

The Relation of Gender to Racial Discrimination Experiences and Achievement Among  
Black College Students

By

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## Dedication

I dedicate this dissertation to all of my ancestors who prayed to God, toiled long hours, willingly sacrificed, and endured much so that I might have the opportunities that they did not. If I enjoy any measure of success today, it is only because they cleared the way.

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## Abstract

The current study examines gender differences in the nature of racial discrimination experiences for Black college students and considers how different forms of discrimination may be relevant to achievement. Utilizing an intersectionality framework (Cole, 2009) this dissertation explores the possibility that as a result of their unique race-gender identities, Black men and women are likely to face qualitatively different forms of racial discrimination, and further, that these discrimination experiences relate differentially to achievement and adjustment outcomes.

Data for this study were drawn from a cross-lagged survey of 403 Black college students from three universities. Results of univariate and structural path model analyses indicate significant gender differences in the nature of racial discrimination experiences for Black students. Comparisons across four types of interpersonal discrimination events indicated that men and women were equally likely to experience racial hassles in which their intellect was devalued. This type of maltreatment was related to higher reports of stress, anxiety, and depression one year later. However, men were more likely than women to experience being treated with fear and suspicion and to be overtly harassed (e.g. being insulted, called names, etc.).

Gender differences in reports of discrimination also related to unique outcomes for men and women in the sample. In particular, experiences of fear/suspicious-based discrimination explained gender differences in achievement and mental health outcomes.

Men were more likely to experience fear/suspicion-based discrimination, which subsequently predicted lower grade point average and higher reports of stress.

These results suggest that there are important differences in the ways that Black men and women experience racial discrimination. Previous research solely examining the overall frequency of reported discrimination without regard to participant gender or the complex nature of discrimination events may not have adequately captured important nuances implicated in the achievement-related outcomes of Black students. Future research should more fully incorporate intersectional perspectives on the role of gender in race-related events in order to capture the complexity of experiences within social categories.

## **CHAPTER I**

### **Introduction**

The social context surrounding the education of Black students is, unfortunately, marred by a history of racial prejudice and discrimination. Despite advances made since the American civil rights movement, racial discrimination against Blacks continues to be prevalent on college campuses (Bonilla-Silva, Lewis & Embrick, 2004; Feagin, Vera, & Imani, 1996; Fisher & Hartmann, 1995). Black collegians must excel academically despite racially biased course content and racially insensitive instructors (Ervin, 2001; Nora & Cabrera, 1996; Steele, 1997; Steele & Aronson, 1995) and constantly confront negative stereotypes about their intellect (Brown & Dobbin, 2004).

Psychological studies examining the link between experiences with racial discrimination and academic outcomes have consistently illustrated that more frequent experiences of racial discrimination are related to lowered educational achievement and academic motivation for Black students. Using a longitudinal survey of Black adolescents, Wong, Eccles, and Sameroff (2003) found that experiences of racial discrimination related to declines in grades, academic self-concept, academic task values, mental health, and increases in the proportion of one's friends who are not interested in school and who have problem behaviors. Similarly, Enrique Neblett (2006) also found that discrimination experiences related to more negative attitudes about the importance of school performance and with lower beliefs in the adolescents' own academic competence.

Empirical research directly documenting the influence of discrimination experiences on achievement-related constructs among young adults is limited. There is a large body of literature, however, documenting the effects of other forms of racial devaluation on achievement outcomes in college samples. One type of ethnic devaluation that has received considerable attention in social psychology is the phenomenon of stereotype threat (Steele & Aronson, 1995). Stereotype threat occurs when individuals' awareness of society's negative stereotypes about their social group lead them to be anxious about engaging in behaviors that confirm those stereotypes, particularly those pertaining to intellectual abilities.

Common stereotypes of racial groups in the U.S. purport a general lack of intelligence and academic underachievement among Black students in all academic domains (as compared to their White and Asian peers; Bobo, 2001; Steele, 1997). Given the injurious nature of these beliefs about Black students, it is not surprising that they are both intuitively and empirically related to academic achievement. Classic stereotype threat studies by Steele and Aronson (1995) have shown that simply making racial stereotypes salient in an academic context is sufficient to significantly depress the achievement of Black college students. For many Black college students, the anxieties induced by stereotype threat can result in decreases in valuing of school, effort to do well on academic tasks (Major & Schmader, 1998; Steele, 1997), and performance on standardized tests (Steele & Aronson, 1995). Although not directly assessing individual's experiences with discrimination, these findings support the prediction that forms of racial devaluation such as racial discrimination are a potential threat to the socio-emotional and school functioning of Black college students.

While this body of work has significantly contributed to our understandings of how racism relates to achievement, very few studies have explicitly examined the how these processes may differ by gender (see Chavous et al., 2008 and Cogburn, Chavous, & Griffin, 2011 as exceptions). Understanding the role gender may play in the educational experiences of minority youth seems especially important given the consistent discrepancy in educational achievement and attainment between Black men and women (e.g. Kaba, 2005). Black males are consistently outperformed by their Black female counterparts on indicators of educational success. A trend that begins in kindergarten, but becomes especially pronounced during post-secondary education (Chatterji, 2006; Irvine, 1989, National Assessment of Educational Progress, 2006). These findings make it readily apparent that examinations of both gender and race-related factors are warranted in order to more fully understand the educational experiences of Black students.

The current dissertation will highlight the importance of both race and gender to achievement outcomes by examining how these identities relate to Black college students experiences with discrimination. Drawing on intersectionality frameworks, the theoretical perspective utilized in this dissertation emphasizes that Black students' unique race-gender identities relate not only to the types of discrimination they encounter, but also to the association that discriminatory events have with academic performance and mental health. As such, this study will consider the following issues: 1) whether or not Black men and women report experiencing different types of discrimination more frequently and 2) whether gender moderates the relation between discrimination and achievement. In addition, it will address the more exploratory question of whether there

is an indirect relationship between student gender and achievement that is explained by the type of discrimination participants report.

### **Guiding Framework: Intersectionality**

It has become increasingly clear that the neglect of gender remains a significant limitation in the current literature on racial discrimination and achievement. Despite the important contributions that theories of race-based discrimination have made to our understandings of Black student achievement, they have been largely ineffectual at explaining gendered trends in achievement within Black populations. “Individuals do not separately experience race and gender, rather, they uniquely experience the social world as gendered-racialized beings” (Monnat, 2010, p.642). By privileging race-based explanations, this research has glossed over the complexity of social identities, generally, and the importance of gender to racialized social outcomes, specifically.

The current study incorporates an intersectional perspective on racial discrimination by drawing on a framework proposed by psychologist and women’s studies scholar, Elizabeth Cole (2009). In this framework, Cole outlines a series of issues for psychologists to consider when conceptualizing the meaning and consequences of multiple social categories. She notes that intersectionality is not a statistical methodology but rather a theoretical lens through which we might evaluate research at multiple levels.

As an analytic tool, theories of intersectionality prompt researchers to consider the simultaneous effects of multiple categories of social group membership (e.g. race, gender, class, sexuality) on various experiences and outcomes (Cole, 2009; Settles, 2006, Stewart & McDermott, 2004). In quantitative analysis, the assessment of social group

membership information is generally accomplished through the use of categorical variables (e.g. male or female; Black, White, or Other), the relationships between these categories are assessed with the inclusion of interaction terms to regression models. Consideration of this practice in light of the provided definitions of intersectionality prompts an important question for researchers: If race and gender are both entered into an analytic model, how then does intersectionality differ from interaction? The answer to this question “hinges on the conceptualization of race, gender and other social categories, rather than the use (or avoidance) of particular methods” (Cole, 2009, p. 178).

Theories of intersectionality suggest that “for individuals whose identities are shaped by simultaneous membership in two (or more) oppressed groups, the neat separation of ethnicity and gender is a false dichotomy” (King, 2005, p. 205). Race and gender are not simply individual characteristics. They are lived experiences and social processes. As such, categorical approaches to studying these identities may run the risk of oversimplifying or misidentifying the complex relations between the groups defined by social categories. However, categorical approaches are not, in essence, counterproductive to intersectional goals. These approaches may provide substantial insights into the components that together form an intersectional identity (see McCall, 2005 for a review of intersectional approaches to research). If utilized and interpreted carefully, research that focuses on the complexity of relationships among multiple social groups within and across analytical categories can be quite informative.

For example, a study by Isis Settles (2006) actually illustrated the unique intersection of race and gender among a sample of Black women collegians by dissecting the identities of race and gender. She found that although the individual identities of

woman and Black person were equally important to the women's self-concept, the importance of the integrated Black-woman identity was greater than both others. This brief example explicates the current dissertation's guiding framework for examining the ways race and gender identities intersect in the processes related to achievement for Black students.

Understanding the role inequality plays in this study requires careful consideration of the "ways that multiple category memberships position individuals and groups in asymmetrical relation to one another, affecting their perceptions, experiences and outcomes" (Cole, 2009, p. 173). This study specifically attends to discrimination as a process that helps define race and gender categories for Black students. It considers the possibility that discrimination experiences may differ for men and women on a number of levels. Men and women may face different types of discrimination, demonstrate different sensitivity to the effects of discrimination, or be impacted by discrimination in different domains (e.g. achievement vs. mental health). The goal of this project is not simply to examine group differences but to offer insight into the processes that create and maintain these differences in order to better understand the nuanced meaning of race and gender categories for Black students.

### **Gender Differences in Race-Related Experiences**

The concept of intersectionality was originally utilized to explore the experiences of oppression among groups holding multiple disadvantaged statuses (as delineated by their social group membership). To this end, it has been primarily used to explore issues for women of color (see Cole, 2009). Although Black men have largely been excluded



from discussions of intersectionality, they also occupy a unique crossroads of social identity that can help inform our understandings of their discrimination experiences.

It has been suggested elsewhere that despite their elevated status as men in a patriarchal society, that Black men may actually be at more risk for discrimination than Black women because of their unique race-gender identity. The subordinate-male target hypothesis proposed by Sidanius and Veniegas (2000) suggests that while Black women are subject to gender discrimination in a patriarchal society, Black men are the primary targets of racial discrimination. Citing examples of racial discrimination in criminal justice system, labor market, and education Sidanius and Veniegas (2000) illustrate that while gender discrepancies still exist, the gaps in social outcomes are most pronounced between White men and their ethnic minority counterparts (e.g. Black and Latino men). Their evolutionary perspective on social hierarchy argues that racial discrimination is primarily a form of intrasexual competition that leaves Black men more vulnerable to negative discriminatory treatment despite the fact that their status as men would suggest otherwise.

“It is probable, however, that exposure to forms of racism varies on the basis of gender, and is likely associated with differing societal views of African American men versus women” (Greer, Laseter, & Asiamah, 2009, p. 296). Utilizing an intersectional perspective, scholarship analyzing images of African Americans has extensively documented stereotyped representations of Black femininity and masculinity in U.S. society (Carbado, 1999; Collins. 2000, 2004; Cose, 2002; hooks, 1992, 2004; Jewell 1993). Research has indicated that some stereotypes of Black women are consistent with those of Black men, suggesting that both groups are rude, hostile, and uneducated

(Niemann, Jennings, Rozelle, & Baxter, 1994; Timberlake & Estes, 2007). For example, Timberlake and Estes (2007) find that stereotypes concerning intelligence are applied similarly to men and women. Still, other research regarding perceptions about Black Americans has also suggested that by virtue of gender, Black men and women suffer different racialized stereotypes (Steinbugler, Press, & Dias, 2006; Niemann, et al., 1994; Timberlake & Estes, 2007).

It has been proposed that stereotypes around race and gender in U.S. society often place Black males in a negative light relative to males of other racial groups and Black females. These stereotypes often characterize Black males as aggressive or as anti-intellectual jocks, etc. (Chavous, Harris, Rivas, Helaire, & Green, 2004; Cunningham, 1999; Swanson, Cunningham, & Spencer, 2003; Neiman et al., 1994; Timberlake & Estes 2007). However, Black women also face negative societal perceptions. Historical and contemporary representations of Black femininity include stereotypes and images of the Mammy (self-sacrificing nurturer, servant), Jezebel (promiscuous and highly sexualized), and Sapphire (angry, rude, and aggressive) (Collins, 2000; Essed 1991; Greene, 1997; Jones & Shorter-Gooden 2003; Thomas et al. 2008; West, 2004;). These differential stereotypes exemplify the intersection of race and gender for Black Americans and indicate that Black men and women may experience qualitatively different forms of discrimination.

Evidence of the unique intersection of race-gender discrimination for Black males suggests that Black males may experience more instances of overt, aggressive types of discrimination and/or discrimination related to others' fear and suspicion of them. For instance, young Black men are often perceived as threatening figures or criminals

(Niemann et al., 1994; Plant, Goplen & Kunstman, 2011) and, therefore, may experience incidences of discrimination involving suspicions of theft and/or fear of their propensity to become violent or aggressive. As a result, Black men are often disproportionately targeted by police officers as suspects for engagement in criminal activities (e.g., Barlow & Hickman-Barlow, 2002; Brunson & Miller, 2006). A recent study by Plant and colleagues (2011) used a computer simulation to examine how race and gender can bias perceptions and responses to threat. A sample of White college students were asked to “shoot” suspects who appeared on the screen with guns, but not those who appeared with neutral objects (e.g. cell phone). Participants showed a bias toward “shooting” Black males whether or not they were armed. Participants made more errors in their responses to Black male suspects than to Black females, White males, or White females. The authors suggest that this response represents a relatively automatic, behavioral, threat-related response that is specific to Black males because of prevalent stereotypes about their group.

Stereotyped perceptions about Black women relate to different, but no less salient, forms of discrimination. It has been argued that stereotypes of Black women often maintain that they are different than Black men, but also different than white women. These perceptions often place Black women in a position of non-prototypicality (Purdie-Vaughns & Eibach, 2008; Sesko & Biernat, 2010). Because Black women do not fit the prototypical images of “women” or of “Blacks,” their experiences often go unrecognized or are distorted to fit within frameworks defined by Black men or White women. As a result, Black women are often rendered invisible in social, legal political, and academic contexts (Purdie-Vaughns & Eibach 2008; Chavous & Cogburn, 2007).

While this invisibility may make Black women less likely to be the targets of active discrimination (such as threat or harassment), it also makes them more likely to be ignored, misrepresented, or marginalized (Purdie-Vaughns & Eibach, 2008).

This phenomenon is illustrated in the current psychological literature on racial discrimination. Considerations of gender are often ignored or subsumed within race-based analyses, and as a result, fail to recognize the diversity of experiences within social categories (Cole, 2009; Reid & Comas-Dias, 1990). The dominant discourse on racial discrimination has centralized Black men's experiences, while marginalizing those of Black women leaving us with few insights into the specific nature of discrimination experiences for Black women or how these forms relate to specific outcomes.

The current study highlights the importance of the intersection of gender and race as an influence on achievement for Black men as well as Black women. I do not assume either advantage or disadvantage of dual subordinate category membership for Black women, but suggest only that Black women experience forms of discrimination that are unique from those of other groups, including Black men.

### **Connecting Gender, Discrimination and Achievement**

A primary assumption of the intersectional approach is that any given discrimination experience may be based on the intersection of multiple social identities such as class, race and gender. It is reasonable then to propose that both Black women and men are both subject to specific types of discrimination unique to their race-gender groups, in addition to discrimination experiences that could be defined as primarily racist or sexist (King, 2005). As a result Black students have 'raced' and 'gendered'

experiences at all stages of their educational trajectories that could be detrimental to their achievement.

Evidence from research in educational settings illustrates the gendered nature of race-related experiences. From young ages, students often hold academic stereotypes of Black males that tend to be less positive than those of Black females (Hudley & Graham, 2001). As a consequence of the particularly scurrilous nature of stereotypes about their group as well as their underrepresentation relative to Black women on college campuses, Black men may face qualitatively different climates on college campuses than their Black female counterparts. Developing literature on gender differences among Black students does indeed show some important differences in women's and men's experiences on White campuses, with Black men experiencing more frequent and more negative attention. Fleming (1984) found that at predominately White institutions, Black men showed lower adjustment to the college than Black women because the environment was less tolerant of their assertive behaviors.

Additionally, predominately White institutions typically enroll fewer Black men than Black women; thus, men may feel more isolated and "tokenized" (Engle, 2005). Examining Black male students' social and academic experiences at elite, historically White campuses Smith and colleagues (2007) found that Black men are stereotyped and placed under increased surveillance by community and local policing tactics on and off campus. Black males' legitimacy as members of the campus community is often challenged and they are viewed as being "out of place." This marginalized status carries important consequences for Black men. Respondents felt that the college environment was more hostile toward Black males than other groups on campus and reported

psychological responses as a result (e.g., frustration, shock, avoidance or withdrawal, disbelief, anger, aggressiveness, uncertainty or confusion, resentment, anxiety, helplessness, hopelessness, and fear) (Smith, Allen, & Danley, 2007). These types of experiences may be related to the lower achievement and greater adjustment difficulties Black male college students display relative to Black women (Chavous, Rivas, Green, Helaire, & Turner, 2004).

In contrast to their male-counterparts, Black women often go “unnoticed” and “unheard” in school contexts, a theme commonly discussed in feminist texts on Black female identity (Bell, 1992; hooks, 1981; King, 1988). Recent research among White undergraduate samples has found that Black women were the race-gender group whose photos were least likely to be recognized and who were least likely to be correctly credited for their contributions during a group discussion (Sesko & Biernat, 2010). Other scholars have also suggested that this form of benign neglect is evident in student-teacher interactions as early as elementary school (Frazier-Kouassi, 2002; Irvine, 1986). From elementary to junior high school, Black girls receive increasingly less overall feedback from their teachers, less positive feedback and fewer opportunities to respond during class than any other gender-race group (Irvine, 1986).

Given that “achievement related behaviors represent a particular set of social behaviors,” it is not unreasonable to expect achievement related behaviors are vulnerable to the influences of social stereotypes, prejudice and discrimination. (Hudley & Graham, 2001, p. 202). While research indicates that there are important gender differences in the nature of discrimination experiences, the role of gender in the relationship between these events and achievement outcomes is less clear.

It is likely that Black men not only experience different types of discrimination than Black women, but also that they respond in unique manners to these events as compared to their Black female counterparts. A growing body of research has begun to examine gender as a moderator of the relation between discrimination and various outcomes. Associations of racial discrimination with self-reported physical and mental health have consistently been shown to be stronger among women than among men (Borrell et al., 2006; Greer, Laseter, Asiamah, 2009). There have been few studies that empirically explore gender differences in this way for achievement. Research in educational domains suggests that racial discrimination relates to poorer achievement outcomes for males, but not females (Chavous et al., 2008, Chavous, Cogburn, and Griffin, 2011). These findings may indicate that men and women are vulnerable to the effects of discrimination in different ways. However, these studies are few in number and utilize measures of discrimination tailored for adolescent samples that may not reflect experiences that relevant for student achievement at higher levels of education.

### **The Current Study**

Our current understandings of discrimination and achievement among Black students have been limited in a number of ways. Previous studies have generally assessed the negative influence of racial discrimination on outcomes without attention to the nuances of those experiences. It is clear that racial discrimination relates to more negative achievement outcomes for Black students, however, much of this work focuses on children and adolescents despite the fact that the discrepancy in educational outcomes is most pronounced for Black men and women in post-secondary education. Second,

although some studies have attended to gender differences in the frequency of discrimination events, we have few empirical insights into the qualitative nature of those events or which types of discrimination events are most relevant to achievement. Finally, it is unclear how, or if, the gender differences in discrimination experiences relate to the gendered patterns of achievement for Black students.

The current study attempts to address these limitations by investigating the role of gender in the discrimination experiences related to achievement outcomes among diverse sample of Black college students. The dissertation is framed in terms of three primary research questions:

1. Are there gender differences in the types of discrimination experienced by Black college students?
2. Does gender moderate the relation of discrimination to achievement outcomes?
3. Do gender differences in experiences of racial discrimination contribute to gender differences in achievement among Black college students?



## CHAPTER II

### Conceptualizing Racial Discrimination

Racial discrimination is defined as differential treatment on the basis of race that disadvantages a racial group (National Research Council [NRC], 2004). This unfair treatment may be perpetrated by both individuals and social institutions (Williams & Mohammed, 2009) and is most often characterized by behavior that “emanates from members (or institutions) of the dominant White majority and is directed at African Americans and members of other ethnic minority groups” (Contrada et al., 2001, p. 1777). Several qualitative and quantitative analyses have documented experiences of discrimination and indicated that discrimination is a common occurrence for Black Americans (Borrell et al., 2006). Racial discrimination happens across multiple contexts, occurs in many different forms, and has negative consequences for well-being in multiple domains (National Research Council, 2004).

Despite evidence pointing to the complex nature of discrimination as a psychological construct, research has been slow to empirically distinguish how different forms of discrimination relate to achievement outcomes. Most studies focus on the overall frequency of discrimination experiences with little attention to the ways in which the nature of the experiences may differentially impact outcomes.

In addition to understanding how characteristics of the discrimination experiences relate to outcomes, we must also understand how characteristics of the individuals experiencing (or perceiving) the event relate to discrimination. Despite evidence that

both achievement and discrimination constructs differ by gender, there is limited literature that examines the role of gender in the discrimination experiences and academic achievement of Black students. The present study addresses these issues in an attempt to advance our understandings of how racial discrimination impacts achievement outcomes for Black collegians.

### **Dimensions of Racial Discrimination**

Several measures have been created to assess perceived discrimination. The majority of these measures assess the frequency of overall discrimination, relating how much or how often an individual experiences discrimination to a relevant outcome. However, people may experience multiple forms of discrimination, which cannot simply be reduced to the sum of each type (Krieger, 1999). Some measures contain subscales that assess discrimination experiences at different levels of analysis (e.g., cultural vs. institutional vs. interpersonal; Utsey & Ponterotto, 1996) or by comparing the context in which they occur (e.g., academic vs. employment settings; McNeilly, Anderson, Armstead, et al., 1996). Independent examinations of these subscales can potentially provide richer information about the context surrounding discrimination events than using composite measures alone.

In this study, analyses are focused toward the gendered nature of interpersonal discrimination. Interpersonal discrimination refers to forms of discrimination that are perpetrated and experienced on a personal level. Unlike institutional or cultural discrimination, which typically refer to discriminatory policies or practices embedded in organizational and social structures; interpersonal discrimination encompasses

discriminatory interactions between individuals, which usually can be directly perceived (e.g. being followed by a security guard while shopping).

Research has demonstrated that the interpersonal dimension of discrimination relates to outcomes in different ways than cultural or institutional discrimination. In a recent survey of racial discrimination and coping among a Black-Canadian community sample, Joseph & Kuo (2008) found that the coping strategies utilized when faced with interpersonal discrimination differed significantly from the coping strategies used in institutional and cultural discrimination experiences. Participants' responses to vignettes depicting cultural or institutional discrimination most frequently involved problem-solving coping strategies. However, when confronting interpersonal discrimination, problem-solving coping strategies were endorsed the least. Utsey, Ponterotto, et al. (2000) indicated a similar preference more passive (i.e. avoidance) coping strategies among African Americans dealing with interpersonal discrimination. These findings suggest that much of the complexity regarding the ways discrimination relates to individual outcomes would be lost using a measure of discrimination that aggregates the frequency of experiences across domains.

There is also evidence of diverse forms of discrimination within broader discrimination components. For example, interpersonal discrimination may encompass different types of experiences ranging from social exclusion to discriminatory workplace practices to physical threat and aggression (Brondolo et al., 2005; Contrada, Ashmore, Gary, Coups, Egeth, Sewell, et al., 2001; Kreiger, 1999). One of the only scales to measure different facets of interpersonal maltreatment is the Perceived Ethnic Discrimination Questionnaire created by Richard Contrada and colleagues (2001). The

Perceived Ethnic Discrimination Questionnaire was developed using data from a sample of 361 African American, Asian, Hispanic, and White college undergraduates. Utilizing exploratory factor analysis in conjunction with conceptual considerations, Contrada et al. (2001) identified four dimensions of interpersonal ethnic discrimination. These dimensions reflected experiences of disvaluation (e.g. Implied you must be dishonest or unintelligent), threats or aggressive treatment (e.g. Threatened to hurt you, Damaged your property), verbal rejection (e.g. Ethnic name calling), and avoidance (e.g. Others avoided social contact).

It is likely that there are unique relations between these forms of interpersonal racial discrimination and individual outcomes:

“Different forms of ethnicity-related interpersonal maltreatment may operate as different types of stressors. For example, the experience of being threatened or harmed because of one’s ethnicity may evoke anger, fear, and sustained vigilance. In contrast, the experience of being excluded or shunned in social situations may induce sadness, loss of self-esteem, and avoidance. In turn, these different stressors ... may be associated with different [outcomes] (Saab et al., 2000).” (Brondolo et al., 2005, p. 336-337).

Despite significant evidence pointing to the existence of these constructs as distinct subscales of discrimination, I am currently unaware of a study that utilizes the Perceived Ethnic Discrimination Questionnaire subscales (or similar subscales from a different measure) independently of a global assessment of discrimination. The current study attempts to identify similar underlying dimensions within a previously established measure of interpersonal discrimination (the Daily Life Experience questionnaire; Harrell, 1997). In doing so, I highlight important distinctions in the types of experiences that relate to Black student achievement.

## **Daily Hassles Discrimination**

Interpersonal discrimination can involve events that are highly provocative and have a major impact on the individual; however, contemporary discrimination events tend to occur in more minor, yet incessant forms of “everyday” discrimination (Essed, 1991). These more common types of discriminatory behaviors, referred to here as “daily racial hassles,” are the focus of the current study. Examples of daily racial hassles might include being ignored or overlooked while waiting in line, being mistaken for someone who serves others (e.g., maid, bellboy), and being followed or observed while in public (Harrell, 1997). It has been argued that these experiences are a central part of understanding the dynamics of racism in contemporary America (Essed, 1991; Feagin, 1991).

The distinction between racial daily hassles and other racism-related life events is an important one. Major racism-related life events are significant, stressful discrimination experiences that are relatively time-limited, but may lead to other events or have lasting effects (Harrell, 2000). Unlike racism-related life events (e.g. police harassment, housing discrimination), experiences of daily hassles discrimination are more likely to occur on a daily or weekly basis. Although daily racial hassles are, arguably, less extreme than other major racism-related life events, their common recurrence in the daily lives of Black Americans can have a cumulative detrimental effect on both physical and mental health outcomes (National Research Council, 2004).

The current study utilizes a measure of racial daily hassles created by Shelley Harrell (1997), to assess dimensions of discrimination experiences among Black college students. The Daily Life Experience (DLE) questionnaire is a self-report measure that

assesses the frequency and impact of experiencing 18 racial hassles due to race in the past year (Harrell, 1997). Two DLE subscales were designed to assess the frequency by which the event happened and how much participants felt bothered by the event. Sellers and Shelton (2003) reported reliability coefficients for the two subscales that ranged from .90 to .91 among a sample of Black college students.

*Daily Racial Hassles in the College Context.* Several studies have illustrated experiences of racial discrimination at colleges and universities (Feagin & Sikes, 1995; Fisher & Hartman, 1995; Gosset, Cuyjet & Cockriel, 1998; Steele, 1998). One survey found that more than 75% of college students, across racial/ethnic groups, felt that there was some degree of racial hostility on campus although it was not openly express. Among those students, 28% agreed that Black students were the primary targets of that discrimination (Biasco, Goodwin, & Vitale, 2001). Qualitative reports of Blacks students' experiences of discrimination on predominately White campuses include having their ideas demeaned in class, being mistaken for other Blacks, and having professors avoid "uncomfortable" topics such as certain aspects of slavery (Feagin, 1996).

In addition to the general stressors experienced by most college students, Black students may face race-specific challenges such as racial identity development and the stress of negotiating the college environment a racial minority. At predominately White institutions, Black students report feeling disconnected from their school and peers, lack of representation, and racial tension (Hurtado, 1992; Loo & Rolison, 1986; Neville, Heppner, Ji, & Thye, 2004). They also report lower levels of general well-being and lower achievement scores as compared to White students (D'Augelli & Hershberger, 1993; Steele & Aronson, 1995).

Studies utilizing Harrell's Daily Life Experience questionnaire with Black college samples find that daily racial hassles discrimination is a common occurrence for Black students, and that these experiences are negatively related to mental health outcomes. In a longitudinal analysis of a sample of 267 first year college students, Sellers and Shelton (2003) found that more than half of the sample had experienced at least 13 racial hassles in the past year. Their reports of perceived discrimination were somewhat stable over time, and on average, the participants were bothered by each occurrence of perceived discrimination. Longitudinal analysis also suggested a causal relationship between discrimination and psychological distress.

Similar to previous research, Banks' (2010) study of daily racial hassles among Black college students found that experiencing racial discrimination was directly correlated with more negative mental health outcomes such as anxiety, stress and depression (e.g. Forman, Williams & Jackson, 1997; Kessler, Mickelson & Williams; 1999, Neblett, Shelton, & Sellers, 2004). On average, students reported experiencing these racially discriminatory events "a few times" over the past year. Findings of this study suggest that the experiences of racial discrimination are important factors in self-reported adjustment outcomes in this population.

### **Redefining Discrimination Dimensions**

Although not originally designed to assess different dimensions in the nature of discrimination experiences, the Daily Life Experiences (DLE) questionnaire encompasses different types of daily hassles discrimination across the 18 items. The DLE includes items that are reflective of the interpersonal discrimination dimensions identified by other

scholars. Similarities amongst Contrada et al.'s (2000) Perceived Ethnic Discrimination Questionnaire items and DLE items indicate that aspects of disvaluation, verbal aggression, and avoidance may be underlying constructs of the DLE. For example, such items as "being ignored, overlooked, or not given service" correspond with disvaluation experiences, while "being insulted, called a name, or harassed" is indicative of verbal rejection. Items of the DLE also correspond with items from other subscales that are not labeled as "interpersonal" discrimination. In a popular index of discrimination used for adolescent samples (Adolescent Discrimination Distress Index, Fisher et al., 2000), having others react to you as if they were afraid or intimidated would be classified as institutional discrimination. This same item corresponds closely with disvaluation experiences as delineated by the Perceived Ethnic Discrimination Questionnaire (an aspect of interpersonal discrimination). Further, several DLE items appear to overlap with more than one previously identified dimension of discrimination. For example, having others avoid you would likely be an aspect of avoidance discrimination on the Perceived Ethnic Discrimination Questionnaire (Contrada et al., 2001), but would be considered an aspect of collective discrimination according to another widely used discrimination typology, the Index of Race-Related Stress (Utsey & Ponterotto, 1996).

Though not directly analyzed in their study, Sellers and Shelton (2003) noted a qualitative difference in the types of discrimination reported among participant responses to DLE items. The least frequently reported experiences were those involving direct and overt discriminatory behaviors such as being laughed at, made fun of, or taunted; being insulted, called a name, or harassed. However, racial discrimination involving passive, or less overt contact with the participants was reported more frequently (e.g., being ignored,



overlooked, not given service). In an unpublished dissertation project, Cooke (2002) performed a factor analysis on the DLE questionnaire and found that 4 items loaded onto a unique factor representing “competence-based” discrimination. This subscale consists of items regarding experiences of 1) having one’s ideas minimized, ignored, or devalued, 2) being treated as stupid, 3) others expecting your work to be inferior, and 4) not being taken seriously. This subscale was reliable across two time-points within the sample of African American college students ( $\alpha = .85$  and  $\alpha = .83$ ), suggesting that competence-based discrimination is an underlying dimension of the DLE that is salient for Black collegians.

Taken together, these findings provide further support for the assertion that the DLE questionnaire assesses a variety of different types of discrimination experiences. Because of this property, it may be particularly well suited for examining the ways that different aspects of interpersonal discrimination are relevant for achievement-related outcomes among Black students. However, that the identification of discrimination subscales using factor analysis has been inconsistent across studies, also suggests that this method may not be an appropriate strategy for delineating the dimensions of discrimination most important for achievement or gender-related experiences.

Factor analysis is generally used to identify those variables that are indicative of an underlying, unobserved construct. In other words, it tells us how underlying constructs, or factors, influence participant responses on observed, or measured, variables. In the case of factor analysis using discrimination scales, the interpretation of the factors is unclear. Dimensions of discrimination determined via factor analysis are statistically assessing an underlying construct of the *individuals* responding to the

questionnaire, but have been interpreted by the researchers based on the observed, contextual similarity of the *events* themselves. For example, items such as “others avoided social contact” and “made you feel you don’t fit in” have been suggested, through factor analysis, to be indicative of an “avoidance” dimension of interpersonal discrimination (Contrada et al., 2001). Statistically, this would mean that “avoidance discrimination” is an underlying construct that influences how frequently a person experiences each of these events. It is more likely, though, that the underlying construct is a characteristic of the individual, which influenced their responses to those items, such as their sensitivity to social exclusion, or a propensity to interpret ambiguous events as racist.

Although conceptually grouping discrimination items into dimensions based on their contextual similarity may yield item groupings much like to those found through factor analysis, interpreting discrimination subscales identified through factor analysis in the same way as other (psychological) constructs may not be theoretically appropriate. In order to avoid this statistical-theoretical incongruence, the current study draws on qualitative and quantitative reports regarding differences in Black women and men’s discrimination experiences to conceptually group discrimination items from the DLE.

### **Intersectional Perspectives on the Measurement of Racial Discrimination.**

Theoretical work has offered various viewpoints on the ways that gender matters for discrimination experiences, but few research studies have explicitly investigated differences in the types of discrimination events faced by Black men and Black women. The small body of research that empirically explores gender differences in race-related

experiences has primarily offered results consistent with the view that Black men are more likely to be the targets of racial discrimination. Black American males generally report a higher frequency of racial discrimination experiences than Black females (e.g. Bobo & Suh, 1995; Carter, 2007; Forman, Williams, & Jackson, 1997; Kessler, Mickelson, & Williams, 1999; Schiele, 2000). Still, other research has found no gender differences in the frequency of racism-related incidences among Black men and women (e.g., Landrine & Klonoff, 1996; Thompson-Sanders, 2002; Caldwell, Kohn-Wood, Schmeelk-Cone, Chavous, Zimmerman, 2004).

Because in American society men's experiences are frequently understood to be gender-neutral, many discrimination scales primarily assess forms of discrimination that are more likely to be perceived or experienced by men (Davis, 2003; Roderick, 2003). For example, 27% of the items (6 of 22) on a widely used measure of perceived discrimination, the brief version of the Index of Race-Related Stress (IRRS-B), are related to institutional discrimination (Utsey, 1999). These items reflect experiences of biased treatment as a result of racism being embedded in the policies of a given institution. Research findings suggest that many Black men perceive themselves to be disproportionately targeted for unfair treatment within various institutions (e.g., Barlow & Hickman-Barlow, 2002; Bowman, 1992). It is therefore, not surprising that studies using this scale would report that men experience more overall instances of discrimination (e.g. James, 2010).

Attending primarily to overt types of discrimination events gives little or no attention to the intersection of gender and race identities that relate to distinctly different experiences for Black women and men. While men may be the targets of more overt

forms of discrimination, Black women may be likely to experience different forms of discrimination such as being ignored (e.g. Sekso & Biernat, 2010). Further, it is likely that more overt types of discriminatory events are not experienced frequently enough by either sex to reveal significant differences. Contemporary forms of discrimination occur in more subtle, covert forms than those from the past (Devine, Plant & Blair, 2001). Identifying other dimensions of discrimination where gender may play a role is an important step in understanding the role of discrimination in individual outcomes.

### **Gender as a Moderator of the Relation Between Discrimination and Achievement**

While a growing body of literature has related global measures of discrimination to achievement outcomes, there are few studies concerned with the relations of its underlying dimensions to achievement. One of the only studies to look at discrimination dimensions as they relate to achievement also found important differences in the ways that these constructs are related to gender. Chavous et al. (2008) utilized a school discrimination scale (see Eccles, Wong, & Peck, 2006; Fisher et al., 2000; Wong, Eccles, & Sameroff, 2003) to assess the role of peer/social and teacher/classroom-based discrimination on achievement outcomes among African American adolescents. Results from this study indicate that specific types of discrimination are related to achievement outcomes for Black girls and boys in different ways.

In the final step of hierarchical regression analyses, peer and classroom discrimination were entered in to separate models for boys and girls controlling for prior achievement and discrimination experiences, racial centrality and socioeconomic status. For boys, discrimination from their peers related to lower grades, beliefs that school was

less important, and lower academic self-concept. For girls, however, peer discrimination only related to their beliefs about the importance of school. The domain of classroom discrimination related to lower grades and school importance beliefs for boys, but did not relate to their own self-concepts. Girls were not negatively impacted by classroom discrimination. Girls' grades and beliefs about school were unrelated to classroom discrimination, and more perceived discrimination from teachers actually predicted higher academic self-concepts for girls with high racial centrality.

These findings suggest that while girls' achievement is not influenced by either type of discrimination, they show different psychological outcomes in response to discrimination from peers and teachers. For boys, both classroom and peer discrimination are predictive of their performance and beliefs about school, but only peer discrimination relates to how they feel about themselves and their abilities. Similar findings were replicated in a recent article using the same teacher/classroom-based discrimination scale. Cogburn, Chavous, and Griffin (2011) found that teacher/classroom-based racial discrimination predicted lower school importance beliefs and self-esteem for both adolescent girls and boys. Racial discrimination was also negatively associated with grade point average among boys but was not significantly associated to achievement for girls. Further, significant gender discrimination by racial discrimination interactions predicted psychological outcomes for girls, but predicted academic achievement for boys.

This gender difference in the relation of discrimination to mental health has also been noted among adult samples. Although Black women generally report higher overall rates of psychological distress, depression and anxiety than Black men, there is also

evidence to suggest that the negative impact of discrimination on mental health is stronger among women in comparison to men (Jackson et al., 1996; Kessler et al, 1999). Banks, Kohn-Wood, and Spencer (2006) found that Black women were more likely than Black men to report experiencing anxiety symptoms overall and in association with discrimination. Similarly, Greer, Laseter, and Asiamah (2009) found that race-related stress was associated with increased anxiety and obsessive-compulsive symptoms for Black women, but had no significant effects on mental health symptoms for Black men.

Overall, these studies illustrate the ways in which different dimensions of discrimination experiences relate to achievement for Black students and further, that gender may moderate these relationships. These findings may shed light on the mechanisms related to the achievement discrepancies between Black men and women. In the face of discrimination, women may not show declines in academic outcomes while their male counterparts do. However, women may demonstrate declines in psychological outcomes in response to discrimination that men do not.

Questions remain, though, regarding the specific types of discrimination events that may relate to achievement. Chavous and colleagues (2008) note in their discussion that the items utilized in the School Discrimination Scale did not assess more subtle forms of discrimination that are likely to be experienced by students generally, and boys in particular (e.g., Davis, 2003). Further, the more overt forms of discrimination measured with these school discrimination items such as being punished harshly or getting into fights with peers may not be relevant for adult students. These items only assess events that occur within the classroom or that have been perpetrated by classroom peers. College experiences with discrimination may occur outside of the classroom, but

still within the college context. As such, it remains unclear which aspects of discrimination are most closely associated with achievement outcomes in older groups.

In Cooke's (2002) examination of a competence-based discrimination dimension among college students, the relation of discrimination to mental health and achievement also differed by gender, but in different ways than those noted by Chavous and colleagues. The study specifically analyzed how the frequency of competence-based discrimination and how much participants were bothered by the events related to self-esteem and academic performance. Patterned discrimination, a variable accounting for both the frequency and "bother" scores for each item, was also assessed. Higher patterned discrimination equated to having more frequent experiences with competence-based racial hassles and being more bothered by these events. Findings revealed that the frequency of discrimination events alone was unrelated to outcomes for men or women. However, being bothered by competence-based discrimination positively predicted women's grade point averages (GPAs), but not men's. Further, patterned discrimination negatively predicted self-esteem for men, but not women.

### **Summary and Research Aims**

Taken together, findings from the literature on discrimination, gender and achievement illustrate several important insights into the nature and impact of discrimination on educational success. It is clear that racial discrimination relates to achievement for Black students and that this relation also differs for men and women. However, it is still unclear why discrimination relates to different outcomes by gender. As intersectionality perspectives suggest, Black men and women likely experience

differential treatment (specifically discriminatory treatment) as a function of both their race and their gender, but there is a gap in the empirical literature pertaining to what the nature of these experiences actually are. As such, the goals of this dissertation project are focused toward understanding the ways gender relates to different aspects of racial discrimination experiences for Black college students.

**Aim 1.** The first aim of this dissertation is to substantiate the existence of interpersonal discrimination dimensions within an established discrimination scale and to determine which of these dimensions are relevant for Black student achievement. While there is evidence to suggest that different forms of interpersonal discrimination may be important to achievement outcomes in unique ways, existing subscales of racial discrimination are seldom examined independently of a global discrimination measure (Utsey & Ponterotto, 1996; Contrada et al., 2001; Brondolo et al., 2005). To do this, I explore the properties of an established measure of interpersonal discrimination, Harrell's (1997) Daily Life Experience questionnaire (DLE), for themes related to the gendered nature of racial discrimination.

Given the range of racial hassles events found in the DLE and the lack of consistency in mapping these items onto previously established measures, a priori hypotheses regarding the expected number and specific content of DLE subscales are somewhat speculative. However, there is some research suggesting that underlying dimensions of interpersonal discrimination can be assessed using this scale (Sellers & Shelton, 2003; Cooke, 2002). Based on empirical work identifying multiple dimensions of discrimination experiences for Black students (e.g. Contrada et al, 2001), I expect that analysis on the DLE will reveal dimensions generally related to experiences of 1)



exclusion/rejection, 2) disvaluation, 3) fear/avoidance, and 4) overt harassment.

**Aim 2.** The second aim of this study is to examine the specific role of gender in the processes relating discrimination dimensions to achievement. It is clear that gender matters to discrimination experiences, but we do not know exactly which aspects of the experience are related to student gender: Are there gender differences in the types of discrimination men and women report? Does gender moderate the relation of discrimination to achievement outcomes? The current project examines three potential mechanisms for the ways in which gender may relate to discrimination experiences and achievement.

*Gender differences in the types of discrimination experiences.* Based on previous research pointing to differences in the nature of discrimination experiences for Black men and women, I anticipated that Black female college students would report more frequent experiences of discrimination that they feel to be marginalizing, such as being ignored or having their ideas dismissed by others. Black men, however, would be more likely to report discrimination events that could be characterized as fear or suspicion based, in which others react to them as if they were dangerous, aggressive, or likely to engage in criminal behavior.

*Gender as a moderator of discrimination experiences.* Next, guided by previous findings in the area, I hypothesize that the relation between discrimination dimensions and achievement will also be moderated by gender. Even if Black men and women have similar discrimination experiences, they may respond to these experiences in different ways. There is some suggestion in the literature on mental health outcomes that women are more vulnerable to the effects of discrimination (Borrell et al., 2006; Greer, Laseter,

Asiamah, 2009). Studies have also revealed that although discrimination is often related to grades for Black males, for girls, discrimination is primarily relevant for self-concepts and self esteem (Chavous et al., 2008, Chavous, Cogburn, and Griffin, 2011; Cooke, 2002). As such, the current study will also examine the possibility that although Black women may not show declines in achievement in response to discrimination experiences, that they may illustrate negative outcomes in other ways. I expect that experiences of discrimination will negatively relate to achievement for men in the sample, but not for women. Women, however, will show decreases in self-esteem in relation to increased discrimination experiences, while men's self-esteem will be unrelated to discrimination experiences.

*Gender differences in discrimination as a predictor of gender variations in achievement.* Finally, I assess the possibility that gender differences in achievement may be explained by gender differences in types of discrimination experiences. That is, men and women are exposed to different types of discrimination, and these different types are then related to achievement outcomes in unique ways. If the types of discrimination that men are more likely to experience have a stronger negative relationship to achievement, then this relation may help explain the discrepancy in educational success between Black men and women.

My current theory regarding these relationships is exploratory. Given that general experiences of discrimination relate to achievement in negative ways, it is reasonable to propose that specific types of discrimination experiences may have unique relations to achievement. For example, the Criminal dimension may involve more overt forms of discrimination experiences that may also be tied to intensely negative emotions from

others (e.g. fear or anger). These types of events may cause heightened physiological and emotional responses for Black students, subsequently relating to more immediate, lasting, substantial effects on the thoughts and behaviors related to achievement.

## **CHAPTER III**

### **Methodological Approaches to Examining the Relation of Gender to Discrimination and Achievement**

This study employs a cross-sequential design using surveys to explore the relationships among perceived racial discrimination, gender, and achievement in African American college students. Additionally, it considers how racial discrimination and student gender relate to select mental health outcomes. This section describes the participants, procedures and measures used to collect the data, and how the data were analyzed. The data analyzed in this dissertation are part of a larger multi-site, cross-lagged study of African American college students. The overall aim of the larger project was to assess the ways in which students' racial identity beliefs influence their experiences and behaviors in specific situations. Data were collected through annual surveys and daily experience sampling (via personal data assistants) over the course of four years. Only data from the annual surveys are utilized in this dissertation. The full survey includes questions regarding students' racial identity, racial discrimination experiences, racial coping strategies, and indicators of mental health.

#### **Procedure**

During their first year in college, students from three different universities were recruited to participate in a four-year longitudinal study on African American daily life experiences. Incoming African American students were identified for the 2005 fall term

from the registrar's office at each institution. Potential participants were contacted via e-mail or phone (when e-mail address was not available). Contacted participants were given a description of the study and screened with regard to their race. Those students who identified as African American and agreed to participate in the study were provided with an Internet web address and instructed to download a copy of the informed consent form. They were instructed to keep a copy of the form and return a signed copy to the researchers via campus mail, U.S. mail, or by dropping it off at a designated location on-campus. Once the informed consent document was received, participants were emailed an URL address for a web-based survey along with a unique password for the study.

Within the first month of school for each of the subsequent four years participants completed web-based versions of the initial surveys. Research assistants sent e-mail and phone messages to participants with information regarding how to access the web-based survey. Reminder messages were sent one week after the initial message was sent. After their first administration of the questionnaire, an e-mail message was sent to participants within one month of the end of the school year asking them to provide: 1) their current permanent contact information, 2) their expected contact information for the fall term, and 3) contact information for a friend who was likely to know how to contact them. Along with public university sources, this information was used to re-establish contact with students when necessary. During the second year of data collection, a second cohort of incoming freshman students was recruited into the study. These students were also surveyed for three subsequent years using the same methods as described above.

In this dissertation, Wave 1 data consist of survey responses from Cohort 1 during their first year of participation in the survey (2006) and from Cohort 2 during their first

year participating in the survey (2007). Similarly, Wave 2 data refer to survey responses collected from Cohorts 1 and 2 during their second year in the study (2007 and 2008, respectively).

## **Participants**

In total, 407 participants completed both the first and second waves of annual survey data collection. Only these participants were used for analyses in this study. The total sample consists of 99 male (24.3%) and 308 female (75.7%) students. The vast majority the participants racially identified as African American (89.6%). The remaining participants identified as biracial or “Other” and specified their racial background as African American and combination of 2 or more other racial/ethnic groups (e.g. Native American, Ugandan). The four students who did not report race were subsequently dropped from the analyses. The mean age of the sample during the second wave of data collection was 19.2 years ( $SD = .72$ ).

The participants were recruited from three universities that differed in location, enrollment size, proportion of African American students and setting (e.g. rural vs. urban). Almost one-third (28.7%) of the participants were recruited from University 1, a private, historically Black institution located in large, urban city in the mid-Atlantic US. University 1 has an undergraduate enrollment of around 7,176 students.

Approximately one- third (33.9%) of the students were recruited from University 2, a public university in Southeast United States. The campus is located in an urban area and enrolls approx. 25,255 undergraduates. At the time of initial recruitment, around 9.5% of the entering freshman class at University 2 identified as Black, non-Hispanic. The third University is a large, public university in the suburban Midwest. University 3

enrolls a total of 26,208 undergraduates. Of the entering freshman class recruited during the first wave of data collection, 7.2% reported their race/ethnicity as Black, non-Hispanic. Thirty-seven percent of the current sample was recruited from this institution.

## **Measures**

***Academic Achievement.*** One year after the completion of their initial survey, participants completed a single item assessing their grade point average (GPA) on a scale of 0 to 4.00.

***Anxiety.*** Spielberger Trait Anxiety Inventory (STAI). is a 20-item measure of the tendency for participants to generally experience symptoms of anxiety. Participants indicate how often they feel several affective states related to trait anxiety (e.g., I feel nervous and restless) using a scale ranging from 1 (almost never) to 4 (almost always). Higher scores on the composite scale indicate higher levels of trait anxiety. Sellers and Shelton (2003) reported alphas of .87 and .92 at two time points for a sample of African American college students. Similarly, the measure indicates a high level of internal consistency in the current sample,  $\alpha = .88$ .

***Depression.*** Center for Epidemiological Studies Depression Scale (CES-D) consists of 20 items that assess the presence and frequency of clinical symptoms associated with depression. All questions are answered on a scale of 0-3, with 0 indicating no symptom presence and with 3 representing symptoms “most or all of the time.” CES-D item scores were averaged to create a composite variable, with higher scores indicating more severe depressive symptoms. The scale has been found to be reliable for African American populations (Pumariega, Johnson, Sheridan, & Cuffe,

1996; Sellers & Shelton, 2003). In a sample of 267 African American college students, Sellers and Shelton (2003) reported Cronbach's alphas of .87 and .89. A similar alpha of .87 was calculated in the current sample.

***Stress.*** Perceived Stress Scale (PSS) includes 14 items that assess the degree to which individuals appraise situations in their lives as stressful (Cohen, Kamarck, & Mermelstein, 1983). Participants respond to how often they have had specific feelings or thoughts over the past month using a scale ranging from 0 (never) to 4 (very often). Scores were averaged across the items to create a composite variable. Higher scores on the composite scale are suggestive of higher levels of stress. Sellers and Shelton (2003) reported alphas of .86 and .85 in a sample of African American college students. Cronbach's alpha is .77 in current sample.

***Discrimination.*** Participants' experiences with racial discrimination were assessed using an 18-item scale that asked about the racial hassles they may have experienced during the past year (Harrell, 1997). Sample items include "Others reacting to you as if they were afraid or intimidated," "Being insulted, called a name or harassed," and "Not being taken seriously." Participants were asked to rate each racial hassle they had experienced using a 6-point response scale assessing how often the event occurred over the past year (0 = never; 5 = once a week or more). Participants also rated how much each event bothered them on a 0 to 5 scale ( $\alpha = .89$ , 18 items). Only discrimination frequency ratings are used in the current study.

***Demographic Covariates.***

***Household income.*** Family income was assessed as a proxy for socioeconomic status (SES). Participants were asked to indicate their best estimate of their family's total



income for the current year. They were given the option to choose one of 13 responses rating income from below \$4,999 to above \$105,000. Alternatively, participants could also indicate that they did not know their family's income.

*Mother Education.* A variable representing the highest level of education a participant's mother received was also included as a covariate. They were presented with 8 different response options with education levels ranging from "junior high school or less" to "Ph.D./M.D./J.D." Alternatively, participants could also indicate that they did not know their mother's highest level of education.

*University.* The university that participants attended was identified as a potential covariate as preliminary analyses indicated statistical differences between the three institutions in gender proportions and student grades. The proportion of male students at University 1 was significantly lower than the proportion of male students at the other two institutions ( $X^2, 2 = 10.45, p = .01$ ). Students from University 1 also reported higher GPAs than students from both other institutions,  $F(2,402) = 15.33, p = .001$ .

*Management of Missing Data.* Patterns of participant attrition and missing data were also analyzed in the current sample. 663 participants completed the survey at Wave 1 and 407 of these participants completed the survey at Wave 2. Given the significant loss of participants at the second time point (38%), a decision was made to analyze only those participants who completed the survey at both waves. Four participants were dropped from analyses because they did not report their race resulting in a final sample size of 403.

Analyses of missing values within the final sample showed that less than 5% of the data points were not reported for any scale. Little's MCAR analysis produced a non-

significant result ( $\chi^2$ ,  $df = 71$ ,  $p = .43$ ) suggesting that any missing values were missing completely at random (MCAR). As such, an expectation-maximization (EM) algorithm was identified as an appropriate method of missing data imputation. The data set with imputed scale values was only used for structural equation model analyses.

### **Analytic Strategy**

Analyses of variance and descriptive techniques, and structural equation modeling techniques were employed to address the research questions under investigation. Structural equation modeling (SEM) was utilized as the primary technique for addressing the research aims. SEM permits the measurement of several variables and their interrelationships simultaneously. It is more versatile than other multivariate techniques because it allows for flexible assumptions that can assess simultaneous, multiple dependent relationships between variables. The hypothesized causal relationships and mediation effects between discrimination and achievement can be tested to estimate and evaluate the structural model. Furthermore, SEM allows for the ability to test coefficients across multiple between-subjects groups (e.g. gender).

The first aim of this dissertation was to examine the multidimensionality of discrimination experiences. To assess this, I utilize a well-established measure of interpersonal discrimination, the Daily Life Experiences questionnaire (DLE; Harrell, 1997), and explore its properties for dimensions of discrimination that may be gendered. Given the similarity of several DLE items to those found in Perceived Ethnic Discrimination Questionnaire (Contrada et al., 2001), I anticipated finding 4 content

areas related to experiences of exclusion/rejection, disvaluation, fear/avoidance, and overt harassment.

The second aim of the dissertation was to examine gender differences in the nature of racial discrimination experiences. To determine whether men and women experience different amounts of each discrimination type, within-subjects ANOVA were performed on the discrimination scales with gender as a between-subjects factor. I hypothesized that there would be significant between-subject and within-subject effects. I anticipated that Black women would report more frequent experiences of discrimination related to marginalization (i.e. Invisible/Outsider discrimination) than the other types and that men would report higher frequencies of fear/avoidance (i.e. Criminal) and overt harassment (Harassed) than other discrimination dimensions. Similarly, I hypothesized that men would report significantly more Criminal-based discrimination than women and that women would report more Invisible/Outsider discrimination than men. The average frequency of Unintelligent discrimination was anticipated to be significantly equivalent between men and women in the sample.

Next, I conducted a multiple -group path analysis to assess whether gender moderates the relation of these discrimination dimensions to achievement. Participants' GPAs as well as depression, anxiety and perceived stress ratings were entered into the model as dependent variables. It was anticipated that discrimination would relate negatively to women's reports of depression, anxiety and stress, but not reported GPA. A different trend was expected for men, such that mental health outcomes would not be significantly related to discrimination experiences, but men's grades would be negatively associated with increased reports of discrimination.

Lastly, I examined whether the forms of discrimination faced by Black students may help explain the relation between gender and achievement. These relationships were assessed using structural equation modeling to specify and test a directional model with multiple mediators. I expected that there would be a significant indirect relation between gender and achievement through the discrimination dimensions most frequently experienced by men (i.e. experiences related to fear/suspicion-based discrimination (Criminal) and overt harassment (Harassed)). For women, however, I hypothesized an indirect relation of gender to mental health, but not achievement, through the Invisible/Outsider domain. Appropriate fit indices (e.g. Chi-square, CFI, RMSEA) were examined and reported to determine how well this predicted model reflects patterns in the data.

## **CHAPTER IV**

### **Results**

The primary aim of this study was to examine the specific role of gender in the discrimination experiences of Black students by addressing three research questions:

1. Are there gender differences in the types of discrimination reported by Black college students?
2. Does gender moderate the relation of discrimination to adjustment outcomes (i.e. academic achievement and mental health)?
3. Do gender differences in discrimination experiences contribute to gender differences in achievement?

### **Preliminary Analyses**

In order to identify aspects of racial discrimination relevant to gender differences Black student achievement, each item of the Daily Life Experiences questionnaire was analyzed for themes identified in previous literature on gender, discrimination and achievement. Generally, previous work has shown that certain aspects of race-related experiences are common to both Black men and women, such as stereotypes of unintelligence (e.g. Timberlake & Estes, 2007), while others are specific to either gender. In particular, Black men may be disproportionately targeted for overt maltreatment (Sidanius & Veniegas, 2000) and are often perceived and treated as if they are dangerous and aggressive (Niemann et al, 1994; Plant, Goplen, & Kuntsman, 2011). Black women face specific events in which they are ignored and marginalized because

they do not easily fit into conceptions of Black people or women (Sesko & Biernat, 2010).

Items of the DLE were grouped by their conceptual similarity to the types of experiences echoed in the literature. Six subscales were identified. The “Invisible” dimension was intended to describe events in which participants felt others did not acknowledge their presence. A sample item was “Being ignored, overlooked, or not given service.” Items grouped in the “Criminal” dimension describe events in which others reacted to participants as if they were a threat to their person or their property. A sample item was “being accused of something or treated suspiciously.” Items in the “Harassed” dimension describe events in which others created an unpleasant or hostile situation with uninvited and unwelcome verbal or physical conduct. Being laughed at, made fun of, or taunted was an example of an item in this dimension. The “Unintelligent” dimension was defined by events in which others underestimated the value of participants’ ideas or abilities, such as “others expecting your work to be inferior.” The fifth dimension of discrimination was named “Outsider.” Items placed in this category described events in which participants felt excluded or made to feel as if they did not belong, such as “being left out of conversations or activities.”

In order to assess the reliability of the discrimination dimensions, a small-scale reliability study was conducted separately from the primary analyses. A panel of adults with advanced knowledge in the study of racism and racial discrimination were recruited via email to participate in the assessment. The recruitment strategy for this portion of the study intentionally targeted participants with advanced degrees (i.e. Masters degrees or higher). Additionally, equal numbers of men and women were solicited to participate in

the study. Of the 10 men and 10 women recruited, a total of 10 participants completed the online survey. It is unknown what percentages of those respondents were male or female. Due to the small sample size, participant anonymity was a concern. In order to prevent any participants in this portion of the study from being identified by their responses, no demographic information was collected as part of the survey.

Through an anonymous online survey, each participant was independently asked to categorize each of the daily hassles items into one of the five dimensions. Participants were given a list of the dimensions and their definitions (without examples). For each of the DLE items, they were then asked to choose the category that they thought best described the event. The instructions explicitly stated that there were no right or wrong answers, and participants were given the option of choosing “Other” for items that they did not feel fit into any of the other dimensions listed.

There was 70% agreement or higher among the expert panel for the categorization of discrimination items except for those items reflective of the Invisible, Outsider, and Other dimensions (see Table 1). “Being ignored, overlooked, or not given service,” “Being left out of conversations or activities,” and “Being stared at by strangers” were each categorized as either Invisible or Outsider, but none were categorized with more than 70% agreement. Given the similarity of these items, the two dimensions were combined to form one subscale. Participant scores on the resulting four dimensions of discrimination were created by averaging the item scores within each subscale. Five items were categorized as Other. Three of these items reflected experiences of being mistaken for other Blacks or someone who serves others, and being treated in an overly superficial way. “Overhearing or being told an offensive joke or comment” was expected

to be grouped in the Harassed dimension and “Other people avoiding you” was expected aspect of Invisible/Outsider discrimination, but were not reliably categorized as such by the participants. None of the items categorized as Other were utilized in the present analyses.

Analyses of variance indicated a significant differences between universities in reports of discrimination,  $F(2,402) = 5.11, p = .01$ . Participants from University 3 reported more instances of marginalizing discrimination events than participants from the other schools. There were also significant differences by mother’s education in students’ reports of Invisible/Outsider discrimination,  $F(6, 396) = 2.56, p = .02$ , and Criminal discrimination,  $F(6, 396) = 2.89, p = .01$ . The primary differences were noted between those whose mother’s had not received a high school degree and other groups. Students whose mothers had only some high school education reported more Invisible/Outsider discrimination than all other education levels. This group also reported more instances of being treated with fear and suspicion (Criminal discrimination) than those whose mothers received a high school diploma, had some college experience, or had received an advanced degree.

Total household income was significantly correlated with achievement ( $r = .19, p = .01$ ). Income was not correlated with other key variables. These results suggest that there is variation on primary study variables related to institution and socioeconomic indicators (i.e. income and mother’s education), suggesting that school context and SES likely relate to both discrimination and achievement outcomes. The variables that were significantly related to key variables were used as covariates in subsequent analyses.



## Descriptive Analyses

Descriptive analyses were utilized to illustrate patterns of participant responses across individual discrimination items and primary study variables. Table 3 lists the percentage of individuals in the sample that reported experiencing each of the 18 racial hassles at least once and the mean score for each item. On average, participants indicated few instances of discrimination. The average frequency of experiencing each discrimination type was between one and a few times in the past year. However, almost all participants (99.3%) reported at least one incident of discrimination during that time period. Assessment of gender differences across the discrimination items indicated few discrepancies between men and women. Men reported more instances of being accused of something or treated suspiciously and of being observed or followed while in public places than women,  $t(397) = 4.71$  and  $4.04$ , respectively. Men also reported more instances of being insulted called a name, or harassed,  $t(399) = 2.99$ ,  $p < .01$ , and significantly more instances of overhearing or being told an offensive joke or comment  $t(399) = 2.57$ ,  $p = .01$ . There were no other significant gender differences on individual discrimination items.

Table 4 shows the means for the primary study variables by gender and for the overall sample. The mean grade point average for the sample was 3.01 on a 0 to 4.00 scale. Women had higher grade point averages than men,  $t(394) = 3.19$ ,  $p = .002$ . Women reported significantly more depressive symptoms,  $t(398) = 1.98$ ,  $p = .048$  and significantly more stress than men,  $t(393) = 2.47$ ,  $p = .01$ . However, the overall reports of negative mental health were low, as indicated by very low scores on the depression scale. The average score for stress was also low. Participants reported perceiving their life

events as stressful almost never to sometimes.

I calculated Pearson's product-moment correlations to examine the bivariate relationships among the primary variables in the study. The bivariate analyses indicate several significant relationships among the discrimination dimensions at Wave 1 with the achievement and mental health variables at Wave 2. Tables 5 and 6 show associations among variables of interest for women and men, respectively. Men's and women's GPAs were not significantly correlated with any discrimination dimension. However, more frequent discrimination experiences in all four dimensions during Wave 1 were associated with participants' mental health outcomes one year later. Each of the discrimination dimensions were associated with increased stress and depression except for the Harassed domain, which was positively correlated with depression, but showed no relation to stress. This same pattern of positive correlations among discrimination experiences and mental health symptomology emerged for both men and women with one exception. While more frequent experiences of Criminal discrimination were associated with greater depressive symptoms among women, this discrimination dimension was unrelated to men's reports of depression.

The overall results of the descriptive analyses suggest that gender is relevant for achievement and mental health outcomes, with women having higher grades as well as higher reports of stress and depression than men. Gender also appears to be relevant for certain types of discrimination. In particular, gender differences emerged for discrimination items related to the Harassed and Criminal domains where men reported higher frequencies than women. The correlations of these dimensions to stress and depression were also significant for men, suggesting that the proposed mediation model

may be viable. However, results point toward the idea that gender may not moderate the relation of discrimination to achievement and mental health, as the magnitude, valence and significance of correlations between discrimination and study outcomes were nearly equivalent for men and women.

### **Evaluation of Univariate Models**

The first research aim for this study was to examine gender differences in participants' reports of racial discrimination. I gauged the extent to which men and women reported different kinds of discrimination experiences by performing a 2 (Gender) x 2 (Dimension) repeated measures ANOVA on participants' discrimination scores with Gender as a between-subjects factor and Dimension (Invisible/Outsider, Criminal, Harassed, Unintelligent) as a within-subjects factor. Results indicated that the main effects of Gender and Dimension were significant, as was the Gender x Dimension interaction,  $F(1, 398) = 7.11, p = .01$ ,  $F(3,1194) = 21.99, p < .001$ , and  $F(3,1194) = 5.99, p < .001$ , respectively. See Table 4 for overall sample means and gender group differences for primary study variables.

Overall, men reported more instances of discrimination than women and participants reported experiencing significantly less discrimination in the Harassed domain than the others, which were equal. These main effects, however, were qualified by their interaction. Within gender groups, women were equally likely to experience Invisible/Outsider, Unintelligent and Criminal discrimination and least likely to experience discrimination in the Harassment domain as compared to the other types. Men's reports of Invisible/Outsider, Unintelligent, and Overt Harassment discrimination

were almost equal, but they reported significantly more discrimination in the Criminal domain than any other type. While there were no significant between-group gender difference in participants' experiences of Invisible/Outsider-based discrimination,  $t(399) = .90, p = .37$  or in their reports of Unintelligent discrimination,  $t(398) = .95, p = .35$ , men were more likely to experience Criminal-based discrimination and Overt Harassment than their female counterparts,  $t(399) = 4.60, p < .001$  and  $t(399) = 2.43, p = .02$ , respectively.

Results partially confirm my hypotheses regarding the gendered nature of racial discrimination. Women experienced discrimination in the Harassed domain less than the other types of discrimination, suggesting that when women do face discrimination, those experiences are likely to be less overt. However, I anticipated that they would experience significantly more experiences of feeling excluded and rejected (i.e. Invisible/Outsider) than the other types and more than men, which was not illustrated in the data. Hypotheses concerning the experiences of men were more fully supported. Men were most likely to experience others treating them with fear and suspicion (Criminal) than any other type of discrimination. Further, they experienced more of this type of discrimination than women in the sample. They were also more likely than women to report instances of Overt Harassment. These findings suggest Black men's experiences of discrimination are more likely to be those in which they are viewed as criminal or threatening. They are also more likely to be the targets of this type of discrimination than Black women. There were no gender differences in reports of Unintelligence discrimination, which was in line with hypotheses predicting that men and women are equally likely to experience this type of mistreatment.

## Gender-Group Comparison of Structural Model

Given that discrimination can operate at different levels of experience (i.e. initial experience, interpretation, outcome), it may be possible that even when men and women experience similar types and levels of discrimination, that the effect of these experiences on relevant outcomes may differ for each group. To test my hypothesis of gender differences in the relation of discrimination to achievement, structural equation modeling (AMOS 18.0; Amos Development Corporation, Spring House, PA) was used to estimate the relationships between each of the different dimensions of discrimination, and achievement and mental health outcomes. Additionally, students' household income and a dummy-coded variable for University 1 were included as covariates to control for their influence on GPA. A dummy-coded variable indicating whether or not a participants' mother had graduated high school was also included to control for its effect on trait anxiety (a relationship that was significant in previous analyses).

An examination of separate models for men and women was conducted to investigate the relationships of discrimination dimensions to each study outcome. The results of the tested model for women appear in Figure 1. For simplicity, only significant standardized path coefficients are shown, but as dictated by the theoretical model, all direct paths were tested. The model fit the data for women relatively well ( $\chi^2/df = 1.23$ , CFI = .99, RMSEA  $\leq$  .03). For women, experiences of discrimination in the Criminal domain were related to higher ratings of stress one year later ( $\beta = .15, p < .05$ ). More frequent experiences of Unintelligent discrimination were associated with higher levels of depression and anxiety ( $\beta = .29, p < .05$  and  $\beta = .23, p < .01$ , respectively) while feeling harassed because of race related to lower GPAs for women in the sample ( $\beta = -.19, p <$

.05). The Invisible/Outsider dimension was unrelated to any achievement or mental health outcome for women.

Interestingly, there were no significant paths from any discrimination dimension to mental health or achievement for men. It is likely that the sample of males was not large enough to detect small effects in the model ( $n = 99$ ). A post hoc estimation of power, where effect size was defined in terms of a null and alternative value of the root-mean-square error of approximation fit index (RMSEA) indicated a low probability of identifying statistically significant effects ( $1-\beta = .32$ ,  $df = 12$ ) (MacCallum, Browne, & Sugawara, 1996; Preacher & Coffman, 2006).

In order to directly test whether the structural process differs across the gender group statistically, a multiple-group comparison was conducted by examining the difference between the chi-square for a model with the structural paths constrained and one with no structural paths constrained (baseline model) (Byrne, 2001). Both the unconstrained, baseline model ( $\chi^2/df = 1.30$ ,  $CFI = .99$ ,  $RMSEA \leq .03$ ) and the constrained model ( $\chi^2/df = .97$ ,  $CFI = 1.00$ ,  $RMSEA \leq .001$ ) fit the data well. The difference in chi-squares, however, was not significant, suggesting that the overall process by which discrimination relates to achievement and mental health was statistically the same for both men and women (see Table 8).. Thus, SEM analyses were conducted simultaneously for each gender, and the hypotheses regarding a gender difference in achievement processes related to discrimination was rejected. The results of the tested model for the whole sample appear in Figure 2. Again, only significant standardized path coefficients are shown, but all direct paths were tested. The standardized path coefficients for all variables in the study can be found in (Table 9).

The results from the overall structural model fit fairly well ( $\chi^2/df = 1.76$ , CFI = .99, RMSEA = .04) and support my hypothesis that the different gendered dimensions of racial discrimination relate to achievement in unique ways. Discrimination in the Criminal and Harassed domains were both negatively related to participants' grade point averages one year later ( $\beta = -.15, p = .01$  and  $\beta = -.14, p = .03$ ), but were unrelated to anxiety, stress, or depression. Ten percent of the variance in GPA was explained by the model ( $R^2 = .10$ ). While discrimination experiences in the Invisible/Outsider domain were unrelated to any outcomes, Unintelligent discrimination was significantly related to participants' mental health symptomology. More frequent experiences of Unintelligent discrimination at Wave 1 predicted significantly more anxiety ( $\beta = .19, p = .01$ ), stress ( $\beta = .16, p = .02$ ), and depression ( $\beta = .18, p = .01$ ) for participants one year later. The model explained 4.4, 7.7, and 4.6% of the variance in stress, depression, and anxiety, respectively.

The results regarding the variables used as controls indicate that participants with higher household incomes also had higher GPAs ( $\beta = .11, p = .02$ ). Students from University 1 also had higher GPAs than those from the other institutions ( $\beta = .27, p < .001$ ). Mother education was unrelated to reports of anxiety.

### **Assessment of Indirect Effects in Structural Model**

A final question in the present analysis concerns whether gender differences in the types of discrimination participants report is related to gender differences in academic achievement. That is, if Black men are more likely to experience Overt Harassment and fear/suspicion-based discrimination (i.e. Criminal) than Black women, is it possible that

this relationship explains why Black men also have lower grades than Black women? Additionally, I explore the possibility that Black students may also be influenced by discrimination in other ways. Specifically, I anticipated that Black students (particularly women) may show declines in mental health outcomes in relation to particular types of discrimination experiences even while their academic outcomes remain unchanged.

In order to test the proposed hypotheses, I followed the steps for testing for mediation via structural equations models outlined by and Zhao, Lynch and Chen (2010). I fit a structural equation model in which the indirect paths of interest and all direct paths between gender and study outcomes were estimated simultaneously and used bootstrap estimates to assess the significance of the hypothesized indirect effects. As there were no significant relations between gender and Invisible/Outsider or Unintelligent discrimination in previous analyses, these paths were not included in the model. However, all direct paths from Invisible/Outsider and Unintelligent discrimination dimensions to achievement and mental health variables were modeled as well as controls for household income, mother education, and institution. The structural model and analysis results are illustrated in Figure 3. All direct and indirect paths were assessed as described above, however only significant standardized path coefficients are shown in the figure for clarity (standardized path coefficients for all variables in the study can be found in Table 10).

As expected, there were significant direct effects of gender on Criminal and Harassed discrimination. Being male predicted more experiences of discrimination in these domains. There were also direct effects of discrimination on achievement and mental health. A higher frequency of Criminal discrimination subsequently predicted



lower GPA and higher stress and more frequent experiences of discrimination in the Harassed domain predicted lower GPA. Gender also had a direct effect on two of the three mental health variables. Being female was associated with more stress and depression ( $\beta = -.12, p < .05$  and  $\beta = -.15, p < .01$ ), but there was no direct effect of participant gender on GPA or anxiety in the current model.

Significance tests of the indirect paths using bootstrap estimates partially confirmed hypotheses regarding the mediating role of discrimination dimensions. Controlling for household income and attendance at University 1, there were significant indirect effects of gender on GPA through the Criminal domains,  $b = -.03, SE = .02, CI (-.08, -.01)$ , but the indirect path through Harassed was non-significant,  $b = -.02, SE = .01, CI (-.05, -.00)$ . As previously noted, the direct effect gender on GPA was also non-significant. These results suggest an indirect-only mediation process. Men were more likely than women to experience Criminal discrimination, and in turn, more frequent experiences of discrimination in this domains predicted lower achievement. However, gender alone does not predict variation in student GPA.

There was also a significant indirect effect of gender on stress via Criminal discrimination ( $b = .04, SE = .02, CI (.01, .08)$ ), such that men experienced more experiences of discrimination in this domain and were subsequently more likely to report higher levels of stress. The significant, positive indirect effect of gender on stress through Criminal discrimination in addition to the significant, negative direct effect of gender on stress ( $b = -.18, SE = .06, p < .01$ ), suggest competitive mediation (Zhao, Lynch, Chen, 2010). That is, although gender directly predicted higher stress for women in the sample, men's ratings of stress were mediated by their experiences of discrimination.

Although there were significant indirect effects and the model fit the data relatively well ( $\chi^2/df = 2.20$ , CFI = .98, RMSEA = .06), it explained relatively little of the variance in mental health outcomes. The multiple squared correlations for anxiety, depression, and stress were .05, .09, and .07, respectively. The model explained slightly more of the variation in achievement. Eleven percent of the variance in student GPA was explained by the mediation model ( $R^2 = .11$ ).

### **Summary**

Overall, study hypotheses regarding the role of gender in discrimination experiences for Black students and their achievement were partially supported. The results for men were illustrated in the expected directions, but those for women were largely non-significant.

As anticipated, men reported significantly higher levels of Criminal and Harassed discrimination than women. They were also more likely to experience these two types than any of the other dimensions assessed. Women were least likely to experience Harassed discrimination than any of the other types. It was anticipated that women would report significantly more instances of Invisible/Outsider discrimination than men, but this assertion was not supported in the data.

The second research question explored whether discrimination would have a different effect on the achievement and mental health outcomes for women than men. Although gender did not moderate the relation of discrimination dimensions to study outcomes, it was shown that these dimensions are related to achievement and mental health in unique ways. In SEM analysis, Criminal discrimination at Wave 1 related to

lower GPA as were more frequent experiences of Harassed discrimination one year later. Mental health outcomes were related to different types of discrimination. Specifically, more frequent instances of being treated as if you were Unintelligent were related to more feelings of anxiety, stress and depression.

Finally, analyses via structural equation modeling indicated that discrimination in the Criminal domain mediated the effects of gender on both stress and GPA. Men were more likely to experience Criminal based discrimination than women, leading to lower GPAs and more stress. There were no other significant indirect effects illustrated in the data. Taken together, these findings suggest that there are both psychological and achievement-related consequences of interpersonal discrimination and further, that these consequences are tied to specific forms of racial discrimination that may be gendered.

## **CHAPTER V**

### **Discussion**

The introduction to this dissertation began with a discussion of the ways in which discrimination relates to achievement for Black students, and proposes that the role of gender is an essential component missing from current analyses in the area. There has been little theoretical or empirical attention given to gender processes within the literature on minority education, despite the consistent gender differences in achievement and attainment among Black students (e.g., Kaba, 2005). This discrepancy in educational achievement may point to the significance of gender to the educational experiences of this population. However, traditional psychological research generally examines these identities in ways that minimize the salience of gender and its inextricable relation to racialized experiences (Burman, 2003).

It is plausible and likely that if men and women have different educational outcomes as a result of racial discrimination experiences, some component of those discrimination experiences differ based on gender as well as race. As such, the overarching goal of this dissertation was to expand current views of achievement outcomes to include considerations of the ways in which Black college students' raced and gendered experiences inform that achievement.

This paper critically examined literature surrounding the study of racial discrimination and takes an intersectional perspective in investigating the ways that race-related experiences are often gendered for Black students. The project empirically tested

various relations between gender and discrimination to assess what role gender may play in the relation of discrimination to achievement. The purpose of this final chapter is to reflect on the findings of the current project and what contributions they make to the existing literature. The chapter also considers the study's limitations and provides some future directions for research in the field.

### **Dimensions of Interpersonal Discrimination**

Before addressing the primary research questions, a preliminary step in the analyses discussed here was to validate the existence of sub-dimensions of racial discrimination within a previously established measure of daily racial hassles. Guided by research in the field showing that there are many types of interpersonal discriminatory events (e.g. Contrada et al., 2001), this study aimed to identify groups of items that were relevant to experiences of gendered racism for Black students.

Thirteen of the 18 Daily Life Experiences questionnaire items were reliably classified into 4 dimensions of gendered racial discrimination: Criminal, Harassed, Unintelligent, and Invisible/Outsider. The Criminal dimension was centered around discriminatory events in which others treated participants as if they were a threat to other people or their property, relating to gendered racial stereotypes of Black men as aggressive and/or dangerous. The Harassed dimension described discrimination events that were more overt in nature in which others such as name-calling or taunting. The Unintelligent dimension was defined by events in which others devalued participants' ideas or abilities. This dimension was theorized to be equally relevant for both genders, as stereotypes about intellectual capacity have been applied toward Black women and

men. Lastly, the Invisible/Outsider domain reflected experiences of being ignored, avoided, or treated as if you do not belong. It was expected that this dimension would reflect the types of marginalizing experiences specifically reported by Black women.

The subscales formed from items in each dimension were moderately correlated indicating overlapping, yet unique facets of racial discrimination experiences. Each of the dimensions also showed different relations to gender, achievement and mental health outcomes, further suggesting that they are qualitatively distinct aspects of discrimination.

The dimensions utilized here do not, by far, represent the totality of discrimination experiences. Although the 18 items spanned a variety of interpersonal discrimination events, there is a much broader universe of discrimination experiences that could be included in the model. Thus, further study is needed to determine what types of discrimination processes may mediate the relation of gender to achievement.

### **Gender Differences in Racial Discrimination**

Results of this study indicated that there are, indeed, some important gender differences in experiences of discrimination among Black students. In line with current research demonstrating the salience of negative, gendered stereotypes for Black males regarding criminality, men in the sample did report more of discrimination that could be classified as fear and suspicion-based than women. Men were also more likely than women to report experiences of overt harassment, a finding in line with literature positing that Black men are more likely to be targeted for discrimination. The current analyses did not identify any domains in which women were the primary targets over men; however, within-group analysis of variance did indicate differences in women's reports of

discrimination dimensions. Women reported discrimination in the Harassed domain less than the other types of discrimination. This result may indicate that when women do face discrimination, those experiences may be more likely to be covert, although women did not report significantly more experiences of being marginalized or ignored as was originally hypothesized.

Without an intersectional perspective, it might be construed from these results that men are simply more likely than women to be the targets of racial discrimination. The current study challenges this assumption by proposing instead that men are more likely than women to experience particular *types* of discrimination. The nature of these particular findings regarding gender differences in discrimination points toward an important limitation of the current analyses. Despite the inclusion of items that span multiple facets of interpersonal discrimination, none of the scale items specifically invoke gender or speak to the unique contexts surrounding discrimination experiences for Black women.

Because Black women represent a significantly larger proportion of Black college students than Black men (American Council on Education, 2004), much of what we know about Black student experiences may be largely based on *responses* from Black women, but *measures* defined by the experiences of Black men. Thus, our findings regarding discrimination experiences are potentially underestimating how often Black women experience discrimination. Because Black men are often viewed as the prototypical members of the racial group, race-related measures are often created with the Black male experience in mind without sufficient attention to those of Black women. This type of bias may have undermined the exploration of the gendered themes at the

center of this study, explaining the lack of significant findings regarding unique experiences for women.

I am currently unaware of any measures of racial discrimination include items that ask, for example, how often someone experiences inappropriate sexual advances because of their race, an experience frequently reported by Black women in qualitative literature and which may be linked to perceptions of Black women as Jezebels or hyper-sexualized figures (see Buchanan & Ormerod, 2002). However, most of the measures do contain items regarding gendered discrimination themes for men. In this study, items in the Criminal domain are closely tied to events based on perceptions of Black men as aggressive, scary and threatening, which is a form of discriminatory treatment primarily focused at Black men (see Plant, Goplen, & Kuntsman, 2011).

In one of the first studies to investigate the possibility of gender bias in current measures and models of interpersonal racial discrimination, Harnois and Ifatunji (2010) found that a popular measure of major-life racial discrimination explained a greater proportion of Black men's mistreatment than it did Black women's and further that an intersectional perspective on the measurement of discrimination (i.e. relaxing measurement invariance constraints between genders) significantly improved model fit. Through these findings, the authors astutely note that not only is the experience of racial discrimination a gendered phenomenon, but also that our existing tools for quantitative analysis do not sufficiently address the intersecting hierarchies of race and gender identities. Without the inclusion of items specifically tapping into the experiences of minority women, questions remain as to how racial discrimination events impact their achievement and other adjustment outcomes. Further studies in this area should take care



to unmask the stories of Black women by to considering the diversity of experiences within social categories. Future work will need to be more sensitive to issues of gender in the construction and measurement of racial discrimination scales so as to avoid the continued marginalization of Black women's experiences.

### **Gender, Discrimination, and Achievement**

The final two questions under investigation in the current study both deal with identifying the specific role of gender in the relation of discrimination events to achievement outcomes. Past research has focused primarily on the negative outcomes associated with racial discrimination, without significant attention paid to the role that gender might play in these processes. The current study contributes to the literature in this area by first asking whether gender moderates the effect of discrimination on achievement, and second, whether the relation of gender to achievement is transmitted through discrimination experiences.

*Gender as a moderator.* In light of recent studies suggesting that women and men may be affected differentially by discrimination experiences (e.g. Banks, Kohn-Wood, & Spencer, 2006; Cogburn, Chavous, & Griffin, 2011) in addition to the gendered trends in Black student achievement showing that women generally have higher grades than men (e.g. Kaba, 2005), it was anticipated that discrimination would relate negatively to women's psychological outcomes, but not reported GPA. A different trend was expected for men, such that mental health outcomes would not be significantly related to discrimination experiences, but men's grades would be negatively associated with increased reports of discrimination in any domain.

The group comparison model was not significant, suggesting that men and women are similarly affected by discrimination events. Women are not more sensitive to discrimination than men, nor are they immune to the effects of discrimination events. The latter point is one to give some special consideration. Because Black women generally have higher academic attainment and achievement (relative to Black men), it could be assumed that they do not have negative educational experiences or remain unaffected by those experiences. These results suggest otherwise. The lack of a significant moderation effect suggests that Black men and women have poorer mental health outcomes in relation to discrimination events that threaten their intelligence. Further, discrimination events involving overt harassment and being treated like a criminal significantly impact achievement for both sexes.

Although gender did not operate as a direct moderator of discrimination-to-achievement processes, it has been shown to moderate other relations involving racial discrimination and academic outcomes. Specifically, gender plays an important role in mechanisms involving racial identity and discrimination. For example, Chavous et al. (2008) showed that among a sample of Black adolescents, centrality moderated the relationship between discrimination and academic outcomes in ways that differed across gender. It is uncertain how these mechanisms play out for older students, who potentially have more complex understandings of discrimination and identity, but in future analyses, incorporating a measure of racial identity to this model may add a level of complexity that explains more about the ways gender operates in discrimination processes.

Further, the findings of this study were likely limited by the narrow operational definition of achievement. It is likely that other achievement-related attitudes and

behaviors such as classroom engagement, beliefs about educational utility, and motivation are the key to understanding why and how discrimination experiences impact educational outcomes for Black students.

*Gender differences in discrimination predicting gender differences in achievement.* The final line of analysis for this dissertation was to examine how forms of interpersonal racial discrimination might indirectly link gender with achievement outcomes. Significance tests of indirect effects were calculated using bootstrapping techniques. It was found that men's lower GPAs relative to women could partially be explained by their higher frequency of discrimination experiences in the Criminal domain. Further, while higher ratings of stress were directly related to gender for women, increases in perceived stress for men were also related to their experiences of Criminal discrimination. To summarize, men were more stressed than women and had lower GPAs due, in part, to their experiences of being treated like criminals. Contrary to the original hypotheses, no other discrimination dimensions were significant mediators in the model. However the positive relations between Unintelligent discrimination and mental health symptomology remained significant.

Assessment of the model fit and path estimates suggests that the association between gender and academic achievement is only partially explained by the mechanisms theorized in the model. Effect sizes in the model were low, and overall, the model did not explain a substantial amount of variance in achievement or psychological outcomes. However, the significant findings in these analyses help elucidate the story of how discrimination relates to achievement for Black students. They also provide further support for the suggestion that there are sub-dimensions of interpersonal discrimination

that have unique relations to various outcomes.

These findings point also toward an important consideration in the measurement of discrimination. It is to be acknowledged that the sorting or grouping of items into dimensions is largely a matter of interpretation or perspective. Although the items under analysis in this dissertation were categorized in relation to themes that may differ by gender, others might group the same discrimination events by another construct relevant for their study. I consider this theory-driven method as an advantage of the current analytic strategy over statistical methods. Several studies have utilized exploratory factor analysis to identify subscales of discrimination, but I propose that this method may not be the most appropriate tool for identifying relevant underlying dimensions within the construct of discrimination. Even still, conceptualizations of discrimination are complex. For this study, it means that gender difference in reports of discrimination could be interpreted in two ways. First, statistical differences in ratings of discrimination could mean that men and women are subject to a different amount of race-based maltreatment. Second, a statistical difference in ratings of discrimination could indicate that men are simply more likely to interpret certain events as discriminatory than are women.

This paper does not explicitly consider the possibility that men and women may interpret discrimination events differently. It is feasible that even when faced with similar discrimination events, men and women may interpret these events in different ways. That is, an experience of ethnic name-calling, may be interpreted by a woman as disvaluation or rejection, but interpreted by a man as threat or aggression. Several of the racial hassles listed in the DLE may map onto more than one discrimination dimension. If men and women interpret discrimination experiences in different ways, it is likely that the

dimensions of discrimination identified have different meanings for each group and are related to achievement outcomes in different ways.

### **Conclusion: Reflections on Intersectionality**

Of primary importance throughout the creation of this dissertation was the utilization of an intersectional perspective as a tool for evaluating the role gender may play in racial discrimination experiences for Black students. Despite a methodological focus on gender differences and the use of categorical groupings (e.g. male/female), I suggest that this study is still intersectional in a number of ways (Cole, 2009; Cole & Stewart, 2001).

This dissertation draws attention to the diversity of discrimination experiences within those defined according to race. By examining the experiences of Black men and Black women separately as well as within the same analyses, the analytic strategies utilized here allow for the emergence of both similar and divergent trends within the population. Similarly, this study specifically attends to discrimination as a process that helps define race and gender categories for Black students. The goal of this project was not simply to examine group differences but to offer insight into the processes that create and maintain these differences. It carefully considers the role that inequality may play in the relation of discrimination to achievement by assessing the influence of gender at different stages of the processes under investigation. First, gender discrepancies in the types of discrimination faced by Black men and women were explored, then the possibility that men and women may demonstrate different sensitivity to the effects of

discrimination, and finally that the influence of discrimination may manifest in different domains (e.g. achievement vs. self-concept).

The use of intersectional perspectives will be a key part of better understanding the complexity of discrimination experiences in the future. Many studies of achievement focus on Black students in comparison to White students, giving little attention to the heterogeneity of experiences within Black populations. Those that do recognize the differences in achievement between Black men and women often focus on what has gone “wrong” with Black males. These approaches essentially render the experiences of Black women invisible. By examining the experiences of both Black men and Black women, this study has offered a more nuanced interpretation of the findings that highlight unique experiences for both groups.

Given the social and political history of Black people in America, the experience of racial discrimination is one shared by both Black men and women. Although this paper focuses on differences in discrimination for Black male and female students, care is taken not to create or reify insidious divisions across gender. The analyses utilized in this study do not only examine group differences, but also differences in the types of discrimination processes relating to achievement. This approach allows for similarities between Black women and men to emerge under the concept of racial discrimination. These shared experiences are indicative of mechanisms related to a collective experience and may point to a critical starting place for changing our thinking and practice around the education of Black students generally.

This research has contributed to the literature by broadening our discourse around issues of discrimination, gender and achievement by dissecting the measurement of

discrimination into more meaningful units and highlighting the role of gender in racial discrimination processes in new ways. However, the findings of this study are both limited and complex in nature. Researchers are beginning to identify the processes contributing to the achievement gap for Black students, but many links are yet to be understood and/or discovered. This dissertation project served only as a preliminary step in addressing the important issues around gender, racial discrimination, and achievement.

Table 1  
*Categorization of Discrimination Items*

	Invisible/ Outsider	Criminal	Harassed	Un- intelligent	Other	% Agreement
1 Being ignored, overlooked, or not given service (in a restaurant, store, etc.)	<b>9</b>	1	0	0	0	90%
12 Being left out of conversations or activities	<b>10</b>	0	0	0	0	100%
16 Being stared at by strangers	<b>9</b>	0	1	0	0	90%
3 Being accused of something or treated suspiciously	0	<b>10</b>	0	0	0	100%
Others reacting to you as if they were afraid or						
4 intimidated	1	<b>8</b>	1	0	0	80%
5 Being observed or followed while in public places	0	<b>8</b>	2	0	0	80%
2 Being treated rudely or disrespectfully	1	0	<b>7</b>	2	0	70%
9 Being insulted, called a name, or harassed	0	0	<b>10</b>	0	0	100%
17 Being laughed at, made fun of, or taunted	0	0	<b>9</b>	0	1	90%
Being treated as if you were "stupid", being "talked						
6 down to"	0	0	0	<b>10</b>	0	100%
Your ideas or opinions being minimized, ignored, or						
7 devalued	1	0	0	<b>9</b>	0	90%
10 Others expecting your work to be inferior	0	0	0	<b>10</b>	0	100%
11 Not being taken seriously	2	0	0	<b>8</b>	0	80%
Overhearing or being told an offensive joke or						
8 comment	5	0	3	1	1	50%
Being treated in an "overly" friendly or superficial						
13 way	4	0	1	2	3	40%
14 Other people avoiding you	6	3	0	0	1	60%
Being mistaken for someone who serves others (i.e.						
15 janitor)	2	0	1	5	2	50%
18 Being mistaken for someone else of your same race	5	0	0	1	4	50%



Table 2

*Descriptive Statistics and Correlation Matrix for Discrimination Dimensions*

Variable	N	M(SD)	1	2	3	4
1. Invisible/Outsider	401	1.61(.95)	-	.56**	.59**	.62**
2. Criminal	401	1.59(.97)		-	.38**	.47**
3. Harassed	401	1.25(.86)			-	.62**
4. Unintelligent	401	1.52(1.06)				-

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

Notes:

Table 3

## Frequency of Occurrence and Mean Score for Individual Items of Racist Hassles

Item	% Occurrence			Mean (SD)		
	Female	Male	Total Sample	Female	Male	Total Sample
1 Being ignored, overlooked, or not given service (in a restaurant, store, etc.)	83.3	76.5	81.6	1.69 (1.07)	1.59 (1.20)	1.67 (1.10)
2 Being treated rudely or disrespectfully	84.6	86.7	85.1	1.74 (1.12)	1.93 (1.18)	1.79 (1.14)
3 Being accused of something or treated suspiciously	69.8	83.7**	73.2	1.28 (1.08)	1.91 (1.28)**	1.43 (1.17)
4 Others reacting to you as if they were afraid or intimidated	77.4	87.8*	79.9	1.68 (1.31)	2.32 (1.50)**	1.84 (1.39)
5 Being observed or followed while in public places	70.8	74.5	71.7	1.44 (1.20)	1.70 (1.33)	1.51 (1.24)
6 Being treated as if you were "stupid", being "talked down to"	80.3	73.5	78.7	1.77 (1.18)	1.69 (1.39)	1.75 (1.23)
7 Your ideas or opinions being minimized, ignored, or devalued	68.9	68.4	68.7	1.43 (1.25)	1.62 (1.45)	1.48 (1.30)
8 Overhearing or being told an offensive joke or comment	87.5	86.7	87.3	1.98 (1.22)	2.36 (1.43)*	2.07 (1.28)
9 Being insulted, called a name, or harassed	60.0	70.4†	62.5	1.03 (1.00)	1.40 (1.21)*	1.12 (1.07)
10 Others expecting your work to be inferior	61.0	63.3	61.5	1.32 (1.32)	1.52 (1.50)	1.37 (1.36)
11 Not being taken seriously	69.5	68.4	69.2	1.43 (1.23)	1.59 (1.47)	1.47 (1.29)
12 Being left out of conversations or activities	68.5	63.3	67.2	1.53 (1.38)	1.51 (1.50)	1.52 (1.41)
13 Being treated in an "overly" friendly or superficial way	74.1	75.5	74.4	1.65 (1.36)	1.85 (1.46)	1.70 (1.38)
14 Other people avoiding you	57.0	65.5	59.1	1.10 (1.24)	1.33 (1.38)	1.16 (1.28)
15 Being mistaken for someone who serves others (i.e. janitor)	32.5	26.5	31.0	.51 (.85)	.47 (.91)	.51 (.87)
16 Being stared at by strangers	79.0	85.7	80.6	2.02 (1.54)	2.32 (1.50)	2.09 (1.53)
17 Being laughed at, made fun of, or taunted	43.6	55.1*	46.4	.78 (1.05)	.96 (1.08)	.83 (1.06)
18 Being mistaken for someone else of your same race	80.7	78.6	80.1	1.97 (1.41)	1.93 (1.36)	1.96 (1.40)

Note: † p < .06 \*p < .05, \*\*p < .01

Table 4

*Means for Primary Study Variables by Gender*

Dimension	Women Mean(SD)	Men Mean(SD)	Overall Mean(SD)
Grade Point Average	3.06 (.51)	2.86 (.56)	3.01(.53)
Depression	.70 (.48)*	.59 (.41)	.67(.47)
Stress	1.89 (.51)*	1.75 (.45)	1.86(.50)
Invisible/Outsider	1.58 (.93)	1.69 (.85)	1.61(.96)
Criminal	1.46 (.89)	1.97 (1.11)***	1.59(.97)
Harassed	1.19 (.84)	1.61 (1.22)*	1.25(.86)
Unintelligent	1.49 (1.00)	1.43 (.90)	1.52(1.06)
Total Discrimination	1.47 (.71)	1.67 (.85)	1.51(.75)
N	304	97	401

\*p&lt;.05. \*\*p&lt;.01. \*\*\*p&lt;.001

Table 5  
 Associations Among Women's Achievement, Mental Health and Discrimination Ratings

Variable	N	1	2	3	4	5	6	7
1. GPA	302	-						
2. Stress	300	-0.14	-					
3. Depression	303	-0.08	.63**	-				
4. Invisible/Outsider	304	-0.04	.14*	.22**	-			
5. Criminal	304	-0.06	.19**	.21**	.51**	-		
6. Harassed	304	-0.07	0.1	.15*	.60**	.37**	-	
7. Unintelligent	303	-0.03	.18**	.24**	.60**	.46**	.66**	-

\*p<.05. \*\*p<.01. \*\*\*p<.001

Notes:

Table 6

*Associations Among Men's Achievement, Mental Health and Discrimination Ratings*

Variable	N	1	2	3	4	5	6	7
1. GPA	94	-						
2. Stress	95	-.07	-					
3. Depression	97	-.10	.59**	-				
4. Invisible/Outsider	97	-.00	.26*	.38**	-			
5. Criminal	97	-.09	.20*	.19	.69**	-		
6. Harassed	97	.06	.16	.31**	.57**	.37**	-	
7. Unintelligent	97	.02	.23*	.33**	.68**	.52**	.51**	-

\*p<.05. \*\*p<.01. \*\*\*p<.001

Table 7  
*Gender Differences on Discrimination items*

Item	Women Mean (SD)	Men Mean (SD)
<b>Invisible/Outsider</b>		
1 Being ignored, overlooked, or not given service (in a restaurant, store, etc.)	1.69 (1.07)	1.59 (1.20)
12 Being left out of conversations or activities	1.53 (1.38)	1.51 (1.50)
16 Being stared at by strangers	2.02 (1.54)	2.32 (1.50)
<b>Criminal</b>		
3 Being accused of something or treated suspiciously	1.28 (1.08)	1.91 (1.28) ***
4 Others reacting to you as if they were afraid or intimidated	1.68 (1.31)	2.32 (1.50) ***
5 Being observed or followed while in public places	1.44 (1.20)	1.70 (1.33)
<b>Harassed</b>		
2 Being treated rudely or disrespectfully	1.74 (1.12)	1.93 (1.18)
9 Being insulted, called a name, or harassed	1.03 (1.00)	1.40 (1.21)*
17 Being laughed at, made fun of, or taunted	.78 (1.05)	.96 (1.08)
<b>Unintelligent</b>		
6 Being treated as if you were "stupid", being "talked down to"	1.77 (1.18)	1.69 (1.39)
7 Your ideas or opinions being minimized, ignored, or devalued	1.43 (1.25)	1.62 (1.45)
10 Others expecting your work to be inferior	1.32 (1.32)	1.52 (1.50)
11 Not being taken seriously	1.43 (1.23)	1.59 (1.47)
<b>Other</b>		
8 Overhearing or being told an offensive joke or comment	1.98 (1.22)	2.36 (1.43)*
13 Being treated in an "overly" friendly or superficial way	1.65 (1.36)	1.85 (1.46)
14 Other people avoiding you	1.10 (1.24)	1.33 (1.38)
15 Being mistaken for someone who serves others (i.e. janitor)	.51 (.85)	.47 (.91)
18 Being mistaken for someone else of your same race	1.97 (1.41)	1.93 (1.36)

\*p<.05. \*\*p<.01. \*\*\*p<.001

Table 8

*Fit Indices for Gender group Comparison Model*

Model	$\chi^2$	df	p-value	CFI	RMSEA	Model Comparison		
						$\Delta \chi^2$	$\Delta df$	p-value
1. Baseline	31.29	24	.15	.99	.03			
2. Regression Weights Constrained	41.57	43	.53	1.00	.00			
3. 1 vs. 2						10.28	19	.95

Table 9

Parameter estimates for model evaluating relationships between Discrimination, Achievement and Mental Health (n = 403)

	GPA			Anxiety			Depression			Stress		
	$\beta$	b	SE	$\beta$	b	SE	$\beta$	b	SE	$\beta$	b	SE
Harassed	-.14	-.08*	.04	-.07	-.04	.04	-.02	-.01	.03	-.07	-.04	.04
Criminal	-.15	-.08*	.03	-.07	-.03	.03	.04	.02	.03	.10	.05	.03
Unintelligent	.10	.05	.03	.19	.08**	.03	.18	.08**	.03	.16	.08*	.03
Invisible/Outsider	.10	.05	.03	.11	.05	.03	.12	.05	.03	.04	.02	.03
Mother Education	--	--	--	.05	.14	.12	--	--	--	--	--	--
Household Income	.11	.02*	.01	--	--	--	--	--	--	--	--	--
School 1	.27	.32***	.06	--	--	--	--	--	--	--	--	--
R <sup>2</sup>		0.10			0.05			0.08			0.04	

Note: Empty cells represent no information because the paths are not tested in the model.

\*p&lt;.05. \*\*p&lt;.01. \*\*\*p&lt;.001



Table 10  
*Parameter estimates for Model evaluating relation of gender to achievement and mental health*

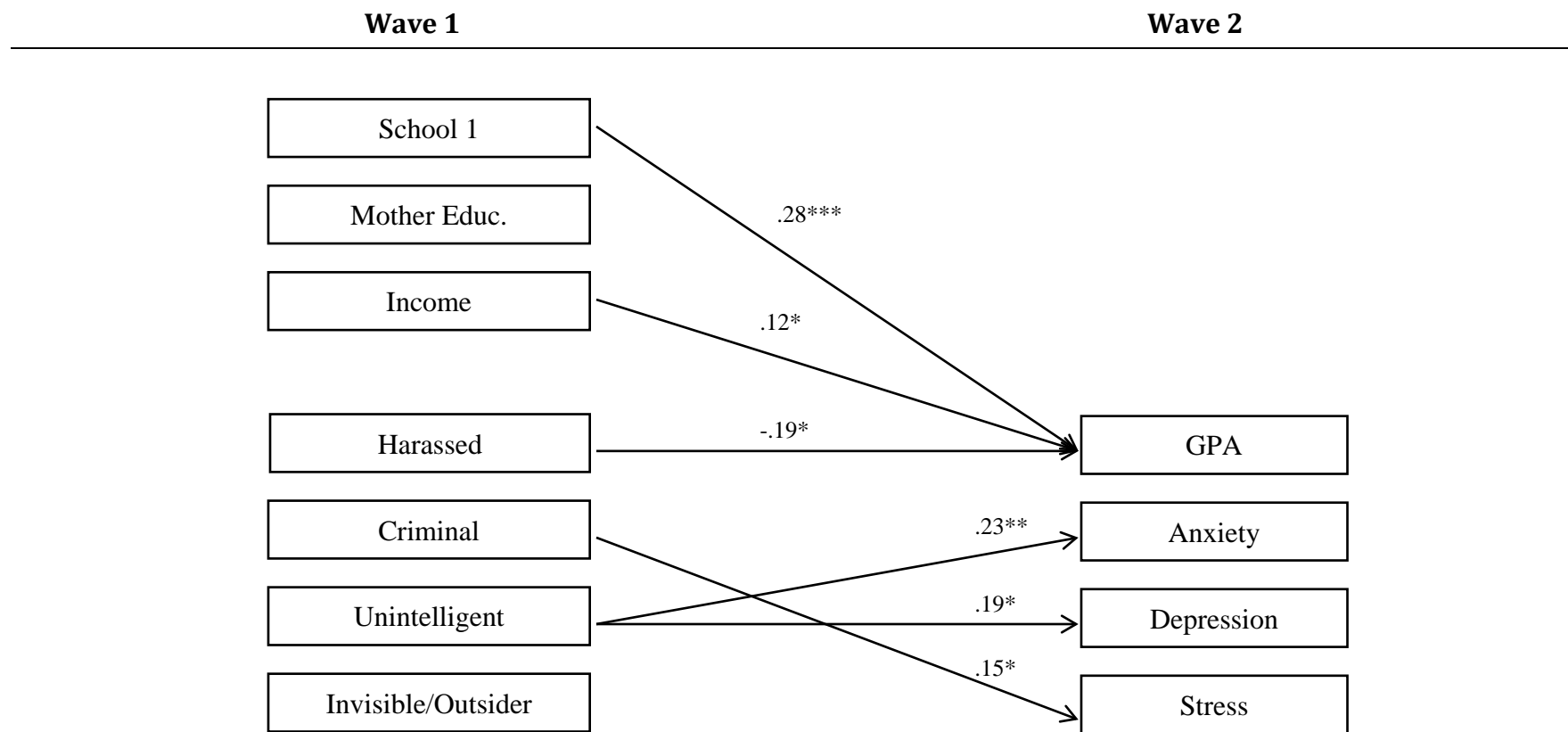
Predictor	Dependent Variable	Direct Effect	Indirect Effect	R <sup>2</sup>
Gender	Criminal	.23***	-	
	Harassed	.12*	-	
	GPA	-.08	-.04**	
	Anxiety	-.09	-.02	
	Depression	-.12*	.02	
	Stress	-.15**	.03	
Criminal	GPA	-.12*		
	Anxiety	-.04		
	Depression	.08		
	Stress	.14*		
Harassed	GPA	-.12*		
	Anxiety	-.05		
	Depression	.00		
	Stress	-.04		
Unintelligent	GPA	.09		
	Anxiety	.18**		
	Depression	.17**		
	Stress	.14*		
Invisible/Outsider	GPA	.08		
	Anxiety	.09		
	Depression	.10		
	Stress	.01		
Mother Education	Anxiety	.05		.05
Household Income	GPA	.11**		.11
School 1	GPA	.26***		.26

*Note.* Significance tests are only reported for direct effects. Dashes represent empty cells or no information because the paths are not tested in the model. \*p<.05.

\*\*p<.01. \*\*\*p<.001

Figure 1  
*Relation of Discrimination Dimensions to Women's Achievement and Mental Health Outcomes*

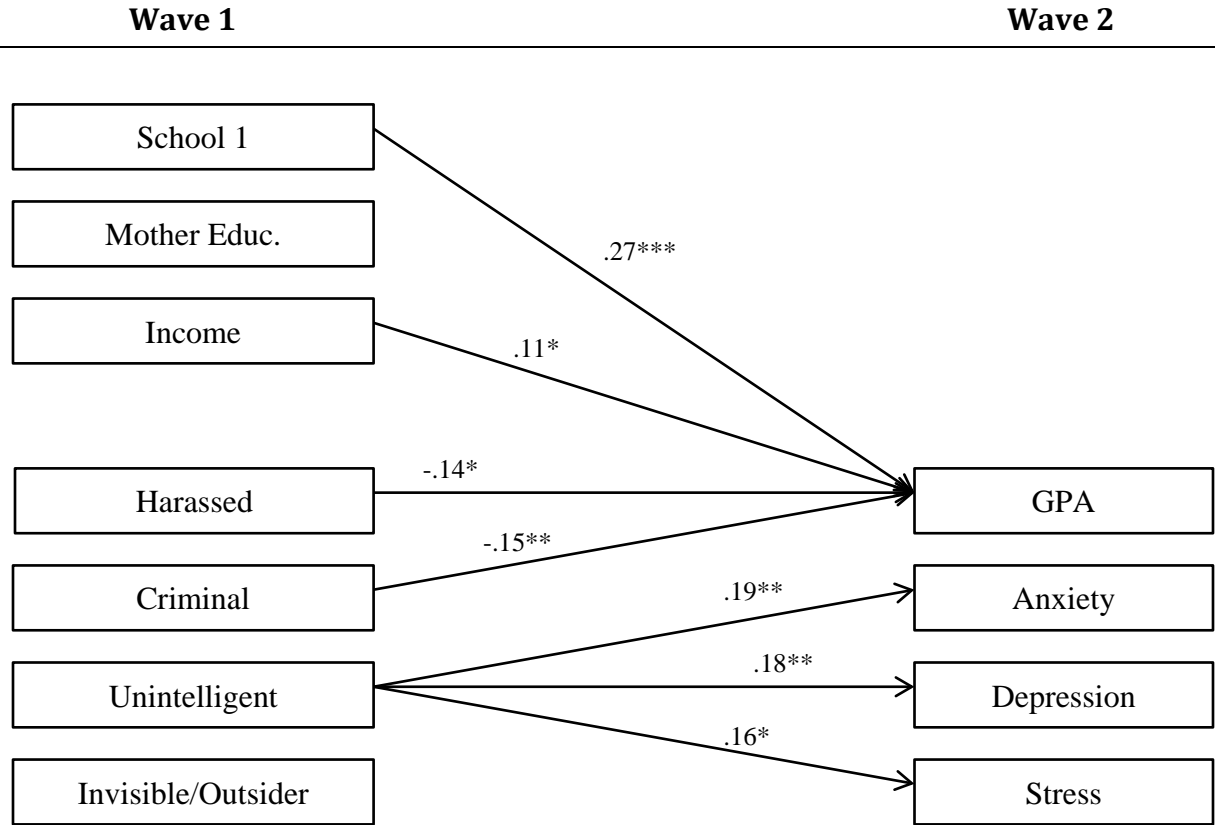
80



Note: Covariance between all predictors was allowed. Model fit statistics:  $\chi^2 = 15.10$ ,  $df = 12$ ;  $\chi^2/df = 1.23$ ; CFI = .99; RMSEA = .03. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Figure 2

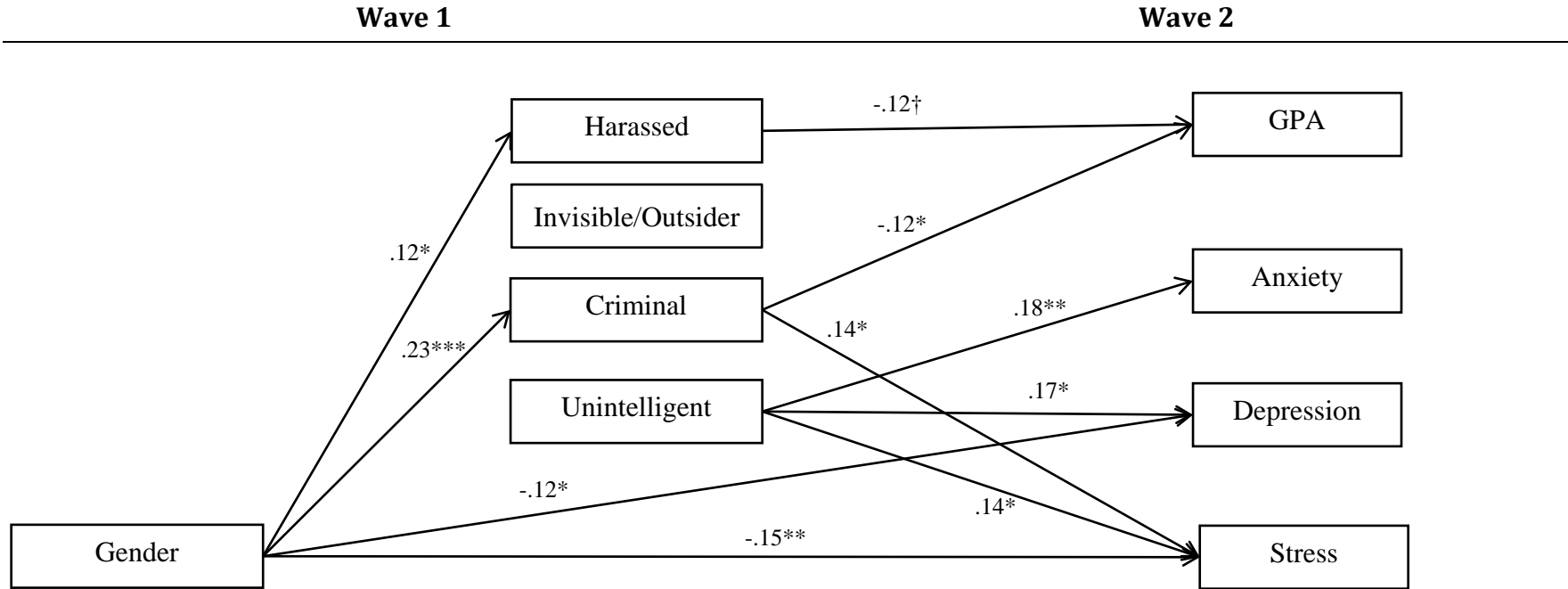
Relation of Discrimination Dimensions to Achievement and Mental Health Outcomes in Full Sample



Note: Covariance between all predictors was allowed. Model fit statistics:  $\chi^2 = 21.16$ ,  $df = 12$ ;  $\chi^2/df = 1.76$ ; CFI = .99; RMSEA = .04. \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

Figure 3

*Indirect Relation of Gender to Achievement and Mental Health Outcomes through Discrimination Dimensions*



Note: Only significant paths shown. For Gender, female = 0, male = 1. †  $p < .06$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## APPENDIX

### Measures

#### Center for Epidemiologic Studies Depression Scale (CES-D)

*0 = Rarely or none of the time (less than 1 day), 1 = Some or a little of the time (1-2 days), 2 = Occasionally or a moderate amount of time (3-4 days), 4 = Most or all of the time (5-7 days)*

1. I was bothered by things that don't usually bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with the help of my family or friends.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people disliked me.
20. I could not get going.

*Note:* Items marked with an asterisk (\*) were reverse coded.

#### State-Trait Anxiety Inventory (STAI)

*1 = Almost Never, 2 = Sometimes, 3 = Often, 4 = Almost Always*

1. I feel pleasant.
2. I feel nervous and restless.
3. I feel satisfied with myself.
4. I wish I could be as happy as others seem to be.
5. I feel like a failure.

6. I feel rested.
7. I am "calm, cool and collected".
8. I feel that difficulties are piling up so that I cannot overcome them.
9. I worry too much over something that really doesn't matter.
10. I am happy.
11. I have disturbing thoughts.
12. I lack self-confidence.
13. I feel secure.
14. I make decisions easily.
15. I feel inadequate.
16. I am content.
17. Some unimportant thought runs through my mind and bothers me.
18. I take disappointments so keenly that I can't put them out of my mind.
19. I am a steady person.
20. I get in a state of tension or turmoil as I think over my recent concerns and interest.

*Note:* Items marked with an asterisk (\*) were reverse coded.

### PSS Perceived Stress Scale

*0 = Never, 1 = Almost Never, 2 = Sometimes, 3 = Fairly Often, 4 = Very often*

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and "stressed"?
4. In the last month, how often have you dealt successfully with irritating hassles?
5. In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
6. In the last month, how often have you felt confident about your ability to handle your personal problems?
7. In the last month, how often have you felt things were going your way?
8. In the last month, how often have you found that you could not cope with all the things you had to do?
9. In the last month, how often have you been able to control irritations in your life?
10. In the last month, how often have you felt that you were on top of things?
11. In the last month, how often have you been angered because of things that happened that were outside of your control?
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?
13. In the last month, how often have you been able to control the way you spend your time?
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

*Note:* Items marked with an asterisk were reverse coded.

### Daily Life Experiences Questionnaire

0 = Never, 1 = Less than once, 2 = A few times, 3 = About once a month, 4 = A few times a month, 5 = Once a week or more

1. Being ignored, overlooked, or not given service (in a restaurant, store, etc.)
2. Being treated rudely or disrespectfully
3. Being accused of something or treated suspiciously
4. Others reacting to you as if they were afraid or intimidated
5. Being observed or followed while in public places
6. Being treated as if you were "stupid", being "talked down to"
7. Your ideas or opinions being minimized, ignored or devalued
8. Overhearing or being told an offensive joke or comment
9. Being insulted, called a name, or harassed
10. Others expecting your work to be inferior
11. Not being taken seriously
12. Being left out of conversations or activities
13. Being treated in an "overly" friendly or superficial way
14. Other people avoiding you
15. Being mistaken for someone who serves others (i.e., janitor)
16. Being stared at by strangers
17. Being laughed at, made fun of, or taunted
18. Being mistaken for someone else of your same race

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