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RACE, HEALTH, AND SOCIAL SUPPORT ON CAMPUS: AN EXPLORATION OF DISCRIMINATION ON HEALTH AND FRATERNITY/SORORITY MEMBERSHIP FOR AFRICAN AMERICAN COLLEGE STUDENTS

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RACE, HEALTH, AND SOCIAL SUPPORT ON CAMPUS:
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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science
at Virginia Commonwealth University

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Abstract

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African American college students face a myriad of unique race related stressors on campus, yet

there is a gap of knowledge on how these experiences may impact overall health as well as what

may mediate these effects. The goal of the current study was threefold. First, it was to better

understand the relationship between health outcomes and the experience of discrimination on

college campuses for African American students. Second, it further investigated the research of

Pieterse & Carter (2007), to explore if perceived discrimination influences health outcomes

above and beyond general life stress in the emerging adult population. Lastly, it explored

potential protective factors by examining if the relationship between health outcomes and the

experience of discrimination is mediated by socio-cultural group involvement in the form of

fraternities and sororities. 133 African American college students from a south eastern

predominantly White university completed the American College Health Association's National

College Health Assessment to explore these research aims. Racial discrimination was positively

correlated with negative health outcomes, however experience of discrimination did not influence health outcomes above and beyond general life stress. Additionally, belonging to a fraternity or sorority did not mediate the relationship between the experience of discrimination and negative health outcomes. The results suggest that the discrimination African American college students face on predominantly white campuses are harmful to overall health, yet more needs to be explored to find adequate interventions to these negative health outcomes.

Race, Health, and Social Support on Campus:
An Exploration of Discrimination on Health and Fraternity/Sorority Membership for African American College Students.

Introduction

Entering college is a large milestone in one's life and is a major accomplishment for many emerging adults. Though the transition in of itself is stressful for all students, for African American college students the new transition can be particularly difficult. In addition to being separated from family, forming new social bonds, and adjusting to a more rigorous set of academic standards, African American college students also face race-related stressors. Race related stress is defined as stress relating to experiences of racial discrimination and manifests in many arenas for African Americans (Harrell, 2000; S. O. Utsey, 1999). The health implications of race related stress are wide. Interpersonal and perceived institutional racial discrimination have been associated with many poor health outcomes (Karlsen & Nazroo, 2002). Additionally, meta-analysis has highlighted that racial discrimination is associated with heightened physiological and psychological stress responses (Pascoe & Smart Richman, 2009). These stress responses contribute to worse mental health outcomes on the same day that discrimination is experienced (Brondolo et al., 2008; Ong, Fuller-Rowell, & Burrow, 2009), as well as more than 1 year after the event (Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003; Torres, Driscoll, & Burrow, 2010) from (Driscoll, Reynolds, & Todman, 2015). Additionally, race-related stress influences mental health above and beyond general stress (Pieterse & Carter, 2007).

Although there has been a fair amount of research examining race related stress and it's varied health effects in community settings, there is still a large gap of knowledge on the topic. Many researchers have highlighted the need for better understanding of how the mechanisms and processes of racial discrimination leads to adverse mental health outcomes (Brondolo, Ver

Halen, Pencille, Beatty, & Contrada, 2009). Preliminary research suggests that different dimensions of racial discrimination may be related to distinct associations with mental health (Sternthal & Williams, 2011). With this in mind, due to the generally stressful yet formative nature of the college experience, further research on examining race related stress during this formative experience is needed.

There has not been any research that investigates how perceptions of discrimination impacts the health of African Americans during emerging adulthood in college. The college experience is often marked as deeply formative in identity development for emerging adults and the ages between 18-25 are a particularly formative time, marked with profound change and importance (Arnett & Jensen, 2000). However, the climate on predominately white university campuses is in many ways a very hostile environment for African American students (Davis et al., 2004; L. V. Jones, 2004; Solorzano, D., Ceja, M., Yosso, 2000; Swim, Hyers, Cohen, Fitzgerald, & Bylsma, 2003).

With that in mind, many colleges have a well spring of survey data yet it is often underutilized. The American College Health Association's National College Health Assessment is a comprehensive health survey that covers a plethora of health topics including mental health, personal safety, physical health, as well as perceptions of discrimination. Over 1.4 million students at over 740 universities have taken the survey. By analyzing campus norms through survey data that is readily available each year at hundreds of campuses nationwide there is potential to see current trends in how African American student's experience of discrimination may be impacting their physical and emotional health, as well as their academics. College campuses may then be more empowered to better serve their African American students by this under utilized mean that is already in place.

However, simply understanding the mechanisms and processes of perceived discrimination is not enough. Previous research has called for the investigation of protective factors against these race related stressors and how these protective factors may mediate or moderate the ill health effects of race related stressors. Generally, it is known that active involvement in social groups increase psychological well-being, including reduction in depressive symptoms and anxiety (Kawachi & Berkman, 2001). Often college students participate in extracurricular activities in the form of social and/or academic groups, clubs, sororities and fraternities. Fraternities and Sororities have the potential to be "counter spaces" to the daily barrage of microaggressions and discrimination African American college students face (Solorzano, D., Ceja, M., Yosso, 2000). Previous researchers have called for more studies investigating the potential positive outcomes of fraternity and sorority membership, but preliminary research has shown that social fraternity or sorority membership positively influenced the sense of belonging of minority college students and was associated with modest gains in the interpersonal skills of members (Hurtado & Carter, 1997; Long, 2012). The current study investigated how fraternity and sorority involvement for African American may serve as a protective factor to the experience of race related stress.

The goal of this study was threefold. First, it is to better understand the relationship between health outcomes and the experience of discrimination on college campuses for African American students. Although numerous studies have been conducted on the impacts of race related stress, few have examined how the experiences of discrimination impacts African Americans college students on campus. The study specifically examined African American adults currently enrolled in university classes. The current study examined how African American college student's perception of discrimination may relate to general health, general

psychological health, overall stress, and feelings of safety on campus by analyzing NCHA (National College Health Assessment) data from a south eastern university. Secondly, through hierarchical regression, the study further investigated the research of Pieterse & Carter (2007), to explore if perceived discrimination influenced health outcomes above and beyond general life stress in the emerging adult population. Lastly, the current study explored potential protective factors by examining if the relationship between health out comes and the experience of discrimination is mediated by socio-cultural group involvement.

By gaining an understanding of the experiences African American college students encounter and how these experiences impact their health during a very crucial time of identity development, we can then begin to explore what may serve as protective factor to race related stressors for the college population.

<center>**Literature Review**</center>

Biological Basis of Stress and its effect on Health

There is an old African American colloquial that goes – "Too blessed to be stressed!" However, despite the general culture of overcoming or rising above stressful situations, African Americans regularly experience incredible amounts of stress on a personal, communal, and institutional level. The cognitive activation theory of stress (CATS) defines the stress response as a general alarm in the homeostatic system, producing general and unspecific neurophysiological activation from one level of arousal to more arousal. This stress response occurs whenever there is homeostatic imbalance or a threat to homeostasis and life itself (Ursin & Eriksen, 2010).

The authors assert that there are four aspects of stress: stress stimuli, stress experience, the non-specific general stress response, and the experience of the stress response. Figure 1 below visually describes the model. First the "load" or stress stimuli is evaluated by the brain and may result in a stress response "alarm" that is fed back to the brain. The physiological stress response may lead to training or straining, depending on the type of activation. Phasic arousal is seen in individuals with a positive expectancy, and sustained arousal may lead to pathology (strain). The brain may then alter the stimulus or the perception of the stimulus by acts or expectancies (Ursin & Eriksen, 2010).

Figure 1. CATS model (Ursin & Eriksen, 2010)
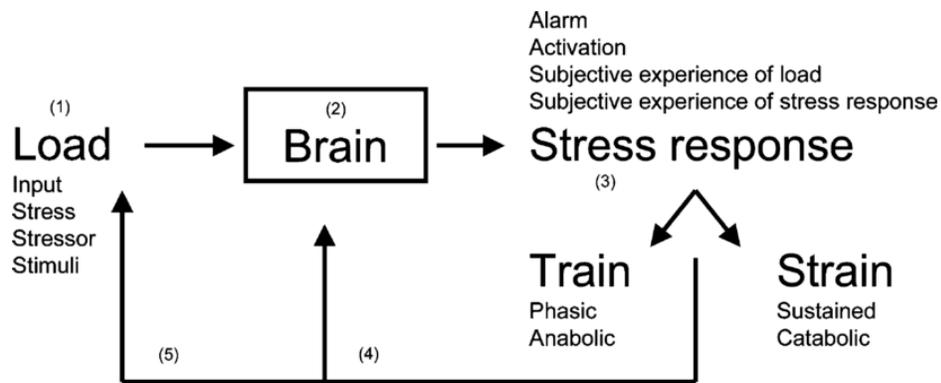
Research has indicated that psychological stressors can codetermine the development and course of somatic disease (Krantz & McCeney, 2002). Psychological stress is part of every day life, and not all stress actually leads to ill health effects. The presentation of illness or disease from psychological stress is majorly caused by *prolonged* physiological activity due to stressors, which manifests in three forms: anticipatory responses (or potential) stressors, slow recovery from stressors, and recurrent activity related to past stressors (Brosschot, Pieper, & Thayer, 2005). In their model of prolonged stress-related activation (Brosschot et al., 2005), they expand off of the CATS theory and present evidence that "perseverative cognition" or the prolongation of active cognitive representation of stressors are associated with profound physiological activation. In other words, phenomena such as worry, rumination, and anticipatory stress are linked with cardiovascular, endocrinological, and immunogical impacts (Brosschot et al., 2005).

Having an understanding of the biological basis of the stress response allows us deeper insight to the physical and mental implications of racism and race related stress. As will be discussed in greater detail in the next section, less innocuous forms of stress such as worry,

rumination and anticipatory stress are all part of the rich tapestry of race related stress, and these factors have severe implications on overall health.

Conceptual Overview Race Related Stress

Racism and stress often go hand in hand. Racism and the influence of racial discrimination on African Americans is a topic that has been studied and researched greatly across a plethora of disciplines. From the W.E.B DuBois (1898), to classic writings by James Baldwin (1963), to the ground breaking doll studies by Kenneth and Mamie Clark (1947), to Afrocentric psychology texts by Kambon (1998) and Nobles (2006), all these works span over a century but speak to the common experience that racism has a profound psychological and physiological impact on Black peoples. Racism, discrimination, and micro aggressions are all forms of the theoretical concept of race related stress and in this section we will explore these subjects and, subsequently in the next section, their impacts on physical and mental health. It is important first to define and distinguish racism and discrimination. Jones and Carter (1996) defined racism as (Jones, J. M., & Carter, 1996):

> *The transformation of racial prejudice into individual racism through the use of power*
>
> *directed against racial group(s) and their members, who are defined as inferior by*
>
> *individuals, institutional members and leaders, and which is reflected in policy and*
>
> *procedures with the intentional and unintentional support and participation of the*
>
> *entire race and dominant culture. (p. 3)*

Racial discrimination, on the other hand, refers to interpersonal interactions and cultural/institutional arrangements that denigrate and marginalize individuals and groups on the basis of physical characteristics or ethnic group affiliation and is a common stressor for African Americans (Clark, Anderson, Clark, & Williams, 1999).

Racial discrimination is multidimensional. African Americans experience three broad dimensions of racial discrimination (Harrell, 2000; J. M. Jones, 1997; S. O. Utsey, 1999): Individual discrimination, which refers to the manifestation of beliefs in the inferiority of racial or ethnic groups at the individual level through interpersonal exchanges. Institutional discrimination, which is bias against the status or functioning of racial and ethnic groups. Lastly, cultural discrimination, which refers to the depiction and representation of racial and ethnic groups as having an inferior culture.

It is important to note that racism and discrimination is not limited to experiences that may be objectively viewed as representing racism and discrimination. Perceived racism refers to the subjective experience of prejudice or discrimination (Clark et al., 1999). Perceived racism can be both overt or subtle and subjective. Most research has focused on overt instances of discrimination (Belvet, 2012), but a more subtle and insidious form of discrimination has been termed and studied within the last decade called microaggressions. Microaggressions are "subtle insults (verbal, nonverbal, and/or visual) directed toward people of color, often automatically or unconsciously" (Solorzano, D., Ceja, M., Yosso, 2000).

Recently, microaggressions have become more researched. Torres, Driscoll & Burrow (2010) found through qualitative research that there are three categories of microaggressions including: Assumption of Criminality/Second-Class Citizen, Underestimation of Personal Ability, and Cultural/Racial Isolation. The first category, assumption of criminality/second-class citizen, entails racially motivated negative events in which the individual of color was thought to be doing something illegal or was treated as a lesser person. A participant in their study gave the following example, "getting harassed by campus police or others while you're walking around in a building late at night because they don't believe you're in graduate school or studying at 2:30

am on a Saturday night in the Engineering School." The second category, underestimation of personal ability, involved stereotypes and negative perceptions regarding one's capacity to succeed. For example, "having to prove myself and 'surprise' faculty who may have had initial assumptions about my competence based on my appearance." Lastly, Cultural/Racial isolation dealt with being singled out because of race or marginalization due to lack of same-race peers. Another participant in the study gave the following example, "I'm in a department that has very few blacks and sometimes I feel so alienated—like no one knows what I'm going through" (Torres et al., 2010).

Racism and discrimination experienced by African Americans can have many outcomes, one of them namely is stress. Race related stress refers to stressors experienced as a consequence of belonging to, and identifying with, a racial or ethnic minority group, and may take many forms (Harrell, 2000) and may result from perceived racism or discrimination. Race related stress is associated with many ill psychological and physiological health outcomes. The biopsychosocial model of racism as a stressor for African Americans (Clark et al., 1999) (Clark, R., Anderson, N. B., Clark, V. R., & Williams, 1999) proposes that "the perception of an environmental stimulus as racist results in exaggerated psychological and physiological stress responses that are influenced by constitutional factors, sociodemographic factors, psychological and behavioral factors, and coping responses" (Clark et al., 1999). With that, over time these stress responses will impact health outcomes and "their perception of environmental stimuli as racist and ensuing coping responses are postulated to be a function of a complex interplay between an array of psychological, behavioral, constitutional, and sociodemographic factors." Figure 2 visually explains the biopsychosocial theoretical model below.

Figure 2. *Clark, Anderson, Clark, & Williams' (1999) Contextual Model to Examine the Biopsychosocial Effects of Perceived Racism*
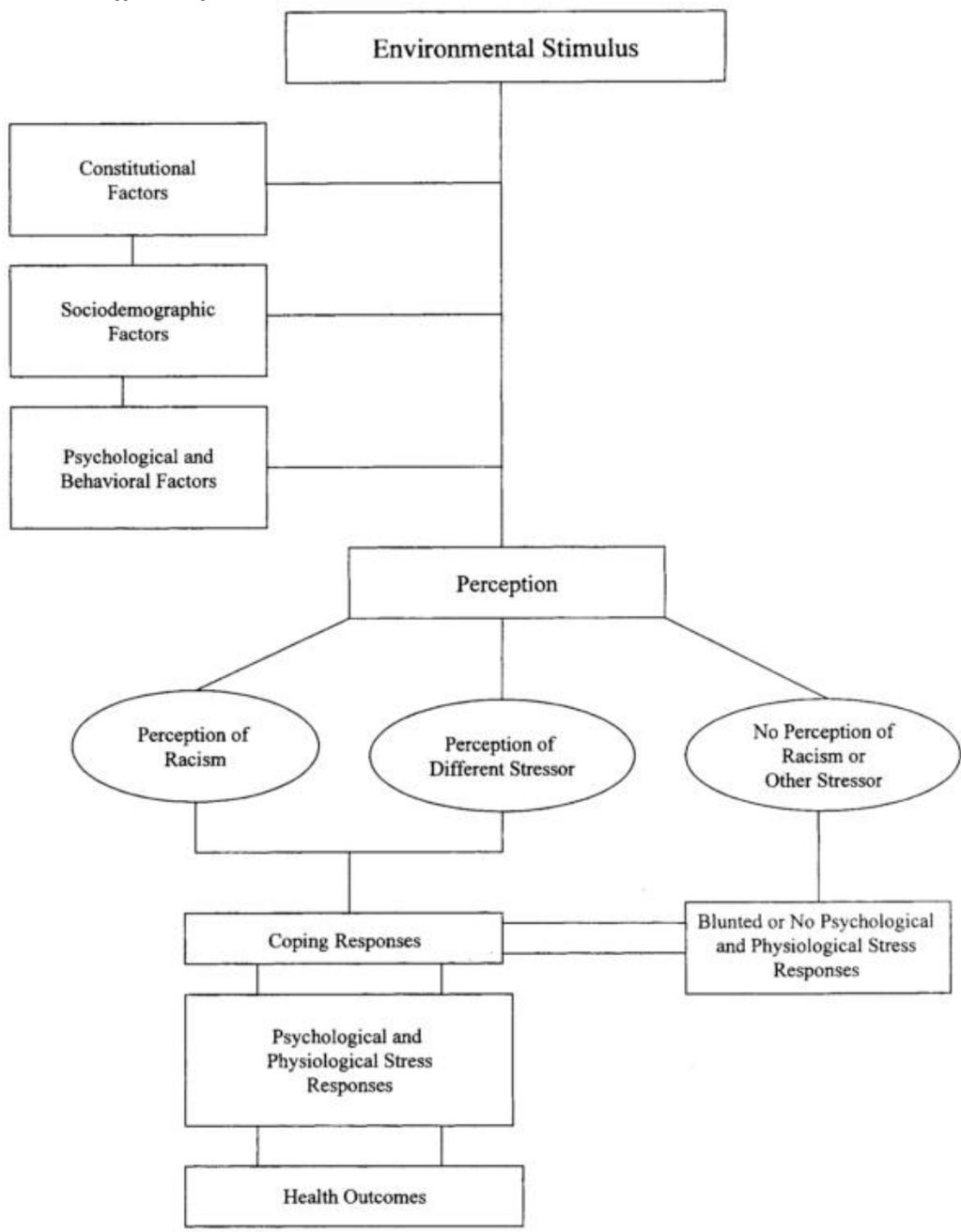
After understanding the biopsychosocial effects of perceived racism and its related concepts of microaggressions and discrimination we can now explore the specific health outcomes of these subjects.

The Health Impacts of Racism and Related Stress Discrimination

Research on the negative effects of stress on both mental and physical health are both extensive and varied. Although all populations experience stress in some capacity, African Americans are at increased risk for exposure to stressful life events (Karlsen & Nazroo, 2002; McCord & Freeman, 1990; Thoits, 1991; David R Williams, Neighbors, & Jackson, 2003) and over the past two decades there has been a plethora of research on the implications of race related stress on the mental and physical health of African Americans.

It has been established that individuals who experience repeated or chronic stressful events are at risk for developing physical and psychological illnesses. African Americans suffer disproportionately from hypertension, cardiac disease, obesity, and drug and alcohol abuse –all illnesses that have been linked to stress (Brosschot, Gerin, & Thayer, 2006; Outlaw, 1993; David R. Williams & Mohammed, 2009). African Americans now have higher rates for heart disease and cancer than whites (National Center for Health Statistics, 2007). Similarly, infant mortality has declined over time for both blacks and whites, the relative gap between the races is wider than it was in 1950 (Williams & Mohammed, 2009; NCHS, 2007) and although there are gains in life expectancy for both blacks and whites, there was still a 5.1 racial gap in life expectancy for African Americans in 2005 (National Center for Health Statistics, 2007).

A more recent report, issued by the Centers for Disease Control National Center for Health Statistics (Centers for Disease Control and Prevention, 2017), indicated that although African Americans are living longer, African Americans ages 18-49 are still twice as likely to die

from heart disease, and are 50% more likely to have high blood pressure than whites. Additionally, young African Americans are living with diseases more common at older ages and have significantly higher rates of diabetes and stroke than whites (Centers for Disease Control and Prevention, 2017).

Research has indicated that these health consequences are exacerbated by daily encounters with individual, institutional, and cultural racism (Clark, R., Anderson, N. B., Clark, V. R., & Williams, 1999; Harrell, 2000; C. E. Thompson & Neville, 1999; V. L. Thompson, 2002; S. O. Utsey & Ponterotto, 1996). Data indicates that almost 100,000 Black persons die prematurely each year who would not die if there were no racial disparities in heath (Levine et al., 2001).

In addition to the ill physical health effects mentioned above, numerous studies have linked racial discrimination with adverse mental health outcomes. A recent meta-analysis revealed that in over 138 reviewed studies on self-reported racism and health that the strongest and most consistent association is between racism and poor mental health outcomes (Paradies, 2006). Another meta-analytic study reviewed specifically 66 studies published between 1996 and 2011 that examined the associations between racism and mental health among Black Americans (Pieterse, Todd, Neville, & Carter, 2012). There they found a positive association between perceived racism and psychological distress. Yet another meta-analysis echoed these findings linking discrimination and poor mental health outcomes (D R Williams, Neighbors, & Jackson, 2003).

In a recent study, Driscoll et al (2015) established that all three forms of race related stress were significantly associated with lower life satisfaction for African Americans (Driscoll et al., 2015). Additionally, among African American adolescents, institutional race related stress

is associated with lower self-esteem and greater depression symptom severity (Seaton & Yip, 2009). It is important to note that stress related to experiences of racial discrimination or race related stress, influences mental health above and beyond general life stress (Pieterse & Carter, 2007). Additionally, not only do African Americans have significantly higher race related stress than other minority groups (Shawn O Utsey, Chae, Brown, & Kelly, 2002), but they report more frequent negative race related experiences than members of other minority groups (Utsey, 1999).

The negative psychological impacts do not only arise for overt racism and discrimination. The more insidious form of discrimination – microaggressions, has many ill consequences as well. Research has shown that racial microaggressions cause significant psychological distress among African Americans. Microaggressions are particularly harmful because they often go unnoticed by outside observers and at times even by the perpetrators of the offense, leaving the weight of the burden solely on African Americans in these interactions (Belvet, 2012; Solorzano, D., Ceja, M., Yosso, 2000).

In Torres et al.'s more recent study, they found that one of the three categories of microaggressions (Underestimation of Personal Ability) was associated with greater perceived stress at one-year follow up, which was related to greater depressive symptoms (Torres et al., 2010). Sue et al echoed these findings (2008), wherein their study found that microaggressions result in high degrees of stress for African Americans because of criticizing messages like "you do not belong," "you are abnormal," "you are intellectually inferior," "you cannot be trusted," and "you are all the same." These messages consequently lead to feelings of powerlessness, invisibility, forced compliance and loss of integrity, and pressure to represent one's group (Sue, Capodilupo, & Holder, 2008).

However, active coping behaviors have been found to moderate the ill effects of microaggressions. In a study conducted on African American doctoral students and graduates of doctoral programs, active coping was found to moderate the racial microaggressions-perceived stress link such that individuals who endorse active coping behaviors reported lower perceived stress (Torres et al., 2010). This is important to note as college campuses can be an exceptionally stressful environment filled with race-related stress as will be discussed below.

Racial Climate on Predominately White Institutions (PWI)s

Microaggressions and other forms of racial discrimination are common experiences on college campuses, and Black students face an array of stressors on predominantly White Institutions (PWIs). Overall, African American college students do not adjust to college as well as white students (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999). Additionally, Black students often have to make many significant familial, social and personal adjustments to attended predominately white institutions (D'Augelli & Hershberger, 1993). These students experience more racial conflict, more pressure to conform to stereotypes, and less equitable treatment by faculty, staff, and teaching assistants than their White counterparts (Ancis, Sedlacek, & Mohr, 2000). Campus climate has a large impact on the adjustment and success of African American colleges yet the climate on predominately white university campuses is in many ways a very hostile environment for African American students (Davis et al., 2004; L. V. Jones, 2004; Solorzano, D., Ceja, M., Yosso, 2000; Swim et al., 2003)

Even though more African American students are entering college, Black students are still underrepresented within higher education but specifically within predominately white college campuses (M. S. Thompson, Gorin, Obeidat, & Chen, 2006). This situation is problematic for many reasons. Most notably, is when there are few black students on campus,

black students' social networks can become compromised and the many stressors black students face are exacerbated in many parts due to lack of social support or inclusion (Tabitha L. Grier-Reed, Na'im H. Madyun, & Christopher G. Buckley, 2008).

Although it has long been known that Black students have an overall more negative experience within higher education at predominately white universities, Ancis, Sedlack, and Mohr (2000), conducted a more recent campus climate survey that has re-illuminated the many stressors that are unique to Black college students. In their study they surveyed 578 African American, Asian American, Latinx, and White undergraduates and found that (1) Black students face significantly more interracial tension in residence halls, racial-ethnic separation, and racial conflict than other groups surveyed. (2) Black students were significantly more likely to feel pressured to conform to racial and ethnic stereotypes, while also trying to minimize overt racial/ethnic group. (3) Black students experienced more faculty racism, and reported less fair treatment by faculty, teaching assistants and students compared to white students. Additionally, (4) Black students have significantly lower overall satisfaction with their university than both white and Asian students (Ancis, J. R., Sedlacek, W. E., Mohr, 2000). In an earlier study, researchers found that Black students are more likely to view predominantly white campuses as more as hostile, and feel more alienation as well as social isolation than their white peers (Smedley, B., Myers, H., Harrell, 1993).

The stressors African American students face at predominately white institutions are wide and varied. These stressors can include lack of knowledge about the college process, institutional racism, poor health and energy, social isolation and family and economic problems (Arnold, 1993; D'Augelli & Hershberger, 1993; Tabitha L. Grier-Reed et al., 2008). In their 2004 study, Davis et. al, conducted structured interviews with 11 successful Black undergraduate

students at a predominately white southeastern university. In the interviews four main themes emerged. The first was, "It Happens Every Day:" Unfairness/Sabotage/Condescension. All eleven participants reported incidents of unfairness, sabotage, and condescension:

> *"I call my mother like every other week. I have a new story for her every week: 'They had nooses hanging out of trees this week, and they said it was an art project and they didn't understand why we would be offended . . . Or somebody wrote 'nigger this, nigger that' and this white girl bumped into me and called me a 'nigger.'. . . . She bumped into me and walked off." (Davis et. al., 2004, pg.427)*

The second theme was "You Have to Initiate the Conversation" : Isolation and Connection. This theme emerged as participants described their experiences of seeking to make successful connections with various segments of the university community:

> *"I mean for the most of my classes that I've been in I had to initiate the conversation to let them know that I am a black person and I can talk. And I have good sense . . . but mostly in my experience I find that I have to initiate it, and that's another obstacle that I think I have to get across, to create relationships with people so that I can fit in the classroom." (Davis et. al., 2004, pg. 428)*

The Third theme was "They all seem the same; I'm the one who's different" All participants expressed experiences of being the same in some ways and different in other ways from those around them. Feeling different was predominately a negative experience that made participants feel "mad," "frustrated," "isolated," or "bothered."

> *"But I've held a 4.0 for two years in these [white] professors' classes, so they look at me as being kind of one of them. I'm accepted into their kind of, their culture, because I know how to play the game to get what I need."(Davis et. al., 2004, pg. 431)*

The fourth theme was "I have to Prove I'm Worthy To Be Here." A common theme in participant narratives was the idea that whites saw blacks as a group and individually as less capable until proven otherwise. Participants described how they had to work harder to overcome such preconceived ideas and succeed in spite of the obstacles presented:

"And I'm proud that I'm black and that I'm doing it. But it's almost like I have to prove a point. Just like with Dr. Smith. She assumed that I didn't have the grades. I was like "No baby, I have a 4.0 in the English department." So why should I have to give you my credentials just because I'm black?" (Davis et. al., 2004, pg. 433).

The final theme was "Sometimes I'm Not Even Here/Sometimes I have to Represent Every Black Student Here" : Invisibility/Super visibility. This theme expressed the participants' experiences of being noticed or not being noticed, wholly as a result of being Black:

"Because in most of my classes when we talk about an issue that deals with black people I become like the black representative of the United States of America. I become that. I really do. And I'm like, I don't represent the black population of the US . . . It's like I know what I think but I don't know what the rest of the black people in the world think." (Davis et. al., 2004, pg. 435)

"And I can remember some of my classes, going into some of my classes, not really being recognized because I would raise my hand and it would be like I wasn't there. I didn't really understand that, because I know people see me. I know I'm not invisible." (Davis, et. al., 2004, pg. 436)

This bombardment of micro and macro aggressions on Black students within higher education has a profound effect on social connectedness. Black students experience a great

amount of social isolation in racially heterogeneous predominately white school settings (Zirkel, 2004).

Furthermore, previous research has indicated that members of minority groups are uncertain about the quality of their social support in achievement settings such as work or higher education. At some point many African American students feel as if "people like me do not belong here" while on majority white college campuses. Because of this, small or subtle events that confirm to the individual a lack of connectedness have disproportionately large impacts . Social exclusion in school is more strongly associated with low academic interest for ethnic minority students than for ethnic majority students (Zirkel, 2004).

This stigmatization can lead to belonging uncertainty, wherein academic and professional settings members of socially stigmatized groups are more uncertain of the quality of their social bonds and thus more sensitive to issues of social belonging, and in a recent study Black college students displayed a drop in their sense of belonging and potential in their university (Walton & Cohen, 2011). One African American student described this feeling in a qualitative study:

> *"A lot of the times, the reason why I don't speak up in a lot of my classes is because I don't want to be stigmatized the minute I open my mouth and something comes out wrong or a little country. White people hear that and White people think 'she's uneducated, what is she doing here' p. 184". (Tabitha Grier-Reed, 2010)*

Fraternities and Sororities as Campus Counter-Spaces

Previous research has investigated the creation of "counter-spaces" in response to the daily barrage of racial microaggressions that African American college students endure both in and outside of their classes (Allen, Maclean, Williams, Webber, & Stevens, 2013). In their 2000

study, Solorzano, D., Ceja, M., and Yosso defined counter-spaces for serving as "sites where deficit notions of people of color can be challenged and where a positive collegiate racial climate can be established and maintained." African American college students who participated in the study's focus groups identified counter-spaces across three different PWIs. These spaces included African American student organizations, organizations or offices that provide services to African American and other students, peer groups, Black student-organized academic study halls and Black fraternities and sororities (Solorzano, D., Ceja, M., Yosso, 2000).

Although the research on the outcomes of fraternity and sorority membership is limited, Fraternities and sororities have many of the markers of the above described studies and some research has highlighted the many benefits of involvement in Greek life. The concept that fraternities and sororities may buffer the ill mental and physical impacts of fraternities and sororities is based on social support theory and literature. Cobb's (1976) classic article defined social support as "information leading the subject to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations" (Cobb, 1976). His research indicated that supportive interactions among other people are protective against the health consequences of life stress. He posited that that social support can be a protective factor from a large range of mental and physical aliments from low birth rate to death, from arthritis to alcoholism, and even depression (Cobb, 1976). Since the 1970s, measures have been developed to study social support and its impacts, yet within this field of research there have been critiques over ever changing and broad definitions to this theory. Barrera (1986) posits that social support can be organized into three broad categories: social embeddedness, perceived social support, and enacted support (Barrera, 1986). 1) Social embeddedness is the social support concept that refers to the connections that individuals have to significant others in their social environments. Being

socially connected is a fundamental element in ones sense of community (S.B. Sarason, 1974) and is the opposite of social exclusion (Gottlieb, 1983) . 2) Perceived social support characterizes social support as the cognitive appraisal of being reliably connected to others. This category fits cognitive models of stress and coping processes that emphasize the appraisal of potentially threatening situations and resources that can be enlisted in coping efforts (Folkman, Schaefer, & Lazarus, 1979; Lazarus & Launier, 1978). 3) Enacted Support is conceptualized as actions that others perform when they render assistance to a focal person. This is to distinguish from "available" support.

Not only do Fraternities and sororities give social support, but they help students develop study skills, critical thinking, commitment to service, management skills, and career skills (Long, 2012). There are about 800 academic institutions across the United States and Canada that host social fraternities and sororities on their campuses. The goal of fraternities and sororities is to complement the mission of the host academic institutions, developing the character and leadership abilities of their members, serving the community, and developing life long friendships ((Walton & Cohen, 2011);Gregory, 2003; (Long, 2012)).

However, even fewer research has been conducted on the outcomes of fraternity and sorority membership for African American students. Mono-institutional research has indicated that fraternity/sorority membership positively influenced the sense of belonging of minority college students and was associated with modest gains in the interpersonal skills of members (Hurtado & Carter, 1997;(Long, 2012). In Long's (2012) multi-institutional study, their research echoed this finding, specifically that fraternity/sorority members reported a high sense of belonging and peer interaction as a result of their fraternity/sorority experience (Long, 2012). Long (2012), asserts that:

"fraternal organizations may promote these outcomes by providing members with

a small, intimate community within the larger campus context and by providing

opportunities for members to meet new people, establish close friendships, empathize

with others, and resolve interpersonal conflicts, respectively (p. 23)."

Additionally, a student participant in Davis et al.'s (2004) study reported:

"I mean I've had some really good experiences here. I joined a sorority my freshman

year, and my second semester there was really good. I've learned a lot of life lessons and

working with black women. Got into some really wonderful honor societies, met some

people, and got a chance to join some groups on campus. Black Cultural Program

committee, I was part of that. I was part of Student Government Association for a year,

so I've touched a little bit around campus, just to get a feel for it " (Davis et. al., 2004, pg.

430).

This finding is particularly significant as current literature has demonstrated the power of

social support in mitigating many ill health effects, both physical and psychological, including

lowering rates of major depression (Lakey, B., & Cronin, 2008), posttraumatic stress disorder

symptoms (Brewin, Andrews, & Valentine, 2000), lowering levels of nonspecific psychological

distress (Barrera, 1986; Cohen & Wills, 1985; Procidano, 1992), and lowering negative affect as

well as increasing positive affect (Finch, Okun, Pool, & Ruehlman, 1999). Additionally,

Constantine et. al. (2003) suggests that social networks may be a buffer against the negative

effects of psychological distress. The authors found that among the 158 Black and Latino college

students surveyed, having a social support network served as a significant moderator for Black

students (but not Latino students) in moderating the relationship between psychological distress and willingness to seek psychological help (Constantine, Wilton, & Caldwell, 2003).

Furthermore, many articles have linked social support with the best potential outcomes for Black students experiencing race related stress (T. Grier-Reed, 2013; L. V. Jones, 2004; Utsey, Shawn O.; Ponterotto, Joseph G.; Reynolds, Amy L.; Cancelli, 2000; Watts-Jones, 2002). In her seven year longitudinal study, Grier-Reed (2013) researched the African American Student Network (AFAM), the purpose of which was to provide a safe space for Black students to (a) explore and make meaning of their experience on campus (b) find support and encouragement for coping with personal and academic stressors, and (c) make meaningful connection with other Black students, faculty and staff (T. Grier-Reed, 2013). In a previous study Grier-Reed, Madyun, and Buckley (2008) conducted a phenomenological-like study to explore the lived experience of the group and seven themes in the students' lives were uncovered: safety, connectedness, validation, empowerment, intellectual stimulation, resilience, and a home base on campus (T. L. Grier-Reed et al., 2008). Her research revealed that AFAM is an effective counter space for African American students had has many therapeutic potential outcomes for students.

One recent study however, did look in depth at the outcomes of African American membership in Black fraternities and sororities. Allen et al.'s (2013), research indicated that campus climate influenced the experiences of Black Greeks in social life, academics, networking opportunities, post-college preparation and sense of support on campus (Allen et al., 2013). By forming focus groups on both HBCUs and PWIs the study illuminated how beneficial fraternity and sorority membership was for African American college students.

Given the previous research described, it is reasonable to assert that membership in fraternities and sororities may help students overcome some of the negative campus experiences

of isolation and micro-aggressions by providing a sense of belonging (Solorzano, D., Ceja, M., Yosso, 2000). However, there is a gap in the literature as how enrollment in fraternities and sororities may serve as a protective factor against perceived discrimination and various negative health outcomes. The current study explored how membership within a fraternities and sororities may mediate the relationship between perceived discrimination and health outcomes.

Summary and Purpose of Current Summary

The goal of this study was threefold. First, it was to better understand the relationship between health outcomes and the experience of discrimination on college campuses for African American students. Although numerous studies have been conducted on the impacts of race related stress, few have examined how the experiences of discrimination impacts African Americans on college campuses. The study specifically examined African American adults ages 18 and older currently enrolled in university. The current study examined how African American college student's perception of discrimination may relate to depression, general health, overall stress, and feelings of safety on campus by analyzing NCHA (National College Health Assessment) data from a south eastern university. Secondly, through hierarchical regression, the study further investigated the research of Pieterse & Carter (2007), to explore if perceived discrimination influences health outcomes above and beyond general life stress in the emerging adult population. Lastly, the current study explored potential protective factors by examining if the relationship between health out comes and the experience of discrimination is mediated by fraternity or sorority membership.

By gaining an understanding of the experiences African American college students encounter and how these experiences impact their health during a very crucial time of identity

development, we can then begin to explore what may serve as protective factor to race related

stressors for African American college students.

Method

Participants

Participants for this study were from the ongoing Wellness Resource Center Health

Research Study at Virginia Commonwealth University. The Wellness Resource Center is in the

Division of Student Affairs at Virginia Commonwealth University whose mission is to maximize

student success by fostering a healthy campus environment. The eligibility criteria for The

Wellness Resource Center's Health Research (thusly for this study) were that participants were

currently enrolled students at Virginia Commonwealth University. For purposes of this study,

further eligibility criteria was needed, namely that participants must identify as African

American and that they have experienced discrimination on campus. 133 African American

college students completed the study and met eligibility criteria between the years 2009-2016.

Figure 3. Current Demographics Characteristics of Current Study Participants

	Current Study Participants (N=133)
Female (%)	67%
Male (%)	25%
Other Gender Identify (%)	1%
Race	
Black (%)	100%
Age (mean)	23
(mode)	20
Member of a fraternity or sorority	19 (14%)
Year in School (mean)	3.6

Procedure

The current study used collected ACHA NCHA data from the years 2009-2016. Every other year, The American College Health Association's National College Health Assessment – II (ACHA-NCHA-II) survey data is distributed by ACHA. An online version of the standardized instrument was emailed to approximately 5,000 students randomly selected from the Registrar's enrollment lists, which includes freshmen through graduate students. The survey is distributed by email so that students have the privacy to take the survey where and when they feel comfortable. Response rates are typically between 17-37% and the sample sizes typically range between 850 -1,800. Each year The Wellness Resource Center obtains permission from the VCU Institutional Review Board to continue the project.

ACHA NCHA. The American College Health Association's National College Health Assessment (ACHA NCHA) is an Institutional Review Board- Approved, empirically supported health assessment for college students (NCHA, 2016). The Wellness Resource Center uses the American College Health Association's National College Health Assessment (ACHA NCHA) to collect data about college students' health habits, behaviors, and perceptions. Developed by an interdisciplinary team of college health professionals, the measure has high reliability and validity (NCHA,2013). The Wellness Resource Center began conducting the American College Health Association's National College Health Assessment (ACHA NCHA) every year between 2002-2012 then in the spring of every other year after 2012.

For purposes of this study, not all items on the ACHA NCHA were assessed. The current study will specifically analyze, items that measure overall psychological health, general health,

overall stress, feelings of safety on campus, perceptions of discrimination, and membership in a fraternity or sorority, respectively. See appendix A for measure items analyzed.

Specific Aims

Aim 1. To examine if there is a relationship between health outcomes, (namely overall psychological health, general health, overall stress, and feelings of safety), and the perception of discrimination on college campus for African American college students. It was hypothesized that African American college students' experience of discrimination will be related to health outcomes, such that experience of discrimination will be positively associated with negative health outcome variables.

Aim 2. The study further investigates the research of Pieterse & Carter (2007), to explore if perceived discrimination influences psychological health outcomes above and beyond general life stress in the emerging adult population. It was hypothesized that the experience of discrimination will have a more significant negative impact on psychological health than general life stress on African American college students.

Aim 3. To examine the potential protective factor of membership in a fraternity or sorority in mediating the relationship between health outcomes and the experience of discrimination for African American College students. It was hypothesized that fraternity or sorority membership will mediate the relationship between perception of discrimination and health outcomes.

Figure 4. Mediation for the Campus Counter Spaces Hypothesis
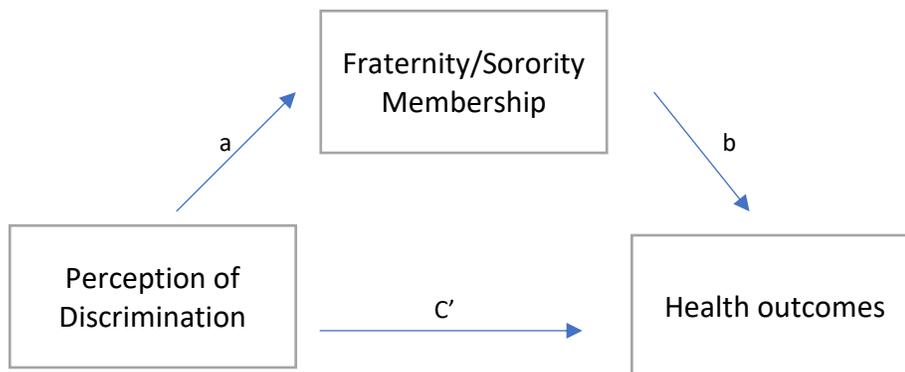
Analyses

All data analyses were performed with SPSS version 22. Descriptive statistics were calculated to examine frequencies, means, and standard deviations and to check for normality of data to ensure that assumptions of statistical tests are met. Power analyses was conducted to assess the appropriate sample size of participants necessary to examine the analyses.

For the first research aim which examines if there is a relationship between perception of discrimination and various ill health outcomes, Pearson's and point-biserial correlations were performed to analyze relations between perception of discrimination, and health outcomes: psychological distress, general health, overall stress, and feelings of safety.

To examine whether perceptions of discrimination is a unique predictor of psychological health when controlling for general life stress, research aim 2 was assessed using hierarchical regression analysis in which the criterion variable is psychological distress and the predictor variables are perceived stress and perceived discrimination.

The third research aim (Figure 4), which examined the relation between perception of discrimination, fraternity/sorority membership, and health outcomes, the relational hypothesis

was tested by using perception of discrimination as the independent variable, membership in a fraternity or sorority as the mediator, and the health outcomes (psychological health, general health, overall stress, and feelings of safety), was the outcome variable. The relation between perception of discrimination and fraternity/sorority membership was examined (path a), fraternity/sorority membership and health outcomes (path b), and perception of discrimination and health outcomes (path c') was examined.

Results

Descriptive Analyses

Sample size included 133 participants, 33 male identifying, 89 female identifying, and 1 nonbinary identifying, 10 participants did not disclose their identifying gender. Median age was 23, and the mean age was 21. Consistent with previous research (Moyers et al., 2007b) data were not transformed. Skewness and kurtosis largely remained within normal values so data was not transformed. A power analysis was conducted using G*Power software (Faul, Erdfelder, Buchner, & Land, 2009) to determine the necessary sample size for the study. In the present study, assuming a large effect size, 133 participants should be sufficient to detect an effect (power >0.8, alpha <0.05).

The research hypothesis were examined using the NCHA health survey which is comprised of 66 individual items. For purposes of this study, the measure was broken into individual subscales to assess the three research aims. The current study utilized the following subscales: Perception of Discrimination, General Health, Overall Stress, Feelings of Safety on Campus, Experience of Personal Difficulty or Trauma, and Overall Psychological Health. Descriptive statistics for these scales are below in Table 1 and Table 2.

Table 1. Descriptive statistics on Perception of Discrimination responses by participants (N=133)

	Range	Minimum	Maximum	Mean	Median
Perception of Discrimination	4	2	6	2.30	2

Table 2. Descriptive statistics on Health Outcomes scales by participants (N=133)

	Range	Minimum	Maximum	Mean	Mode	Std. Deviation
*General Health	5	1	6	2.45	2	.973
*Overall Stress	4	1	5	3.70	4	.906
Safety	3	1	4	2.90	3	.60
*Trauma	1	1	2	1.39	1.42	.272
*Psychological Health	1.43	.65	2.08	1.129	1.09	.223

*Higher Score denotes more negative health

Hypothesis 1: Perception of discrimination and health outcomes

Pearson's correlations were preformed to analyze relations between perception of

discrimination, and health outcomes: general health, overall stress, feelings of safety, experience

of trauma, and overall psychological distress. Specifically, if experience of discrimination will be

positively associated with the above mentioned negative health outcome variables. Table 1

visually displays results below.

Table 3.
Pearson Correlations between perception of discrimination and health outcomes

Health Outcomes	Perception of discrimination
General Health	.165*
Overall Stress	.245**
Feelings of Safety	-.214**
Trauma	.177*
Psychological Health	.197*

*p < .05; **p < .01*

Pearson's correlation analysis revealed a significant association between students'

perceived discrimination and their general health, r (130) = .165, p = .029. Such that the more a

student perceived discrimination the worse their general health.

Pearson's correlation analysis revealed a significant association between students'

perceived discrimination and their overall stress, r (130) = .245, p = .002. Such that the more a

student perceived discrimination the higher their overall stress.

Pearson's correlation analysis revealed a significant negative correlation between

perception of discrimination (M = SD =) and feelings of safety (M = SD =) , r = -.214, p = <

.001, n = 100. Such that the more a student perceived discrimination the less safe they felt on

campus.

Pearson's correlation analysis revealed a significant association between students

perceived discrimination and feelings of trauma, r (130) = .177, p=.021.

Such that the more students perceived discrimination the more feelings they had of academic and personal difficulty.

Lastly, Pearson's correlation analysis revealed a significant association between students perceived discrimination and overall psychological health, $r(130) = .197$, $p=.023$. Such that the more students perceived discrimination the worse their overall psychological health.

Hypothesis 2: Does Perceived Discrimination Influence Psychological Health Outcomes Above and Beyond General Life Stress?

To further investigate the research of Pieterse & Carter (2007), the current study explored if perceived discrimination influences psychological health outcomes above and beyond general life stress in the emerging adult population. A hierarchical linear regression was computed. Assumptions of univariate and multivariate normality, linearity, and normally distributed errors were checked and met. When general stress was entered into the model it significantly predicted psychological health outcomes, $F(1,130) = 57.65$, $p < .001$, R square $= .303$. As indicated by the R square, 30.3% of the variance in psychological health outcomes could be predicted by knowing the participant's level of general stress. When perceived discrimination was added into the model it however did not significantly improve the prediction R square change $= .008$, F change $(2, 128)$, $p = .231$. General life stress $t(129) = 7.07$, $p < .001$ was a significant predictor of psychological health outcomes but perceived discrimination $t(129) = 1.21$, $p = .231$, was not. Furthermore, general life stress was a stronger predictor of psychological health outcomes (beta $= .129$) compared with perceived discrimination (beta $= .022$). The current data did not show that perceived discrimination influences psychological health outcomes above and beyond general life stress.

Hypothesis 3: Mediation models

Five mediation analyses were conducted to determine if membership in a fraternity or sorority mediated the relation between health outcomes and the experience of discrimination for African American college students. First, the relation between feelings of safety on campus and perception of discrimination was examined. Using the Baron and Kenny Method (1986) for testing mediation, perception of discrimination was found to predict feelings of safety campus β = - .214, p < .02. Next, perception of discrimination did not predict belonging in a fraternity or sorority, β = .132, p ≥ .02. When both perception of discrimination and fraternity/sorority membership were entered into the third model the relationship between discrimination and feelings of safety remained significant, β = .142, p < .02, but the relation to fraternity/sorority membership was not significant, β = .047, p=.754. Using the sobel test, the magnitude of the relation between perception of discrimination and safety on campus did not change significantly, z = .318, p = .75. Thus, the findings indicate that belonging to a fraternity or sorority does not mediate feelings of safety on campus.

Second, the relation between the experience of trauma on campus and perception of discrimination was examined. Using the Baron and Kenny Method (1986) for testing mediation, perception of discrimination was found to predict experience of trauma on campus, β = .177, p < .05. Next, perception of discrimination did not predict belonging in a fraternity or sorority, β = .132, p ≥ .02. When both perception of discrimination and fraternity/sorority membership were entered into the third model the relationship between discrimination and experience of trauma on campus did not remain significant, β = .161, p = .068, and the relation to fraternity/sorority membership was not significant. Using the sobel test, the magnitude of the relation between perception of discrimination and experience of trauma on campus did not change significantly, z

= .964, p = .96. Thus, the findings indicate that belonging to a fraternity or sorority does not mediate experience of trauma on campus.

Third, the relation between the experience of general stress and perception of discrimination was examined. Using the Baron and Kenny Method (1986) for testing mediation, perception of discrimination was found to predict experience of general stress, $\beta = .245$, p < .05. Next, perception of discrimination did not predict belonging in a fraternity or sorority, $\beta = .132$, p $\geq$ .02. When both perception of discrimination and fraternity/sorority membership were entered into the third model the relationship between discrimination and general stress remained significant, $\beta = .227$, p < .02, but the relation to fraternity/sorority membership was not significant, $\beta = .128$, p = 140. Using the sobel test, the magnitude of the relation between perception of discrimination and general stress did not change significantly, z = 1.05, p = .28. Thus, the findings indicate that belonging to a fraternity or sorority does not mediate general stress.

Fourth, the relation between general health and perception of discrimination was examined. Using the Baron and Kenny Method (1986) for testing mediation, perception of discrimination was found to predict general health, $\beta = .165$, p < .05. Next, perception of discrimination did not predict belonging in a fraternity or sorority, $\beta = .132$, p $\geq$ .02. When both perception of discrimination and fraternity/sorority membership were entered into the third model the relationship between discrimination and general health did not remain significant, $\beta = .166$, p > .05, and the relation to fraternity/sorority membership was not significant, $\beta = .012$, p > .05. Using the sobel test, the magnitude of the relation between perception of discrimination and general health did not change significantly, z = .135, p = .86. Thus, the findings indicate that belonging to a fraternity or sorority does not mediate general health.

Fifth, the relation between overall psychological health and perception of discrimination was examined. Using the Baron and Kenny Method (1986) for testing mediation, perception of discrimination was found to predict psychological health, $\beta = .197$, $p < .02$. Next, perception of discrimination did not predict belonging in a fraternity or sorority, $\beta = .132$, $p \geq .02$. When both perception of discrimination and fraternity/sorority membership were entered into the third model the relationship between discrimination and experience of trauma on campus remained significant, $\beta = .184$, $p < .05$, but the relation to fraternity/sorority membership was not significant, $\beta = .088$, $p = .315$. Using the sobel test, the magnitude of the relation between perception of discrimination and overall psychological health did not change significantly, $z = .834$, $p = .404$. Thus, the findings indicate that belonging to a fraternity or sorority does not mediate overall psychological health.

Discussion

For African American students, entering college and navigating race related stress on campus is a complicated problem with varied consequences that impact health. Although there is a myriad of research studies examining race related stress and its varied health effects in community settings, there is still a large gap of knowledge on the topic, particularly with the adult college enrolled population. With the climate on predominately White universities being particularly hostile to African American college students, it is even more imperative to examine this population. Many researchers have highlighted the need for better understanding of how the mechanisms and processes of racial discrimination leads to adverse mental health outcomes (Brondolo, Ver Halen, Pencille, Beatty, & Contrada, 2009).

The American College Health Association's National College Health Assessment, is a largely untapped resource to examine this issue. The survey that has been taken by over 1.4 million students across 740 universities is a comprehensive health survey that covers a plethora of health topics including mental health, personal safety, physical health, as well as perceptions of discrimination, and holds potential in furthering the understanding of race related stress on campus for African American college students and its impact on health. However, simply understanding the mechanisms and processes of perceived discrimination is not enough. Fraternities and Sororities have the potential to be "counter spaces" to the daily barrage of microaggressions and discrimination African American college students face (Solorzano, D., Ceja, M., Yosso, 2000).

Therefore, the purpose of the current study had three main goals in examining NCHA data. First, it was to better understand the relationship between health outcomes and the experience of discrimination on college campuses for African American students by examining how African American college student's perception of discrimination may relate to depression, general health, overall stress, and feelings of safety on campus by analyzing NCHA (National College Health Assessment). Second, through hierarchical regression, the study further investigated the research of Pieterse & Carter (2007), to explore if perceived discrimination influences health outcomes above and beyond general life stress in the emerging adult population. Lastly, the current study explored potential protective factors by examining if the relationship between health out comes and the experience of discrimination is mediated by socio-cultural group involvement in the form of fraternities and sororities.

The current study found support for the correlational hypothesis. General health, overall stress, feelings of safety, feelings of trauma and overall psychological health were all correlated

with perception of discrimination, such that the more discrimination one experienced the worse those health out comes. However, the current study did not find that perceived discrimination influences health outcomes above and beyond general life stress in the emerging adult student population. Nor did the current study find that belonging to a fraternity or sorority mediates the relationship between negative health outcomes and perception of discrimination.

These findings suggest that the race related stress that African American college students face on predominately white campuses are harmful to overall health, yet more needs to be explored to find adequate interventions to these negative health outcomes.

Research Aim 1

Six distinct health outcomes in relation to experience of discrimination were examined in this study. Overall, the first hypothesis which asserts that perception of discrimination is positively correlated with negative health outcomes, was supported. Specifically, the current study found that general health, overall stress, feelings of safety, trauma, and overall psychological health are all correlated with an individual's perception of discrimination, such that the more one perceives discrimination the more they experience these negative health outcomes.

First, these findings supports and contemporizes previous literature that African American students still in fact face race related stressors on campus (Arnold, 1993; D'Augelli & Hershberger, 1993; Tabitha L. Grier-Reed et al., 2008). Additionally, it supports the CATS stress model (Ursin & Eriksen, 2010) that experience of stressful events lead to poor health outcomes.

However, current literature is still lacking in more contemporary studies on how race specific stressors such as the experience of discrimination impacts overall health for African Americans. The current study findings adds to the *Contextual Model to Examine the*

Biopsychosocial Effects of Perceived Racism (Clark, Anderson, Clark, & Williams, 1999) (See Figure 2) which states that over time race related stressors will negatively impact health by highlighting this correlational relationship.

Furthermore, the current study findings apply the above theory to the specific context of emerging African American adults in the university setting. In a more recent study, researchers found that through structured interviews African American college students are experiencing discrimination and microaggressions in a myriad of arenas on campus and that these experiences took a toll on their overall campus experience as well as their health (Davis et. al., 2004). Taken together, these results suggest that discrimination on campus is negatively impacting the mental and physical health of African American college students and that there is still much to be done to improve African American college students experiences on college campuses, specifically on PWIs.

Research Aim 2

In investigating if experience of discrimination was a unique predictor of psychological health above general life stress for African American college students, the hypothesis was not supported. The current study found that when general stress was controlled, experience of discrimination predicted a non significant amount of variance in overall psychological health.

In the original study, Pieterse & Carter (2007) found that results of hierarchical regressions indicated that when general stress was controlled, racism-related stress predicted an additional 4% of variance in psychological distress for working class men and an additional 7% for upper middle class men. There are several key differences between the current study and the research of Pietrese & Carter (2007) to note.

First, the population sample between the two studies are quite different. The 2007 study limited participants to men only. Furthermore, only 22% of the participants in the 2007 study cited as having an undergraduate degree. The difference in population demographics may be a factor in the differing results between the two studies.

Secondly, methodology between the two studies were also distinctly different. Pieteres & Carter utilized The Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983), a 14-item self-reporting measure designed to assess the degree to which individuals perceive their life as stressful, The original Schedule of Racist Events (SRE; Landrine & Klonoff, 1996), an 18-item self-report measure that assesses the frequency and stressfulness of selected racist experiences faced by African Americans, and finally The Mental Health Inventory (MHI; Veit & Ware, 1983) a 38-item measure assessing both psychological distress and well- being in adults. The current study only utilized the he American College Health Association's National College Health Assessment for measuring general stress, perceived discrimination, and overall psychological health. The results indicate that although it would be convenient if universities and researchers could utilize existing campus wide data, the ACHA NCHA may not be as sufficient in measuring these items as other psychological measures.

Research Aim 3

Potential protective factors were explored by examining if the relationship between health out comes and the experience of discrimination is mediated by socio-cultural group involvement in the form of fraternities and sororities. The current study did not find that belonging to a fraternity or sorority mediates the relationship between negative health outcomes and perception of discrimination. A potential reason for this outcome was the low participant

sample for this research aim. Unlike the other two research aim that included 133 participants, only 19 participants indicated that they belonged to a fraternity or sorority. Future studies should aim for a larger sample size to assess this research question.

However, previous literature has stated mixed outcomes for fraternity and sorority involvement . A more recent longitudinal study noted the immensely nuanced educational outcomes fraternity/sorority membership has for college students, particularly in differences in race (Hevel, Martin, Weeden, & Pascarella, 2015). The Hevel, et. al, (2015), study found that while fraternity/sorority involvement had no significant ill effect on educational outcomes, it did find that with White members critical thinking was negatively impaired, though this was not true of African American members. Additionally, the study found that African American members had declined moral reasoning, yet this was not true of White members. This study highlights the need for much more investigation on the mechanism and processes as well as outcomes for African American fraternity/sorority members.

Alternatively, it is possible that the negative health outcomes of belonging to a fraternity or sorority overshadow the possible positive attributes of membership. Many recent studies site that college students who are members of fraternities and sororities have higher risk of alcohol use, frequent drinking, binge drinking, smoking, and specifically for men, rape-supportive attitudes and sexually aggressive behavior (Cheney, Harris, Gowin, & Huber, 2014; DeSimone, 2010; Kingree & Thompson, 2013; Murnen & Kohlman, 2007). Additionally, even protective behavioral strategies have not been found sufficient for preventing negative outcomes associated with drinking in high risk groups like fraternities and sororities (Soule, Barnett, & Moorhouse, 2015).

However, it is extremely important to note that the majority of these research studies, including the above mentioned Hevel, et. al, (2015) study, highlighting the ill effects of Greek life examine historically and predominately White fraternities and sororities, while much of the research on historically Black fraternities/sororities note positive impacts on social life, academics, networking opportunities, post-college preparation and sense of support on campus (Allen, Maclean, Williams, Webber, & Stevens, 2013). Additionally, Black fraternities can serve as a space to help develop positive masculinity (Chambers, 2011; Dancy & Hotchkins, 2015; Walker, 2013). One researcher has even outlined the positive aspects of Black Greek life as being comparable to traditional West African organizations, called Asafo, serving as another community space that sustains African identities and culture amidst oppressive environments (Chambers, 2016).

The current study did not distinguish between these two different types of fraternities/sororities either, and this lack of distinction may have impacted the results of the study. Suggestions and future directions on this issue will be discussed in more detail below.

Strengths and Limitations

The study adds to the extant literature on the African American experience on predominantly White universities, specifically by providing new data on the many negative health outcome associated with experience of discrimination, new insights on general stress and race related stress health outcomes for the African American college population, and the potential protective factor of fraternity and sorority membership. However, several limitations should be noted. One limitation of the current study is that although the NCHA measure is quite compressive, there is only a single item that assesses students' experience of on campus discrimination. Future studies may want to investigate the experience of campus discrimination

and race related stress with a more nuanced measure such as the Index of Race Related Stress (IRRS) (Utsey, 1999). However, because over 740 universities use the NCHA regularly there is the greater potential to see overall trends in the African American college student's experience of discrimination and it's impact on health – potentially empowering more college campuses to better serve African American students by using tools that are already in place.

Another limitation was the small sample size for research aim 3 (N=19), where of the 132 surveyed participants only 19 identified as belonging to a fraternity or sorority. To investigate the potential protective factor of fraternities and sororities more African American students should be surveyed.

Furthermore, there is conflicting data regarding the protective factor potential of membership within a fraternity or sorority for African American college students. Thus, the current study contributes to this important area of research in which there is conflicting outcome data.

Future Directions

In the context of better understanding the potential protective role of fraternities and sororities for African American college students against the negative health outcomes of racial discrimination on campus, future research should consider examining historically Black fraternities and sororities and/or comparing outcomes to traditionally White Greek organizations. Furthermore, future research may want to examine individual members level of involvement in the fraternity or sorority as well to determine if more engagement in the social organization may have a better outcome in serving as a protective factor against racial discrimination on campus.

In order to investigate the above mentioned directions, the NCHA health survey cannot be the only measure implemented in future studies. The NCHA health survey, although readily

accessible and overall comprehensive in assessing mental and physical health of college

students, does not include enough items to assess more in depth questions regarding level of

involvement as well as of what type of fraternity or sorority one belongs to.

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VITA

Alexandra Mae Munson was born on February 8th, 1990, in Mountain View, California and is a dual American and German citizen. She graduated from high school a year early with her California High School Proficiency Examination (CHSPE) in 2007. She then received her Associate Degree in Liberal Arts from Cabrillo College, Aptos, California in 2009. She graduated with her Bachelor of Arts in both Africana Studies and Psychology Magna Cum Laude from San Francisco State University San Francisco, California in 2012. She subsequently worked for the West Oakland Afrocentric non-profit The Institute for the Advance Study of Black Family Life and Culture from 2012-2013, and volunteered at the Veterans Affairs Hospital in San Francisco from 2012-2013 before beginning her graduate school journey.

APPENDIX A.
ACHA NCHA Items

1) How would you describe your general health?
- ❍ Excellent
- ❍ Very Good
- ❍ Good
- ❍ Fair
- ❍ Poor
    Don't Know

4) How safe do you feel: (Please mark the appropriate column for each row)

	Not safe at all	Somewhat unsafe	Somewhat safe	Very safe
On this campus (daytime)?	❍	❍	❍	❍
On this campus (nighttime)?	❍	❍	❍	❍
In the community surrounding this school (daytime)?	❍	❍	❍	❍
In the community surrounding this school (nighttime)?	❍	❍	❍	❍

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

	No, never	No, not in the 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	❍	❍	❍	❍	❍
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	❍	❍	❍	❍	❍

31A) 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)

	No	Yes, diagnosed but not treated	Yes, treated with medication	Yes, treated with psychotherapy	Yes, treated with medication and psychotherapy	Yes, other treatment
Anorexia	❍	❍	❍	❍	❍	❍
Anxiety	❍	❍	❍	❍	❍	❍
Attention Deficit and Hyperactivity Disorder (ADHD)	❍	❍	❍	❍	❍	❍
Bipolar Disorder	❍	❍	❍	❍	❍	❍
Bulimia	❍	❍	❍	❍	❍	❍
Depression	❍	❍	❍	❍	❍	❍
Insomnia	❍	❍	❍	❍	❍	❍
Other sleep disorder	❍	❍	❍	❍	❍	❍

31B) 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)

	No	Yes, diagnosed but not treated	Yes, treated with medication	Yes, treated with psychotherapy	Yes, treated with medication and psychotherapy	Yes, other treatment
Obsessive Compulsive Disorder (OCD)	❍	❍	❍	❍	❍	❍
Panic attacks	❍	❍	❍	❍	❍	❍
Phobia	❍	❍	❍	❍	❍	❍
Schizophrenia	❍	❍	❍	❍	❍	❍
Substance abuse or addiction (alcohol or other drugs)	❍	❍	❍	❍	❍	❍
Other addiction (e.g., gambling, internet, sexual)	❍	❍	❍	❍	❍	❍
Other mental health condition	❍	❍	❍	❍	❍	❍

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	○	○
Career-related issue	○	○
Death of a family member or friend	○	○
Family problems	○	○
Intimate relationships	○	○
Other social relationships	○	○
Finances	○	○
Health problem of a family member or partner	○	○
Personal appearance	○	○
Personal health issue	○	○
Sleep difficulties	○	○
Other	○	○

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	○	○
Psychiatrist	○	○
Other medical provider (e.g., physician, nurse practitioner)	○	○
Minister/Priest/Rabbi/Other clergy	○	○

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

45B) Within the last 12 months, have any of the following affected your academic performance? (Please select the most serious outcome for each item below)

	This did not happen to me/not applicable	I have experienced this issue but my academics have not been affected	Received a lower grade on an exam or important project	Received a lower grade in the course	Received an incomplete or dropped the course	Significant disruption in thesis, dissertation, research, or practicum work
Chronic health problem or serious illness (e.g., diabetes, asthma, cancer)	❍	❍	❍	❍	❍	❍
Chronic pain	❍	❍	❍	❍	❍	❍
Death of a friend or family member	❍	❍	❍	❍	❍	❍
Depression	❍	❍	❍	❍	❍	❍
Discrimination (e.g., homophobia, racism, sexism)	❍	❍	❍	❍	❍	❍
Drug use	❍	❍	❍	❍	❍	❍

Eating disorder/proble m	○	○	○	○	○	○
Finances	○	○	○	○	○	○

46) How old are you?

_____Years

47A) What sex were you assigned at birth, such as on an original birth certificate?
- ○ Female
- ○ Male

47B) Do you identify as transgender?
- ○ No
- ○ Yes

47C) Which term do you use to describe your gender identity?
- ○ Woman
- ○ Man
- ○ Trans woman
- ○ Trans man
- ○ Genderqueer
- ○ Another identity (please specify) _____

48) What term best describes your sexual orientation?
- ○ Asexual
- ○ Bisexual
- ○ Gay
- ○ Lesbian
- ○ Pansexual
- ○ Queer
- ○ Questioning
- ○ Same Gender Loving
- ○ Straight/Heterosexual
- ○ Another identity

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

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