

PERCEPTIONS OF STEREOTYPE VULNERABILITY, BELONGING AND CAMPUS
CLIMATE BY AFRICAN AMERICANS ATTENDING A PREDOMINATELY WHITE
INSTITUTION

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ABSTRACT

LOREN WRIGHT THOMPSON: Perceptions of stereotype vulnerability, sense of belonging and campus climate by African Americans attending a Predominately White Institution.
(Under the direction of Rune J. Simeonsson)

The purpose of this study was to examine of stereotype vulnerability, sense of belonging and campus climate for African American college students at a Predominately White Institution (PWI) in the Southeast. This research used a sociocultural model to explore African American student perceptions at a PWI in the southeast of the United States. This study hypothesized that campus climate would moderate a relationship between stereotype vulnerability and sense of belonging. It was also hypothesized that gender (male, female) differences would exist concerning perceptions of these variables. An anonymous Qualtrics survey link, containing the three scales and demographic questions, was provided to students, through student led organizations (N=102). Pearson Product Moment Correlation statistic identified correlations between stereotype vulnerability and sense of belonging, sense of belonging and campus climate, as well as, stereotype vulnerability and campus climate. Further, a Multiple Analysis of Variance (MANOVA) found differences in the perception of stereotype vulnerability and sense of belonging among male and female students. A Hierarchical Regression Analysis did not reveal that the relationship between stereotype vulnerability and sense of belonging was moderated by campus climate. Both perceptions of environment (i.e., campus climate) and factors of social cognition (i.e., stereotype vulnerability) predicted the extent to which African American college students perceived they belonged in their university setting.

DEDICATION

This research study is dedicated to the past and present African American faculty members, college students and staff working within systems of higher education; the struggle continues.

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CHAPTER I

INTRODUCTION

Statement of the Problem

Although levels of racial integration within high schools in the United States have decreased (Rankin & Reason, 2005), demographic trends and landmark court cases concerning discriminatory admission practices have led to an increase in racial integration in higher education (Ancis, Mohr, & Sedlacek, 2000). African American undergraduate enrollment at degree granting institutions increased from 943,000 to 2,269,000 between 1976 and 2008; increasing their share of total enrollment from 10% to 14% (Aud, Fox, & Kewal-Ramani, 2010). The enrollment of African American graduate students increased from 90,000 in 1976 to 315,000 in 2008; increasing their share of the total graduate enrollment from 6% to 12%. Many students will experience their first significant interracial interaction as they transition to college (Rankin & Reason, 2005).

Despite a significant increase in enrollment during the 1990's, the US Department of Education's "Educational Progress Report" highlights the difficulty which African American face with achieving academic success in universities. In 2007, 19.5% of African Americans, 25-29 years old had a bachelor's degree or higher, while 35.5% of European Americans had attained a bachelor's degree or higher (The US Department of Education, 2007). Also, from 1996 to 2007 students graduating within four years at a four year college increased from 34 percent to 40

percent, however this increase was from 20 percent to 21 percent for African Americans. In 2007, forty three percent of European Americans students graduated within four years; which is four percentage points higher than the national average. African Americans equaled the national average after six years, but did not reach the four year completion percentage of European students (Sydey & Dillow, 2012). While university enrollment has increased for African Americans, statistics still highlight challenges concerning academic attainment outcomes.

Further, campus experiences reported by African Americans do not parallel those of European Americans (Ancis, Mohr, & Sedlacek, 2000). Campus experiences result from historical inequality and general social context. In the United States, desegregation, Civil Rights Law litigation (Title IV), and a surge in enrollment of diverse populations in universities raised awareness concerning overt discriminatory practices, however, covert and unconscious practices still plague the academic attainment and educational experiences of African Americans (Hurtado, 1992). U.S universities must now connect educational quality to agendas of inclusion, leading various diversity initiatives that ignore socio-historical context and lack integration (Milem, Chang & Antonio, 2005),

Statement of Purpose

Researchers have taken legitimate efforts to address the discrepancy between the academic experience of European American and African Americans, by attempting to reduce potential cultural bias in the use of tests, and identifying intervening factors such as SES.

However such research continues to suggest racial gaps persist even when socioeconomic and other factors are controlled (Taylor, 2005). Stereotype threat is believed to occur when an individual perceives that they are vulnerable to confirming a stereotype about a group they are identified with; leading to an impact on task performance (Steele & Aronson, 1995). Numerous research studies have framed stereotype threat as an explanation for the academic differences between African Americans and Whites Americans (Aronson & Inzlicht, 2004; Good, Aronson, & Inzlicht, 2003; Steele & Aronson, 1995), but widespread interventions are limited (Milem, Chang & Antonio, 2005). Through stereotype threat, the presence of a negative social stereotype about African Americans can influence their individual academic performance.

Lave and Wenger (1991) have shed light on aspects of the academic learning experiences that are often overlooked. These sociocultural theorists state that theories growing out of psychological orientations have left areas such as interconnections of activity, activity systems, communities, cultural and political economy within an environmental context, or climate, unexplored (p. 121). Within Lave and Wenger's framework, the construct of belonging constitutes a "crucial condition for learning" and a "source of power or powerlessness" (pg. 36). The aim of this current study was to examine stereotype threat in a culturally relevant manner that is context specific. The specific purpose of this study was to assess the relationship among perceptions of stereotype threat, sense of belonging and campus climate for African American college students, at a predominately white university, in the southeast of the United States. The role of gender will also be examined in this relationship, given outcome differences between African American females and males in within the institution of interest. A review of literature indicates that previous studies have focused upon changing the conceptual view of students

and/or failed to consider the importance the social context of a setting when analyzing stereotype threat. In addition, previous studies have assumed but not assessed a link between stereotype threat and sense of belonging. These issues are addressed in this study by three research questions.

Research Questions

RQ 1: Is there a significant relationship between the perceptions of stereotype vulnerability and sense of belonging for African American college students at a predominately white institution?

RQ 2: Does perceptions of campus climate significantly strengthen the relationship between stereotype vulnerability and sense of belonging among African Americans college students at a predominately white institutions?

RQ 3: Are there significant differences in the perceptions of stereotype vulnerability, sense of belonging and campus climate between female and male African American students at a predominately white institution?

Definition of Terms

The construct stereotype threat occurs when an individual perceives that they are vulnerable to confirming a stereotype about a group they are identified with (Steele & Aronson, 1995). This perceived threat, can hinder the individual's performance in a variety of tasks (i.e., evaluations, assignments). Stereotype threat is measured by creating a situation in which a stereotype becomes salient and measuring differences (i.e., test score, grades) between stereotyped and non-stereotyped participants in the control and experimental groups. For this non-experimental research study, stereotype vulnerability, defined as, the extent to which one

perceives his/herself at-risk for stereotype threat, is used as a proxy. This construct will be measured with self-reports on the stereotype vulnerability Scale (SVS).

The construct of sense of belonging is defined as the extent to which an individual feels accepted, respected, included, and supported by others in their school social environment (Goodenow, 1993). This construct will be assessed with self-reports on the Psychological Sense of School Membership Scale.

The construct of cultural climate, referred to as, the environmental quality of a setting; includes physical aspects of the setting (such as locations and materials), characteristics of individuals in the setting, patterns or rules of the setting and norms, values, belief systems concerning diversity (Tagiuri et al., 1968). This construct will be assessed with self-reports on the UNC campus climate Scale.

CHAPTER II

REVIEW OF LITERATURE

In order to address the growing trend towards African American university enrollment and the need for contextual research concerning the perspective of African Americans, this literature review will utilize a socio-cultural framework and examine previous research concerning stereotype threat, sense of belonging, and university campus climate. The relationship between stereotype threat vulnerability and African Americans students' sense of belonging will be addressed. Then, literature on the relationship between sense of belonging and campus climate will be explored. Given the relationship of sense of belonging with stereotype threat vulnerability and campus cultural climate, a rationale will be presented that cultural campus climate has a moderating role on the relationship between stereotype threat vulnerability and sense of belonging.

Framework: Sociocultural Learning Theory

Gutiérrez and Rogoff (2003) urge researchers to shift to a sociocultural perspective to better describe how individual engagement in shared practices, in different communities, contributes to learning and development. Sociocultural theory is increasingly recognizing the importance of looking at the influence of macro level sociocultural patterns on the activities of an individual. This ecological perspective is beginning to touch on the issue of power, which potentiates the applicability of sociocultural theory to describe mechanisms of culture, race, and academic achievement (Hand, 2006). In particular, key components that clarify issues about

culture, race and academic achievement include the sociocultural principles of tools and artifacts, multiple levels of embedded systems leading to contradictions between them, interactions with capable others, and identity intertwined in the process of learning.

Tools and Artifacts. Cultural tools and artifacts are critical to learning and development (Wertsch, 1991). Artifacts are both material and ideational. In the material form, artifacts are viewed as tangible material such as pencils, paper, and academic test. While in the form of ideational, artifacts may be words, rituals, or other cultural practices like using the GRE to inform college readiness. Ideational artifacts are tools that have consistently preformed overtime to achieve the goals they are designed to accomplish (Cole, 1998). Artifacts can also represent ideas and cultural conceptions about “self” that facilitate or impair interactions in cultural activities. When individuals, administrators, or other governing bodies maintain the idea that African Americans are worst academically, then an artifact exists that African Americans lack relevant tools for academic success. Furthermore, the assumption of a lack in appropriate tools can restrict the type of activities African Americans believe they can participate in and the activities available to them (Nasir, 2004).

Activity. The term “activity” within the sociocultural context involves all social interactions including the personal, interpersonal, and community. These levels influence, mediate, and ultimately create one another (Hand, 2006). Activity is goal directed and fundamentally considered as motives. Individual or group motives work toward explicit conscious goals that emerge over the course of the activity. Activity can also appear as operations, or units of action that are shaped by the context in which they occur (Leontiev & Elkonine, 1979).

Tools are used to achieve goals in activity systems (Wertsch 1991), such as educational attainment. Every African American produces and reproduces his or her culture through activity that is embedded in several higher levels of history and can motivate and be motivated by individual behavior (Cole, 1998; Hand & Nasir, 2006). These systems are divergent; they may not share the same tools, artifacts or operations. The unequal distribution of tools, artifacts, and operations make contradictions possible when systems interact. These contradictions help to create opportunities for development; however contradictions also frame the trajectory for legitimate participation in activities. Participation in cultural activities provides further activities, cultural tools, and interactions, in that individuals who do not gain entry into a system are not afforded certain activities (Nasir & Cooks, 2009).

Contradictions between Systems. Contradictions in behavior help to explain how larger sociopolitical and economic friction mediate local practices and learning in people (Yeo, Tan, & Lee, 2006). Contradictions vary at different levels within an activity system. Contradictions have been described in four levels. When considered at the primary level, a contradiction concerns a concept that is inappropriate to accomplish a goal or action. For example using a pen to fill out a “scantron” bubble sheet would be inappropriate because the testing program does not recognize ink. Contradictions at the second level are between two principles such as the belief that raising one's hand is the best way to be heard in class but during recess yelling is the best principle. Third level contradictions occur between the motive of the prototype system and the motive of a more culturally divergent form of the activity. When the motive of the prototype system contradicts with the culturally divergent system then larger societal pressures can impede the effectiveness of learning. For example, an individual with a communal point of view, in an

educational setting that encourages individualism and rewards competitiveness (Boykin, Lilja & Tyler, 2004). The fourth level of contradiction proposes that trouble may exist between central activity and one of its neighboring activities. For example, a tension between participation based learning in a subject area, such as science, that requires acquisition focused activities (Yeo & Tan, 2014).

Social interactions are dialectical and multi-dimensional; containing a personal dimension and interpersonal dimension. The personal dimension is comprised of individual cognition, emotion, behavior, values and beliefs. The interpersonal dimension is comprised of communication, role performances, and interactions with important social others. The interpersonal dimension also contains the community/institutional planes which hold shared history, language, rules, values, beliefs and identities (Rogoff, 2008). Social interactions constitute ecologies that integrate the individual, social, and cultural tools that occur during one's life time.

Interactions with Others. Also relevant to the discussion of race, culture, and academic achievement is the concept of learning through interactions with capable others (Lave & Wenger 1991). Interactions with capable others or experts are important contributions to the way people participate in activity (Vygotsky, 1978), though processes, such as, scaffolding. Scaffolding involves novice learning through assistance from experts to each an expert role (Bliss, Askew, & Mcrae, 1996). Participation in a culture can be achieved though observation at the boundary, which is referred to as legitimate peripheral participation. Through increased involvement, an individual moves from an observer to a functional member (Lave & Wenger, 1991). The aforementioned concept was expanded to include inbound and peripheral learning. Inbound

trajectories represent newcomers joining the community with expectations of being full participants, while peripheral trajectories involve individuals remaining marginal to the practices over time. The differences in trajectories frame learning opportunities and opportunities for the development of identity (Hood, 2006).

Identity and Learning. According to sociocultural theory, learning is an aspect of identity and identity is a result of learning (Wenger, 1998). This conceptualization presents learning as academic achievement and also as an ontogenetic process of participation in cultural practices and identity creation (Nasir & Cooks, 2009). Identity building in the context of activities is constant and continual between the individual and other levels of social interactions, including other people, the school, and the United States pedagogic cultural system (Wenger, 1998).

Current research is beginning to consider students identities as learners, believing identity to be a critical mediator (Nasir & Hand, 2006). Students' perception of themselves can influence participation in educational activities and settings. An underpinning of this framework is that learning is about personal transformation. The roles made available in becoming or forming new identities through cultural activity allow for new possible ways of considering oneself. People tend to avoid activities that they perceive to be contradictory which potentially inhibit the trajectory of the person they want to become. Individual activities are embedded in a larger activity system and through history these larger systems maintain more direct paths for development due to commonality and overlapping practices, granting privacy for the way individuals may obtain their goals in the future. A more constrained view results in less

imagined identities. Consequently, perceived choices of what to do and how to do things is constrained by a history of participation and identity (Nasir & Hand, 2006).

Ideational artifacts represent ideas about race that constrain the participation of some and enable the participation of others. Stereotypes can be particularly useful in describing how ideational artifacts influence individual thinking and performance (Nasir, 2004). The influence of stereotypes has been a saturated yet unresolved topic since compelling evidence of stereotype threat indicated academic underperformance in individual African Americans can be caused by the introduction of a negative stereotype (Steele, Aronson 1995). Sociocultural theories that utilize levels of analysis and address race and power are useful to frame stereotype threat. Through a sociocultural lens, stereotype threat can be considered a cultural artifact derived over time by an intersection of macro level sociocultural patterns and individual academic functioning (Nasir, 2004).

Stereotype threat

When capable Black college students fail to perform as well as their [white] counterparts, the explanation often has less to do with preparation or ability than with the threat of stereotypes about their capacity to succeed (Steele, 1999, p. 68). Researchers have noted that observed differences in group performance make their way to individual performance in the form of lower expectations from teachers (Ferguson, 2003), disengagement (Ogbu, 2003), and self-fulfilling prophecies (Jussim, Eccles, & Madon, 1996). Many researchers have focused their attention on the effects that racial group differences have on individual African American performance in the form of negative stereotypes (Katz, Roberts, & Robinson, 1965; Steele & Aronson 1995).

In 1995 Aronson and Steele formed an experiment assessing the stereotype vulnerability of African American Students and its effect on academic performance as measured by the GRE. African American participants in the researchers study, expected to take a difficult ability-diagnostic test showed significantly greater cognitive activation of stereotypes about African Americans, greater cognitive activation of concerns about their ability, a greater tendency to avoid racially stereotypic preferences, a greater tendency to make excuses for their performance, and finally, a greater reluctance to have their racial identity linked to their questionnaires. Reflecting upon these initial results, the researchers concluded Stereotype threat caused the grades and test scores of negatively stereotyped students not to be commensurate with their ability (Walton & Spencer, 2009). Perhaps more importantly, the concept of “stereotype threat” which has saturated academic literature over the past 20 years, proposes that the mere threat of confirming the stereotype that African American cannot achieve at the level of European Americans can decrease an individual’s academic functioning (Steele & Aronson, 1995). For African Americans, experiencing negative stereotypes can create a chronic evaluative threat (Cook, Purdie-Vaughns, Garcia, & Cohen, 2012).

Aronson and Inzlicht (2004) examined a link between vulnerability to stereotypes, stereotype threat, and educational outcomes. African American and European American participants were given 10 questions from the GRE verbal portion. In addition, a measure of stereotype vulnerability, the RS-Race Scale, was given to the participants. The measure assessed “race-based rejection sensitivity, the tendency to anxiously expect, and the tendency to readily perceive and strongly react to rejection conceivably due to race” (p. 831). This measure was found to correlate with institutional mistrust, stereotype threat, and academic performance. The

participants were also asked to indicate the likelihood that their responses were correct from nine probability estimates from 20% to 100%. These researchers found that African Americans who were stereotype vulnerable knew less about their abilities than less vulnerable African Americans and non-stereotyped individuals such as European Americans. This finding indicated that stereotype vulnerability impairs knowledge of self by promoting an over calibration of capability. The researchers concluded “self-presentational” concerns or a “bravado response” may have led students to present themselves in a more favorable light (Aronson & Inzlicht, 2004).

Good, Aronson, and Inzlicht (2003) explored a long term intervention for stereotype threat designed for adolescents in middle school. In a mentoring program the researchers exposed an experimental group of minorities to the “expandable nature of intelligence” and the power of a student to bounce back after academic disappointment. Prior to the experiment and upon the conclusion of the mentoring sessions the students were given the Texas Assessment of Academic Skills (TAAS) test. At the end of the school year, the students were administered the TAAS test again. Good et al.’s findings corroborated with their hypotheses. Encouraging seventh graders to attribute poor academic performance to factors outside their own ability was found to enhance their performance.

Aronson, Fried and Good (2002) induced a sense of the malleability of intelligence for a group of African American college students in order to target stereotype threat. College students were encouraged to send messages to middle school aged youth. In the malleable pen pal condition, college students were instructed to encourage their middle school pen pals by telling them intelligence was not finite. This message was reinforced through video clips which

promoted the malleability of intelligence and the importance of passing the message on. College students in the control pen pal condition were also instructed to encourage their young pen pals, but they were told to give a different message. The non-pen pal condition did not receive any intervention via a pen pal. The grades of the European American and African American students in the experimental pen pal group improved. While a reported academic enjoyment indicated measured by questionnaire persisted for the African American students, over time academic enjoyment dissipated for the European American students.

Cohen and Walton (2007, 2011) explored the use of value affirmation as a protective factor for stereotype threat. Seventh grade students in an experimental condition were instructed to write 15-20 sentences at the beginning of the school year about two personal values. Seventh grade students in the control condition were instructed to write about values that were not important to them. The academic performance for students in the experimental condition surpassed the academic performance of those in the control condition and persisted for two years. African American students in the experimental condition received significantly higher grades than their peers in the control condition, lessening a gap in achievement by 40% (as cited by Yeager & Walton, 2011).

Stereotype threat not only involves the personal identity but also the social identity. Currently, the general consensus toward the application of stereotype threat is to approach it as a multi-threat concept in order to most accurately predict when and who threats will affect. Researchers should distinguish stereotype target according to personal identity and social identity, as these targets differ in responses and susceptibility. Personal identity threats reduce performance through the effect of negative stereotypes to one's personal image. Individuals

become concerned their actions will appear stereotypical which may causes arousal and underperformance. Social identity threats affect ones concept of the social group. Such a threat may undermined an individual's belief that their group is competent to address negative stereotypes thus causing arousal and underperformance (Wout, Danson, Jackson and Spencer, 2007).

Three processes involving imbalances between task domain, personal identity, and social identity have been identified to elicit stereotype threat (Schmader, John, & Forbes 2008). The first process occurs when one is performing in a given domain where a negative stereotype exists. Researchers typically manipulate this process by priming negative connections between one's group and performance domain. A second process that leads to an imbalance is when environmental cues cause one's social identity to be more salient than their personal identity. Such a process is related to stereotype threat experienced by minority groups performing in majority context. Lastly, an imbalance can occur when individuals derive worth from their personal identity when performing well on particular task in which their social group is known to underperform (Schmader, John, & Forbes 2008).

Stereotype threat theory comprises an expansive body of research, but the consolidation of stereotype threat's complex components is problematic. Nasir and Saxe (2003) frame the African American achievement gap in terms of the ways individuals from minority groups manage tension between ethnic and academic identities as they are situated and attempt to situate themselves in relation to cultural practices in school and in other communities. The researchers argue that an approach to ethnic achievement must consider shifts in positioning during face to

face interactions, shifts in positioning over time, and the capital associated with practices in the social history of communities.

Studies on stereotype threat have proposed interventions, and identified factors related to resilience (Aronson & Inzlicht, 2004; Good, Aronson, & Inzlicht, 2003). Unfortunately, many of the proposed interventions seem to lack true applicability as they do not appear to be situated in individuals' experiences. They propose messages which African Americans often times do not hear in life or not as often as dialogues on racial disparities. Factors related to resilience in the face of stereotype threat are useful but run the risk of becoming traits placed in people instead of commonalities between people and their culture (Gutiérrez & Rogoff, 2003). For example, studies addressing resilience also fall short in addressing stereotype threat because there has been little consideration of how an African American who initially responded to stereotype threat can learn over time through interactions within and between activity systems to overcome stereotype threat.

Prior interventions have not taken into consideration contextual factors, such as, the impact of curriculum, quality of instruction nor aspects of the objective environment (Spitzer & Aronson, 2015). Previous interventions may be useful in sterile conditions, but the real prevalence of these messages in society is limited, especially in long-term situations, where the threat is reoccurring and becomes chronic (Cook, Purdie-Vaughns, Garcia & Cohen, 2012). In comparison, identifying ecologically situated learning activities engaged by African Americans who have overcome stereotype threat, can provide examples of how that can be accomplished by African Americans in real life.

To address the issues of a more ecologically situated perspective on stereotype threat, Purdie-Vaughns, Steele, Davies, Dittmann, & Crosby (2008) found that setting alone can signal the degree of threat an individual experiences. The researchers found aspects of a setting can convey a message or cue that the treatment of an individual is contingent upon his group identity. Furthermore the researchers address the importance of considering aspects of the environment as functions of an African Americans connection to the setting.

Sense of belonging

The need for social belonging—for seeing oneself as socially connected—is a basic human motivation (Baumeister & Leary, 1995). Sense of belonging is a fundamental drive to obtain lasting positive interpersonal relationships (Baumeister & Leary; Osterman, 2000). Belonging is synonymous with relatedness (Osterman, 2000). Students who experience a sense of relatedness are more likely to have positive attitudes toward class assignments, exhibit more engagement in school, participate more in school activities and invest more effort in the learning process. Several studies have linked a sense of belonging to positive outcomes such as greater academic motivation (Goodenow & Grady, 1993; Anderman & Anderman, 1999). Male students may experience a sense of belonging differently than female students; experiencing sense of belonging to a lesser degree (Osterman, 2000; Goodenow, 1993). Students from underrepresented groups also have different experiences when it comes to sense of belonging (Goodenow & Grady, 1993; Hurtado & Carter, 1997).

Negative stereotypes are linked to a sense of belonging (Cook, Purdie-Vaughns, Garcia & Cohen, 2012). People who experience stereotype vulnerability may question their inclusion and value in an academic environment (Yeager & Walton, 2011). This uncertainty about belonging

can co-occur with perceived negative social-academic experiences (i.e., loneliness & criticism from an instructor). When this co-occurrence arises, students may perceived it as evidence that they do not belong in academic settings.

Cohen and Walton (2007) found that negatively stereotyped groups are less certain about their social bonds in professional settings and more likely to question their social belonging. Like stereotype threat, sense of belonging is sensitive to group representation in a setting. A decreased sense of belonging can occur in the absence of negative feedback or evaluation. Cohen & Walton (2007) manipulated sense of belonging by encouraging a group of students to believe that they were lacking friends in their field of choice. African American students under this condition reported a significantly lower sense of fit and potential in their field of study. In a second study Cohen & Walton (2007) found that sense of belonging or fit for African Americans is vulnerable to level of adversity experienced within a day.

A sense of belonging is particularly important for students as they begin college, due to the stress associated with academic pressure, loneliness (Spitzer & Aronson, 2015), structural differences in the environment and high expectations of autonomy (Wilson & Gore, 2013). In addition, students are experiencing the loss of some pre-college relationships. On college campuses, positive interactions with faculty and positive peers as well as academic integration and a commitment to obtaining a degree are all important components of academic success (Tinto, 1987). For college students, higher levels of student sense of belonging is associated with higher grades, higher perceived academic competence, increased self-worth and less externalizing behaviors (Pittman & Richmond, 2008) as well as self-efficacy, perceived value of a class tasks and class motivation (Freeman, Anderman & Jenson, 2007). Doubt concerning

belonging undermines student performance and health (Wilson & Gore, 2013; Walton & Cohen, 2007).

In order to enhance the academic performance of group of African American college students, Cohen & Walton (2011) devised a short intervention to promote sense of belonging. Students first read a fabricated report that surveyed senior students at their school. The reported indicated that most students worried about whether they belonged in college during the difficult first year but grew confident in their belonging with time. To internalize the message, participants wrote an essay describing how their own experiences in college echoed the experiences summarized in the survey. Participants turned their essay into a speech and delivered the speech while being video taped. African Americans in the control group showed no improvement in GPA from the fall of their freshman year through their senior year. By contrast, the GPAs of intervention-treated African Americans rose over time. By the students' senior year, the difference in achievement between European Americans and African American students was cut by 79%.

Stereotype vulnerable African Americans may become hyper-vigilant to environmental cues of associated with stereotype threats (Cook, Purdie-Vaughns, Garcia & Cohen, 2012). Over-time this hyper-vigilance destabilizes sense of belonging by making it contingent upon situation cues. At this point, stereotype vulnerability becomes chronic and self-reinforcing through perceptions of one's environment. For African Americans entering evaluative environments where they are underrepresented, such as college campuses, interventions for sense of belonging should take place early as possible and take into account perceptions of environment (Cook,

Purdie-Vaughns, Garcia, & Cohen, 2012; Purdie-Vaughns, Steele, Davies, Dittmann, & Crosby 2008).

Campus climate

Perceptions of racial tension are not created solely in the minds of specific individuals, but rather are rooted in a shared institutional reality (Hurtado, 1992, p.557). An individual's participation in a setting is dependent upon the varying historical situations that molded and continue to mold the social world in which they dwell (Holland & Lave, 2009). Structural properties of an environment are integral to shaping social interaction and individual attitudes and behaviors of actors within a system (Hurtado, 1992). The climate of a campus can be defined as current perception and attitudes of students regarding issues of diversity on campus (Rankin & Reason, 2005). This definition includes personal campus experiences and perception of institutional actions.

Tagiuri et al. (1968) stated that a setting's climate (or atmosphere) is synonymous with its *environmental quality*. According to Tagiuri et al., components of a setting's climate are its *Ecology* (items concerning physical locations/materials that are external to participants), *Milieu* (items that represent characteristics of individuals at the school), *Social System* (items that represent formal & informal patterns or rules of operating or interacting in the school) and *Culture* (items that reflect campus norms, values, belief systems concerning diversity). Utilizing a sociocultural lens, material artifacts would fall under this framework's ecology component, whereas, symbolic or ideational artifacts are a component of a setting's social system. Within a social system, ideational artifacts can represent a setting's rules of engagement when it comes to populations of people (Nasir, 2004).

Perceptions of racial climate differ by institution. The ethnic composition and selectivity of a university impact perception of campus climate (Hurtado, 1992). A great number of Predominantly White Institutions (PWIs) have a history of exclusionary practices (Milem, Clayton-Pedersen, Hurtado, & Allen, 1998). A college's historical legacy of exclusion can determine the prevailing climate and influence current practices (Hurtado, 1992). Specifically, historical remnants of segregated campuses continue to affect the climate for racial/ethnic diversity on college campuses through old policies that promote homogeneity and attitudes/behaviors that hinder interracial interaction (Milem, Clayton-Pedersen, Hurtado, & Allen, 1998). Research indicates that perceptions of a supportive environment reinforce positive learning and social outcomes (Rankin & Reason, 2005).

Perception of campus climates differ as a function of racial group. Students of color report campus climate experiences that are offensive, hostile or intimidating in nature and that interfere with learning to a higher degree than European American peers (Rankin & Reason, 2005) In their 2000 study, Ancis, Sedlacek, & Mohr found that African American college students reported more racial tension in residence halls than their European American peers, reported less faculty respect for diverse ethnic groups than their European American peers (less equitable treatment by faculty), more pressure to minimize overt racial-ethnic group characteristics (language, dress) to fit in and more pressure to conform to stereotypes concerning their race in order to fit in.

In a qualitative study, Johnson-Ahorlu, (2013) explored stereotypes and cultural climate of African American students, who voiced perceptions of stereotypes on their campuses and stereotype threat in their lives. Students reported a belief that faculty and peers viewed African

Americans as “intellectually incapable” and “undeserving of university admission” (p. 387).

Focus group participants expressed a pressure to not conform to stereotypes about African Americans and to demonstrate group worth.

Rankin and Reason (2005) found that African American students were more likely to disagree that their university promoted diversity and less likely to agree that curriculum represented contributions of people from underrepresented populations in comparison to their European peers. In addition, African Americans were significantly more likely to endorse the use of workshops on race, and mandatory classes and staff training as institutional strategies to address race issues. Overall, African Americans reported that institutional interventions would improve campus racial climate. This finding is consistent with previous research. Academic courses which address diversity are associated with a decrease in racial bias (Milem, 2003), the quality of interaction with diverse peers and a commitment to social action (Laird, Engberg, & Hurtado, 2005). Diversity workshops are associated with individuals that are open to diversity and an increased satisfaction with college. Rankin and Reason (2005) concluded that workshops, training, as well as fiscal and administrative interventions should be utilized to improve perceptions of campus climate. The researchers assert that faculty members are socializing agents on campus, setting intellectual and behavioral norms. Fiscal and administrative interventions may include recruitment and retention of faculty members of diverse groups. The research also indicated that the presence of faculty members of underrepresented populations has a positive impact on perceived racial climate and student outcome.

While previous research indicates the importance of analyzing campus climate, there is no link to cognitive processes of underrepresented groups. In addition, campus climate differs

per context, therefore, exploration should occur with consideration of setting. In order to fully analyze academic concerns faced by underrepresented populations, it would be beneficial to integrate campus climate with research on cognitive processes, such as stereotype threat in specific environments.

Rationale

Increases in college enrollment during the 1990's have not lead to equivalent campus experiences for African American college students (Ancis, Mohr, & Sedlacek, 2000; Rankin & Reason, 2005). The academic difficulties experienced by African American students, within educational systems in the United States, remains one of the most perplexing and pressing concerns within educational systems in the United States (Rovai, Gallien Jr, & Wighting, 2005). Extensive research has indicated that stereotype threat is a factor that limits academic performance for African Americans (Steele & Aronson, 1995; Aronson & Inzlicht 2004; Walton & Spencer, 2009). In spite of sustained efforts, interventions have been largely ineffective as evident by the persistence of the differences at all achievement levels (Rovai, Gallien Jr & Wighting, 2005). In order to provide interventions that are ethically and culturally relevant, information regarding the perspectives of diverse students is needed (Ancis, Mohr, & Sedlacek, 2000). These perspectives are situated in and inseparable from their socio-historical context (Holland & Lave, 2005).

Previous research has not formally analyzed the relationship between stereotype threat and sense of belonging, but there are indications that these two variables are connected. An impaired sense of belonging in academic situations is believed to accompany stereotype threat (Steele, 1997). Student sense of belonging has been tied to stereotype threat for African

Americans through interventions involving correcting faulty attributions about environmental cues and providing affirmation in non-affirming environments (Yeager & Walton, 2011; Cohen & Walton 2011). Furthermore research indicates that a sense of belonging is impacted by environmental cues within a setting (Walton & Cohen, 2007). Environmental cues such as racial composition, are also components of a campus' climate (Reason & Rankin, 2005; Hurtado, 1992).

Prior research has not explored the campus climate of colleges and universities, in the context of stereotype threat, even though studies indicate that environmental settings impact stereotype threat (Purdie-Vaughns, Steele, Davies, Dittmann, & Crosby, 2008) as well as a sense of belonging (Cook, Purdie-Vaughns, Garcia & Cohen, 2012). Campus climate involves perceptions of attitudes and actions of campuses with regards to diversity (Rankin & Reason, 2005). African American students report campus experiences that include a lack of support and unreceptive campus environments (Rankin & Reason, 2005); especially in Predominantly White Institutions (Milem, Clayton-Pedersen, Hurtado, & Allen, 1998). Male African American students are more susceptible to differences in academic experiences; indicated by decreased rates of academic outcome measures (i.e., four year graduation rate and first year GPA).

As discussed above, the cultural context or climate has implications for the social outcomes of students; therefore cultural climate is an important construct for higher education research and policy (Rankin & Reason, 2005). Campus climate may moderate a relationship between perceptions of stereotype threat and sense of belonging. A moderator is a variable that affects the direction and/or strength of the relation between predictor/independent variable and a criterion/dependent variable (Baron & Kenny, 1986). If this is the case, interventions that target a

setting's climate may lessen the strength of the relationship between perceptions of stereotype threat and perceptions of belonging. The association between stereotype threat, sense of belonging and campus climate should be analyzed in order to identify factors that can inform future interventions and improve the campus experience of African American college students attending predominately white institutions.

Hypotheses

H₁: There will be a significant negative relationship between self-reports of stereotype vulnerability and sense of belonging among African American college students at a predominately white institution.

H₂: The strength of the relationship between self-reports of stereotype vulnerability and sense of belonging among African American college students at a predominately white institution will be significantly moderated by the addition of perceptions of campus climate, with a decrease in the strength of the relationship.

H₃: There will be significant differences on self-reports of stereotype vulnerability, sense of belonging and campus climate between African American female students African American and male students at a predominately white institution. Specifically, male students will report significantly higher levels of stereotype vulnerability and lower levels of campus climate and sense of belonging than female African American students.

CHAPTER III

METHODOLOGY

The overarching purpose of this study was to examine the contextual perceptions African American college students at predominately white institution. Specifically, this research examined the relationship between stereotype vulnerability, sense of belonging and campus climate among African Americans at a predominately white institution in the south. This chapter describes the research design and analysis, the targeted population, data collection process and the measures utilized.

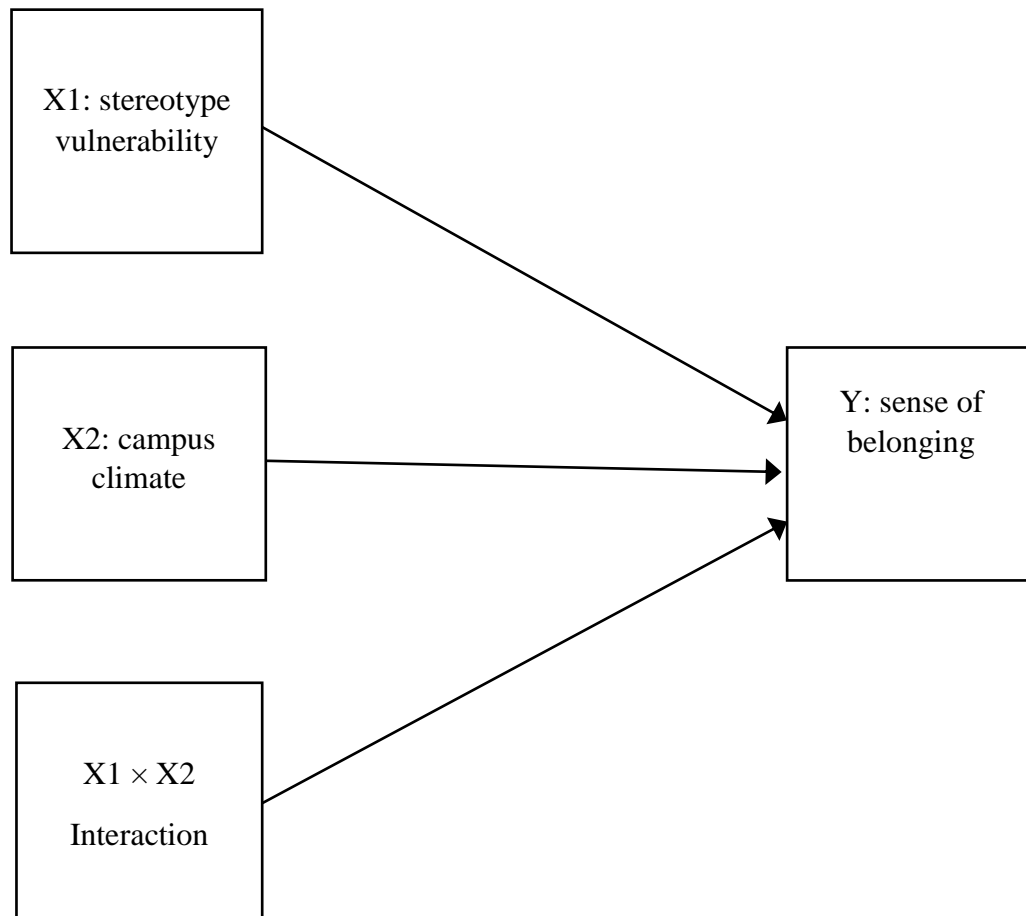
Research Design and Data Analysis

This quantitative study is correlational and cross-sectional in nature. In an effort to document the link between stereotype vulnerability, sense of belonging and campus climate for African American students attending a predominately white institution in the southeast of the United States, data entered into the online survey software, Qualtrics, was exported into the Statistical Package for Social Sciences (SPSS). Pearson's product-moment correlation statistics were used to assess the relationship between stereotype threat and sense of belonging, between stereotype vulnerability and campus climate, and between sense of belonging and campus climate. Hierarchical linear regression analysis was used to assess the degree to which campus climate moderates the relationship between sense of belonging and stereotype threat (see Figure

I). A MANOVA assessed differences concerning stereotype vulnerability, sense of belonging and campus climate between African American female and male college students.

Figure I

Moderator Model Utilizing Hierarchical Linear Regression



Study Participants

All participants were students enrolled at The University of North Carolina at Chapel Hill (UNC-CH) who self-identified as African American. Participants included current undergraduate and graduate students, over the age of 18. The sample population included one hundred and two male and female students.

Setting history and context. The university used in this research study has an overall population of approximately 29,000 graduate and undergraduate students (UNC-CH Diversity & Multicultural Affairs, 2014-2015). The racial composition of the targeted setting indicates a downward trend of enrollment rates of African American students in the past five years. In this setting, 8.5% of undergraduate students and 7.4% of graduate students are African American. The four year graduation rate is 81% for black females and 61% for black males. The university average four year graduation rate is 85.5% for females and 77% for males. African American faculty members represent 5.3% of faculty of the overall faculty population. On the campus of UNC-CH differences in academic attainment can be viewed in statistics concerning male African American students.

At times, physical structures (or artifacts, using sociocultural terminology) in the environment of UNC-CH are catalysts for African American students to express perceived differences in their experiences on campus. Examples of these structures are the *Silent Sam* statue, the *Student Body* sculpture, *Carolina Hall* (formerly known as *Saunders Hall*) and the *Unsung Founders* memorial (UNC University Libraries, 2017). Silent Sam was erected in 1913 as a memorial to the 321 alumni who lost their lives in the American Civil War and all students who joined the Confederate States Army. Since 1913, Silent Sam has been a source of

frustration for the Black students attending UNC-CH. The *Student Body* was created by Julia Balk in October of 1990. It was installed in front of Davis Library. After the sculpture's installation, UNC-CH students expressed disapproval of some of the statues, which they believed promoted racial and gender stereotypes. The work consisted of a group of seven bronze figures, including an African American male figure twirling a basketball on his finger, an African American woman balancing a book on her head, an Asian American women carrying a violin, and a white woman holding an apple and leaning on her male companion's shoulder. *Saunders Hall* (now *Carolina Hall*) was a building on campus named after William Saunders, a UNC graduate and trustee who was secretary of state in North Carolina from 1879 to 1891. Saunders was also a Klu Klux Klan member. Student protests prompted the renaming of the building in 2015. The *Unsung Founders* memorial was commissioned by the 2002 senior class at UNC-CH, in order to honor the black slaves and freed men who contributed to the building of UNC-CH. All four of these artifacts have promoted a dialogue and at times protests concerning race and culture. In addition, these structures impact the social systems and activities within a setting.

Procedures

Prior to conducting this research study, the primary researcher submitted the proposal for ethical review by the university's institutional review board (IRB). Upon approval, data collection began November of 2016. In order to ensure response of the target population, an undergraduate research assistant was hired to assist with recruitment. Prior to the data collection phase, the undergraduate research assistant completed the Collaborative Institutional Training Initiative (CITI), a web-based training concerning human subjects' research. Supplemental training and supervision concerning recruitment occurred through biweekly teleconference

meetings with the lead investigator. The undergraduate research assistant's role was to provide copies of the recruitment letters (see Appendix B) to members of campus minority organizations (ex. The Black Student Movement, historically black sororities and fraternities). In order to ensure confidentiality, only the principal investigator had access to data collected and any identifying information. The university undergraduate assistant's access to research study materials was restricted to the recruitment letter.

The recruitment letter referred students to a single questionnaire on the Qualtrics website by providing a web address. The Qualtrics software program is anonymous (individual responses cannot be traced to a respondent) and participation is voluntary. Once a student went to the website provided, they encountered the research study's consent form (see Appendix C). After a student indicated consent, by selecting they agree to participate, they were redirected to preliminary questions which asked students to indicate whether they were over the age of eighteen, their race/ethnicity, and whether they were a graduate or undergraduate students. Responses to the preliminary questions determined how the Qualtrics program proceeded. Those that indicated that they were under the age of eighteen and not African American were directed to a page thanking them for their time. Students that indicated that they were African American and over the age of eighteen were redirected to the structured questionnaire, composed of, measures assessing perceptions of stereotype vulnerability, sense of belonging and campus climate, as well as, demographic questions. Demographic questions concerned participants age, race, classification, gender, parental SES, racial composition of their high school, estimated grade point average and anticipated graduation time (4 versus 6 years) in order to provide relevant context and descriptive statistics.

The questionnaire did not include questions about the participants' names, email address, physical addresses, or IP addresses. To obtain information needed to distribute the raffle incentive and still keep survey responses anonymous, the survey responses and the contact information were stored in two separate locations. Two surveys were created; the questionnaire previously mentioned and a second “incentives” survey that collected the information needed to deliver incentives to participants. The average completion time for the questionnaire was twelve minutes. After completion of the questionnaire, participants indicated their willingness to enroll into a raffle for several monetary awards of fifty dollars. Qualtrics redirected willing participants to the separate survey within the Qualtrics program, to provide a name and a mailing address. Data collection occurred for eight weeks. After data collection, participants were randomly selected for the monetary raffles and gift cards were mailed to participants.

Measures

The Stereotype Vulnerability Scale (SVS). Stereotype Vulnerability Scale (SVS), developed by Spencer (2005) assessed the degree to which “college students report feeling threatened by a negative stereotype threat about their academic success”. As mentioned previously, stereotype threat is assessed through an experiment that makes a stereotype salient and measures differences in outcomes for the control group and experimental group for stereotyped and non-stereotyped groups. For this non-experimental study, the construct stereotype vulnerability was used as a proxy. The SVS contains eight item scale on a 7 point Likert style scale originally developed to measure stereotype threat, math ability and gender (Spencer, 1995). An example of an item is “My math success may have been easier for people

of my gender” (Barnard, Burley, Crooks, & Olivares, 2008). Steele, James, and Barrett (2002) have noted the internal consistency for this measure to be high as .84.

Dodson-Sims (2005) adapted this stereotype threat vulnerability measure for African Americans and academic achievement by changing terms indicating gender to terms indicating race and academic ability (i.e., “My academic success may have been easier for people of my race”). This adapted scale is also on a 7 point Likert Style scale. Dodson-Sims (2005) formed a pilot study of 37 randomly assigned African Americans. The eight items on this adapted measure were found to reflect two dimensions. Dimension one was labeled “negative personal experiences”. Questions such as “Professors expect me to do poorly in class because of my race” and “Some people feel I have less academic success because of my race” were included in this dimension. Dodson-Sims (2005) reported the internal consistency of this dimension was moderate (Cronbach’s $\alpha = .70$). The second dimension was labeled “racial group characteristics”. Questions such as “People of my race rarely face unfair evaluations in academic classes” and “My race does not affect people’s perception of my academic achievement” were included in this dimension. The internal consistency for this dimension was also found to be moderate (Cronbach’s $\alpha = .50$).

Psychological Sense of School Membership: Sense of belonging was assessed utilizing the Psychological Sense of School Membership Scale. Goodenow (1993) designed The Psychological Sense of School Membership Scale to assess the perceived sense of belonging or membership of adolescents in the secondary school setting. During this initial study, Goodenow (1993) administered the measure to 755 students in a suburban and an urban setting. English and Spanish versions of the survey were provided. Goodenow (1993) resulted in an 18 item survey

with good internal consistency (Alpha =.88). Questions include: “I feel like I am a part of my school” and “Teacher’s at my school respect me”. The Psychological Sense of School Membership Scale utilizes a 5-point scale (1 not true at all to 5 completely true).

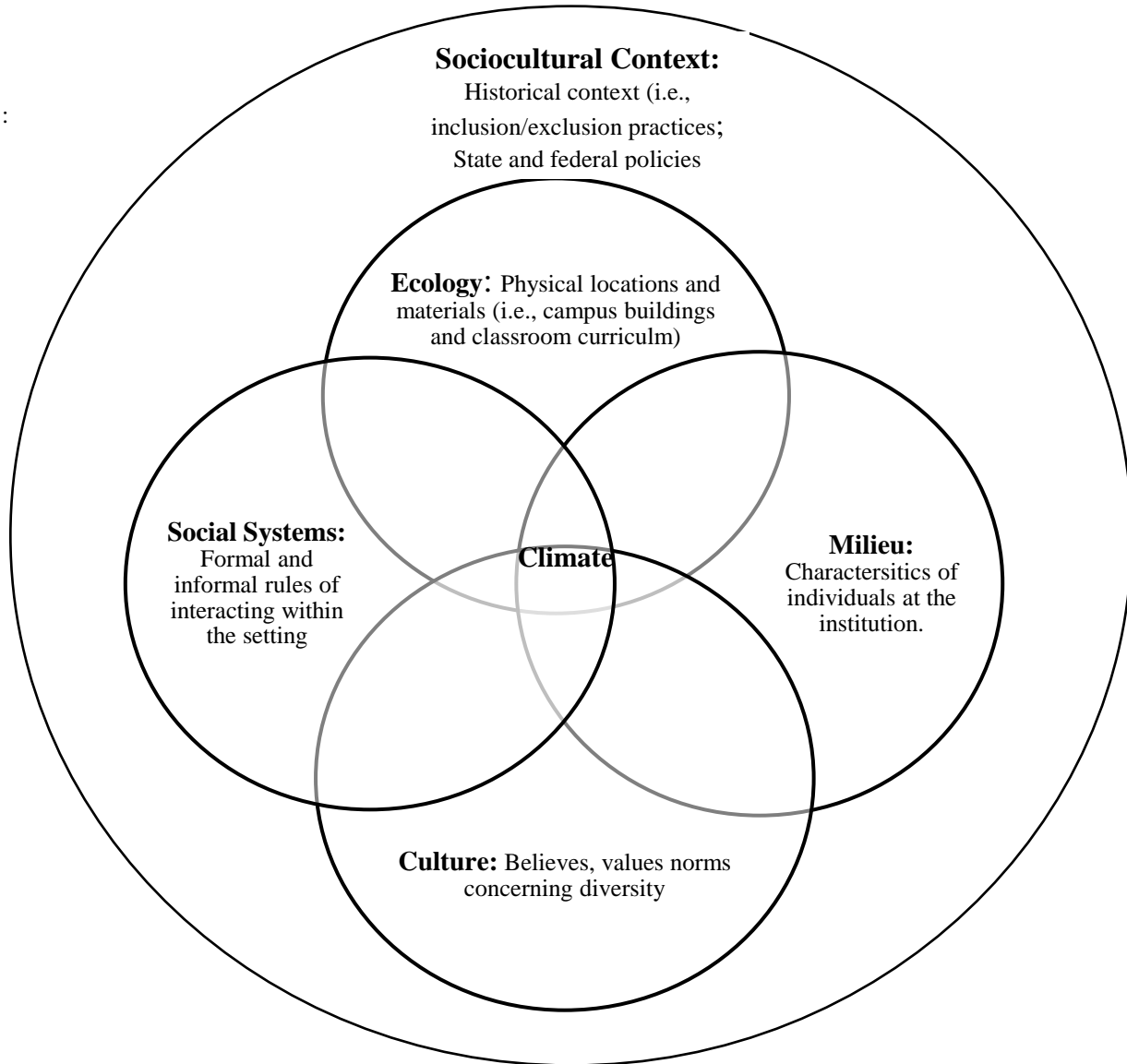
Subsequent studies have utilized the Psychological Sense of School Membership Scale at the high school level (Sanchez, Colon, & Esparaza, 2005; Shochet et al., 2007), as well as the university level (Freeman et al., 2008; Pittman & Richmond, 2007). In order to utilize the Psychological Sense of School Membership Scale with a college population Pittman and Richmond (2007) made slight modifications to the scale. For example, “Most teachers at my school are interested in me” was modified to “Most professors at [name of university] are interested in me”. Pittman and Richmond (2007) found the internal consistency to be good ($\alpha_{T1} = .91$, $\alpha_{T2} = .97$). Items 3, 6, 9, 12 and 16 of the scale were negatively worded so they were reverse coded that a high value indicates the same type of response on every item. The scores are summed into a total score. Higher scores indicate higher levels of sense of belonging.

Campus climate: The Climate Survey was adapted from the NC State University campus climate Survey. The NC State University campus climate Survey assesses student’s beliefs concerning the campus’s focus on diversity and inclusion, particularly for underrepresented populations. This instrument is normed on undergraduate and graduate students. A third of the overall survey was adopted for use in this study (i.e., sixteen items). Item selection was based upon a model of organizational climate proposed by Tagiuri, Litwin & Barnes (1968), who provided a taxonomy to select questionnaire items that assess a more objective view of campus climate from self-reports, one of which focuses on context. The items selected fall under four domains, *Ecology* (items concerning physical locations/materials that are

external to participants), *Milieu* (items that represent characteristics of individuals at the school), *Social System* (items that represent patterns or rules (formal & informal) of operating or interacting in the school) and *Culture* (items that reflect campus norms, values, belief systems concerning diversity). Figure II provides an illustration of how the study at hand conceptualizes campus climate through the lens of Tagiuri, Litwin & Barnes (1968).

Ecology is synonymous with the sociocultural term, *material artifact*. An example of a question under the domain *Ecology* includes “Of all the courses you have taken at [insert university name], how many have had diversity issues clearly integrated into their content (e.g., diversity topics, scholarship by authors from diverse populations, examples from a global perspective, etc.)” An example of an item under the domain *Milieu* “While at [insert university name], how many classes have you taken that were taught by an instructor of a race/ethnicity different than your own?” *Milieu* would also represent a material artifact. Within sociocultural theory, the *Social System* and the *Culture* of a setting are *ideological artifacts*. An example of an item under the domain *Social System* includes “How likely is it that you would actually get in touch with staff Counseling and Psychological Services (CAPS) if you thought you might need some kind of assistance from them, or if someone suggested that you get in touch with them? An example of an item under the domain *Culture* includes “How important is it to you that [insert university name] holds diversity as one of its essential values?” The *Social System* and *Culture* (ideological artifacts or tools) can hinder or promote activities (i.e., in social cultural theory, social interactions including personal, interpersonal and community activities) within a setting. A summary score will be derived from summing all dimensions.

Figure II
Campus Climate Model



CHAPTER IV

RESULTS

This study examined the relationship between perceptions of stereotype vulnerability, sense of belonging and campus climate among African American students at a predominately white institution in the south. This chapter presents the data analysis, descriptive statistics and results found. As a preliminary step, the data was screened for normality and outliers, and reliability coefficients were determined. The data suggested no serious departures for normality with reference to skewness and kurtosis (see table 1). Descriptive statistics based on the variables were derived. Range, mean and standard deviation scores were computed for the stereotype vulnerability, sense of belonging and campus climate scales. Reliability coefficients were assessed for each measure. Analysis of Cronbach's alpha for the measures indicated good internal consistency; sense of belonging ($\alpha = .91$), campus climate ($\alpha = .84$), and stereotype vulnerability Scale ($\alpha = .78$).

Table 1: Means, Skewness and Kurtosis for Variables

Descriptive statistics						
Variable	N	Range	Mean	Std. Deviation	Skewness	Kurtosis
campus climate	93	129-255	198.81	21.31	-.488	1.27
stereotype vulnerability	102	11-54	36.43	8.11	-.258	.466
sense of belonging	102	36-90	61.40	11.99	.089	-.322

Expected Years to Graduate	93	1.00-2.00	1.09	.28	---	---
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Descriptive statistics were derived for major demographic characteristics of the sample population (see table II). One-hundred and thirty-one students began the survey, however, only One hundred and two responded with sufficient data for analyses. The majority of respondents (77%) were female students. Although ages ranged from eighteen to forty-nine, roughly sixty-two percent of participants were aged eighteen to twenty. The majority of respondents were in their junior year (31%), however, a substantial amount of respondents were in their freshmen (18%), sophomore (19%) and senior (21%) years. Eight percent of respondents were doctoral students. The majority of participants reported a middle-class upbringing (40%). Furthermore, the majority of respondents (31%) endorsed that they attended a high school where they were a different race than most students.

Table II: Participant Demographic Characteristics

Variable	N	%
Total Participants	102	100
Graduate Students	9	8.82
Undergraduate Students	93	91.17
Gender		
Male	23	22.55
Female	79	77.45
Age		
18-20	64	62.27
21-25	33	32.35
26-29	3	2.94
30-39	0	0
40-49	2	1.96
Classification/Degree Level		

Freshman	19	18.62
Sophomore	20	19.60
Junior	32	31.37
Senior	22	21.56
Doctoral	9	8.82
Socioeconomic Background		
Low Income	10	9.80
Working Class	31	30.39
Middle Class	41	40.19
Upper Middle Class	18	17.64
Upper Class/Wealthy	2	1.96
Racial/Ethnic Composition of High School		
All/nearly all students were the same race	22	20.75
Most students were the same race as participant	11	10.78
Half of students were the same race as participant	24	23.52
Most of students were a different race as participant	32	31.37
All/Nearly all students were a different race	13	12.74
GPA Ranges Reported by Undergraduate Participants		
4.00-3.50	24	25.80
3.49-3.00	35	37.63
2.99-2.50	25	26.88
2.49-2.00	8	8.60
Below 2.0	1	1.07

Hypothesis one proposed that there was a significant negative relationship between the perception of stereotype vulnerability and sense of belonging for African American college students at a predominately White institution (see table III). As predicted, the relationship ($r = -.577$, $p < .01$) between stereotype vulnerability and sense of belonging was significant and negative, suggesting that students who perceived higher levels of stereotype vulnerability, perceived lower levels of sense of belonging and conversely students who perceived lower levels of stereotype vulnerability perceived higher levels of sense of belonging. An association was also found between stereotype vulnerability and campus climate ($r = -.516$, $p < .01$), as well as, sense of belonging and campus climate ($r = .679$, $p < .01$).

Additional correlations were conducted to assess possible associations in the demographic information (see table III). GPA was found to be negatively correlated with stereotype vulnerability ($r = -.223$, $p < .05$) and positively correlated with sense of belonging ($r = .268$, $p < .05$). Respondents who perceived higher levels of stereotype vulnerability self-reported lower GPA levels. On the other hand, respondents who perceived higher levels of sense of belonging were more likely to report higher GPA levels. A point-biserial procedure was run to assess relationships between gender and the primary variables as well as demographic variables. A positive correlation was found for gender and stereotype vulnerability ($r = .288$, $p < .01$). A negative correlation was found for gender and sense of belonging ($r = -.308$, $p < .01$). Male participants were coded as one and female participants were coded as two; therefore this indicates that women were reporting higher levels of stereotype vulnerability and lower levels of sense of belonging than men. Higher scores on the *Expected Years to Graduate* demographic question meant more years to graduate (Question 6; 1=4 years, 2= 5 years, 3= 6 years). A positive correlation was found between years to graduate (four years vs. five and six) and gender ($r = .280$, $p < .01$). Male participants were more likely to report additional years to graduation. This is consistent with university data concerning graduation rates for males and females. A positive correlation was also found for expected years to graduate and estimated GPA (Question 5; 1= 4.00-3.50, 2= 3.49-3.00, 3= 2.99-2.50, 4=2.49-2.00, 5= Below 2.0); indicating that respondents graduating within a lower number of years (e.g. within four years) were more likely to have higher self-reported GPAs ($r = .371$, $p < .01$). Age was found to be positively correlated with classification; older respondents were more likely to report higher classification levels and younger respondents were more likely to report lower classification levels.

Table III: Summary of Correlations for Variables

Variables	SV	SB	CC (U)	Gender	Socio- economic background	Classification	Age	Expected Yrs. to Graduate	GPA
Stereotype Vulnerability (SV)	1								
Sense of Belonging (SB)	-.577**	1							
Campus Climate (Undergrad)	-.516**	.679**	1						
Gender	.288**	-.306**	-.167	1					
Socio- economic background	-.025	.168	-.015	.098	1				
Current Classification	.095	.060	-.139	.083	.158	1			
Age	-.084	.105	-.003	.113	.091	.666**	1		
Expected Yrs. to Graduate	.009	.136	.030	.280**	.192	.069	-.034	1	
GPA	-.223*	.268*	-.044	.033	.230*	-.103	-.181	.371**	1

**, Correlation is significant at the 0.01 level (2-tailed).

*, Correlation is significant at the 0.05 level (2-tailed).

Hypothesis two stated that campus climate moderated the relationship between stereotype vulnerability and sense of belonging among African Americans college students at a Predominately White Institution. A hierarchical multiple regression analysis was conducted to test hypothesis two with sense of belonging as the dependent variable (see table IV). In the first step, stereotype vulnerability accounted for a significant amount of variance (36 %) in sense of belonging, $F(1, 83) = 46.13$, $p < .001$. Campus climate was added to the regression model, which accounted for a significant portion of variance (57%) in sense of belonging, $F(2, 82) = 54.58$, $p < .001$. Next, the interaction term between stereotype vulnerability and campus climate was added to the regression model, to test the moderating role of campus climate in predicting

sense of belonging. This term did not account for a significant proportion of the variance in sense of belonging $F(1, 81) = 1.49, p = .227$. Campus climate did not moderate the relationship between stereotype vulnerability and sense of belonging.

Table IV: Hierarchical Regression Analysis Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.598 ^a	.357	.349	10.19054	.357	46.129	.000
2	.756 ^b	.571	.561	8.37552	.214	40.871	.000
3	.758 ^c	.575	.559	8.38825	.004	.751	.389

a. Predictors: (Constant), stereotype vulnerability
b. Predictors: (Constant), stereotype vulnerability, campus climate (Undergrad)
c. Predictors: (Constant), stereotype vulnerability, campus climate (Undergrad), stereotype vulnerability X campus climate

Hypothesis three proposed that there would be significant differences in the perceptions of stereotype vulnerability, sense of belonging and campus climate between female and male African American students at a Predominately White Institution. A one way Multiple Analysis of Variance (MANOVA) was conducted (see table IV). The multivariate result was significant for gender, Pillai's Trace = .12, $F = 3.53, df = (3, 81), p = .018$, indicating differences in scores for stereotype vulnerability, sense of belonging, and campus climate between male and female students. The univariate F tests showed there was a significant difference between males and females for Stereotype vulnerability, $F = 7.97, df = (1, 83), p = .006$. Descriptive statics show that mean stereotype vulnerability scores were higher for females (37.8) than males (32.00). The univariate F tests showed there was a significant difference between males and females for sense of belonging, $F = 8.46, df = (1, 83), p = .005$ with mean scores for males on sense of belonging being 68.00, and for females being 59.05. The F test for gender differences on campus climate

was not significant with mean scores for males being 196.83 and 205.18 for female students reflecting the lack of differences in their perceptions of campus climate.

Table V: MANOVA Summary for Gender Differences among Stereotype Vulnerability, Campus Climate and Sense of Belonging

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Gender	stereotype vulnerability	514.494	1	514.494	7.969	.006**	.088
	Sense of belonging	1239.883	1	1239.883	8.456	.005**	.092
	campus climate	1514.156	1	1514.156	3.289	.073	.038

*p<.05, ** p<.01

CHAPTER V

DISCUSSION

The focus of this research study was to examine relationships and an interaction between stereotype vulnerability, campus climate and sense of belonging. As predicted, a negative relationship was found between student sense of perceived stereotype vulnerability and perceived campus climate at the university. In addition, a positive association was found between perceived campus climate and student perceptions sense of belonging. However, the relationship between student perceptions of sense of belonging and stereotype vulnerability was not influenced by the campus climate of the university. Interestingly, gender differences were found in perceptions of stereotype vulnerability and sense of belonging but not campus climate. Contrary to the predictions of this research study, female participants reported experiencing stereotype vulnerability to a greater degree and a sense of belonging to a lesser degree than male participants. Chapter five, expounds these findings, explores implications for universities, discusses limitations of the study, and concludes with future areas of research.

The results of this research study support Hypothesis one; a statistically significant negative relationship was found between student perceptions of stereotype vulnerability and sense of belonging. African American students vulnerable to a stereotype concerning their academic performance are less likely to feel as though they belong in rigorous academic settings. Students who have experienced extensive situations of perceived threat (i.e., critical teacher feedback, peer slights or micro-aggressions, and poor grades) become hyper-vigilant to these

environmental cues and perceive them as an indication that they do not belong in the university setting (Purdie-Vaughns, Steele, Davies, Dittmann & Crosby, 2008). A practical example of this is a student of a stereotyped group who receives a poor grade on a paper and attributes the teacher's feedback to their lack of fit in the domain assessed or the teacher's disinterest in their ability. With increased perceptions of stereotype vulnerability, critical feedback and evaluation become threats and indicative of a hostile environment, instead of opportunities for challenge and growth (Cook, Purdie-Vaughns, Garcia, & Cohen, 2012). This may lead to periods of *disengagement* (i.e., the immediate withdrawal from performing tasks within an academic domain) and eventually *disidentification* (i.e., progressively placing less importance on one's performance within an academic domain); thus narrowing of future career paths for African American students (Woodcock, Hernandez, Estrada & Schultz, 2012). Disidentification and disengagement are both self-protective strategies; employed to place distance between a student's self-concept and their performance on a stereotyped area (i.e., academic domain for African American students).

An important finding of this study was that, the strength of the relationship between stereotype vulnerability and sense of belonging was not found to vary as a function of campus climate (Hypothesis 2). However, associations were found between student perceptions of sense of belonging, stereotype vulnerability, and campus climate. African American students that are exposed to a positive climate may perceive that they are less vulnerable to negative stereotypes about their race. In fact, students exposed to negative stereotypes about their race may not internalize negative perceptions if the overall environment is perceived to be supportive (i.e., a university wide commitment to diversity that can be viewed in curriculum, programming and the ethnic/racial composition of students, faculty and staff). Forty percent of students in this

research study reported that few or none of their courses clearly integrated diversity into course content (i.e., diversity topics, authors of diverse populations, global perspectives). Through a sociocultural lens, this is an indication that the environment lacks appropriate material and ideological artifacts, which can hinder activities or interactions within systems. Environmental factors, that comprise an institution's climate, can invoke a sense of threat by making the stereotype more salient. A number of environmental factors have been identified that make stereotypes more salient. One of these factors is token status, if a student is one of few members of a stereotyped group in a setting (Sekaquaptewa & Thompson, 2003; Steel & Aronson, 1995). Another factor is Identity Salience, defined as highlighting that a student is a member of the stereotyped group, for example, documents requesting that a student provide their race. An additional factor is when an evaluation is in the stereotyped domain for the stereotyped group (Aronson, Fried & Good 2002; Steele & Aronson, 1995). For example, there is a perception that women underperform in science, technology, engineering and mechanical (STEM) fields, therefore; stereotype threat can arise for women when they are assessed in STEM subjects. If the individual assessing the student is not a member of the stereotyped group, stereotypes concerning the subject area also become more salient. For example, women perform better on standardized math tests when their proctors are female than when their proctors are male (McGlone & Aronson, 2006; Shih, Pittinsky & Ambady, 1999).

The results of the present study did not support Hypothesis 3, which proposed that male students would report increased stereotype vulnerability and decreases in campus climate and sense of belonging. The self-reported perceptions of stereotype vulnerability, campus climate and sense of belonging among male and female participants were significantly different.

However, females, but not males reported higher levels of stereotype vulnerability and lower levels of perceived campus climate and sense of belonging. One explanation for this finding is the impact of intersecting identities (Purdie-Vaughns & Eibach, 2008). African American women represent a marginalized group nestled within a stigmatized group. This may heighten their susceptibility for stereotypes. African American women confront both gender and racial stereotypes concerning STEM and mathematic fields. (Schmader, 2002; Shapiro & Williams, 2012; Spencer, Steele & Quinn, 1999).

It is also possible that other variables account for differences in outcomes for male and female African American students seen at predominately white institutions. Male students may differ in individual characteristics, such as, college preparedness, indicated by pre-college GPA, SAT/ACT scores and previous classroom experiences (Allen, Robbins, Casillas & Oh, 2008; Combs, Slate, Moore, Bustamante, Onwuegbuzie, & Edmonson 2010). In addition, African American males in this research study represent a smaller proportion of the overall university population than African American females. This may factor into observed differences in academic experiences between female and male African American students in this research study.

Implications

Previous studies have explored ways to combat stereotype threat in laboratory settings. Few have implemented strategies on a larger scale and integrated them into the ecosystem of a university (Fischer, 2010). An approach that integrates strategies into several sections of the community (i.e., system wide, in classrooms and in social spheres) would systematically target

perceptions of sense of belonging and campus climate and stereotype vulnerability via a multi-level plan of action.

Within the university ecosystem, professors are vital agents for modeling campus expectations and disseminating belief systems of the campus community concerning diversity to students. Administrative/fiscal policies that prioritize the recruitment and retention of African American faculty members promote campus climate. Further, the presence of faculty of color is linked to positive perceptions of climate and student outcomes (Milem, 2003; Rankin & Reason, 2005). Institutional policies and university declarations should explicitly support racial/ethnic diversity and disavow racism by faculty, staff and students. Over a third of the participants in this research study reported experiencing inappropriate, stereotypical remarks from peers on campus. This can be targeted through mandatory workshops and classes on race/ethnicity (Rankin & Reason, 2005). Another way to promote climate through university policy is through institutional research (Hurtado, Griffin, Arellano, & Cuellar, 2008). Policy is informed by the on-going and systematic assessment of the campus climate of the university. Periodically releasing a synthesis of survey findings would indicate transparency and a commitment to diversity. In addition, a task force analyzing current policies on diversity/inclusion, racial discrimination and departmental level practices may prove to be vital in transforming an institution's climate. A diversity task force may also assess the effectiveness of current programs. For example, the summer reading requirement prior to enrollment at UNC-CH was created to promote an understanding of diversity, however, 46% of respondents in this study did not read the book assigned their freshman year.

Faculty members are socializing agents within a university that set intellectual and social norms (Rankin & Reason, 2005). Forging positive professor-student relationships foster an inclusive climate and promote sense of belonging. Classroom environments provide a space to explore effective communication strategies of different dialogues and challenging mechanisms of social development. Open and on-going dialogues on race and the importance of diversity are important to foster a positive campus climate and promote student sense of belonging (Milem, 2003; Rankin & Reason, 2005).

Classroom level strategies that target stereotype threat and sense of belonging also highlight the importance of a growth-mindset. A growth mind-set based approach emphasizes the normality of failure and the malleability of intelligence (Aronson, Fried, Good, 2002; Good, Aronson and Inzlicht, 2003; Dweck, Walton, & Cohen, 2014). Through this approach, students are encouraged to view critical feedback as a belief in their ability to meet high standards. In addition, success is not attributed to innate ability but effort, utilizing strategies and seeking help. Professors whom promote a growth-mind set, inform students that they perceive intelligence is malleable, regardless of the race/culture of a student.

Encouraging self-affirmation also mitigates stereotype threat and promotes a sense of belonging of students (Cohen, Garcia, Apfel & Master, 2006; Cohen, Garcia, Purdie-Vaughns, Apfel & Brzustoski, 2009; Shapiro, Williams, & Hambarchyan, 2013). As microcosms of our current society, universities are inherently evaluative and filled the inescapable stereotypes of mainstream culture. When stereotypes become salient, affirmation theory holds that reflecting other valued identities helps protect self-integrity and reduce outcomes of threat (Steele, 1988). Self-affirming strategies may increase a student's overall self-image as competent, effective, and

able to control important outcomes (Cohen & Walton 2011 & Fischer, 2010). Value-affirmation writing assignments and interactive projects remind negatively stereotyped students of the attributes they value in themselves. Research has confirmed that reflecting upon diverse, positive aspects of self reduces stress, helps negative effects seem less threatening and improves functioning (Yeager & Walton, 2011).

Limitations

Although this research study produced important finding on stereotype vulnerability, sense of belonging and campus climate, several factors limited the results. One limitation was the sample size, in particular, a limited number of male respondents. Participants were recruited through various African American student organizations and campus functions. It is possible that a disproportionate number of the members of these African American organizations are female students. Another limitation was the lack of information concerning individual variables that may be associated with stereotype vulnerability and sense of belonging. Such variables include college preparedness (Allen, Robbins, Casillas, & Oh, 2008), parental SES and first generation college status (Harackiewicz et. al., 2014). While information on parental SES was collected for descriptive statistics, a limited small size in each SES background (i.e., low income, working class, middle class, upper middle class, wealthy), prevented the adequate exploration of parental SES in this study. Parental SES impacts academic experience through both stereotype threat and sense of belonging (John-Henderson, Rheinschmidt, Mendoza-Denton & Francis 2014; Jury, Smeding, Stephens, Nelson, Aelenei & Darnon, 2017).

A third limitation of this study pertains to the design and analytic approach. Correlation not does not equal causation, therefore, no causal statements can be made concerning the

relationships among stereotype vulnerability and campus climate and sense of belonging. In addition, this research study did not take into account socio-historical context nor history as a confounding variable. A historical event, unrelated to the aims of the current study, occurred during the study period. Data collection began November 11th, 2016, three days after the 2016 presidential election. Differences in voting were seen across educational attainment, age, race and gender. Ninety-five percent of Black women in North Carolina voted for the losing candidate, Hillary Clinton (CNN Politics, 2016). Eighty-six percent of all Black voters were aged eighteen to thirty. The same age range as approximately ninety-eight percent of this research study's sample population. This indicates that a substantial number of female participants may have voted for Hilary Clinton. In addition, Election Day polls indicated that seventy-six percent of Black women reported that they were "scared" of a "Trump win". This was higher than any other group, with fifty-six percent of Black men, thirty-four percent of White women and twenty-six percent of white males reporting the same fear. Were gender differences between African American males and females inflated by the election results?

One of the most informative aspects of this study was differences found between male and female African American students with regards to perceptions of stereotype vulnerability and sense of belonging. These findings provide several areas of future research. Studies could tap into mechanisms for enhancing academic outcome for male and female students. There is a lack of research concerning differences in stereotype threat among African American female and male students. Research could explore gender differences in pre-college factors, such as college preparedness variables (i.e., number of Advanced Placement courses, pre-college grades and

SAT scores), parental engagement, or college expectations, which may hinder or promote academic experiences.

Future Directions

Group differences in the perceived campus climate, among classification levels (i.e., freshman, sophomore, junior, senior) at the university, could be explored to assess whether chronic threat (years of evaluation, critical feedback and negative stereotypes) strengthens the negative association between stereotype vulnerability and sense of belonging. Do underclassmen (freshmen and sophomores) have lower levels of stereotype vulnerability and higher levels of sense of belonging than upperclassmen (juniors and seniors)? Furthermore, qualitative studies exploring campus climate would provide a richness to the results of this study through obtaining the voices of African American UNC-CH students. Focus groups with African American students may identify themes with regards to concerns about toxic environmental factors, such as, negative peer interactions and perceptions of university statements on diversity. Classroom level stereotype vulnerability studies, could assess the generalizability of laboratory interventions to real world settings. These studies may lead to research assessing scaling up classroom level interventions, to deter Stereotype threat, campus wide.

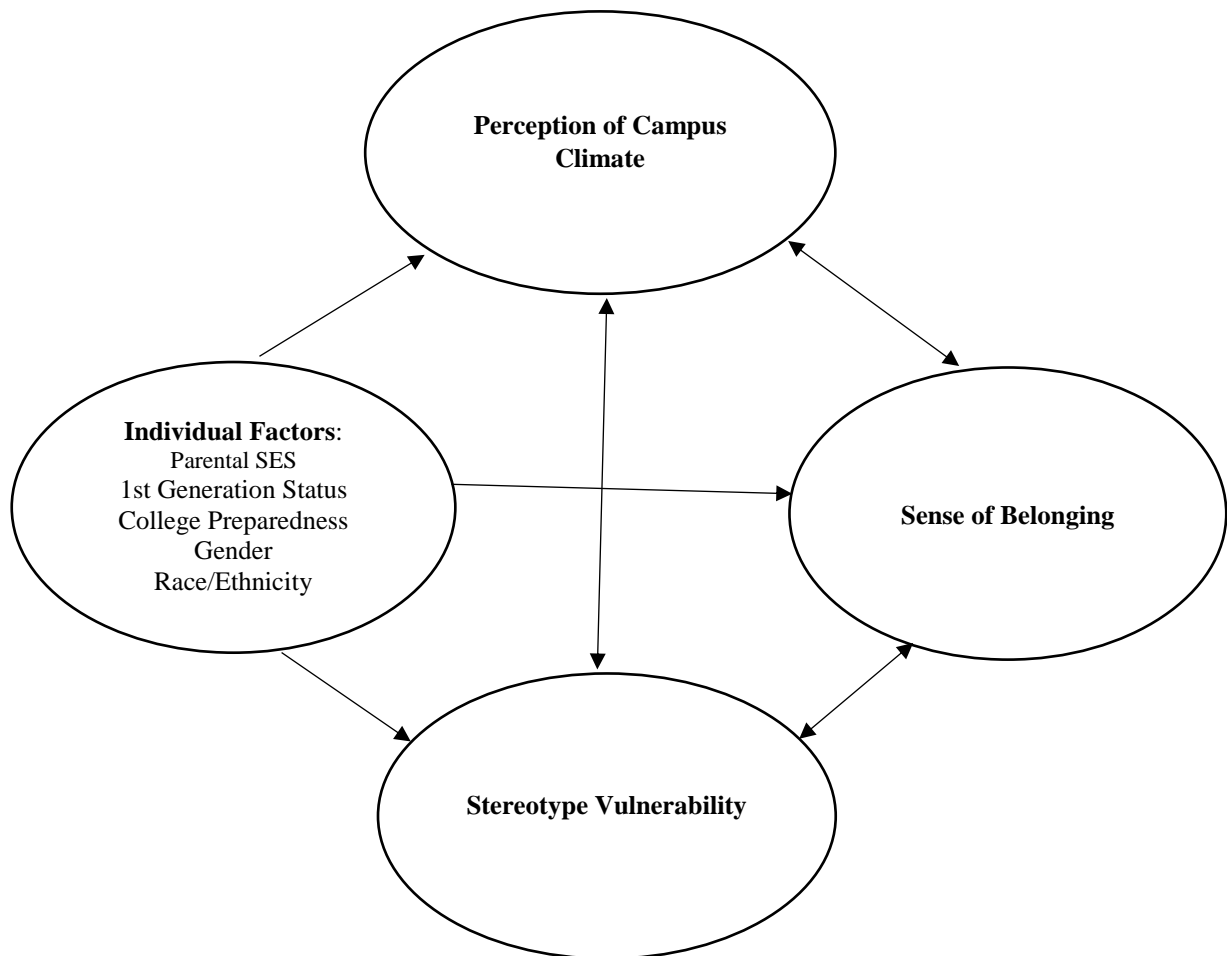
Conclusion

The strength of this study was its use of sociocultural theory; a framework which removes the focus from deficits in an individual to observing history, social systems, interactions and artifacts and tools available to examine stereotype vulnerability and sense of belonging. Under this ecological lens, the perceptions of African American students, resources and interactions within their setting was explored. Specifically, this quantitative study assessed

relationships among stereotype vulnerability, campus climate and sense of belonging for African American students through the collection of self-report measures. Gender differences were also analyzed for these three constructs. While student perceptions of the variable campus climate was not found to have a proposed moderating role for the relationship between student sense of stereotype vulnerability and sense of belonging, all three variables were found to be associated with each other. Higher levels of student stereotype vulnerability were associated with lower levels of both climate and sense of belonging. In addition, increased perceptions of campus climate were related to perceptions of belonging. These findings are consistent with previous research on stereotype threat and sense of belonging. Female African American students reported higher levels of stereotype vulnerability and lower levels of sense of belonging. This finding may provide insight into research on women and stereotyped domains, as well as theories of dual minority status. Additional research on the intersectionality of race and gender may elucidate mechanisms and protective factors with regards to stereotype vulnerability for African American female students. Multi-level campus and classroom wide interventions that integrate the constructs of stereotype vulnerability, sense of belonging and campus climate may be beneficial to enhance student perceptions, due to the connections found among these variables. A mixed methods research study, utilizing focus groups with African American students followed by quantitative methods to devise a measure, may provide a transformative approach. In mixed methods research, a transformative design is historically and culturally relevant to the specific population of interest, while capitalizing on the rigor, generalizability replicability of experimental research. Further research examining stereotype vulnerability and sense of belonging within an ecological framework may identify essential mechanisms for change and

thereby contribute to enhancing the academic experiences and outcomes of African American university students.

Figure III:
Revised Model Conceptual Model



Stereotype Vulnerability Scale (SVS)

1 2 3 4 5 6 7
strongly disagree strongly agree

1 2 3 4 5 6 7
strongly disagree strongly agree

1 2 3 4 5 6 7
strongly disagree strongly agree

1 2 3 4 5 6 7
strongly disagree strongly agree

1 2 3 4 5 6 7
strongly disagree strongly agree

1 2 3 4 5 6 7
strongly disagree strongly agree

1 2 3 4 5 6 7
strongly disagree strongly agree

1 2 3 4 5 6 7
strongly disagree strongly agree

Psychological Sense of School Membership

1) I feel like a part of UNC-CH.

Not at all true

Completely True

1

2

3

4

5

2) People at UNC-CH notice when I am good at something.

Not at all true

completely true

1

2

3

4

5

3) It is hard for people like me to be accepted at UNC-CH.

Not at all true

Completely True

1

2

3

4

5

4) Other students at UNC-CH take my opinions seriously.

Not at all true

Completely True

1

2

3

4

5

5) Most professors at UNC-CH are interested in me.

Not at all true

Completely True

1

2

3

4

5

6) Sometimes I feel as if I don't belong at UNC-CH.

Not at all true

Completely True

1

2

3

4

5

7) There is at least professor I can talk to at UNC-CH if I have a problem.

Not at all true

Completely True

1

2

3

4

5

8) People at UNC-CH are friendly to me.

Not at all true

Completely True

1

2

3

4

5

9) Professors here are not interested in people like me.

Not at all true

Completely True

- | | | | | | |
|--|---|---|---|---|-----------------|
| | 1 | 2 | 3 | 4 | 5 |
| 10) I am included in lots of activities at UNC-CH. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |
| 11) I am treated with as much respect as other students in UNC-CH. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |
| 12) I feel very different from most other students at UNC-CH. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |
| 13) I can really be myself at UNC-CH. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |
| 14) Professors at UNC-CH respect me. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |
| 15) People at UNC-CH know that I can do good work. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |
| 16) I wish I were in a different university. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |
| 17) I feel proud to belong to UNC-CH. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |
| 18) Other students at UNC-CH like me the way that I am. | | | | | |
| Not at all true | | | | | Completely True |
| | 1 | 2 | 3 | 4 | 5 |

Campus Climate Survey-Undergraduate Student

Q1 While at UNC-CH, how often have you had the following experiences?

	Very Often	Often	Sometimes	Seldom	Never
Attended events/hung out in the Student Union					
Participated in multicultural or ethnic activities on campus					
Met with your academic advisor					
Interacted with faculty during office hours or in other academic settings outside the classroom					
Participated in a research project with faculty					
Attended events/hang out in the Pit					

Q2 While at UNC-CH, how often have you interacted with students:

	Very Often	Often	Sometimes	Seldom	Never	Don't know
Who have a disability						
With a religious belief different from your own						

With a sexual orientation different from your own						
---	--	--	--	--	--	--

Q3 In the past year at UNC-CH, how often how you had the following experiences with a student of a different race/ethnicity than your own?

	Very Often	Often	Sometimes	Seldom	Never
Socialized Worked together in class on a small group activity or class project					

Q4 How likely is it that you would go to or get in touch with staff in the following offices at UNC-CH:

	Very Unlikely	Unlikely	Undecided	Likely	Very Likely
Counseling and Psychological Services (CAPS)					
UNC-CH Campus Police					
Offices of Scholarships and Financial Aid					
Student Health Services					
UNC Writing Center					
University Career Services					

Q5 How likely is it that you would go to or get in touch with staff in the following offices at UNC-CH:

	Very Unlikely	Unlikely	Undecided	Likely	Very Likely
Sonja Haynes Stone Center					
Accessibility Resources & Services (ARS)					
UNC LGBTQ Center					
Diversity & Multicultural Affairs Office (DMA)					
Carolina Women's Center					

Q6 Of the course you have taken at UNC-CH, how many have had diversity issues clearly integrated into their content (e.g., diversity topics, scholarship by authors from diverse populations, examples from a global perspective)?

- ☐ None
- ☐ Few
- ☐ Some
- ☐ Most
- ☐ All

Q7 To what extent do you agree with the following statement: The Carolina Summer Reading assignment, the summer prior to my first year at UNC-CH contributed to my appreciation or awareness of diversity issues. (freshman entering in 2011 read were asked to read 'Eating Animals' by Jonathan Safran Foer ; in 2012 'Shallows' by Nicholas Carr; 'Home' by Toni Morrison; in 2014 'The Round House' by Louise Erdrich

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Did not read the book

Q9 To what extent do you agree or disagree with the following statements as they relate to diversity at UNC-CH

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
<p>UNC-CH does a good job of articulating the values of diversity and inclusion</p> <p>The messages I am getting from campus leaders about diversity is consistent (e.g. University, College and Department Administration)</p> <p>UNC-CH provides an environment for the free and open expression of ideas, opinions, and beliefs.</p> <p>UNC-CH leaders appropriately distinguish between free speech and hate speech, and adequately respond to hate speech when it occurs on campus</p> <p>UNC-CH is a place to gain an understanding</p>					

about multicultural issues and perspectives It is easy to find information about diversity on the UNC- CH website					
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Q10 In general, how supportive do you think the UNC-CH campus environment is of the following groups of students:

	Strongly Supportive	Supportive	Neutral	Nonsupportive	Strongly Supportive
African Americans students					
Asian students					
Hispanic/Latino students					
Native American/Alaska Native students					
White students					
International students					
Female students					
Male students					
Transgender students					
Gay, lesbian, bisexual students					
Students with a disability					
Non-traditional students (i.e., "older" students)					
Students with children					

Q11 While a student at UNC-Ch, how often have you heard faculty/instructors make negative, inappropriate, or stereotypical statements related to:

	Never	Rarely	Occasionally	Often	Very Often
Disability status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gender or sexual identity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
immigration background	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Race/ethnicity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual orientation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socio-economic status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13 While a student at UNC-Ch, how often have you heard other students make negative, inappropriate, or stereotypical statements related to:

	Never	Rarely	Occasionally	Often	Very Often
Disability status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gender or sexual identity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
immigration background	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Race/ethnicity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Religion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sexual orientation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Socio-economic status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 While at UNC-CH, how many classes have you taken that were taught by an instructor of the same race/ethnicity as your own?

- ☐ None
- ☐ A Few
- ☐ Some
- ☐ Most
- ☐ All

Q16 While at UNC-CH, how many times have you had a roommate (either on-or off-campus that was of a race/ethnicity different than your own?

- ☐ Never had a roommate
- ☐ Never
- ☐ Once
- ☐ Twice
- ☐ Three or more times

Campus Climate Survey – Graduate Student

Q1 While at UNC-CH, how often have you had the following experiences?

	Very Often	Often	Sometimes	Seldom	Never
Attended events/hung out in the Student Union					
Participated in multicultural or ethnic activities on campus					
Met with your academic advisor					
Interacted with faculty during office hours or in other academic settings outside the classroom					
Participated in a research project with faculty					

Q2 While at UNC-CH, how often have you interacted with students:

	Very Often	Often	Sometimes	Seldom	Never	Don't know
Who have a disability						
With a religious belief different from your own						
With a sexual orientation						

different from your own						
-------------------------	--	--	--	--	--	--

Q3 In the past year at UNC-CH, how often how you had the following experiences with a student of a different race/ethnicity than your own?

	Very Often	Often	Sometimes	Seldom	Never
Socialized Worked together in class on a small group activity or class projects					

Q4 How would you rate the following?

	Excellent	Good	Fair	Poor	Not Applicable
Faculty support for attending conferences					
Faculty support for presenting at conferences					
The selection process for teaching and/or research assistant positions					
Access to your adviser/committee chair					

Q5 How likely is it that you would go to or get in touch with staff in the following offices at UNC-CH:

	Very Unlikely	Unlikely	Undecided	Likely	Very Likely
Counseling and Psychological					

Services (CAPS)					
UNC-CH Campus Police					
Offices of Scholarships and Financial Aid					
Student Health Services					
UNC Writing Center					
University Career Services					

Q6 How likely is it that you would go to or get in touch with staff in the following offices at UNC-CH:

	Very Unlikely	Unlikely	Undecided	Likely	Very Likely
Sonja Haynes Stone Center					
Accessibility Resources & Services (ARS)					
UNC LGBTQ Center					
Diversity & Multicultural Affairs Office (DMA)					
Carolina Women's Center					

Q7 Of the course you have taken at UNC-CH, how many have had diversity issues clearly integrated into their content (e.g., diversity topics, scholarship by authors from diverse populations, examples from a global perspective)?

- ☐ None
- ☐ Few
- ☐ Some
- ☐ Most
- ☐ All

Q8 To what extent do you agree or disagree with the following statements as they relate to diversity at UNC-CH

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
UNC-CH does a good job of articulating the values of diversity and inclusion					
The messages I am getting from campus leaders about diversity is consistent (e.g. University, College and Department Administration)					
UNC-CH provides an environment for the free and open expression of ideas, opinions, and beliefs.					
UNC-CH leaders appropriately distinguish between free speech and hate					

<p>speech, and adequately respond to hate speech when it occurs on campus</p> <p>UNC-CH is a place to gain an understanding about multicultural issues and perspectives</p> <p>It is easy to find information about diversity on the UNC-CH website</p>					
---	--	--	--	--	--

Q9 In general, how supportive do you think the overall campus environment is of the following groups of students:

	Strongly Supportive	Supportive	Neutral	Nonsupportive	Strongly Supportive
African Americans students					
Asian students					
Hispanic/Latino students					
Native American/Alaska Native students					
White students					
International students					
Female students					
Male students					
Transgender students					

Gay, lesbian, bisexual students					
Students with a disability					
Non-traditional students (i.e., "older" students					
Students with children					

Q10 In general, how supportive do you think your graduate program is of the following groups of students:

	Strongly Supportive	Supportive	Neutral	Nonsupportive	Strongly Supportive
African Americans students					
Asian students					
Hispanic/Latino students					
Native American/Alaska Native students					
White students					
International students					
Female students					
Male students					
Transgender students					
Gay, lesbian, bisexual students					
Students with a disability					
Non-traditional students (i.e., "older" students					
Students with children					

Q11 While a student at UNC-Ch, how often have you heard faculty/instructors make negative, inappropriate, or stereotypical statements related to:

	Never	Rarely	Occasionally	Often	Very Often
Disability status					
Gender or sexual identity					
immigration background					
Race/ethnicity					
Religion					
Sexual orientation					
Socio-economic status					

Q12 While a graduate student at UNC-Ch, how often have you heard other graduate students make negative, inappropriate, or stereotypical statements related to:

	Never	Rarely	Occasionally	Often	Very Often
Disability status					
Gender or sexual identity					
immigration background					
Race/ethnicity					
Religion					
Sexual orientation					
Socio-economic status					

Q13 While a graduate student at UNC-CH, how many classes have you taken that were taught by an instructor of the same race/ethnicity as your own?

- ☐ None
- ☐ Few
- ☐ Some
- ☐ Most
- ☐ All

Q14 While a graduate students UNC-CH, how many times have you had a roommate or housemate (either on-or off-campus that was of a race/ethnicity different than your own?

- ☐ Never had a roommate
- ☐ Never
- ☐ Once
- ☐ Twice
- ☐ Three or more times

Q15 Are any of your committee members of a different race/ethnicity than your own?

- ☐ Yes
- ☐ No
- ☐ Not Applicable

Demographic Information-Undergraduate

Q1 What is your gender?

- ☐ Male
- ☐ Female
- ☐ Transgender

Q2 What is your race/ethnicity?

- ☐ African American/Black
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Hispanic/Latino
- ☐ Native Hawaiian or Pacific Islander
- ☐ White-Non Hispanic
- ☐ Other

Q3 Do you have any of the following diagnosed disabilities or conditions?

- ☐ ADHD
- ☐ Autism Spectrum Disorders
- ☐ Blindness/low vision
- ☐ Deafness/hard of hearing
- ☐ Learning disability
- ☐ Orthopedic/mobility disability
- ☐ Psychological disability
- ☐ Prefer not to answer

Q4 How would you describe your socio-economic background when you were growing up?

- ☐ Poor or low income
- ☐ Working class
- ☐ Middle class
- ☐ Upper Middle or professional class
- ☐ Upper class or wealthy

Q5 Which of the ranges below correspond with your estimated GPA

- ☐ 4.00-3.50
- ☐ 3.49-3.00
- ☐ 2.99-2.50
- ☐ 2.49-2.00
- ☐ Below 2.0

Q6 How many years total do you expect it will take to obtain your current degree from UNC-CH?

- ☐ 4 years total
- ☐ 5 years total
- ☐ 6 years total

Q7 What is your current classification?

- ☐ Freshman
- ☐ Junior
- ☐ Senior
- ☐ Masters Student
- ☐ Doctoral Student

Q8 Which of the following best describes the racial/ethnic composition of the high school in which you graduated?

- ☐ All or nearly all the students were the same race/ethnicity as you
- ☐ Most of the students were the same race/ethnicity as your
- ☐ About half of the students were the same race/ethnicity as you
- ☐ Most of the students were a different race/ethnicity than you
- ☐ All or nearly all of the students were a different race/ethnicity than you

Q9 What is your age?

- ☐ 18-20
- ☐ 21-24
- ☐ 25-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50 and over

Demographic Information-Graduate

Q1 What is your gender?

- ☐ Male
- ☐ Female
- ☐ Transgender

Q2 What is your race/ethnicity?

- ☐ African American/Black
- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Hispanic/Latino
- ☐ Native Hawaiian or Pacific Islander
- ☐ White-Non Hispanic
- ☐ Other

Q3 Do you have any of the following diagnosed disabilities or conditions?

- ☐ ADHD
- ☐ Autism Spectrum Disorders
- ☐ Blindness/low vision
- ☐ Deafness/hard of hearing
- ☐ Learning disability
- ☐ Orthopedic/mobility disability
- ☐ Psychological disability
- ☐ Prefer not to answer

Q4 How would you describe your socio-economic background when you were growing up?

- ☐ Poor or low income
- ☐ Working class
- ☐ Middle class
- ☐ Upper Middle or professional class
- ☐ Upper class or wealthy

Q5 How many years total do you expect it will take to obtain your current degree from UNC-CH?

- ☐ 2-3 years total
- ☐ 4-5 years total
- ☐ 6 years total
- ☐ 7 years total

Q6 What is your current classification?

- ☐ Masters Student
- ☐ Doctoral Student

Q7 Which of the following best describes the racial/ethnic composition of the high school in which you graduated?

- ☐ All or nearly all the students were the same race/ethnicity as you
- ☐ Most of the students were the same race/ethnicity as your
- ☐ About half of the students were the same race/ethnicity as you
- ☐ Most of the students were a different race/ethnicity than you
- ☐ All or nearly all of the students were a different race/ethnicity than you

Q8 What is your age?

- ☐ 18-20
- ☐ 21-24
- ☐ 25-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50 and over

Q9 Which UNC-CH graduate department houses your program?

APPENDIX B: RECRUITMENT LETTER

Dear Student,

My name is Loren Wright and I am a doctoral candidate in the UNC-CH School of Education. I am conducting a research study in order to fulfill the requirements for my degree. You are being asked to take part in my research study. To join the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study by disconnecting the survey at any time, for any reason. I am interested in examining experiences of students at a predominately white institution in the southeast. The purpose of this study is to understand perception of Black students. I would like to request your participation in this research study.

If you agree to participate in this study, your consent will be indicated by your following the anonymous survey link provided and completing the questionnaire. It should take you approximately 15 minutes to complete the entire study. There are little to no risk involved in this study. For your participation, you will be entered voluntarily into a raffle for several monetary awards of \$50.

Should you have any questions or desire further information, you can contact me via email at lwright@live.unc.edu. This study has been approved by the Institutional Review Board (IRB) at the University of North Carolina at Chapel Hill (UNC-CH). If you have any questions about your rights as a research participant, or if you have any complaints or concerns, about this study, you may contact my committee chair, Rune Simeonsson, Ph.D. at rjsimeon@email.unc.edu or the IRB board at UNC-CH (919-966-3113 or by email to IRB_subjects@unc.edu).

Study link:

<http://tinyurl.com/jv7pwpq>

APPENDIX C: CONSENT

University of North Carolina-Chapel Hill Consent to participate in a research study Adult participants

Study of IRB No. _____

Date of the consent form version: 9/3/16

Title of the study:

Principal investigator: Loren Wright, M.A.

Department of the UNC-Chapel Hill: School of Education-School Psychology

Adviser: Rune Simeonsson, PhD

Phone Number of the contact of the study: rjsimeon@email.unc.edu

Email of the contact of the study: (919) 962-2512

What are some of the General issues that you should know about research studies?

You are asked to participate in a research study. Participation in this study is voluntary.

You may refuse to participate, or you can withdraw your consent to participate in the study, for any reason, without penalty.

Research studies are designed to obtain new information. It is possible that this new information will help people in the future. It is possible that do not receive any direct benefit by participating in this research study. There may also be risks associated with participation in research studies.

Details about this study examined below. It is important that you understand this information so that you can decide in the form based on the participation in this research study.

What is the purpose of this study?

The objective of this research study is to obtain information about experiences of students at a predominately white institution in the southeast. The purpose of this study is to understand perception of African American/Black students.

How many people will be participating in this study?

If you choose to participate in this study, will be one of approximately 200 students.

How much time will participate in this study?

Participation in this research study will take approximately 30 minutes of your time.

What will happen if you participate in this study?

At the end of this consent form, if you agree to participate in this study, click the continue button. If you do not agree to participate, close the window. Upon agreement, you will be directed to an approximately 30 minute survey. This survey will ask questions about your experiences as a student. At the end of the survey you will be asked to participate in the raffle. If you do not want to participate in the raffle press no. If you do want to participate in the raffle press yes. If you press no, the survey will end. If you press yes, you will be redirected to a separate survey to provide a name and address for delivery of the \$50, if your name is drawn. Names and addresses will be kept separate from survey responses and remain stored remotely, within the password protected Qualtric program. At the conclusion of the raffle drawing, all identifying information will be deleted.

What are the possible benefits for participating in this study?

The research is designed to benefit society by obtaining new knowledge. It can be expected to also benefit from their participation in this study using

What are the possible risks or discomforts involving participation in this study?

It is possible that there minimal psychological discomfort associated with this research study. These risk are associated with reflecting upon sensitive topics. There may be additional unknown risks, such as social discomfort. The privacy and confidentiality of this research project should minimize these concerns.

How will you protect your privacy?

The participants will not be identified in reports or publications on this study. The program used (Qualtrics) will assign a numerical code for each participant, therefore names will not be connected to survey responses. Responses will be stored in the password protected program. If I participant chooses to participate in the raffle, all identifying information collected for the reward are stored in the password protected program, separate from survey responses. Although there will be efforts to keep research records private, will occur that required by State or federal law to such records, including personal information, to be divulged. This is very unlikely, but if you ever ordered that they be revealed, UNC-Chapel Hill will take measures permitted by law to protect the privacy of personal information. In some cases, the information gathered in this research study could be examined by representatives of the University, sponsors of research or Government agencies such as quality control or safety purposes.

Will you receive something for participating in this study?

For your participation, you will be entered voluntarily into a raffle for several monetary awards of \$50.

Will it cost you something the participation in this study?

There is no charge for participating in this study.

What happens if you are a student from UNC?

You can choose not to participate in the study or discontinue their participation in the study before its completion at any time. This will not affect your academic career or their qualifications at the UNC-Chapel Hill. Not be offered nor will receive special consideration for participating in this research.

What if you are an employee of the UNC?

Participation in this research is not part of his duties at the University, and their refusal will not affect your employment. Not be offered nor will receive special considerations related to their employment by participating in this research.

What happens if want to ask questions about this study?

It has the right to ask and to answer you, any questions that you have about this research. If you have questions or concerns, they should please contact the researchers listed in the first page of this form.

What happens if you want to ask questions about your rights as a research participant?

All research carried out with human volunteers is examined by a Committee that is working to protect their rights and well-being. If you have questions or concerns about your rights as a research subject, you can be contacted, anonymously if you wish, with the Institutional Review Board (Committee of institutional review, IRB for its acronym in English) to the 919-966-3113 or by email at IRB_subjects@UNC.edu.

Agreement of the participant:

I have read the information provided above. I do not have questions at this time. By clicking continue, I agree to voluntarily participate in this research study.

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