012	.006	-.035	-2.192	*	-.005	.007	-.015	-.779	NS	-.028	.011	-.077	-2.509	*
NQ7A Feel safe on campus-daytime	.019	.022	.014	.853	NS	.029	.025	.021	1.135	NS	.043	.049	.030	.877	NS
NQ7B Feel safe on campus-nighttime	.008	.014	.010	.575	NS	.023	.015	.028	1.501	NS	-.061	.034	-.061	-1.820	NS
NQ37 Last 12 months: Level of stress	.014	.012	.020	1.115	NS	.031	.015	.043	2.088	*	-.028	.023	-.043	-1.239	NS
overlpsystrsNQ45 Overall Psychological Stressors & Symptoms	-.102	.023	-.094	-4.437	***	-.106	.027	-.098	-3.968	***	-.063	.046	-.056	-1.372	NS
famperpsystrsNQ45 Familial/Personal Psychological Stressors	-.013	.020	-.013	-.657	NS	-.035	.024	-.033	-1.489	NS	.019	.038	.019	.487	NS

TABLE 4. Continued

	All					Females					Males				
	B	SE	β	t	p	B	SE	β	t	p	B	SE	β	t	p
NQ33A Last 12 months difficult to handle: Academics	-.198	.024	-.148	-8.415	***	-.167	.027	-.126	-6.202	***	-.301	.049	-.214	-6.180	***
NQ33B Last 12 months difficult to handle: Career related issue	-.035	.026	-.023	-1.373	NS	-.050	.029	-.033	-1.718	NS	.033	.055	.020	.606	NS
NQ33C Last 12 months difficult to handle: Death of family member/friend	-.027	.027	-.016	-1.012	NS	-.015	.030	-.009	-.492	NS	-.056	.058	-.030	-.968	NS
113 NQ33D Last 12 months difficult to handle: Family problems	.012	.024	.008	.489	NS	.036	.027	.027	1.320	NS	-.024	.052	-.016	-.464	NS
NQ33E Last 12 months difficult to handle: Intimate relationships	-.017	.024	-.012	-.719	NS	-.036	.027	-.026	-1.315	NS	.048	.050	.030	.954	NS
NQ33F Last 12 months difficult to handle: Other relationships	.042	.026	.027	1.595	NS	.062	.030	.042	2.089	*	.000	.056	.000	-.003	NS
NQ33G Last 12 months difficult to handle: Finances	-.053	.023	-.039	-2.263	*	-.057	.027	-.043	-2.145	*	-.048	.048	-.034	-.994	NS
NQ33H Last 12 months difficult to handle: Health problem of family member/partner	.005	.027	.003	.175	NS	-.010	.031	-.006	-.325	NS	.060	.062	.032	.962	NS

TABLE 4. Continued

	All					Females					Males				
	B	SE	β	t	p	B	SE	β	t	p	B	SE	β	t	p
NQ33I Last 12 months difficult to handle: Personal appearance	.050	.027	.032	1.851	NS	.028	.030	.019	.953	NS	.107	.065	.055	1.641	NS
NQ33J Last 12 months difficult to handle: Personal health issue	.082	.029	.049	2.848	**	.098	.032	.062	3.104	***	.020	.069	.010	.285	NS
NQ33K Last 12 months difficult to handle: Sleep difficulties	-.007	.027	-.005	-.275	NS	.002	.031	.002	.078	NS	-.006	.057	-.004	-.102	NS
impemoexpNQ30 Impeding Emotional Experiences	.023	.011	.039	2.141	*	.014	.012	.024	1.133	NS	.039	.022	.064	1.788	NS
intenttoharmNQ30 Intentions to Harmself	.000	.017	.000	-.012	NS	.002	.019	.002	.117	NS	-.008	.037	-.007	-.210	NS
NQ36 Consider seeking help from mental health professional in future	.108	.020	.078	5.335	***	.125	.024	.090	5.263	***	.052	.039	.038	1.340	NS
NQ35 Ever received mental health services - University Health/Counseling	-.030	.030	-.015	-1.009	NS	-.070	.034	-.037	-2.086	*	.118	.067	.051	1.768	NS
NQ41A3 Last 12 months diagnosed/treated: Back pain	.002	.031	.001	.053	NS	.003	.035	.001	.073	NS	.006	.064	.003	.101	NS

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TABLE 4. Continued

	All					Females					Males				
	B	SE	β	t	p	B	SE	β	t	p	B	SE	β	t	p
NQ41A6 Last 12 months diagnosed/treated: Chlamydia	-.110	.054	-.030	-2.053	*	-.105	.059	-.031	-1.788	NS	-.068	.136	-.015	-.502	NS
NQ41B1 Last 12 months diagnosed/treated: High blood pressure	.014	.041	.005	.333	NS	-.008	.050	-.003	-.153	NS	.033	.071	.014	.469	NS
NQ41B5 Last 12 months diagnosed/treated: Migraines	-.033	.037	-.013	-.891	NS	-.012	.040	-.005	-.303	NS	-.135	.100	-.039	-1.350	NS
NQ41B9 Last 12 months diagnosed/treated: Sinus infection	-.043	.032	-.020	-1.356	NS	-.038	.035	-.019	-1.077	NS	-.051	.076	-.019	-.678	NS
NQ41B12 Last 12 months diagnosed/treated: Urinary tract infection	-.004	.037	-.002	-.102	NS	.011	.037	.005	.282	NS	-.279	.153	-.055	-1.831	NS
disphysexaddNQ45 Disruptive Physical experiences and addictions	.028	.046	.010	.606	NS	-.162	.075	-.039	-2.153	*	.086	.065	.044	1.322	NS
NQ28 Usual number of fruits/vegetables per day	.044	.015	.043	2.924	**	.019	.018	.018	1.053	NS	.094	.028	.096	3.390	***

TABLE 4. Continued

	All					Females					Males				
	B	SE	β	t	p	B	SE	β	t	p	B	SE	β	t	p
NQ42 Last 7 days: Enough sleep to feel rested	.007	.006	.020	1.200	NS	.004	.007	.013	.661	NS	.015	.011	.044	1.392	NS
NQ43 Last 7 days: Problem with sleepiness	.006	.012	.009	.451	NS	-.003	.014	-.006	-.241	NS	.027	.025	.040	1.059	NS
NQ44A Last 7 days: Awakened too early	-.009	.006	-.026	-1.618	NS	-.014	.006	-.042	-2.216	**	.004	.012	.011	.330	NS
NQ44B Last 7 days: Felt tired/sleepy during the day	.008	.007	.026	1.187	NS	.012	.008	.039	1.570	NS	-.002	.013	-.006	-.136	NS
NQ44C Last 7 days: Gone to bed because could not stay awake	-.006	.005	-.021	-1.276	NS	-.005	.005	-.017	-.895	NS	-.010	.011	-.029	-.924	NS
NQ44D Last 7 days: Extremely hard time falling asleep	-.015	.005	-.049	-2.805	**	-.017	.006	-.056	-2.694	**	-.015	.011	-.044	-1.309	NS
NQ38D Last 30 days: Diet pills to lose weight	-.028	.048	-.008	-.572	NS	-.015	.052	-.005	-.290	NS	-.100	.131	-.022	-.763	NS
NQ39A Last 12 months: Dental exam/cleaning	.067	.018	.053	3.632	***	.070	.021	.056	3.275	***	.058	.036	.046	1.614	NS
NQ39D Females last 12 months: Routine gynecological exam	-.032	.023	-.021	-1.392	NS	-.027	.024	-.021	-1.130	NS					

TABLE 4. Continued

	All					Females					Males				
	B	SE	β	t	p	B	SE	β	t	p	B	SE	β	t	p
NQ39E Used sunscreen regularly with sun exposure	.064	.020	.046	3.170	***	.062	.023	.045	2.664	**	.060	.040	.042	1.492	NS
NQ39F Ever been tested for HIV infection	-.069	.019	-.056	-3.696	***	-.064	.022	-.052	-2.891	**	-.065	.036	-.052	-1.820	NS

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