Does racial identity explain the buffering impact of racial socialization on discrimination?

by

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The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this thesis. The Graduate College will ensure this thesis is globally accessible and will not permit alterations after a degree is conferred.

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ABSTRACT

Two variables under the group identification construct have received the most attention in research as significant protective factors moderating the discrimination to distress link: racial identity and racial socialization (Lee & Ahn, 2013; Pascoe & Richman, 2009). These variables are assumed to be related to one another such that an individual's racial identity is a result of their racial socialization (Katz, 2013). However, there exist surprisingly few studies aimed directly at explicating this relationship, and even less so exploring how this relationship impacts the discrimination to distress link. This study aimed to build upon past findings and fill this gap in the literature by providing both a longitudinal and an integrative exploratory model examining not only direct effects, but also moderation and mediation pathways of racial socialization and racial identity on the discrimination to distress link. Results were inconclusive. Although racial identity significantly moderated the discrimination to distress link, racial socialization did not, making mediation analyses difficult. Findings highlighted a need for continued research and implications and future directions for researchers are discussed.

Keywords: racial socialization; racial identity; African Americans; discrimination

CHAPTER 1

INTRODUCTION

A 2011 Public Health Review noted the increased awareness that, without also paying attention to social factors and social determinants of health, medical care alone is an insufficient tool for improving the overall health of individuals (Braveman, Egerter, & Williams, 2011). In African American populations, an important social determinant of health is the experience of discrimination as this is often present in multiple social settings including the workplace, housing, educational, criminal settings, and more (Priest et al., 2013; Schmitt, Brandscombe, Postmes, & Garcia, 2014). Given the pervasive nature of discrimination in African American communities, one would expect these communities to suffer notable psychophysical costs.

Indeed, experiences of discrimination are suspected to be at the core of the racial health disparities witnessed in our society as evidenced by the lower birth rates, higher infant mortality rates, shorter life expectancies, and higher risks of heart disease present in African American populations, as they are significantly associated with these outcomes (Allison, 1998; Flack et al., 1995; Krieger & Sidney, 1996). However, African American populations demonstrate great resilience in the face of this adversity. In our conceptual understanding of the impact of discrimination on health, we assume experiences of discrimination will affect all members of a marginalized group similarly. However, current research does not support this assumption. There exists a diversity of responses to discrimination, and one factor has drawn special attention to its potential for explaining these differences: group identification. Group identification refers to how closely individuals identify with their racial/ethnic group. A 2009 study identified variables under the group identification construct that appear to moderate the impact of discrimination on health: racial identity and racial socialization (Brondolo et al., 2009).

Overview

African Americans in the United States face many forms of discrimination, including unfair housing laws and practices (Wilson & Callis, 2013), poorer educational opportunities (Kozol, 2012), discrimination in the workplace (Deitch et al. 2003), biased criminal justice standards (Hartney & Vuong, 2009; Wagner & Rabuy 2018), and unequal income levels among other forms of unfair treatment. For example, the most recent federal census report on income, earnings, income inequality, and poverty in the United States – based on data collected in 2017 and previous years – revealed that the economic gap between African American household income on average is nearly 40 percent less than that of European Americans, a gap that appears to have persisted since 1967. An independent report by the Economic Policy Institute tells a more somber story, stating that the gap has not simply persisted, but that it has increased since 1979 and this growth may be due to discrimination:

> …Changes in unobservable factors—such as racial wage discrimination, racial differences in unobserved or unmeasured skills, or racial differences in labor force attachment of less-skilled men due to incarceration—along with weakened support to fight labor market discrimination continue to be the leading factors for explaining past and now the recent deterioration in the economic position of many African Americans. (Wilson & Rodgers, 2016, p.3)

Similar findings are apparent in the housing industry, where, in a 2009 survey of married couples who were renting, European-American couples were four times more likely to qualify for buying a "modestly priced home" than African American couples (Wilson & Callis, 2013).

In education, we continue to observe segregation of public schools such that in 2015, European-American students, on average, were observed to attend schools that were 9 percent

African-American, while African-American students attended schools that were 48 percent African-American (National Assessment of Educational Progress, 2015). Despite the fact that African Americans make up only 13% of the US population, they make up nearly 34% of high school dropouts, and 40% of the incarcerated population (Hartney & Vuong, 2009; Brown & Lent, 2008; Wagner & Rabuy 2018).

Discrimination and Health

The pervasiveness of these discriminatory practices, as unfair as they are in themselves, also put African Americans at risk of suffering from serious psychophysical effects. A systematic review of the effects of discrimination on well-being in children and young adults, analyzing 153 papers representing 121 studies, assessed the impact of racial, ethnic, cultural, and religious discrimination on various health outcomes in younger populations. Their analyses revealed a strong and consistent positive association between discrimination and poorer mental health (anxiety, depression, and negative self-esteem), as well as a negative association with indicators of positive mental health (resilience, self-worth, psychological adaptation & adjustment). Additionally, the researchers noticed that these relationships increased with age, suggesting that racial discrimination may play an important role in the development of children and young adults (Priest et al., 2013). A similar study focusing on African American populations examined 328 independent effect sizes, with a total sample population of 144,246, specifically looking at differences in age groups (children under 13 years old, adolescents 13 to 18 years of age, and adults 18 years or older). Their findings provide supporting evidence for the negative relationship between discrimination and wellbeing. However, this study noted that children experienced more negative effects (r = -.26) when compared to adolescents (r = -.22), and adults (r = -.23). Furthermore, when comparing cross-sectional data against longitudinal data, the

researchers noted that considering that the effect sizes were significantly different (r = -.23 and r = -.15, respectively), the mean weighted effect size for longitudinal data was still significant at p < .05. This suggests that the impact of discrimination may not only have an immediate negative effect on well-being, but that those effects are long-lasting (Schmitt, Branscombe, Postmes, & Garcia, 2014).

Group Identification as a Protective Factor

Despite the pervasiveness of discrimination, not all members of the African American community, when faced with discrimination, suffer from its deleterious effects, suggesting the presence of resilience factors. Research on these resilience factors has revealed group identification, specifically racial identity and racial socialization as important protective factors against the effects of discrimination. The concept of group identification has its roots in social psychology. Social Psychologists Taijfel and Turner (1979), proposed the Social Identity Theory which suggests that individuals derive a sense of self-worth from their group memberships and that as we develop more positive attitudes towards our in-groups we enhance our self-esteem (Trepte, 2006). Building on this idea, the Rejection-Identification Model (RIM) views rejection as psychologically detrimental and argues that group-identification can help buffer its deleterious impact (Branscombe, Schmitt, & Harvey, 1999). As a result, RIM proposes that the more positive the attitudes we hold towards our in-group, the stronger our group identification will be when faced with discrimination (Giamo, Schmitt, & Outten, 2012). According to these theories, developing strong positive attitudes towards our in-group is instrumental in developing psychological resilience as it leads to positive identity development and improved psychological well-being. Racial identity and racial socialization are believed to be important ingredients in the development of this psychological resilience.

Looking at the African American population, there is evidence of the buffering power of racial identification on the impact of discrimination on health. For example, Sellers, Caldwell, Schmeelk-Cone, and Zimmerman (2003) examined the relationship between two racial identity attributes (Centrality and Public Racial Regard) and psychological distress in a population of African American high school students. Their study, covering two time points, revealed that whereas perceptions of public regard of one's race were not related to psychological distress, greater racial centrality was associated with lower levels of psychological distress. Additionally, they noted that the degree of racial centrality (low, medium, and high) moderated the relationship between discrimination and stress such that for those with high racial centrality, greater discrimination did not predict greater distress.

Research on racial socialization demonstrates similar effects. A 1999 study of African American college students examined socialization messages and beliefs, self-esteem, and social networks as potential moderators of the discrimination to distress link. Findings revealed that for African Americans who reported low levels of racial socialization messages from caregivers, greater discrimination was related to poorer mental health. However, for those with higher levels of socialization messages, the relationship between discrimination and distress was significantly weaker (Fisher and Shaw, 1999).

Given the evidence of the moderating impact of these constructs, we lack an understanding of their processes. Said another way, we do not yet understand how these factors are protective. There exist multiple beliefs aimed at explaining these processes. For example, Katz (2013) stated that “the development of ethnic attitudes is integrally related to the establishment of a child’s self-identity,” suggesting that youth’s racial socialization processes lead to and facilitate their racial identity development (pp. 125-126). Basic correlational research

suggests the presence of a relationship between socialization and identity. Researchers have reported that racial socialization is related to increased feelings of closeness to Black individuals and more positive evaluation of their own racial group (Demo & Hughes, 1990). Inasmuch as this establishes a relationship between racial socialization and identity, it does very little to explain the causal relationship or demonstrate a potential causality suggested by Katz (2013). Surprisingly, there exist few studies aimed at explicating this relationship, and even fewer exploring how this relationship impacts the discrimination to distress link.

The Current Study

The present study sought to build upon the existing research by not only examining the direct relationship between racial socialization and racial identity but also their relationship with the discrimination to distress link over time. Using three waves of data from the Family and Community Health Study (FACHS), an ongoing investigation on the impact of social factors on the well-being of African American families and communities, I examined 1) the direct relationships between reports of perceived discrimination, racial socialization, racial identity, and three outcome variables including depressive symptoms, self-esteem, and educational achievement over a period of six years; 2) the moderating effects of both racial socialization and racial identity over time; and 3) the indirect impact of racial socialization on the discrimination to distress link, considering racial identity as a potential mediator.

CHAPTER 2

LITERATURE REVIEW

> …daily the negro is coming more and more to look upon law and justice, not as protecting safeguards, but as sources of humiliation and oppression. (W.E.B. DuBois, 1903, p. 176)

Since 1903, the United States (U.S.) has taken progressive strides towards a more just and equal society. Still, many of the sentiments of inequality, oppression, and feelings of inferiority expressed by Du Bois in 1903 apply to the African American population today (R. Clark, Anderson, V. Clark, & Williams, 1999; Feagin, 1991; Pieterse, Todd, Neville, & Carter 2012). As evidenced by the emergence of the Black Lives Matter Movement after the death of Trayvon Martin on February 26, 2012, and the more recent White Supremacists protest in Charlottesville, Virginia in 2017, it is clear that despite apparent societal progress, Black communities in the US continue to experience racism. This, however, looks qualitatively different today than it did in 1903. Today's society no longer tolerates overt acts of racism (e.g., segregation laws, the use of racial slurs); however, covert racism is a practice that is pervasive in our society today. It manifests itself not only in individuals' attitudes and stereotypes but also in the basic structure of society (Alexander, 2010; Gee & Ford 2011). Research consistently demonstrates that there exist serious persistent disparities and injustice in employment, poverty rate, education, criminal convictions, and health between Black and White communities (D. W. Sue & D. Sue, 2015; The National Association of County & City Health Officials (NACCHO), 2006). Due to the structural infusion of racism into society, marginalized groups must confront such discriminatory attitudes, laws, and regulations on a day-to-day basis. This confrontation has

been linked to increased levels of stress in these populations (Viruella-Fuentes, Miranda, & Abdurahim, 2012).

Discrimination as Stress

Stress, according to Lazarus & Folkman (1984), derives from a set of experiences appraised as taxing or exceeding one's resources for managing them, thus impinging upon an individual's wellbeing. Experiences are often appraised as stressful if they are ambiguous, negative, unpredictable, and/or uncontrollable (Carter, 2007; Williams & Mohammed, 2009). Unfortunately, ambiguity, negativity, unpredictability, and lack of control are common characteristics of racially discriminatory interactions (Pascoe & Richman, 2009). Therefore, racism has been considered an important and chronic stressor for African-Americans (Clark et al. 1999). Exposure to such chronic and pervasive stress would be expected to have a considerable negative impact on African-Americans' mental and physical health.

For decades, African Americans have exhibited poorer health when compared to their European American counterparts. African American families suffer from lower birth weight, higher infant mortality rates, shorter life expectancies, higher risk of heart disease (Allison, 1998; Flack, 1995), and increased psychological stress responses (Anderson, McNeilly, & Myers, 1993) when compared to their European-American counterparts (Braveman, 2011; Major, Quinto, & McCoy, 2002). These health disparities are not just a result of poverty, lack of education, or poor life choices. Other factors are certainly at play. Racial discrimination is a prime suspect and has been directly related to negative health outcomes for African-Americans.

In the medical field, for example, differences in levels of blood pressure have been evident between African American and European American populations since the late 1900s. Researchers, with the Coronary Artery Risk Development in Young Adults (CARDIA) Study,

were interested in understanding the role racial discrimination played in the blood pressure disparity (Krieger & Sidney, 1996). Examining 4,089 participants, ages 25 to 37, across both racial groups, the researchers evaluated perceived discrimination across seven settings (school, job search, work, housing, medical care, public setting, and police and courts), four response patterns (accept as fact of life and keep to self, accept as fact of life and talk to others, do something about it and keep to self, do something about it and talk to others), and two social strata (working class and executive/professional). Across all settings, African Americans reported higher rates of unfair treatments and discrimination when compared to their White counterparts. For example, 52% of African American women and 55% of African American men reported experiencing racial discrimination at work when compared to 8% and 6% of their White counterparts. The study found no differences in how the two groups responded to unfair treatment. However, researchers noted an interaction effect between experiences of discrimination and response patterns. Even after controlling for demographic factors including age, education, marital status, body mass index, waist-to-hip ratio, alcohol consumption (all factors believed to contribute to elevated high blood pressure), the study found that high blood pressure was highest among 1) African Americans who did not report experiences of discrimination, 2) African American women with reports of discrimination who accepted it as a fact of life and kept it to themselves, and 3) African American men with reports of discrimination who accepted it as a fact of life but talked to others. Because blood pressure was highest among African Americans who did not report experiences of discrimination, we may want to conclude that experiencing more discrimination may be physically beneficial. However, this seems an unlikely conclusion. As the authors suggested, it is much more plausible that individuals not reporting the discrimination may be internalizing it, thus putting them at higher

risk of suffering increased high blood pressure. The findings not only suggest a strong association between discrimination and high blood pressure but also lend support to the idea that individuals who internalize their responses to discrimination may suffer increased consequences (Krieger & Sidney, 1996).

Even after controlling for moderating variables such as education, wealth, and neighborhood impact, African American communities continue to suffer from higher infant mortality rates and are at higher risk of developing chronic diseases when compared to European-American communities (Braveman et al, 2011).

Given these findings, it would be easy to assume that all members of marginalized groups, when faced with discrimination, will suffer from its deleterious effects. Current research, however, does not support this assumption; rather, research indicates that there are individual differences in responses to environmental stressors. Some African Americans do not respond to discrimination as expected but appear to thrive despite it. Clark et al., (1999) highlighted the "wide within-group variability in health outcomes among African Americans" noting that, when exposed to similar discriminatory experiences, some African Americans may be more resilient than others and thus suffer less deleterious effects (p. 806). As scientists worked to uncover these differences, there was an apparent shift in perspective. "Rather than focusing on the vulnerability of targets of prejudice, this perspective emphasized targets' psychological resilience and hardiness and focused on their methods of adaptation and resistance" (Major et al., 2002, p.253). This new perspective saw marginalized individuals as agents actively negotiating their degree of exposure to racism and subsequent coping responses to maintain psychological well-being (Major et al., 2002; Clark et al., 1999).

Coping with Discrimination

Thornton and Sanchez (2010) describe resilience as a "dynamic process that enables the individual to respond or adapt under adverse situations" (p. 455). Resilience refers to the set of learned and developed coping strategies that improve one's ability to manage stress, enable positive psychological development and functioning as well as continued competency, and lead to recovery and improved mental status after a trauma (Connor & Davidson, 2003; Kirby & Fraser, 2004; Thornton & Sanchez, 2010). Understanding resilience in the face of discrimination is an important pursuit that can help to pinpoint protective factors that facilitate positive psychological development in marginalized communities and highlight the intrapersonal processes of those factors. One potentially important factor that promotes resilience in African-American groups is group identification. Given the stress of discrimination and being a racial minority group, African-Americans may benefit from and find solace in identification with their racial group. This may help to protect against the effects of persistent and chronic discrimination.

Two variables under the group identification construct have received the most attention in research as potential protective factors moderating the discrimination to distress link: racial identity and racial socialization (Brondolo, Brady, Pencille, Beatty, & Contrada, 2009; Hughes et al., 2006; Lee & Ahn, 2013; Pascoe & Richman, 2009). Both of these variables have demonstrated effectiveness in buffering the deleterious effects of discrimination. Conceptually, a strong racial identity provides African Americans with the historical and cultural knowledge of their racial group, facilitating their understanding of their societal position (Pascoe & Richman, 2009). This provides Black individuals the ability to adequately cope with the many difficulties that discrimination presents. For example, group identity may provide African-Americans a mechanism for attributing discrimination to prejudice and not internalize it, which reduces

distress and stabilizes self-esteem. In turn, racial socialization is seen as the processes by which one develops one's racial identity and thereby the coping strategies necessary to navigate and negotiate such racial experiences. These two variables have long been conceptually linked, however very few studies have specifically investigated their direct relationship.

Racial identity. Racial identity has been conceptualized in various ways over the past half-century. The work arguably started with general concepts of identity development. Based on Erikson's (1963) concepts of identity development through crisis and commitment, Marcia (1966) proposed a model that included four statuses of general identity development. These four statuses (Diffused, Foreclosed, Moratorium, Achieved) are based on two main premises: identity exploration and commitment to identity's personal meaning. Individuals in the **Diffused** state have neither begun the exploration process nor have committed to a specific definition of their identity. Those in the **Foreclosed** state have committed to a specific identity based on societal (especially familial) influences, and have done so without an exploration process. In the **Moratorium** state, individuals are actively involved in the self-exploration process but have not yet committed to an identity. Those in the **Achieved** state have explored a variety of identities and have committed to a specific one. In his 1966 study, Marcia discovered that individuals in the achieved state persevered longer under stressful conditions (indicating a higher a level of resilience), maintained a realistic perspective on future goals, and were less vulnerable to negative feedback, denoted by a smaller decrease in their self-esteem scores. Despite the fact that the original study focused on occupational and ideological identity development, there existed a high potential for its generalizability to development across different identities.

Curious to assess whether Marcia’s developmental model could also apply to ethnic and racial identity development, Phinney (1989) constructed a set of questionnaires directly based on

Marcia's model and interviewed 91 tenth-grade students in four different ethnic groups (Asian Americans, Hispanic Americans, African Americans and European Americans). Participants were also given questionnaires measuring their ego identity and their psychological adjustment. Results revealed three distinct categories. Close to one-half of participants had not yet explored their racial/ethnic identity (diffusion/foreclosure), close to one-quarter were actively exploring (moratorium), and the other quarter had explored their racial/ethnic identity and were committed to it (achieved). Here, an Achieved status described students who, through active exploration and questioning, acquired knowledge and understanding of their in-groups' social and cultural backgrounds as well as demonstrated a "secure commitment to one's group" (Phinney, 1966, p. 272). Furthermore, findings revealed that the highest scores in psychological adjustment were in students in the Achieved status.

Another theoretical model specific to African Americans' racial identity development is the Nigrescence model (Cross, 1971). This five-stage model for Black identity development includes the following stages: Pre-encounter, Encounter, Immersion-Emersion, Internalization, and Internalization-Commitment, all of which describe the progression of Black individuals as they "discover" their blackness. The **Pre-encounter** stage is meant to describe individuals influenced by miseducation and self-hatred attitudes. This stage is generally characterized by low race salience. The **Encounter** stage involves a subjective event that catapults an individual in a state of internal turmoil and questioning, prompting them into the next stage, Immersion-Emersion, where they begin exploring their racial identity. Finally, the **Internalization** stage marks a point of reconciliation between the individual's identities, including the Black identity, and is characterized by high race salience (Vandiver, Fhagen-Smith, Cockley, Cross, & Worrell, 2001; Worrell, Vandiver, Schaefer, Cross, & Fhagen-Smith, 2006).

However, with stages, there is an implicit focus on the process of identity development that does little to provide information as to its content and the meaning that individuals assign to their race. Stage theories tend to assume a successful completion of a stage before advancement to the next one. They attempt to explain *how* change happens (its process), but not *what* it consists of (the content). One of the first attempts to describe the content of racial identity development was offered by Sellers, Rowley, Chavous, Shelton, & Smith (1997). Their study introduced the Multidimensional Model of Racial Identity (MMRI), which outlines four distinct but interrelated dimensions of African American racial identity: Ideology, Regard, Centrality, and Salience. **Racial Ideology** refers to an individual's beliefs about how members of his/her racial group should behave and comprises four subcategories: the Nationalist, the Oppressed Minority, the Assimilationist, and the Humanist Ideologies. **Racial Regard** refers to the affective judgment (i.e., the positive or negative feelings) individuals assign to their race (private), or believe is assigned to their race by others (public). **Racial Centrality** refers to the importance an African American puts on her/his race. And **Racial Salience**, which is highly dependent on racial centrality, refers to the likelihood an individual will believe race to be an important factor in an ambiguous interaction. The more central one's race is to one's self-concept, the more salient it will be when in ambiguous situations. Various combinations of the four dimension could provide us with a more specific understanding of one's identity development. For example, it is probable that two adolescents both at the Pre-Encounter stage but with different Racial Ideologies (one with an Assimilationist identity, and the other with a Nationalist identity) might respond differently when confronted with discrimination (i.e., Encounter stage). Given the two different underlying worldviews or meaning-making styles in each ideology, we might assume that the two adolescents will interpret the event differently. The youth with the Assimilationist identity

might internalize the experience, whereas the youth with a Nationalist identity, by definition, would be more aware of the Black "national" experience in the U.S. and might be able to attribute the experience to prejudice. The former response pattern has been linked to decreased levels of self-esteem and increased distress, while the latter has demonstrated protective attributes (Major et al., 2002; see also Miller & Kaiser, 2001; Schmitt and Branscombe, 2002) As a result, the racial content of these two adolescents' identities might determine how they move from one stage to the next (Pre-Encounter to Encounter) and consequently lead to different outcomes.

The role of group identification in racial identity development. To help us deepen our understanding of the contents in identity development, let us explore foundational work in group-identification focusing especially on Social Identity Theory and the Rejection-Identification Model (RIM). Social Identity Theory (Taijfel & Turner 1979) assumes an innate desire of "belonging", and suggests that individuals derive a sense of self-worth from their group memberships and that as we develop more positive attitudes towards our in-groups we enhance our self-esteem (Trepte, 2006). Building on this idea, the Rejection-Identification Model views social rejection as psychologically detrimental and argues that group-identification can help buffer its deleterious impact. As a result, RIM proposes that the more positive the attitudes we hold towards our in-group, the stronger our group identification will be when faced with discrimination (Giamo, Schmitt, & Outten, 2012). Leach, Mosquera, Vliek, and Hirt (2010) conducted three separate studies examining the impact of group devaluation on group-identification. Studies 1 and 3 examined real-world groups (Jewish and Black populations respectively), whereas Study 2 was a laboratory experiment examining the effect of feigned evidence suggesting that psychology students at the University of Amsterdam were inferior to

students at a neighboring institution. Participants completed pre and post surveys measuring their group identification before and after being presented with evidence of their in-group devaluation. All studies provided direct support for the idea that perceived and actual group devaluation led to stronger in-group identification, specifically by increasing individuals' in-group satisfaction. More importantly, Study 3 demonstrated that Black participants with higher pre-test identification scores tended to feel greater out-group rejection, but reported lower vulnerability scores. This study did not, however, explore the impact of higher group identification on the discrimination to distress link. Nonetheless, its findings suggest that stronger group identification might increase feelings of perceived discrimination, while simultaneously acting as a protective factor by increasing psychological resilience (Leach et al., 2010).

Similarly, Giamo et al., (2012) hypothesized that perception of discrimination would negatively impact participants' life satisfaction scores, and tested whether group identification mediated the relationship. The study, looking at 252 participants self-identified as multiracial, not only provided supporting evidence for Leach et al. (2010), such that increased discrimination led to increased group identification, but also revealed that specific dimensions of group identification (namely, self-stereotyping) significantly correlated with higher life satisfaction scores (Giamo et al., 2012). According to these results then, developing strong positive attitudes towards one's in-group is instrumental in developing psychological resilience as it leads to positive identity development and improved psychological well-being.

Racial identity as a protective factor for African Americans. Research consistently demonstrates that racial identity plays an important role in the lives of African Americans. The literature suggests that racial identity attenuates the effects of discrimination and racism, leading to improved psychological health (Umana-Taylor, 2014; Utsey, 1997). In a 2003 study, Sellers,

Caldwell, Schmeelk-Cone, and Zimmerman examined the relationship between two racial identity attributes (Centrality and Public Racial Regard) and psychological distress. Their research covered two waves (wave 4 and 5) of a longitudinal study of African American high school students. By wave 5, these students were young adults averaging 20 years of age. Thirty-two percent of this population was enrolled in a 2 or 4-year institution, while another 26 percent reported not receiving a high school diploma. Assessing 555 African American young adults, the researchers noted that greater racial centrality was associated with lower levels of distress, but perceptions of public regard of one's race were not related to psychological distress. Additionally, the researchers split participants into three different racial centrality groups (low, medium, and high) and examined centrality as a moderator of three relationships: discrimination to psychological distress, discrimination to stress, and stress to psychological distress. The degree of racial centrality moderated the relationship between discrimination and stress such that for those with high racial centrality, greater discrimination did not predict greater stress. These results suggest that individuals for whom race is central were less likely to suffer the negative effects of discrimination.

Similarly, in a 2013 meta-analysis, Lee and Ahn observed that private regard, racial centrality, and Afrocentricity (i.e., the degree to which African Americans demonstrate pride through the adoption of Afrocentric as opposed to Eurocentric, values, customs, and perspectives [Vandiver et al. 2001]), were not only negatively related to psychological distress, but that this relationship was greater in youth than it was in adults (Lee & Ahn, 2013). Their findings highlight the negative relationship between racial identity and distress and suggest that this relationship may be more important within African American youth. One way this relationship may play out for African American youth is through the educational system. In a study of 606

high school seniors, public racial regard was positively related to school attachment and perceptions of school relevance (Chavous et al., 2003). Thus, the more students felt that others had positive attitudes towards African Americans (i.e., Public Regard), the more attachment and relevance they assigned to their institutions. In a follow-up survey assessing students' educational attainments (high school attendance, high school completion, and college attendance), only high racial centrality and private racial regard significantly predicted all three outcomes two years later. While interpreting these findings, the authors suggest that inasmuch as public regard may impact how students view and interact with their teachers, peers, and social context, "it appears that youths' own personal group attitudes and feelings about their group [private regard] influence their educational behavior more strongly, regardless of their societal views" (Chavous et al., 2003, p. 1086).

The support for racial identity as a moderating variable between perceived discrimination and health outcomes is not uniform. In the same meta-analysis introduced above, the authors examined the relationship between racial/ethnic identity and racial socialization on the discrimination to distress link. Based on 27 studies comprising 70 effects sizes representing the relationship between racial/ethnic identity and racial socialization and perceived discrimination, and 43 effect sizes representing the relationship between racial/ethnic identity and racial socialization and distress, the authors deemed the potential buffering effects of racial identity on the discrimination to distress link "inconclusive" (p. 10). Their analyses revealed that not only was racial identity significantly and negatively associated with distress, it was also significantly and positively associated with perceived discrimination (Lee & Ahn, 2013).

Occasionally, a study offering supporting evidence for the buffering effects of group identification (racial and/or ethnic), has also provided evidence to the contrary. In a study

examining racial identity in Black Americans, for example, Sellers and Shelton (2003) found that certain facets of racial identity, namely racial ideology and public regard, significantly buffered the relationship between racial discrimination and psychological distress such that higher levels of racial identity led to lower levels of distress. However, their study also demonstrated that a greater endorsement of racial centrality, yet another facet of racial identity, was associated with higher levels of perceived racial discrimination. In a study exploring the impact of ethnic identity as a protective factor on depressive symptoms in an adult Latino population, one facet of ethnic identity (exploration) was found to exacerbate the relation between discrimination and depression, while another facet (commitment) was found to buffer that relationship (Torres & Ong, 2010).

There are numerous possibilities that could help explain the contradictory nature of the findings in this meta-analysis. First, the variability in findings could be due to differences in construct measurements. Lee and Ahn (2013) noted: "significant measure differences among the established racial identity measures (RIAS-B, CRIS, MIBI)" (p. 10). For example, the relationship between racial discrimination and subscales of racial identity indicating African American's affiliation with their in-group's culture (e.g., Afrocentricity, racial centrality, private regard) was significant when measured by the Cross Racial Identity Scale (CRIS), but not by the Multidimensional Inventory of Black Identity (MIBI). Yet, the relationship between racial discrimination and subscales of racial identity indicating African American's synergistic awareness and appreciation of their own in-group as well as others' (e.g., internalization, multiculturalist, minority) was significant when measured by MIBI, but not by CRIS. Although these differences did not affect the overall direction of relationships of the constructs, they do point to potentially conceptual and psychometric differences.

Second, time may be an important moderator to consider. Of the studies included, none were longitudinal. Longitudinal studies allow researchers to track the impact of constructs across time, increase the validity of associations made, and as a result strengthen our causal claims. Unfortunately, cross-sectional studies make up the bulk of this line of research. As a result, this meta-analysis may simply be a representation of time-specific snapshots of an overarching concept.

Finally, as mentioned above, there may be some inherent shortcomings in how we conceptualize racial identity as a protective factor. An underlying assumption made in this field of research is that perceived discrimination and distress have a unidirectional, positive linear relationship where increases in perceived discrimination lead to greater distress. Possibly because this relationship has received much support in the literature, it has unfortunately been generalized to relationships involving protective factors. Meaning, there is an apparent unwritten yet underlying assumption in this field that for a protective factor to act as a buffering agent, it must be negatively associated with both perceived discrimination and distress. However, as evinced in the aforementioned meta-analysis this is not always the case.

In one of the few longitudinal studies, examining the impact of different dimensions of racial identity on perceived discrimination, researchers assessed 267 African American university students' racial ideology and racial regard across two time points (Sellers & Shelton, 2003). The study demonstrated that even though both of these variables buffered the discrimination to distress link, appreciating the multidimensional complexity of these variables is of importance. For example, analyses of racial ideology and racial regard revealed that individuals who endorsed a nationalist ideology and low public regard also reported higher frequencies of racial discrimination, and were simultaneously buffered from its negative impact

(Sellers & Shelton, 2003). The findings suggest that individuals' social and racial in-group awareness predicts degrees of perceived discrimination, such that higher awareness (high nationalist identity, low public regard) is positively associated with perceived discrimination. However, the authors suggest, this increased awareness comes with an "expectation" of discrimination which may help to lessen the psychological tax suffered from the shock of discrimination. Said expectations are not only based on how people identify with their in-group but on the meaning placed on that identification.

Racial socialization. Racial identity appears to play an important role in the resiliency of African-Americans. Therefore, the development of identity is an important concern as well. Scholars have long suspected racial socialization (RS) to be an important factor in developing racial identity, seeing the socialization process as essential in assisting minority children in negotiating and developing meanings of their social contexts while helping them cope with discrimination. The term racial socialization refers to the implicit and explicit verbal and non-verbal messages youth receive that help shape their beliefs, values, and attitudes regarding the self as a racial being as well as a member of a specific racial group (Demo & Hughes, 1990; Hughes & Chen, 1997; Miller & MacIntosh, 1999; Scott, 2003).

Racial socialization is an integral component of parenting in most families and is especially salient in minority families. Specifically, minority parents and caregivers show a consistent impulse to "arm" their children with skills that enable them to confront racial barriers and negative stereotypes (Demo & Hughes, 1990). Research shows that racial socialization may be an important buffer, reducing the negative impact racial discrimination can have on minority individuals' health. For example, in a study of 119 African American college students, Fisher and Shaw (1999) explored potential moderators of the discrimination to distress link, looking at

socialization messages and beliefs, self-esteem, and social networks. The study, distinguishing socialization messages from socialization beliefs, revealed that for African Americans who reported low levels of racial socialization messages greater discrimination was related to poorer mental health. However, for those with higher levels of socialization messages, the relationship between discrimination and distress was significantly weaker. Conversely, analyses with racial socialization beliefs yielded no significant results. These findings suggest that the racial socialization messages, and not simply youth's beliefs about the socialization process, may play a key role in the development of resilience.

However, the transactional processes by which children are socialized and towards what end vary. For example, some researchers have focused solely on the transmission of cultural values, observing how parents transferred information about cultural and historical heritage (Branch & Newcombe, 1986; Constantine & Blackmon, 2002). Others have preferred to focus on the ways parents caution their children about the majority culture with the intent to prepare them for discrimination and/or warn them against the mistreatment of their cultural in-group (Fisher & Shaw, 1999; Frabutt, Walker, & MacKinnon-Lewis, 2002). These strategies exemplify how these approaches are distinct in both style and content. In efforts to consolidate these strategies, Hughes and Chen (1997) proposed a four-dimensional model of racial/ethnic socialization including Cultural Socialization, Preparation for Bias, Promotion of Mistrust, and Egalitarianism.

Cultural Socialization refers to socialization practices that focus on the promotion of cultural customs and traditions including the teaching of the child's mother tongue; visiting museums and discussing important historical figures with children; exposing youth to books, music, movies, food, clothing, traditional artifacts, and more; and celebrating important racial/ethnic holidays with youth. ***Preparation for Bias*** describes the socialization practices

focusing on preparing youth to confront discrimination. These practices are characterized by awareness raising of biases and stereotypes the child's racial/ethnic in-group faces and teachings of necessary coping skills. ***Promotion of Mistrust*** refers to communications encouraging mistrust and wariness of an out-group. Promotion of mistrust is often mistaken as part of preparation for bias as the two are often used simultaneously. However, unlike preparation for bias, promotion of mistrust suggests an avoidance of out-groups, while offering no coping skills to help youth manage their experiences with discrimination. Finally, ***Egalitarianism*** refers to socialization practices characterized by the promotion of individual values over racial ones, and can at times be accompanied by what Hughes et al. (2006) referred to as "silence about race" and/or "promotion of color-blind perspectives" (p. 757) as an attempt to promote diversity. Conceptually, Egalitarianism shares similarities with the construct of enculturation, such that it seeks to provide youth with skills that will enable them to integrate and thrive in the mainstream culture, at times at the risk of forfeiting one's own in-group cultural practices.

Understanding how these different types of socialization are actually used and what predicts their use is an important step in the process of revealing how socialization might be a protective factor for health. A 1997 study evaluated 157 African American parents with children from ages 4 to 14. The study explored three different types of socialization messages – teaching children about African American culture (Cultural Socialization), preparing children to deal with discrimination (Preparation for Bias), and promoting out-group mistrust (Promotion of Mistrust) – and potential catalyzing factors, specifically children's ages, parents' experiences with discrimination, and parent's own socialization experiences. The study's findings revealed that cultural socialization messages were the most popular among parents, followed by preparation for bias, and then promotion of mistrust. Both parents' own socialization and experiences with

discrimination were positively correlated with the frequency of messages parents imparted to their children. Additionally, the authors observed a significant difference in frequency and type of socialization messages as children increased in age. For parents of older children (9 to 14 years of age) who also reported higher levels of experiences of discrimination in the workplace, the authors observed higher frequency of socialization messages, noting a significant increase especially in preparation for bias messages (Hughes & Chen, 1997).

These practices, especially preparation for bias, appear to affect youth's internalization processes and their subsequent ability to cope with discrimination. The number of parental messages about the meaning of race, focusing especially on socialization behaviors, racial barriers, and racial pride has been linked to differences in youths' racial centrality over time; higher frequency of messages at time 1 was linked to higher scores of racial centrality at time 2 (Neblett, Smalls, Ford, Nguyen, & Sellers, 2009). Furthermore, Scott (2003) observed that African American adolescents who reported receiving higher frequency of preparation for bias messages were significantly more likely to engage in approach coping strategies characterized by active efforts to confront and resolve stressors generally associated with increased feelings of self-efficacy and less distress, as opposed to avoidant coping strategies characterized by avoidance and potential internalization of stressors generally associated with reduced feelings of self-efficacy and increased distress.

These findings are in line with what researchers have long believed; these socialization practices are essential to the development of a strong racial identity:

> … the development of ethnic attitudes is integrally related to the establishment of a child's self-identity. It is typically assumed that the child must necessarily learn about which groups he/she does not belong to as part of the self-discovery process. At about the

same time positive and negative feelings come to be associated with various groups. (Katz, 2013, pp.125-126)

According to Katz, a child's socialization process is integrally linked to the child's racial identity development. Katz posits that racial identities are based on the negative and positive feelings youth experience about their own racial group during the socialization process. The theory moves beyond a simple claim of interrelatedness towards an implied sequence of events, where socialization comes first and drives identity development. This is supported at least in part by research showing a significant correlation between socialization and racial identity.

Demo and Hughes (1990) conducted a study looking at the effects of family background and socialization on Black identity development. Their findings indicated that racial socialization was related to increased feelings of closeness to Black individuals and more positive evaluation of their own racial group, suggesting socialization is related to racial identity. Studies looking at different ethnic groups have found similar relationships. Quintana and Vera (1998) conducted interviews with Mexican American youth ages 7 to 12 years old. Their results demonstrated that parental ethnic socialization practices were related to increased knowledge of one's culture, which was in turn related to higher understanding of ethnic prejudices. Umana, Taylor, and Fine (2004) observed similar findings in their sample of Mexican American adolescents, adding that the socialization to identity development relationship may be moderated by adolescents' age and social and cognitive maturity. The authors, adhering to an Eriksonian approach, suggest that children's growth is accompanied with role changes, increased responsibility, and increased social interactions and awareness. As a result, children increasingly become socially autonomous and self-reflective (i.e., social and cognitive maturity) and begin to interact in more complex and

abstract ways with parental socialization messages as they themselves actively seek to define their identity.

The Problem

The current correlational work suggests the presence of a relationship between socialization and identity but does very little to explain that relationship. There exist surprisingly few studies aimed directly at explicating this correlational relationship, and even less so exploring how this relationship impacts the discrimination to distress link. Neblett, Banks, Cooper, and Smalls-Glover (2013) provide one of few studies exploring the association between racial socialization, racial identity, and depressive symptoms. Examining the experiences of 211 African American college students in predominately White institutions, the authors examined the indirect relationship between racial pride messages, racial barriers, and behavioral socialization (racial socialization) and depressive symptoms, proposing that the relationship may be mediated by racial identity dimensions (racial centrality and private regard). Their results revealed that private regard mediated the relationships between racial pride messages and behavioral socialization and depression, such that stronger messages of racial pride and behavioral messages were associated with stronger endorsement of private regard, and a stronger endorsement of private regard was associated with fewer depressive symptoms (Neblett et al., 2013).

These findings support previous research where racial socialization was observed to mediate the relationship between experiences of discrimination and the primary dimensions of racial identity: ideology, centrality, and regard (Stevenson & Arrington, 2009). Using a three-step hierarchical multiple regression analysis, the researchers reported that socialization fully mediated the relationship between discrimination and racial identity, but only when looking at the participants' private regard. More specifically, coping messages were positively correlated

with increased scores in private regard (Stevenson & Arrington, 2009). Although informative, both of these studies based their mediation models on cross-sectional data. According to Maxwell and Cole (2003; 2007), mediation models consist of causal processes that unfold over time. Consequently, they suggest that running a mediation model on cross-sectional data increases the likelihood of biased and inaccurate estimates, and recommend testing mediation models on longitudinal data (Maxwell & Cole, 2007).

There exist even fewer longitudinal studies directly exploring not only the direct relationship between racial socialization and identity but also its impact on the discrimination to distress link. Neblett et al. (2009), described above, observed that frequency of racial socialization at Time 1 could predict scores of racial centrality at Time 2, but the study stopped short of evaluating the impact of that relationship on discrimination, well-being, or the discrimination to distress link. In addition, another longitudinal study examined experiences of discrimination and racial socialization as predictors of racial identity (Seaton, Yip, Morgan-Lopez, and Sellers, 2012). Racial identity was conceptualized along the four statuses of identity development according to Marcia (1996) whereas socialization and experiences of discrimination were used to predict 1) specific racial identity status, and 2) change in identity over time. Based on a three-year longitudinal study during which surveys were administered yearly, their results revealed that experiences of discrimination were neither predictive of a specific identity status nor of change in development over time. Racial socialization, however, was significant in both. Their results highlighted a progressive trajectory in identity development over time such that participants who were in the diffused class at time 1 and reported higher levels of racial socialization were less likely to have remained in that status by time 2 and 3. Notwithstanding its important addition to the literature, this study did not include measures of health or distress.

Therefore, despite the fact that some studies have examined socialization and identity over time, the direct and indirect relationships among discrimination, socialization, racial identity, and health over time cannot be ascertained from the existing research.

Present Study

The present study sought to build upon the existing research by not only examining the direct relationship between racial socialization and racial identity but also their effects on the discrimination to distress link over time. The current research contributes to the literature by providing both a longitudinal and integrative exploratory model, examining not only direct effects, but also moderation and mediation pathways. Using three waves of data from the Family and Community Health Study (FACHS), an ongoing investigation on the well-being of African American families and communities since 1997, this study examined the direct relationship between reports of perception of discrimination, racial socialization, racial identity, and three outcome variables including depressive symptoms, self-esteem, and educational achievement over a period of six years.

Hypothesis 1. Based on prior findings, I hypothesized that experiences of discrimination and outcomes will be linearly associated such that, higher reports of discrimination will be positively associated with depressive symptoms, but will be negatively associated with reports of self-esteem and educational achievement.

Hypothesis 2. I hypothesized that greater racial socialization and racial identity will predict less depressive symptoms, and greater self-esteem and educational achievement after controlling for the outcomes measured at Time 1.

Hypothesis 3. Furthermore, I hypothesized that racial socialization will moderate the relationship between racial discrimination and psychological outcomes such that greater

discrimination will predict poorer psychological outcomes only for those participants with low but not high racial socialization.

Hypothesis 4. Similarly as above, I hypothesized that racial identity will moderate the relationship between racial discrimination and psychological outcomes such that greater discrimination will predict poorer psychological outcomes only for those participants with low but not high racial identity.

***Hypothesis 5*.** Finally, I expected that racial identity will explain (i.e. mediate) the moderation of racial socialization on the perceived discrimination to outcome link. In line with prior work, racial socialization was considered an independent variable that informs individuals' identity development. When examining the impact of racial socialization and racial identity simultaneously, I hypothesized that racial identity would remain a significant moderator to the discrimination to outcome link, while the moderating impact of racial socialization on this link will be significantly reduced or eliminated.

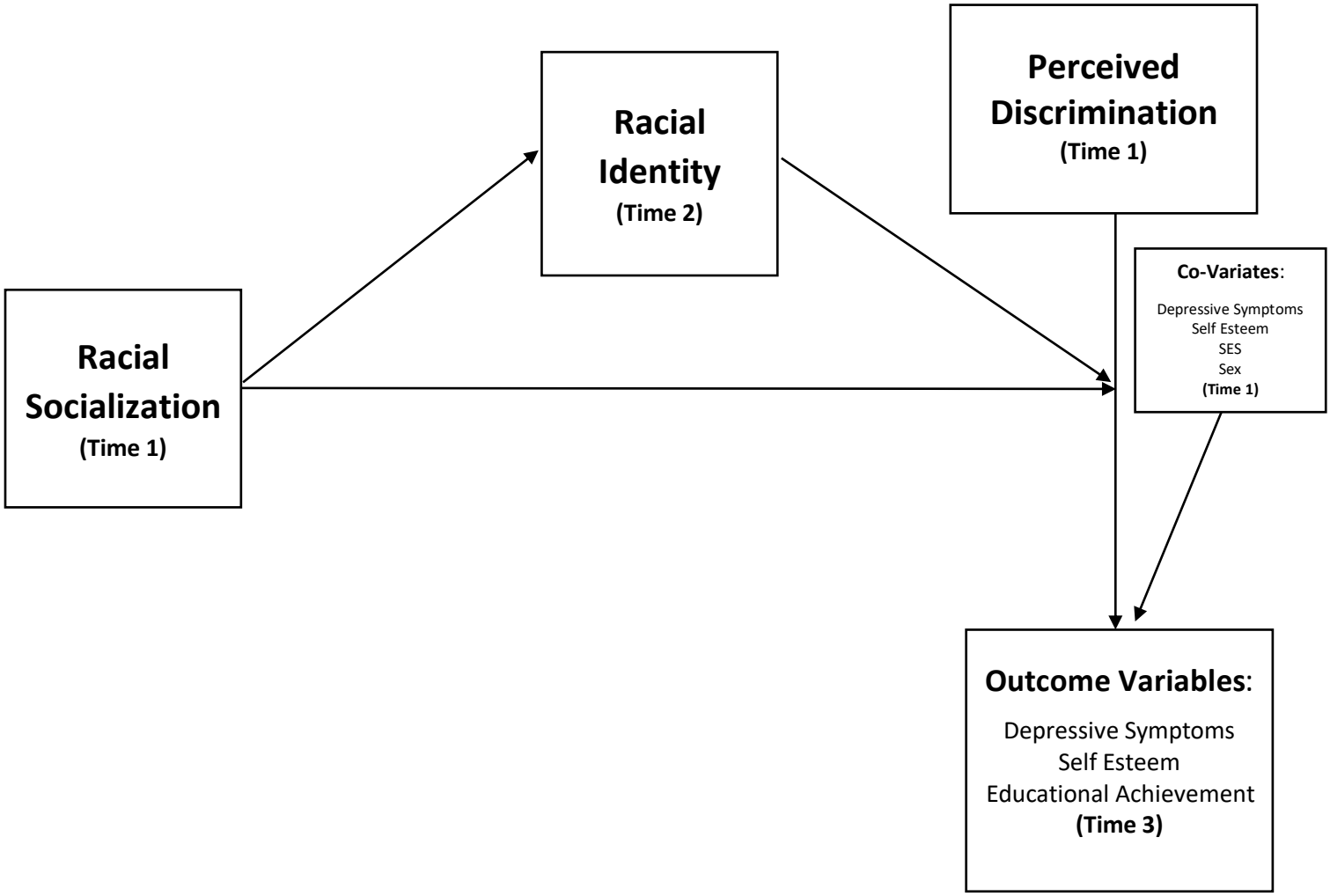

Figure 1. Hypothesized Relationships among Study Variables

CHAPTER 3

METHOD

The current study employed data collected from the Family and Community Health Study (FACHS). Funded by the National Institute of Mental Health, The National Institute on Alcohol Abuse and Alcoholism, and the National Institute on Drug Abuse, FACHS is a longitudinal study of African American families, examining family and community processes, characteristics, and genetic influence on child and adult psychological and physical well-being.

Participants

Participants were African American families recruited in both Georgia and Iowa. Each family had to have at least one child, age 10-12, who identified as African American. Families were recruited from a range of settings, including rural areas, small towns, and midsized cities. Unlike prior studies that have concentrated mostly on impoverished families, this sample spans a wide range of family incomes, including middle-class African American families who have received very little research attention. Data collection was completed in waves. The original wave (Wave 1), collected in 1997, consisted of 889 African American families with 422 in Georgia and 475 in Iowa. Intervals between each wave varied slightly, averaging about 2 years. Wave 2 was collected in 1999, Wave 3 in 2002, Wave 4 in 2004, Wave 5 in 2008, and Wave 6 in 2010. The current study will focus on children in the families who were 10-12 years old at Wave 1 (henceforth referred to as the Targets) and data collected from the Targets at Wave 3, Wave 4, and Wave 5 (for this report, termed Time 1, Time 2, and Time 3, respectively). At Time 1 the average Target age was 16, at Time 2 participants averaged 19 years of age, and at Wave 5 they averaged 22. Given the nature of longitudinal studies, participant attrition is expected. By Time 1 (as described in this study) the participants' pool was reduced by about 20% from its original 889

families in 1997, resulting in 714 target participants. By Time 2, there was another 3.6% reduction from the previous wave, resulting in 689 target participants. By Time 3, a few more target participants returned to the study for a total of 699 participants (2.2% attrition from Time 1).

Procedure

Using the 1990 census data in Georgia and Iowa, neighborhoods with a minimum of 10% African American residents, who also represented a wide social economical range, were identified for potential recruitment. Prior to data collection, eight focus groups were formed (four in Georgia and four in Iowa), each comprising ten African American women who lived in neighborhoods similar to those from which participants were being recruited. The resulting 80 members of the focus groups were interviewed and asked to examine and critique the questionnaire designed for the study. Based on the feedback received from these focus groups, the questionnaires were then adapted and pilot tested with 16 families meeting the requirements (8 in Georgia and 8 in Iowa). The pilot test led to further amendments and modifications to the questionnaires.

Data collection was administered via interviews. All interviewers were African American, with most residing in the communities in which the study took place. The interviewers received extensive training, beginning with a 3-day workshop and followed by periodic meetings. Interviews were conducted in participants' homes or in locations near their homes (e.g., a library or school). The interview required two separate visits with two interviewers. Each visit lasted about 90 minutes, and each family signed a consent form at every wave. Interviews were administered through the use of Computer Assisted Personal Interviewing (CAPI). The participants and interviewers were seated both facing the computer screen. If

necessary, the interviewer would read each question aloud and enter the participant's response immediately. An advantage of computer-assisted personal interviewing is that out-of-range values are rejected at the time of entry and interviewers were required to enter a valid response before they were presented with the next question. Participants received $80 at Time 1 (T1), $125 at Time 2 (T2), and $145 at Time 3 (T3). Both the University of Georgia and the Iowa State University Institutional Review Boards approved this study (See Appendix H and I).

Measures

Predictor variables.

Perceived Discrimination. Experiences of discrimination among Targets were measured using a 13-item scale developed by Simons et al. (1995) specifically for use in FACHS. The scale was influenced by Landrine and Klonoff's (1996) Schedule of Racist Event (SRE). The items assessed various experiences of discrimination from diverse agents looking at more blatant acts such as "How often has someone yelled a racial slur or racial insult at you just because of your race or ethnic background?" to more covert behaviors such as "How often has someone discouraged you from trying to achieve an important goal just because of your race or ethnic background?" or "How often have you encountered people who didn't expect you to do well just because of your race or ethnic background?" The items were assessed on a 4-point Likert scale (1= Never, 4= Frequently). Internal reliability was adequate at Time 1: Cronbach's α=.90

Racial socialization. Measurements for racial socialization were introduced in FACHS during Time 1. Items included in this measure were adapted from the Hughes and Johnson's (2001) Parents' Racial Socialization scale. The scale is a 15-item scale that assesses parental behaviors, seeing them as a more accurate reflection of socialization practices, rather than parents' values/attitudes/beliefs about racial dynamics. Participants responded to items using a 5-

point Likert scale (1= never; 5= 10 or more times). The scale was developed to assess three underlying subscales of racial socialization: 1) Cultural socialization, meant to assess teachings about one's racial culture, history, and heritage (e.g., "How often within the past year have the adults in your family talked to you about important people or events in the history of your racial group?"); 2) Preparation for bias, which aimed to educate children about prejudices and discrimination towards one's racial group (e.g., "How often within the past year have the adults in your family indicated that some people might treat you badly or unfairly because of your race?"); and 3) Promotion of mistrust, which looks at how parents communicated cautions and warnings about other groups (e.g., "How often within the past year have the adults in your family told you to be careful around kids and adults of a certain race or ethnicity?"). Internal reliability was adequate at Time 1: Cronbach's α=.87.

Racial identity. Targets' racial identity was measured using the Black Pride scale. As was the case for racial socialization, the Black pride measure was available at two time points, Time1 and Time 2. For this study, I will only use reports from Time 2. The measure consisted of a 12-items scale adapted from the Black pride Subscale of Smith and Brookings' (1997) Multi-Construct African American Identity Questionnaire. The measure focuses on assessing participants' positive or negative views of the African American community and their membership therein (i.e., private regard). It evaluates different perceptions of in-group membership, from perception of phenotype (e.g., "Blacks have bad hair" or "Black is beautiful") to perception of skill (e.g., "Whites do better in school" or "Blacks are not good at math"). Participants responded using a 4-point Likert scale (1= strongly agree, 2= somewhat agree, 3= somewhat disagree, 4= strongly disagree). Seven items in the scale were reversed coded such

that higher scores reflect more positive racial identity. Internal reliability for items at Time 2 was acceptable: Cronbach's α =. 71.

Outcome variables.

Depressive symptoms. The Target's depressive symptoms were assessed at both Time1 and Time 3. At Time 1, targets' depressive symptoms were assessed using the Diagnostic Interview Schedule for Children, Version IV (DISC-IV; Shaffer et al., 1993). The DISC-IV has demonstrated reliability and validity (Shaffer et al., 1993). During the interview, children were asked to respond to 20 questions about their depressive symptoms during the preceding year using a 3-point scale (*0 = no, 1 = sometimes, 2 = yes*). The responses to the 20 items were then summed to create the depressive symptom counts. By Time 3 targets' ages ranged from 19 to 23. Because of the developmental changes that occurred for the target participants between Time 1 and Time 3, a new 16-item scale was developed. The scaled assessed mood, anhedonia, and their potential impairment of targets' social and occupational settings. Internal reliability was adequate with T1 (α=.87) and T3 (α = .86).

Self-esteem. Participants' self-esteem was measured at Time 2 and Time 3, using a ten-item scale adapted from Rosenberg's Self Esteem Scale (1965). The scale was reduced to six items at Time 3 (items 1- 4 were deleted. Please refer to Appendix E for more information). The items were assessed on a 5-point Likert scale (1= Strongly Agree, 5= Strongly Disagree). Internal reliability for the times assessed were T2 (α=.79) and for T3 (α=.78).

Education achieved. Targets' highest level of education achieved was assessed at every time point, using a single item scale: "What is the highest level of education you have completed?" Participants answered using an open-ended format. Answers were later coded as (0) Kindergarten, no grade completed, (1-11) Grade completed below 12th and grade in now, (12)

High school graduate or GED, (13) 1 year college / vocational / or tech training, (14) 2 years college / vocational /or tech training, (15) 3 years college / vocational / or tech training, (16) BS or BA, and (77) other.

Covariates.

Two covariates were considered in this study due to their previously established relationship with the outcome measures: Social Economic Status (SES) and Gender.

SES. At Time 1, target participants' age averaged at 16 years old. As a result, SES was assessed using reports from targets' primary caregivers. SES was assessed using a Family Income measure. Primary caregivers reported the number of individuals living in the household for more than 50 percent of the time, how many of those household members contributed to income, and all sources of income for each contributor including income from the previous year of employment, self-employment, child support, and government assistance. These amounts were summed to form a measure of annual family income.

Sex. Targets' biological sex was assessed with a single dichotomous item scale where targets identifying as male were coded as 1 and those identifying as female were coded as 2.

Data Analysis Plan

Preliminary analyses. Prior to conducting the main analyses, I conducted preliminary analyses to assess for missing data and to test the assumptions of a hierarchical multiple regression. I also conducted bivariate correlational analyses among all variables included in this study. These analyses facilitated the examination of the underlying assumption of association between the proposed constructs.

Main analysis.

Hypothesis 1. Experiences of discrimination and outcomes will be linearly associated such that higher reports of discrimination will be positively associated with depressive symptoms, and negatively associated with reports of self-esteem and educational achievement after controlling for the outcome variable measured at T1 and both covariates. To test this hypothesis, I conducted three hierarchical linear regressions, one for each outcome variable measured at T3 (i.e., depression, self-esteem, and educational achievement). In the first step, I entered the outcome variable measured at T1, both covariates, perceived discrimination (T1) to directly assess Hypothesis 1, and examined the beta weight and associated significance test for perceived discrimination (PD).

Hypothesis 2. Greater reports of racial socialization and racial identity will predict less depressive symptoms, and greater self-esteem and educational achievement after controlling for the outcomes measured at Time 1. To test this, I entered racial socialization (T1) and racial identity (T2) as predictors in the second step of my hierarchical linear regression and examined the beta weights and associated significance tests for both.

Hypothesis 3. Racial socialization will moderate the relationship between racial discrimination and psychological outcomes such that greater discrimination will predict poorer psychological outcomes only for those participants with low but not high racial socialization. Following step 2, I tested this hypothesis by entering an interaction between perceived discrimination and racial socialization (PDxRS) in a third step. Again, I examined the beta weight and significance test for this interaction.

Hypothesis 4. Racial identity will moderate the relationship between racial discrimination and psychological outcomes such that greater discrimination will predict poorer psychological

outcomes only for those participants with low but not high racial identity. To test this hypothesis, in the final step (fourth step) of this regression, I entered an interaction between perceived discrimination and racial identity (PDxRI) and examined the beta weight and significance test for this interaction.

Hypothesis 5. Racial identity will explain (i.e. mediate) the moderation of racial socialization on perceived discrimination to outcome link. To test this, I examined the beta weights for both interactions following the last step, and mediation was determined following procedures recommended by Baron and Kenny (1986). I not only expected that the PDxRI interaction term would significantly predict the outcome (hypothesis 4), but also that the PDxRS interaction (hypothesis 3) would no longer be significant.

Table 1:

Structure of Hierarchical Multiple Regression Analyses.

	Variables Entered into the Regression
Step 1	Outcome variable measured at T1
	Perceived Discrimination
Step 2	Racial Socialization
	Racial Identity
Step 3	Perceived Discrimination x Racial Socialization
Step 4	Perceived Discrimination x Racial Identity

Note: This analysis will be conducted three times, one for each outcome variable (i.e., depressive symptoms, self-esteem, and educational attainment)

CHAPTER 4

RESULTS

Data Cleaning

Accounting for missing data. Two elements of concern were present in regards to missing data. First, given the method of tracking families over the course of years, the researchers had difficulty regaining contact with some of the participants. As a result, available cases at Time 1 may not have participated at Time 3 and vice-versa. Second, the dataset also contained item-level missing data. As a result, two means of dealing with missing data were used. To limit the amount of case deletion, composite mean scores within each measure were created for all cases with 50 percent or more of item-level data present. For example, when creating composite scores for the perceived discrimination scale, participants with at least seven of the 13 items answered were included in the data. Furthermore, because the study is a within-subject design, where the same participants are assessed over time, I used the listwise deletion method to exclude participants who did not have data present at all three time points.

Preliminary Analyses

Descriptive Statistics. Table 2 displays the number of participants, the mean, the standard deviation, and the minimum and maximum values for each continuous variable used in this study. While conducting the descriptive analyses, the z-scores for the five main predictor variables (perceived discrimination, Black pride, cultural socialization, promotion of mistrust, and preparation of bias) were saved as standardized versions of the variables that were used in the main analyses.

Table 2

Descriptive Statistics

Variables	*N*	*Mean*	*S.D.*	*Range*
Depression T1	766	5.61	4.85	0 – 19
Depression T3	689	4.27	3.66	0 – 15
Self-esteem T2	714	42.82	5.12	22 – 50
Self-esteem T3	689	24.33	4.37	6 – 30
Education Achieved T3	699	12.92	1.71	3 – 17
Perceived Discrimination T1	715	22.35	7.41	13 – 49
Black Pride T2	713	42.55	4.20	16 – 48
Cultural Socialization T2	766	12.56	4.72	5 – 25
Promotion of Mistrust T2	766	5.58	2.52	4 – 20
Preparation of Bias T2	766	14.46	6.07	6 – 30

Note. Sex = "0" (male), and "1" (female). Income = "0" (at or below poverty level) and "1" (above poverty level).

Correlations. I computed bivariate correlations among all study variables (see Table 3). These analyses indicated that the predictor variables were associated with each other and with the outcome variables often, but not always, in the expected direction. Perceived discrimination, for example, had a moderate positive relationship with depression symptoms, but had only a small association with self-esteem, and no association with education achieved. Black pride exhibited similar relationships, such that it was negatively correlated with depressive symptoms and positively correlated with self-esteem but showed no association with education achieved. Neither of the racial socialization subscales nor self-esteem was associated with depressive symptoms at Time 1. However, cultural socialization and preparation for bias were both associated with education achieved, whereas promotion of mistrust was not.

The outcome variables were associated as expected such that depressive symptoms at Time 1 were positively associated with depressive symptoms at Time 3, but were negatively associated with education achieved and self-esteem. Additionally, education achieved and self-esteem were positively correlated. Predictor variables, on the other hand, exhibited some

Table 3

Correlation Matrix of all Variables

	1	2	3	4	5	6	7	8	9	10	11
1. Sex	-										
2. Income	-.04	-									
3. Dep T1	.14**	-.05	-								
4. Dep T3	.19**	-.06	.34**	-							
5. Edu	.10*	.24**	.03	-.14**	-						
6. SE T2	.06	-.03	-.13**	-.26**	.15**	-					
7. SE T3	-.09*	.01	-.18**	-.48**	.15**	.39**	-				
8. PD	.03	.05	.21**	.22**	.08	-.02	-.10*	-			
9. BP	.02	-.01	-.10*	-.09*	.07	.27**	.17**	-.07	-		
10. CS	.04	-.01	-.02	.04	.11*	.09*	.07	.18**	.08	-	
11. PM	.01	-.07	-.04	.06	-.06	-.11*	-.07	.22**	-.16**	.20**	-
12. PB	.02	.06	.12**	.08	.16**	.04	.02	.50**	.01	.46**	.41**

Note. Sex = Biological sex (0=male, 1=female); Income (0=at or below poverty level, 1=above poverty level); Dep T1 = depression at Time 1; Dep T3 = Depression at Time 3; Edu = Education Achieved at Time 3; SE T2 = Self-esteem at Time 2; SE T3 = Self-esteem at Time 3; PD = Perceived Discrimination; BP = Black Pride; CS =Cultural Socialization; PM = Promotion of Mistrust; PB = Preparation for Bias.
Valid N (listwise) = 515.
*p = or < .05. **p = or < .01

unexpected associations among themselves. Perceived discrimination was positively correlated with all three of the racial socialization subscales, but was not associated with Black pride. Additionally, Black pride was negatively correlated with promotion of mistrust but was not associated with either cultural socialization or preparation for bias. These associations will be revisited in the Discussion section.

Main Analyses

To test the five hypotheses proposed in this study, I conducted a four-step hierarchical multiple regression analysis on each of the three outcome variables. Each of the steps corresponds directly to a specific hypothesis.

Hypothesis 1 – Step 1

The first hypothesis posited that perceived discrimination and each outcomes variable would be linearly associated such that higher reports of discrimination would lead to more depressive symptoms, less educational achievement, and lower self-esteem.

Depression symptoms. In this step, participants' sex, income, and level of depression at T1 were used as covariates (see Table 4). The results of this regression indicated that the four predictors explained 15.7% of the variance (R^2 = .16, p < .001, F[4,545] = 25.29, p<.001).

Table 4

Hierarchical Regression Predicting Depression at Time 3

	Step 1			Step 2			Step 3			Step 4		
	B	***SE***	***β***	***B***	***SE***	***β***	***B***	***SE***	***β***	***B***	***SE***	***β***
Dep T1	.22	.03	.29**	.22	.03	.29**	.22	.03	.30**	.22	.03	.29**
Income	-.41	.30	-.06	-.35	.30	-.05	-.36	.30	-.05	-.32	.30	-.04
Sex	.94	.29	.13**	.95	.29	.13**	.96	.29	.13**	.99	.29	.14**
PD	.55	.15	.15**	.60	.17	.17**	.61	.17	.17**	.65	.17	.18**
BP				-.19	.15	-.05	-.17	.15	-.05	-.19	.15	-.05
CS				.15	.16	.04	.14	.16	.04	.14	.16	.04
PM				.14	.16	.04	.22	.17	.06	.23	.17	.06
PB				-.26	.19	-.07	-.30	.19	-.08	-.32	.19	-.09
PDxCS							-.09	15	-.02	-.05	16	-.02
PDxPM							-.23	.13	-.08	-.27	.13	-.10*
PDxPB							.15	.15	.05	.11	.16	.04
PDxBP										-.33	.17	-.08*
R^2			**.157**			**.163**			**.168**			**.174**
ΔR^2			**.157****			**.006**			**.005**			**.006***

Note. Sex = Biological sex (0=male, and 1=female); Income (0=at or below poverty level, 1=above poverty level); Dep T1= depression at Time 1; PD = Perceived Discrimination; BP = Black Pride; CS = Cultural Socialization; PM = Promotion of Mistrust; PB = Preparation for Bias. (x) indicates an interaction term between two independent variables.
*p = or < .05; ** p = or < .01

Two of the three covariates significantly predicted depression at T3: greater depression at T1 (*B* = .22, *SE* = .03, β= .29, *p*<.001) predicted greater depression at T3 and females reported more depression (*B* = .94, *SE* = .29, β= .13, *p*=.001). In addition to these covariates, perceived discrimination at T1 significantly predicted depression six to seven years later at T3 (*B* = .55, *SE* = .15, β= .15, *p*<.001) such that greater perceptions of discrimination were associated with greater depression.

Education achieved. Similarly, I conducted a multiple regression to predict participants' educational achievement, using income and sex as covariates (See Table 5). The results indicated that the three predictors explained 7.1% of the variance (R^2=.071, *p*<.001, *F*(3,511) =13.08, *p*<.001). The covariates, income (*B* = .83, *SE* = .15, β = .24, *p*<.001) and sex (*B* = .35, *SE* = .15, β= .10, *p*=.016), were significantly related to the amount of education achieved, with those above

Table 5

Hierarchical Regression Predicting Education Achieved

	Step 1			Step 2			Step 3			Step 4		
	B	***SE***	***β***	***B***	***SE***	***β***	***B***	***SE***	***β***	***B***	***SE***	***β***
Income	.83	.15	.24**	.76	.15	.22**	.79	.15	.23**	.79	.15	.23**
Sex	.35	.15	.10*	.34	.14	.10*	.32	.14	.10*	.33	.14	.10*
PD	.10	.07	.06	-.01	.08	-.004	.01	.09	.01	.02	.09	.01
BP				.08	.08	.05	.08	.08	.04	.07	.08	.04
CS				.08	.08	.05	.08	.08	.05	.08	.08	.05
PM				-.20	.08	-.12*	-.25	.08	-.15**	-.25	.08	-.15**
PB				.29	.10	.18**	.32	.10	.19**	.32	.10	.19**
PDxCS							.07	.08	.04	.07	.08	.04
PDxPM							.15	.07	.12*	.14	.07	.11*
PDxPB							-.16	.08	-.11*	-.16	.08	-.11*
PDxBP										-.03	.08	-.02
R^2			**.07**			**.11**			**.12**			**.12**
ΔR^2			**.07****			**.04****			**.01**			**.00**

Note. Sex = Biological sex (0=male, and 1=female); Income (0 = at or below poverty level, 1 = above poverty level); PD = Perceived Discrimination; BP = Black Pride; CS =Cultural Socialization; PM = Promotion of Mistrust; PB = Preparation for Bias.
(x) indicates an interaction term between two independent variables.
* *p* = or < .05; ** *p* = or < .01

the poverty line and women achieving more education. Perceived discrimination was not associated with educational achievement.

Self-esteem. The same analysis was conducted to predict participants' self-esteem at T3. Participants' sex and income were again used as covariates as was their level of self-esteem at T2 (see Table 6). Perceived discrimination at T1 was also included as a predictor. The results indicated that the four predictors explained 17.4% of the variance (R^2=.174, p<.001, F(4,545) =28.70, p<.001). Self-esteem at T2 (B = .35, SE = .03, β = .4, p<.001) and sex (B = -.83, SE = .34, β= -.09, p=.016) were found to be significant predictors. Above and beyond the covariates, perceived discrimination at T1 significantly predicted self-esteem (B = -.40, SE = .17, β= -.09, p= .02) such that greater perceptions of discrimination were associated with lower self-esteem.

Table 6

Hierarchical Regression Predicting Self-esteem at Time 3

	Step 1			Step 2			Step 3			Step 4		
	B	***SE***	***β***	***B***	***SE***	***β***	***B***	***SE***	***β***	***B***	***SE***	***β***
SE T2	.35	.03	.40**	.32	.04	.38**	.32	.04	.37**	.32	.05	.37**
Income	.19	.35	-.02	.16	.36	.02	.18	.36	.02	.17	.36	.02
Sex	-.83	.34	-.09*	-.85	.34	-.10*	-.85	.34	-.10*	-.86	.34	-.10*
PD	-.40	.17	-.09*	-.48	.20	-.11*	-.48	.20	-.11*	-.48	.20	-.11*
BP				.30	.18	.07	.29	.19	.06	.29	.19	.06
CS				.13	.19	.03	.14	.19	.03	.14	.19	.03
PM				-.07	.20	-.02	-.19	.20	-.04	-.19	.21	-.04
PB				.19	.22	.04	.25	.23	.06	.26	.23	.06
PDxCS							-.03	.19	-.01	-.04	.19	-.01
PDxPM							.32	.16	.09*	.33	.16	.10*
PDxPB							-.21	.19	-.06	-.21	.19	-.06
PDxBP										.06	.20	.01
R^2			**.17**			**.18**			**.19**			**.19**
ΔR^2			**.17****			**.01**			**.01**			**.00**

Note. Sex = Biological sex (0=male, and 1=female); Income (0=at or below poverty level, 1=above poverty level); SE T2 = Self-esteem at Time 2; PD = Perceived Discrimination; BP = Black Pride; CS = Cultural Socialization; PM = Promotion of Mistrust; PB = Preparation for Bias. (x) indicates an interaction term between two independent variables.
* p = or < .05; ** p = or < .01

Hypothesis 2 – Step 2

The second hypothesis proposed that greater racial socialization and racial identity will predict fewer depressive symptoms, greater educational achievement, and higher self-esteem after controlling for the outcomes measured in Step 1.

Depression symptoms. I added the Black pride measure (racial identity) as well as all three racial socialization subscales (cultural socialization, promotion of mistrust, preparation of bias) as predictors of depression in step 2. The addition of these variables did not account for a significant amount of additional variance in depression (ΔR^2=.006, p= .392). None of the added predictors were significantly related to depression at T3.

Education achieved. The same variables were entered into Step 2 to predict educational achievement. This step explained an additional 3.5% of the variance in education achieved (ΔR^2=.035, p=.001). Black pride and cultural socialization were not significant predictors. However, both the preparation for bias (B = .29, SE = .1, β = .18, p=.002), and the promotion of mistrust (B = -.20, SE = .08, β= -.12, p=.012) were significant predictors of education achieved. Greater preparation for bias was associated with greater education achieved. Contrary to the hypothesis, promotion of mistrust had a negative relationship with education achieved such that greater promotion of mistrust predicted lower achievement.

Self-esteem. Again, the Black pride measure as well as all three racial socialization subscales were entered as predictors for self-esteem in the second step. The added variables did not provide a significant amount of variance explained (ΔR^2=.008, p= .298). None of the added predictors were found to be significant.

Hypothesis 3 – Step 3

The third hypotheses explored the moderating effects of racial socialization between perceived discrimination and the outcome measures, predicting that greater discrimination will predict poorer outcomes only for those participants with low, but not high, racial socialization.

Depression symptoms. In step 3 of this analysis, I added the interaction variables between perceived discrimination and each of the racial socialization subscales. The addition of these interaction variables did not account for any additional variance (ΔR^2=.005, p= .351). None of the added interactions were found to be significantly related to depression at T3.

Education achieved. I conducted the same analysis for education achieved. The added interaction variables accounted for an additional 1.1% variance (ΔR^2=.011, p=.09), which was not reliably greater than zero. Interestingly, despite the fact that the model was not significant, two of the three interactions appeared to significantly predict educational achievement: the preparation for bias by perceived discrimination interaction (B = -.16, SE = .08, β= -.11, p=.048) and the promotion of mistrust by perceived discrimination interaction (B = .15, SE = .07, β= .12, p=.023). These results indicate that preparation for bias and promotion of mistrust may be significant moderators between perceived discrimination and education achieved. Because the overall model was non-significant yet some individual interactions were significant, I decided to conduct a post hoc analysis to further explore these relationships. Results are discussed below under the heading "Post Hoc Analyses."

Self-esteem. When regressed on self-esteem, the interactions did not explain a significant amount of additional variance (ΔR^2=.006, p= .229). Similar to the results observed in education achieved, one of the included interactions, promotion of mistrust, appeared to be a significant moderator (B = .31, SE = .16, β= .09, p=.044). Again, due to the conflicting nature of these

results (i.e., significant at the individual interaction level but not at the step level), I conducted a series of post hoc analyses, which are also reported below.

Hypothesis 4 & 5 – Step 4

The fourth hypothesis explored the moderating effects of racial identity between perceived discrimination and the outcome measures, such that greater discrimination was expected to predict poorer outcomes only for those participants with low but not high racial identity. Additionally, with the fifth hypothesis, I expected to see that the moderation of the perceived discrimination and outcome relationship by racial socialization proposed in step 3 would disappear, thereby providing some evidence of mediation.

Depression symptoms. In step 4 of this analysis, I added the interaction variable between perceived discrimination and Black pride. The addition of this variable explained an additional 0.6% of the variance in depression symptoms (ΔR^2=.006, *B* = -.33, *SE* = .17, β= -.08, *p*=.044). A plot of the interaction indicates that Black pride buffers the relationship between perceived discrimination and depression. Specifically, for participants high in Black pride greater perceived discrimination is not related to greater depression (see Figure 2). Furthermore, due to the lack of significant interactions in step 3, there was no moderation to mediate.

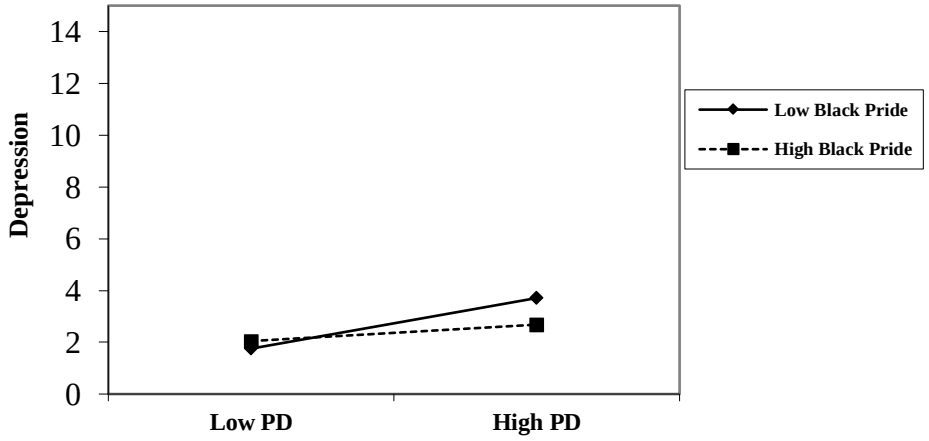

Figure 2. Interaction Effect of Black Pride and Perceived Discrimination on Depression

In addition to these findings, the interaction between perceived discrimination and promotion of mistrust became significant at this step. Because this interaction only became significant with the addition of the interaction between perceived discrimination and Black pride, I have not analyzed this result in more detail, but instead refer the reader to the "Post Hoc Analyses" section below.

Education achieved. The interaction between perceived discrimination and Black pride explained no additional variance in education achieved (ΔR^2=.000, p= .703). Because the results indicated that the interaction was not significant, there was no moderation observed. Furthermore, because the interaction between perceived discrimination and Black pride was not significant, there is no evidence that Black pride mediates the perceived discrimination by racial socialization moderation.

Self-esteem. Similarly, the interaction between perceived discrimination and Black pride did not lead to any added explanation to the variance in self-esteem (R^2=.000, p= .763). The results indicated that the interaction was not significant, and thus no moderation was observed. Furthermore, because the interaction between perceived discrimination and Black pride was not significant, there is no evidence that Black pride mediates the perceived discrimination by racial socialization moderation.

Post Hoc Analyses

Given the unusual findings in the main analyses, I decided to conduct post hoc analyses to further explore the relationship between the predictor variables and the outcome variables. As a result, I decided to rerun my hierarchical regression for each of the outcome variables. However, this time I decided to conduct a regression for each of the racial socialization subscales individually. This means that I conducted three separate (4-step) hierarchical regressions for each of the outcome variables entering each of the three racial socialization scales into separate

regressions (for a total of nine separate regression analyses). Thus, I included cultural socialization, preparation for bias, and promotion of mistrust separately at the second step of their respective regressions, and each of their interactions with perceived discrimination separately at the third step.

The results from this post hoc analysis proved enlightening (see Table 7). I conducted three regressions to examine depression. None of the individual racial socialization subscales nor their interactions significantly predicted depression. This is in line with the results when I included all of the racial socialization scales together, as reported above. Additionally, the results indicate that the perceived discrimination by Black pride interaction was significant only in the

Table 7

Final Step of the Hierarchical Regression by Racial Socialization Subscale on Depression

	Cultural Socialization			**Preparation for Bias**			**Promotion of Mistrust**		
	B	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Dep T1	.21	.03	.28**	.21	.03	.30**	.21	.03	.29**
Inc	-.37	.30	-.05	-.36	.30	-.05	-.35	.30	-.05
Sex	.98	.29	.14**	.98	.29	.14**	.98	.29	.14**
PD	.07	.02	.15**	.09	.02	.18**	.08	.02	.16**
BP	-.22	.15	-.06	-.21	.15	-.05	-.19	-.15	-.05
CS	.07	.14	.02	--	--	--	--	--	--
PM	--	--	--	--	--	--	.14	.16	.04
PB	--	--	--	-.14	.16	-.04	--	--	--
PDxCS	-.07	.14	-.02	--	--	--	--	--	--
PDxPM	--	--	--	--	--	--	-.22	-.12	-.08
PDxPB	--	--	--	-.04	.13	-.01	--	--	--
PDxBP	-.27	.16	-.46	-.29	.16	-.07	-.34	.16	-.08*
R^2			**.165**			**.165**			**.169**
ΔR^2			**.005**			**.005**			**.007***

Note. Dashes represent variables that were not included in that particular regression. Sex = Biological sex (0=male, and 1=female); Income (0=at or below poverty level, 1=above poverty level); Dep T1= depression at Time 1; PD = Perceived Discrimination; BP = Black Pride; CS = Cultural Socialization; PM = Promotion of Mistrust; PB = Preparation for Bias. (x) indicates an interaction term between two independent variables.
* p = or < .05; ** p = or < .01

regression considering promotion of mistrust as the moderator. These findings are further explored in the Discussion section.

I also conducted three regressions to examine educational achievement (see Table 8). Preparation for bias significantly predicted education achieved. Greater preparation for bias was related to more educational achievement (B = .25, SE = .08, β= .15, p=.002). Furthermore, none of the interactions significantly predicted educational achievement.

Table 8

Final Step of the Hierarchical Regression by Racial Socialization Subscale on Education Achieved

	Cultural Socialization			**Preparation for Bias**			**Promotion of Mistrust**		
	B	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Inc	.83	.15	.24**	.82	.15	.24**	.81	.15	.23**
Sex	.33	.14	.10*	.34	.14	.10*	.34	.14	.10*
PD	.01	.01	.05	.00	.01	.01	.02	.01	.07
BP	.11	.08	.06	.12	.08	.07	.11	.08	.06
CS	.16	.07	.10*	--	--	--	--	--	--
PM	--	--	--	--	--	--	-.12	.08	-.07
PB	--	--	--	.26	.08	.16**	--	--	--
PDxCS	.05	.07	.03	--	--	--	--	--	--
PDxPM	--	--	--	--	--	--	.07	.06	.06
PDxPB	--	--	--	-.07	.07	-.05	--	--	--
PDxBP	-.04	.08	-.02	-.04	.08	-.02	-.02	.09	-.01
R^2			**.086**			**.096**			**.082**
ΔR^2			**.001**			**.000**			**.000**

Note. Dashes represent variables that were not included in that particular regression. Sex = Biological sex (0=male, and 1=female); Income (0=at or below poverty level, 1=above poverty level); PD = Perceived Discrimination; BP = Black Pride; CS = Cultural Socialization; PM = Promotion of Mistrust; PB = Preparation for Bias. (x) indicates an interaction term between two independent variables.
* p = or < .05; ** p = or < .01

For the three regressions predicting self-esteem (see Table 9), the results were identical to the regressions predicting depression. None of the individual racial socialization subscales nor their interactions were significant predictors. When examined individually, none of the individual interactions between the racial socialization subscales and perceived discrimination were significant. This aligns with the findings at the model level in my main analyses. These results

suggest that the individual predictors that were significant in the main analyses when the model was not, are probably not stable findings and should not be interpreted.

Table 9

Final Step of the Hierarchical Regression by Racial Socialization Subscale on Self-Esteem

	Cultural Socialization			**Preparation for Bias**			**Promotion of Mistrust**		
	B	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
SE T2	.33	.04	.38**	.33	.04	.38**	.33	.04	.38**
Inc	.19	.36	.02	.18	.36	.02	.17	.36	.02
Sex	-.84	.34	-.10*	-.84	.34	-.10*	-.84	.34	-.10*
PD	-.06	.02	-.09*	-.06	.03	-.11*	-.06	.02	-.10*
BP	.31	.18	.07	.32	.19	.07	.32	.19	.07
CS	.19	.17	.04	--	--	--	--	--	--
PM	--	--	--	--	--	--	-.06	.19	-.01
PB	--	--	--	.24	.19	.054	--	--	--
PDxCS	-.06	.17	-.01	--	--	--	--	--	--
PDxPM	--	--	--	--	--	--	.22	.14	.06
PDxPB	--	--	--	-.07	.16	-.018	--	--	--
PDxBP	.01	.19	.00	.00	.20	.00	.07	.20	.01
R^2			**.168**			**.169**			**.170**
ΔR^2			**.000**			**.000**			**.000**

Note. Dashes represent variables that were not included in that particular regression. Sex = Biological sex (0=male, and 1=female); Income (0=at or below poverty level, 1=above poverty level); SE T2 = Self-esteem at Time 2; PD = Perceived Discrimination; BP = Black Pride; CS = Cultural Socialization; PM = Promotion of Mistrust; PB = Preparation for Bias. (x) indicates an interaction term between two independent variables.

* p = or < .05; ** p = or < .01

CHAPTER 5

DISCUSSION

The present study sought to build upon the existing research by not only examining the direct relationship between racial socialization and racial identity but also their effects on the discrimination to distress link over time. Prior to this study, previous empirical research examined the relationship between racial socialization and racial identity on discrimination but not on distress (Neblett et al., 2009; Seaton et al., 2012). In studies where distress was also assessed, the analyses were conducted on cross-sectional data (Stevenson & Arrington, 2009; Neblett et al., 2013). This was the first study looking at an integrative analytic approach toward assessing the relationship between racial socialization and racial identity and their effects on the discrimination to distress link on longitudinal data, through a mediated moderation model. The results of this study were surprising as no mediation pathways were observed, and only one variable significantly interacted with discrimination in the predicted direction.

Perceived Discrimination on Mental Health and Behavioral Outcomes

The first hypothesis looked at perceived discrimination and its relationship with three outcome variables: depression, education achieved, and self-esteem, while accounting for covariates. Perceived discrimination, measured at Time 1 was a significant predictor of both depression and self-esteem measured at Time 3, nearly six years later. The relationships were in the direction predicted such that the increased reports of experiences of discrimination at Time 1 were related to higher counts of depression symptoms, and lower reports of self-esteem. It is important to note that these relationships were significant even after controlling for prior measures of depressive symptoms and self-esteem (respectively) as well as covariates including participant sex and income. Experiences of discrimination appear to leave a persistent

psychological impact on African Americans, especially women, who appeared to experience significantly more depression and lower self-esteem than their male counterparts.

Perceived discrimination did not significantly predict education achieved. Income, which was not a predictor of either depression or self-esteem, significantly predicted education achieved. This finding supports prior research indicating that student's negative experiences with others (teachers, peers, and others in their social context) may affect how they view those individuals but has little impact on their educational behaviors (Chavous et al., 2003).

Racial Socialization and Racial Identity on Mental Health and Behavioral Outcomes

Next, I looked at the relationship between the three racial socialization subscales (cultural socialization, preparation for bias, and promotion of mistrust) and racial identity on the outcome variables. The step was intended to test whether racial socialization and racial identity have a significant impact on our mental and behavioral health above that of covariates and perceived discrimination.

Racial socialization. Racial socialization, measured at Time 1, demonstrated mixed associations with the different outcome measures. Contrary to the hypothesis, the racial socialization subscales predicted neither depression symptoms nor self-esteem. Past research afforded evidence of a direct relationship between racial socialization and mental health outcomes. Davis and Stevenson (2006), for example, demonstrated that different facets of racial socialization predicted different mental health outcomes. Specifically, they found that youth with higher levels of Cultural Legacy Appreciation (socialization messages focusing on cultural history, heritage, and African ancestry) demonstrated lower self-esteem. However, Black youth with high levels of Cultural Pride Reinforcement (socialization messages focusing on teaching of pride and knowledge of African American culture) demonstrated higher self-esteem, but only for

youth who perceived their neighborhoods as having positive resources. Furthermore, those who received more messages of Mainstream Fit (messages encouraging assimilation into mainstream society) reported higher levels of depression.

One potential reason for the differences in findings in my study may simply be the fact that I used different scales for measuring racial socialization. Davis and Stevenson (2006) used the Teenager Experience of Racial Socialization Scales, TERS (Stevenson, Cameron, Herrero-Taylor, & Davis, 2002), the present study used an adapted measure of the Parents' Racial Socialization Scale, RSS (Hughes and Johnson, 2001). Even though both measures focus on the frequency of caregivers' messages received, TERS appears to attend specifically to the communication of cultural beliefs ("Blacks don't always have the same opportunities as Whites" or "You are connected to a history that goes back to African royalty"). However, the RSS appears to focus more on the frequency of specific communication ("How often within the past year have the adults in your family explained how something you saw on TV showed poor treatment of your racial group?" or "… the adults in your family encouraged you to read books concerning the history or traditions of your racial group?"). The quality of messages differs and may bring up questions around its importance in assessing socialization messages. The meta-analysis by Lee and Ahn (2013) provides support for this study's finding as they did not find any significant correlation between racial socialization and psychological distress. Their data indicated that racial socialization was significantly correlated with racial discrimination, but not distress; observations replicated in this study as reports of perceived discrimination were significantly correlated with all three subscales of racial socialization.

A different tale is told when looking at the relationship between education achieved and the socialization subscales. The results demonstrated that both preparation for bias and cultural

socialization were significant predictors of educational achievement. The two subscales positively related with education achieved, where higher frequency of preparation for bias and cultural socialization messages predicted higher educational achievement. One potential interpretation may be that students receiving higher frequency of messages of pride in cultural customs and traditions as well as warnings about societal bias may develop a level of expectancy of discrimination that may reduce the feelings of confusion and unpredictability, and as a result, reduce the level of stress experienced. Additionally, students expecting bias may be motivated to "prove them wrong," a mindset that might cultivate internal self-worth and thus may increase self-efficacy in educational settings. Support for this interpretation is observable in this study's findings where education achieved is negatively correlated with experiences of depression at Time 3, but positively correlated with reports of self-esteem at Time 2 and 3.

Our findings partially support that of a recent study by Hughes, Witherspoon, Rivas-Drake, and West-Bey (2009). Their study assessed the relationship between racial socialization (specifically cultural socialization and preparation for bias) and youth's academic achievement while considering ethnic identity and self-esteem as mediators. The authors similarly found that cultural socialization was strongly associated with academic outcomes. This relationship was only partially mediated by ethnic identity and self-esteem. On the other hand, preparation for bias was negatively associated with academic achievement, and this relationship was fully mediated by ethnic identity and self-esteem. The full mediation implies an association between preparation for bias with ethnic identity and self-esteem that explains its relationship with academic achievement. These associations are not present in the current study as preparation for bias was neither correlated with Black pride nor self-esteem. It is uncertain why the correlation was not present. One potential explanation may be the differences in sample population. Age, for

example, may be an important factor in understanding the different results. Whereas Hughes et al. (2009) recruited participants in early adolescence, this study looked at participants from adolescence to young adulthood. A 1997 study evaluated 157 African American parents with children from ages 4 to 14, and its findings revealed that cultural socialization messages were used most often by parents, followed by preparation of bias, and then promotion of mistrust. Additionally, the authors observed a significant difference in frequency and type of socialization messages as children increased in age. For parents of older children 9 to 14 years old, the authors noted a significant increase in preparation for bias messages, especially parents who reported greater discrimination in the workplace (Hughes & Chen, 1997). Additionally, our youth samples may developmentally differ both cognitively (Selman, 1980; Quintana, 1994) and psychosocially (Erickson, 1963), which may then impact the integration of messages received.

Racial identity. Surprisingly racial identity did not significantly predict any of the outcome variables. This finding is contrary to ample supportive evidence encountered in prior research, but may be explained in Lee and Ahn's (2013) meta-analysis. They found that measures of racial identity were associated with distress measures, but these results significantly differed from each other based on which measure was used. The authors noted that measures of private regard, racial centrality, and Afrocentricity were significantly negatively associated with distress when assessed using the Multidimensional Inventory of Black Identity (MIBI), but were positively associated with distress when using the Cross Racial Identity Scale (CRIS). Admittedly, both scales aim to measure racial identity; however, they differ notably. CRIS appears to measure identity development and as a result, it is set up as a stage model, which often (but not always) tends to assume a linear progression through stages: Pre-encounter, Immersion-Emersion, and Internalization. On the other hand, the MIBI seems to measure identity content. It

assesses an individual's degree of identification (low to high) along three main dimensions: Racial Regard (public and private), Racial Centrality, and Racial Ideology. According to the theory, different combinations of identity content would reflect different in-group identification. Furthermore, in a 2002 article on the validation of CRIS, the authors noted that their Internalized Afrocentric items (a subscale of the Immersion-Emersion stage) did not correlate with MIBI's centrality as expected. They conjectured that, whereas racial centrality refers to the extent to which people define themselves with regard to race, Afrocentricity measures the belief that taking an African-based frame of reference is useful in solving the problems of African Americans. These differences may help explain the contrary findings, for not only do these scales differ structurally, their subscales, although correlated, may actually be assessing distinct constructs.

Additionally, as it relates to this study, the authors found that private regard was not statistically associated with distress measures when using "researcher-made items" (p.9). This study's findings (or lack thereof) may then not be representative but may be a result of a limitation inherent in this study (discussed in detail below).

Racial Socialization and Racial Identity as Moderators

The third and fourth hypotheses suggested a moderating effect from both racial socialization and racial identity on the discrimination to distress link. Based on prior findings, the hypotheses proposed that higher reports of racial socialization and racial identity will buffer the impact of discrimination on mental and behavioral health outcomes. Out of 12 possible interactions, only one was significant; Black pride was a significant moderator of the effect of perceived discrimination on depression. It is important to note that while conducting the post hoc analyses, the data showed that Black pride was a significant moderator only when promotion of

mistrust was included as part of the hierarchical regression (see Table 7). With the added step, promotion of bias became a significant moderator in the main analysis, but its significance disappeared in the post hoc analyses. It seems likely that promotion of mistrust is a significant moderator, albeit a small effect, that can only be detected when variance accounted for by the perceived discrimination by cultural socialization, preparation for bias, and Black pride interactions are also included.

Looking at our correlations (Table 3), we see that Black pride is negatively correlated with promotion of mistrust. It seems then, that the fewer messages of mistrust a child receives the more racial pride they are likely to have. The more racial pride a child has, the weaker the impact of discrimination on their mental health. This double negative relationship may have created a suppression effect of the interaction between discrimination and promotion of mistrust, which rendered the interaction significant in the main analysis (Table 4). It is unclear why our measure of racial identity was not associated with either cultural socialization or preparation for bias. These two subscales, in particular, have been found to especially contribute to youth's sense of pride, which corresponds to the goal of cultural socialization to teach Black cultural history and heritage thereby instilling pride in the membership group. Similarly, preparation for bias aims to caution youth of societal prejudices providing them with coping skills in an attempt to prevent the internalization of blame in the face of racial discrimination.

Racial Identity as a Mediator

The last hypothesis of the study sought to explain the different relationships inherent in this study through a mediated moderation. With a mediated moderation, the same 4 conditions established by Barron and Kenny (1986) must be met, however, the treatment effect observed in

this case is a moderation rather than a simple direct effect. As it relates to this present study, the conditions were as follows:

1- Racial socialization moderates the discrimination to distress link
2- Racial socialization is associated with racial identity
3- Racial identity moderates the discrimination to distress link
4- When the moderation of racial identity is present, that of racial socialization is reduced, or completely disappears.

As discussed in the previous section, the first condition of this mediated moderation was not met, namely, none of the racial socialization subscales moderated the impact of perceived discrimination on the mental and behavioral health outcomes. As a result, no mediated effect was observed. Findings of no mediation are surprising. Stevenson & Arrington (2009) found that socialization mediated the relationship between perceived discrimination and racial identity. However, it is important to note that in their cross-sectional study, experiences of discrimination were presumed to precede messages of socialization. However, all variables were collected at the same time point. It may be that over time (as in my study) racial socialization does not actually mediate the relationship. More research is needed to determine how these variables influence one another over time.

Limitations and Future Directions

An important limitation of this study deals with participant attrition. As discussed above, each wave of data collection took place at an interval of 2 years. This makes the locating and contacting of participants difficult and sometimes impossible. As a result, data between participants is not always collected at the same time intervals; meaning some may have participated in wave 3 two years after wave 2, while others may have been reached three years

after. Additionally, some participants may not have been accessible at certain waves, creating data gaps across waves. Consequently, the current study used 515 participants, granted a large number, it is a little over half (58%) of the initial pool. This level of attrition is not uncommon. But, it does bring up important questions about the participants not included. Were there characteristics common to them that were not accounted for in this study? If so, how did this relate to their views of self as members of their racial group? Did it affect their educational achievement, their levels of depression and/or levels of self-esteem?

As mentioned above, our measure of racial identity may also be an important limitation in the study. Our racial identity scale was shortened from a 21-items scale to a twelve-item scale with an internal reliability of $\alpha =. 70$, a modest but acceptable alpha. Another possible limitation to this study may be the instrumentation of certain constructs. Perceived discrimination, for example, was assessed through self-reports. Considered a reasonable form of assessment, self-reports nonetheless often open up questions to the veracity and accuracy of reported experiences. However, it has been argued that the perception of the discrimination, rather than the experience itself, is more likely to influence psychological processes (Harris-Britt, Valrie, Kurtz-Costes, & Rowley, 2007). It is possible to experience discrimination, and not perceive it. Racial discrimination in today's age may not always be clear-cut, and often times is ambiguous, which can lead to targets internalizing guilt and shame over the experiences and not recognizing it as discrimination. As a result, assessing perception of discrimination may be especially informative in understanding individuals' attributional patterns and its impact on mental health.

Similarly, racial socialization was assessed through self-reports. It may be beneficial for future research to assess both adolescents' reports of socialization as well as their caregivers' reports. This may provide more accurate data on the frequency of messages and may help

researchers determine which messages resonated most and remained with adolescents. Additionally, adolescents' racial socialization self-reports lack information on the quality of these messages. When caregivers impart messages to prepare youth for bias, are these done through proverbs? Just as an aside? Or do caregivers sit down and talk at length with their youth? Is there an inciting event (e.g., the caregiver or the child experiencing discrimination) that leads to the conversation? Who initiates the conversation, the child or the caregiver? Future research can further our understanding by highlighting differences in the quality of messages. This may, in turn, increase our understanding of the relationship between racial socialization and experiences of discrimination, a "chicken or egg question" that continues to plague this line of research (Stevenson & Arrington, 2009).

Future studies can also further the literature by focusing on assessing the relationships between individual subscales in an attempt to narrow down under what conditions a mediation might be observed. Special attention can be paid to the curvilinearity of the effects of racial socialization and racial identity (Harris-Britt et al., 2007). The collection of prior research reveals inconsistent patterns in how racial socialization, racial identity, and perceived discrimination relate to and interact with each other. Looking at the curvilinear influence of socialization subscales on the relationship between discrimination and health outcomes may provide additional information on the role that frequency of messages, as opposed to only quality of messages, plays on facilitating racial identity development and/or moderating the relationship between discrimination and health outcomes. Preparation for bias, for example, has been observed to both buffer and exacerbate the relationship between experiences of discrimination and health outcomes, an indication that there may be differential effects based on the frequency

of messages (Harrist-Britt et al., 2009; Hughes et al. 2009). As a result, a close attention to curvilinearity may help us answer questions like "how much preparation for bias is too much?"

Conclusions

The current study takes an integrative exploratory approach to assessing the longitudinal relationship between discrimination, racial identity, and racial socialization as well as their impact on health and educational outcomes, through a mediated moderation lens. The study's findings provide support of the long-term relationship between discrimination and mental health outcomes. It highlights the fact that, although prior studies have used a summed score for racial socialization, it may be important to study the subscales separately to identify their individual effects on youth's psychosocial development both for statistical and parsimonious reasons. For example, the study's post hoc analyses highlighted the specific impact of cultural socialization and preparation for bias on education, but not of promotion of bias, findings that partially contradict those from the main analysis.

Furthermore, many of the findings were unexpected as they did not support hypotheses based on prior literature. The data showed Black pride to be a strong buffer of discrimination on depression, but none of the racial socialization measures moderated the discrimination to health link. This points to a need for continued explicit evaluation of the differences between measurements positing to assess identical/similar constructs.

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APPENDIX A. PERCEIVED DISCRIMINATION SCALE

1. How often has someone said something insulting to you just because of your race or ethnic background? Is it…
2. How often has a store-owner, sales clerk, or person working at a place of business treated you in a disrespectful way just because of your race or ethnic background? Is it...
3. How often have the police hassled you just because of your race or ethnic background? Is it...
4. How often has someone ignored you or excluded you from some activity just because of your race or ethnic background? Is it…
5. How often has someone suspected you of doing something wrong just because of your race or ethnic background? Is it...
6. How often has someone yelled a racial slur or racial insult at you just because of your race or ethnic background? Is it...
7. How often has someone threatened to harm you physically just because of your race or ethnic background? Is it...
8. How often have you encountered people who are surprised that you, given your race or ethnic background, did something really well? Is it...
9. How often have you been treated unfairly just because of your race or ethnic background? Is it...
10. How often have you encountered people who didn't expect you to do well just because of your race or ethnic background? Is it...
11. How often has someone discouraged you from trying to achieve an important goal just because of your race or ethnic background? Is it...
12. How often have your close friends been treated unfairly just because of their race or ethnic background? Is it...
13. How often have members of your family been treated unfairly just because of their race or ethnic background? Is it...

CODING SCHEME: (1) never (2) once or twice (3) a few times (4) frequently

APPENDIX B. RACIAL SOCIALIZATION SCALE

1. How often within the past year have the adults in your family celebrated cultural holidays of your racial group?
2. How often within the past year have the adults in your family talked to you about important people or events in the history of your racial group?
3. How often within the past year have the adults in your family taken you to places or events that reflect your racial heritage?
4. How often within the past year have the adults in your family encouraged you to read books concerning the history or traditions of your racial group?
5. How often within the past year have the adults in your family said or done anything to encourage you to do something to learn about the history or traditions of your racial group?
6. How often within the past year have the adults in your family indicated that people might limit you because of your race?
7. How often within the past year have the adults in your family indicated that some people might treat you badly or unfairly because of your race?
8. How often within the past year have the adults in your family indicated that you will have to be better than other kids to get the same rewards because of your race?
9. How often within the past year have the adults in your family talked with you about discrimination or prejudice against your racial group?
10. How often within the past year have the adults in your family explained how something you saw on TV showed poor treatment of your racial group?
11. How often within the past year have the adults in your family talked to someone else about discrimination or prejudice against your racial group while you were present?
12. How often within the past year have the adults in your family talked to you about how you can't trust kids from other racial or ethnic groups?
13. How often within the past year have the adults in your family encouraged you to keep your distance from kids of a race or ethnicity that differs from yours?
14. How often within the past year have the adults in your family told you to be careful around kids or adults of a certain race or ethnicity?
15. How often within the past year have the adults in your family talked about the negative qualities that people of other races or ethnicities possess?

CODING SCHEME WAVES: (1) never (2) 1-2 times (3) 3-5 times (4) 5-10 times (5) 10 or more times

APPENDIX C. BLACK PRIDE SCALE

1. *Blacks should be proud of their race. Do you...
2. *Blacks can do anything if they try. Do you...
3. Whites do better in school. Do you…
4. [+]Whites look better than Blacks. Do you...
5. [+]Blacks do not do well in business. Do you...
6. *Blacks are good at things besides sports. Do you...
7. I prefer to go to a White school. Do you...
8. [+]Blacks have "bad" hair. Do you...
9. [+]*Short hair is as nice as long hair. Do you...
10. Blacks don't speak as well as Whites. Do you...
11. I prefer White friends. Do you...
12. [+]Blacks are not good at math. Do you...
13. [+]I don't like being around Blacks. Do you...
14. Most Blacks can't be trusted. Do you...
15. *I like living in a Black neighborhood. Do you...
16. *Black is beautiful. Do you...
17. I prefer living in a White neighborhood. Do you...
18. Whites speak better than Blacks. Do you...
19. [+]*Black people are very smart. Do you...
20. [+]I wish my skin were lighter. Do you...
21. [+]I think people of other races look better than Black people. Do you...

CODING SCHEME WAVES: (1) strongly agree (2) somewhat agree (3) somewhat disagree (4) strongly disagree

* Reverse coded items

[+] Deleted items from Time 1 to Time 2.

APPENDIX D. DEPRESSION SCALES

General Depression

1. During the past week, how much have you...felt depressed? Was it...
2. During the past week, how much have you...felt discouraged? Was it...
3. During the past week, how much have you...felt hopeless? Was it...
4. During the past week, how much have you...felt like a failure? Was it...
5. During the past week, how much have you...felt worthless? Was it...

Anhedonia

6. During the past week, how much have you...felt withdrawn from other people? Was it...
7. During the past week, how much have you...felt like nothing was very enjoyable? Was it...
8. During the past week, how much have you...felt really lively, "up"? Was it...
9. During the past week, how much have you...felt really happy? Was it...
10. During the past week, how much have you...felt like you had a lot of energy? Was it…
11. During the past week, how much have you...felt like you were having a lot of fun? Was it...
12. During the past week, how much have you...felt like you had a lot to look forward to? Was it...
13. During the past week, how much have you...felt like you had a lot of interesting things to do? Was it..

Non-Specific Anxiety

14. During the past week, how much have you...felt tense or "high strung"? Was it...
15. During the past week, how much have you...felt uneasy? Was it...
16. During the past week, how much have you...felt keyed up, "on edge"? Was it...

CODING SCHEME: (1) Not at all (2) Somewhat (3) Extremely

APPENDIX E. SELF-ESTEEM SCALE

1. [+]*I feel that I'm a person of worth, at least on an equal level with others
2. [+]*I feel that I have a number of good qualities
3. [+]All in all, I am inclined to feel that I'm a failure
4. [+]*I am able to do things as well as most other people
5. I feel I do not have much to be proud of. Do you...
6. *I take a positive attitude toward myself. Do you...
7. *On the whole, I am satisfied with myself. Do you...
8. I certainly feel useless at times. Do you...
9. I wish I could have more respect for myself. Do you...
10. At times I think I am no good at all. Do you...

CODING SCHEME WAVE 4: (1) strongly agree (2) agree (3) neutral or mixed (4) disagree (5) strongly

* Reverse coded items

[+] Deleted items from Time 1 to Time 2.

APPENDIX F. EDUCATION ACHIEVED

1. Is [TARGET NAME] currently in school?
2. What grade is [TARGET NAME] currently enrolled in?
3. What is the highest level of education [TARGET NAME] has completed?

APPENDIX G. SOCIAL ECONOMIC STATUS

Household Size:

1. How many children do you have altogether, either living at home or outside this home?
2. How many of these children live outside this home more than 50% of the time
3. How many people, including yourself, are currently living in this household – that means anyone who lives here more than 50% of the time?
4. How many children 18 years of age or younger live in the household more than 50% of the time? [NOT INCLUDING Target AND Sibling]

Household Wage Earners:

5. During the past 12 months, how many household family members, including yourself, received wages or salaries? This does not include self-employment income or farm income

Household Income: Wages

6. Did you (PC) have income? If yes, how much was earned in 2001
7. Did your Spouse/Partner have income? If yes, how much was earned in 2001
8. Did Target have income? If yes, how much was earned in 2001
9. Did (Other Person 1) have income? If yes, how much was earned in 2001
10. Did (Other Person 2) have income? If yes, how much was earned in 2001
11. Did (Other Person 3) have income? If yes, how much was earned in 2001

Household Income: self-employment

12. During the past 12 months, did anyone in your household have his or her own business, professional practice, farm operation, or other form of self-employment

Household Income: Other Sources

13. During the past 12 months, did anyone in your household receive income from...some kind of government assistance like food stamps, Temporary Assistance to Needy Family (TANF), Family Investment Program (FIP), or heating assistance?
14. During the past 12 months, did anyone in your household receive income from...Alimony?
15. During the past 12 months, did anyone in your household receive income from...Child support?
16. Do you have any other sources of income such as unemployment or disability compensation, pensions, IRS's, social security, loans or interest savings or investments?

APPENDIX H. UNIVERSITY OF GEORGIA IRB APPROVAL

UNIVERSITY OF GEORGIA

Tucker Hall, Room 212
310 E. Campus Rd.
Athens, Georgia 30602
TEL 706-542-3199 | FAX 706-542-5638
IRB@uga.edu
http://research.uga.edu/hso/irb/

Human Research Protection Program

APPROVAL OF MODIFICATION

March 11, 2019

Dear Ronald Simons:

On 3/11/2019, the IRB reviewed the following submission:

Type of Review:	Modification
Title of Stud:	Social Determinants of Inflammation and Metabolic Syndrome among African Americans/Biomarkers of Health Risk among African American Couples/Health Behaviors among Young Black Adults: Risk & Resilience; Psychosocial Context and the Biological Clock: Changes in Weathering during Middle Age.
Investigator:	Ronald Simmons
Co-Investigator:	Anita Brown
IRB ID:	MOD00006931 (STUDY00000172)
Funding:	NATIONAL INSTITUTES OF HEALTH
Grant ID:	FP00008257; FO00000772 ; UGA046373; UGA046752
Review Category:	Expedited 2a, 4, 7

Modification: Added Kaixiong Ye to the study team.

Materials Reviewed: Modification form.

A request to waive documentation of informed consent (i.e. signature) for the phone interview only has been approved. Signed consent must be obtained before doing any human subjects research beyond the screening procedures described in the approved protocol. Please note that you are required to consent subjects with the verbal consent script approved with this submission, and document this consent process. Informed consent has not been waived; only the requirement for subject signature has been waived.

The IRB approved the protocol from 3/11/2019 to 7/25/2019 inclusive. Before or within 30 days of study closure, whichever is earlier, you are to submit a continuing review with required explanations. You can submit a continuing review by navigating to the active study and clicking Create Modification / CR. If continuing review approval is not granted before the expiration date of 7/25/2019 approval of this study expires on that date.

To document consent, use the consent documents that were approved and stamped by the IRB. Go to the Documents tab, Final column, to download them.

Please close this study when all human subject research activities and data analysis of identifiable information is complete. In conducting this study, you are required to follow the requirements listed in the Investigator Manual (HRP-103).

Sincerely,

Kate Pavich, IRB Analyst
Institutional Review Board
University of Georgia

APPENDIX I. IOWA STATE UNIVERSITY IRB APPROVAL

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY

Institutional Review Board
Office for Responsible Research
Vice President for Research
2420 Lincoln Way, Suite 202
Ames, Iowa 50014
515 294-4566

Date: 11/02/2018

To: Carolyn Cutrona

From: Office for Responsible Research

Title: **Family and Community Health Study Wave 7**

IRB ID: 14-575

Submission Type: Continuing Review **Review Type**: Expedited

Approval Date: 11/01/2018 **Date for Continuing Review: 10/31/2019**

The project referenced above has received approval from the Institutional Review Board (IRB) at Iowa State University according to the dates shown above. Please refer to the IRB ID number shown above in all correspondence regarding this study.

To ensure compliance with federal regulations (45 CFR 46 & 21 CFR 56), please be sure to:

- **Use only the approved study materials** in your research, including the **recruitment materials and informed consent documents that have the IRB approval stamp**.
- **Retain signed informed consent documents for 3 years after the close of the study,** when documented consent is required**.**
- **Obtain IRB approval prior to implementing any changes** to the study.
- **Inform the IRB if the Principal Investigator and/or Supervising Investigator end their role or involvement with the project** with sufficient time to allow an alternate PI/Supervising Investigator to assume oversight responsibility. Projects must have an eligible PI to remain open.
- **Immediately inform the IRB of** (1) **all serious and/or unexpected adverse experiences** involving risks to subjects or others; and (2) **any other unanticipated problems involving risks** to subjects or others.
- **Stop all human subjects research activity if IRB approval lapses**, unless continuation is necessary to prevent harm to research participants. Human subjects research activity can resume once IRB approval is re-established.

- **Submit an application for Continuing Review** at least three to four weeks prior to the **date for continuing review** as noted above to provide sufficient time for the IRB to review and approve continuation of the study. We will send a courtesy reminder as this date approaches.

- Please be aware that IRB approval means that you have met the requirements of federal regulations and ISU policies governing human subjects research. **Approval from other entities may also be needed.** For example, access to data from private records (e.g. student, medical, or employment records, etc.) that are protected by FERPA, HIPAA, or other confidentiality policies requires permission from the holders of those records. Similarly, for research conducted in institutions other than ISU (e.g., schools, other colleges or universities, medical facilities, companies, etc.), investigators must obtain permission from the institution(s) as required by their policies. **IRB approval in no way implies or guarantees that permission from these other entities will be granted.**

- Please be advised that your research study may be subject to **post-approval monitoring by Iowa State University's Office for Responsible Research**. In some cases, it may also be subject to formal audit or inspection by federal agencies and study sponsors.

- Upon completion of the project, transfer of IRB oversight to another IRB, or departure of the PI and/or Supervising Investigator, please initiate a Project Closure to officially close the project. For information on instances when a study may be closed, please refer to the IRB Study Closure Policy.

Please don't hesitate to contact us if you have questions or concerns at 515-294-4566 or IRB@iastate.edu