

RACE STEREOTYPES, ACADEMIC SELF-CONCEPT, AND RACIAL
CENTRALITY IN AFRICAN AMERICAN ADOLESCENTS

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A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill
in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the
Department of Psychology (Developmental Psychology)

Chapel Hill
2009

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ABSTRACT

Ndidi A.Okeke: Race Stereotypes, Academic Self-Concept, and Racial Centrality in
African American Adolescents
“Under the direction of Dr. Beth Kurtz-Costes”

In this study, the developmental progression from eighth to eleventh grade of academic race stereotype endorsement and its relation to academic self-concept was examined in African American youth. Based on expectancy-value theory, I hypothesized that academic race stereotype endorsement would be negatively related to self-perceptions of competence. I expected that racial centrality and race stereotype attributions would moderate the relation between stereotype endorsement and academic self-concept, and that parental racial socialization would be related to stereotype endorsement. Mean ratings of Black students' academic competence decreased from eighth grade to eleventh grade. In 8th grade, 11th grade, and over time, endorsement of traditional stereotypes was negatively related to the academic self-concept of students with high racial centrality. This relation was nonsignificant among students for whom race was not a central aspect of their self-definition. Implications of the study findings and directions for future research are discussed.

ACKNOWLEDGEMENTS

I am most grateful to God because without Him, this would not have been possible. I owe my mother, Josephine Okeke, so much for her prayers, love, and support. Without such a wonderful mother, I don't know where I would be. I would like to acknowledge my father in heaven, David Okeke, who had so much to do with who I am today. Though he is not here physically, his presence is forever with me.

I truly appreciate my advisor, Dr. Beth Kurtz-Costes for giving me an opportunity to do this work and for being such a supportive mentor. Many thanks to Katrina Walker, the best Davie hall mother in the world! I have to also thank my Davie hall buddies, especially Amy Johnson, Cecily Hardaway, and Dana Wood. I'm not sure what I would have done without their never ending support, encouragement, and help. Special thanks to April Harris-Britt. She has been amazing (in so many ways) for me throughout this process. Thanks also to Erica Odom and Lionel Howard, some of my favorite Drs., for their encouragement and wisdom.

I truly appreciate my Jubilee Christian Church family, especially Pastors Bisi and Toyin Tofade and my cell group members, for their prayers and encouragement. My friends, old and new, have been wonderful throughout this process and I thank God for their lives. Special thanks to Lattice and Peace for putting up with such an absent friend! I would also like to thank the many people who I have not named, but have helped to shape me into the person I have become.

I would also like to acknowledge the National Institutes of Mental Health for awarding me a Predoctoral National Research Service Award.

Last but not least, I would like to thank the love of my life, Dayo Adeyanju. I thank him for his unconditional love and support. He has been a listening ear and a shoulder to lean (and sometimes cry) on. I am so happy to know that we will be together till death do us part!

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Introduction

Though identity formation is a continuous process, adolescence is a key period for identity development (Erikson, 1968). During this time, individuals are attempting to understand who they are, and cues (e.g. societal stereotypes) from the broader society influence this process (Oyserman, Gant, & Ager, 1995). Indeed, adolescents tend to be especially aware of and sensitive to how they are viewed by others. Erikson (1968, p. 128) describes adolescents as "sometimes morbidly preoccupied with what they appear to be in the eyes of others." For members of ethnic minority groups, constructing an identity also involves developing a sense of self in relation to an ethnic/cultural group. Thus ethnic minority adolescents have an added task of understanding how their personal identity intertwines with their race/ethnicity. In the course of this process, ethnic minority adolescents become aware of societal stereotypes about their racial group (McKown & Weinstein, 2003; Rowley, Kurtz-Costes, Mistry, & Woods, 2007). Accordingly, stereotypes that are prevalent in a particular society have the potential to influence an individual's sense of self.

Stereotypes are beliefs, oftentimes based on reality, about the abilities and attributes of members of a social or cultural group. Unfortunately, stereotypes about the academic ability of African Americans have largely been negative: A prevalent race stereotype in the United States is that African Americans are not as smart as Whites (Devine & Elliott, 2000; Steele, 1997). For African American adolescents, awareness or endorsement of this stereotype may negatively impact self-perceptions. Because of increasing cognitive and social sophistication, with age Black youth may be more likely

to attribute race-related differences to factors such as discrimination or lack of resources as opposed to personal characteristics (i.e., attitudes, behaviors, innate ability) of African Americans, yet these ideas have not been explored in prior research. Because of these developmental changes in knowledge about our society and race-related attributions, stereotypes might have different influences on youth as they proceed through adolescence. Thus, major purposes of the present investigation were to examine normative levels of race stereotype endorsement as well as how such beliefs were related to attributional beliefs about race differences in achievement and achievement motivation as African American youth cross the transition from middle school to high school.

In addition to the developmental factors at play, individual attributes might influence the extent to which race stereotypes shape the identity beliefs of African American youth. In particular, stereotype endorsement might be related to an individual's sense of self only to the extent that the individual feels strongly connected to the group for whom the negative stereotype applies. Thus, if being Black is central to one's self-definition, endorsement of racial stereotypes is more likely to negatively influence self-perceptions than if race is not central. Along with examining racial centrality as a moderator in the relationship between stereotype endorsement and self beliefs, the influence of parents on these processes was examined. African American parents might serve a protective role through the messages about race that they transmit to their children.

Thus, the proposed study had five specific aims: (1) to examine the developmental progression of academic race stereotype endorsement in African American youth from eighth grade to eleventh grade; (2) to examine why students

believe race differences in achievement may exist (3); to explore, over time, the impact that academic race stereotype endorsement has on the academic self-concept of Black adolescents; (4) to determine whether racial centrality (i.e., the extent to which being Black is central to an individual's definition of self) and attributional beliefs moderate the relationship between stereotype endorsement and self-perceptions; and (5) to explore the relation between parental racial socialization messages and academic race stereotype endorsement. These relationships are examined in a sample of African American youth who completed surveys in eighth grade and again in eleventh grade.

Racial Attitudes and Stereotype Endorsement

Historically, justification for slavery in the United States was based upon the generally-accepted belief that African Americans were inherently intellectually and culturally inferior to Whites (Estell, 1994). Racial attitudes towards African Americans have, indeed, changed in the United States during the last century. Studies document that Whites hold more positive views of African Americans than decades ago (Bobo, 2001). This change is substantiated by the emergent African American middle class and their growing influence in American society (Bobo, 2001). It has become, in many situations, socially unacceptable to openly assert that African Americans are biologically inferior to European Americans. Though views of African Americans have become more positive, there is evidence that notions of Black intellectual inferiority persist (Devine & Elliott, 2000; Herrnstein & Murray, 1994; Jensen, 1969).

Jensen (1969) claimed that the differences in IQ scores of Whites and Blacks could be primarily attributed to genetic factors, while only a small portion could be attributed to social or environmental factors. *The Bell Curve: Intelligence and Class*

Structure in American Life (Herrnstein & Murray, 1994), a best selling book only a decade ago, provides a striking example of the idea of Black inferiority in American society. Herrnstein and Murray's thesis is based on Jensen's argument that a large proportion of the variance in individual IQ scores is due to genetic or inherited factors. These claims suggest that, as evidenced by the Black-White achievement gap, African Americans are inherently intellectually inferior to Whites. These ideas of intellectual inferiority that have been propagated by scholars are avenues whereby stereotypes are formed.

Devine and Elliott (2000) examined racial stereotypes in a sample of 147 White undergraduate students. All respondents completed a stereotype scale. Participants were told that researchers were interested in their knowledge of stereotypes about Blacks. They were given a list of adjectives and told to identify the adjectives that refer to cultural stereotypes concerning Blacks. Next, respondents were asked to indicate, according to the cultural stereotype, which 5 items were most typical of Blacks. Results of the study indicated that stereotypes about Blacks persist and that these cultural stereotypes are largely negative. Lazy, unreliable, low intelligence, and uneducated were among the adjectives indicated as characteristic of Blacks.

Race Stereotypes about Academic Ability

Research indicates that young children are aware of race as a social category (Aboud, 1988). By preschool (i.e. ages 4 or 5) children understand the fixed characteristic of race; thus they know that race is constant over time (Hirschfeld, 2001). It is to be expected that at some point in development, African American youth become aware of the stereotype about Black intellectual inferiority and may even endorse it

themselves. Relatively little research has examined the age at which children become aware of academic race stereotypes, their endorsement of them, and the consequences of endorsement on children's self-perceptions of competence.

Most of the work on academic race stereotypes concerns stereotype threat. Steele (1997) proposed that awareness of a negative social stereotype about one's group can negatively impact the performance of group members. Researchers consistently find that those who experience stereotype threat in a particular academic domain perform significantly lower than those who do not experience this threat (Kellow & Jones, 2008; Schmader, Johns, & Forbes, 2008; Steele, 1997; Steele & Aronson, 1995); however, if that threat condition is not present, performance of the stereotyped group is equal to or even in some cases higher than other groups. One can infer from the stereotype threat literature that adolescents are aware of academic race stereotypes (e.g., Kellow & Jones, 2008). Several studies have examined stereotype awareness using explicit measures.

McKown and Weinstein (2003) examined stereotype consciousness in an ethnically diverse group of elementary school children. To assess children's ability to infer stereotypes, the authors used a vignette-based experimental task in which children were told about an imaginary land populated by "Greens" and "Blues" where a Green character believed that Blues were not as smart as Greens. Children were asked to talk about ways in which the real world mirrored the imaginary land. Children were rated as being aware of broadly held ethnic stereotypes if they said, "White people think Black people are not smart." From these interviews, the researchers found that awareness of broadly held ethnic stereotypes increased with development; by age 10, 80% of ethnic minority children and 63% of majority children were aware of widely held stereotypes

(McKown & Weinstein, Study 1, 2003). These findings suggest that, by middle school, African American students (members of a stigmatized group) are likely to be aware of common academic race stereotypes. McKown & Weinstein (2003) assessed stereotype consciousness and not endorsement, but other work suggests that not only are children aware of commonly held stereotypes, but they may even endorse them as well.

Rowley and her colleagues (2007) examined race stereotype endorsement in 448 fourth, sixth, and eighth grade White and Black children. Using visual analogue scales, they assessed how children believed Blacks and Whites performed in several academic and non-academic areas. In their sample, average scores indicated that traditional academic race stereotypes (i.e., Whites are smarter than Blacks) were endorsed by White and Black middle school youth but not fourth graders. Findings from this study suggest that by middle school, youth are aware of commonly held stereotypes and may even endorse them as well. Unfortunately, because of its cross-sectional design, it is unclear if the age differences that emerged in stereotype endorsement among youth were due to developmental change or to other sample characteristics.

Researchers have also found that students endorse traditional academic race stereotypes using indirect measures that examine beliefs about the academic competence of different racial groups (Hudley & Graham, 2002). Hudley and Graham (2002) examined race stereotype beliefs in African American, Latino, and White junior high school students. Participants heard descriptions of high and low achieving students and chose a photo (from a series of photos of varying ethnicities and genders) that best represented each hypothetical student. Youth of all ethnic/racial groups associated ethnic minority males with scenarios of academic disengagement. Specifically, African

American boys and girls over-selected Latino and African American boys for descriptions of disengaged students. Similarly, students under-selected African American and Latino boys, but not White boys, for scenarios of academic engagement.

In two studies, we examined academic race stereotype endorsement in African American adolescents. In the first study, using the first time point of the current study (8th grade data), we found that the average difference on a 100-point rating scale for the academic abilities of Whites compared to those of Blacks was 11.3 across the full sample of eighth graders (Okeke, Howard, Kurtz-Costes, & Rowley, in press). In the second study, data were collected from 283 seventh grade students. These African American students also endorsed traditional academic race stereotypes (i.e., White students are smarter than Black students) with a 10.3-point difference on the 100-point scale. These findings have serious implications for African American adolescents who, as members of a stigmatized group, must reconcile negative societal views of their racial group with their own individual identities. Consequently, it is important to understand the potential impact that stereotype awareness and endorsement may have on various developmental outcomes.

Academic Stereotype Endorsement and Self-Perceptions of Competence

Academic self-concept, which can be defined as the way individuals perceive themselves with regard to their academic competence or abilities, is consistently found to be related to academic achievement outcomes (Awad, 2007; Cokley, 2002; Cokley & Chapman, 2008; Valentine, DuBois, & Cooper, 2004). Awad (2007) explored how racial identity, academic self-concept, and self-esteem all impact the academic achievement outcomes of African American students. With a sample of 168 students, GPA was the

only variable that was significantly related to academic self-concept (Awad, Sample 1, 2007). In another study of academic self-concept in African Americans, GPA was strongly correlated with academic self-concept in 206 African American undergraduates (Cokley, 2002). Most motivational theories posit the importance of competence beliefs as a necessary condition for achievement striving (Eccles, Adler, Futterman, Goff, & Kaczala, 1983; Wigfield & Eccles, 2002). Thus, factors that influence academic self-concept are important in order to understand achievement outcomes.

In their expectancy-value model of achievement motivation, Eccles and her colleagues theorized that a child's perception of stereotypes directly influences perceptions of his or her own competence (Eccles et al., 1983). According to this model, endorsement of traditional academic race stereotypes (i.e., that Blacks are less competent than Whites in academic domains) may lead to lowered perceptions of academic competence for African Americans. To date, most work related to stereotype endorsement and self-concept has focused on the impact of parent gendered beliefs about math on children's perceptions of math competence.

This research has shown links between parent gender stereotypes about math and children's perceptions of their own competence in math (e.g. Jacobs, 1991; Tiedemann, 2000). In a study of parents and their middle and high school children, Jacobs (1991) found that parents' gender stereotypes concerning math, interacting with child gender, were related to children's self-perceptions. More stereotyping by parents was associated with lower math self-perceptions for daughters and higher math self-perceptions for sons. Similarly, Tiedemann (2000) examined parents' gender stereotypes as a predictor of elementary children's math self-concepts. He concluded that mothers' stereotypes were

strongly related to children's math self-perceptions. Thus, daughters whose mothers believed that boys were better than girls in math had lower math self-concepts with children's current math grades controlled. These studies examined the link between parent beliefs and children's academic self-concept; a few studies have assessed the relationship between an individual's own gender stereotypes and self-perceptions.

In a sample of 86 college women, Schmader and colleagues (2004) found that endorsement of traditional stereotypes about women's math ability was negatively related to performance self-esteem and confidence: Women who held the stereotype that men are better than women in math were more likely to have lower performance self-esteem and confidence than women who did not endorse this belief. However, a study of late elementary and middle school children showed that gender stereotypes about mathematics and science abilities were related to self-perceptions for boys, but not for girls (Kurtz-Costes, Rowley, Harris-Britt, & Woods, 2008). Thus, additional research is warranted on the relationship between stereotype endorsement and self-perceptions. Moreover, it is unclear whether conclusions about gender stereotype/self-perception linkages can be generalized to theory regarding race stereotypes and self-perceptions in African American youth.

As mentioned above, using data from the first time point of the current study, we found that African American adolescents do endorse academic race stereotypes and, in addition, academic race stereotype endorsement was negatively related to academic self-concept in a sample of eighth graders. Thus, with achievement controlled, those students who believed that African Americans are not as smart as Whites had significantly lower academic self-concepts than students who had egalitarian or non-traditional beliefs

(Okeke et al., in press). Additional data are needed to substantiate the reliability of these findings, to understand the development of these phenomena across adolescence, and to understand the processes that shape stereotype endorsement.

Developmental Considerations

Middle school is an important period in which to examine the role of stereotype endorsement on an African American's self-perceptions because early adolescence is a crucial time for identity development in general; moreover, African American adolescents are also forming their racial identities (Erikson, 1968; Tatum, 1997). It has been well documented that the transition to middle school is accompanied by a decrease in self-perceptions and motivation for many youth (Barber & Olsen, 2004; Eccles, Wigfield, Midgley, Reuman, Mac Iver, Feldlaufer, 1993; Seidman, Allen, Aber, Mitchell, & Feinman, 1994; Simmons & Blyth, 1987; Simmons, Rosenberg, & Rosenberg, 1973). In contrast to elementary school, middle school students have greater autonomy and responsibility, may have relationships with teachers that are less nurturing and personal, and are likely to encounter greater racial and social class diversity in the student body. These added stressors, along with a growing awareness of negative views of their social group, may account for some of the decline in self-perceptions and motivation among African American youth in middle school.

Experience with the middle school social environment may lead to an increase in the endorsement of stereotypes about race differences in academic abilities (Rowley et al. 2007). In schools with racially diverse populations, African American and White students tend to be separated, with minority and poor students disproportionately represented in low-achieving tracks (Mickelson & Heath, 1999; Oakes, 1987). As

students advance through middle school, stereotype endorsement may become even stronger, leading to less valuing of academic achievement. These attitudes may only worsen as students enter high school.

During high school, academic achievement is quite salient as students make behavioral choices that will determine whether and how they pursue post-secondary education. Though some form of academic tracking existed much earlier, in high school students are placed on college or vocational tracks. Thus, they either prepare to enter college or prepare for jobs that only require a high school diploma (Oakes, 1987). As ability tracking continues throughout high school, students are likely to be aware of the fact that a smaller percentage of African American students are placed on high achieving tracks compared to their White counterparts. This awareness of race differences in course taking and other high school activities (e.g., students who take the PSAT; students who attend College Fairs) may lead students to draw conclusions—whether implicitly or explicitly—about race differences in academic performance, with repercussions for the adolescent’s self-perceptions of competence. Because the development of the self is a major task during adolescence, self-perceptions formed during this period have significant implications for future self-perceptions (Harter, 1999).

To our knowledge, no prior studies have examined whether or not African American high school students endorse traditional academic race stereotypes or the relationship between stereotype endorsement and self-perceptions among high school students. Because of the additional exposure to societal beliefs that comes with age, experiential theory would predict that high school students would be more likely than middle school youth to report traditional stereotypes (Rowley et al, 2007). However, for

other reasons, it might be *less* likely for stereotype endorsement to influence the academic self-concepts of high school youth than the academic self-concepts of middle schoolers. It is during adolescence that individuals begin to think abstractly (Flavell, Miller & Miller, 1993; Inhelder & Piaget, 1958). Because of these higher-order abilities, high school students may be more cognitively equipped than younger children to understand stereotypes and to distinguish between individual and group attributes (Jacobs, Bleeker, & Constantino, 2003). Thus, an individual may endorse a stereotype about his/her ethnic group, but believe that the stereotype does not personally apply. For example, a youth may endorse the common stereotype that African Americans, on average, are not as academically talented as Whites, yet know that she is at the top of her class, outperforming both Whites and Blacks in her school. Accordingly, youth may understand that a stereotype is simply a belief about a group that may or may not hold for individual group members.

In addition, stereotypes may have little impact on individual self-perceptions among high school youth because of their increased understanding of discrimination and systemic racism. Thus, high school students may be aware of race differences in academic success but may attribute these race differences to racial discrimination or a lack of resources rather than race differences in attitudes and behaviors. These attributions about race differences would likely have ramifications for the relationship between stereotypes and self-perceptions. The link between stereotypes and self-perceptions is probably also influenced by other personal attributes such as the degree to which being African American is central to the youth's identity. In the next sections, I first discuss racial centrality as a moderator in the relationship between stereotype

endorsement and academic self-concept, and then explore the possible role of attributional beliefs about reasons for race differences in outcomes.

Racial Centrality as a Moderator in the Stereotype-Self-Concept Relation

Stereotypes may influence the self-perceptions of members of stigmatized groups only for group members whose personal identities emphasize membership in that group (Rosenberg, 1979). Recognizing that African Americans are not homogeneous and are often as different from one another as they are from Whites is an important point to understand when conducting research. It cannot be assumed that race is a central aspect of every Black person's identity. For example, for some youth, being female, Protestant, and from the Northeast might be more salient than being African American. Sellers and his colleagues introduced the Multidimensional Model of Racial Identity (MMRI) to better understand African American racial identity (Sellers, Smith, Shelton, Rowley, & Chavous, 1998). The MMRI describes racial identity as "the significance and qualitative meaning that individuals attribute to their membership within the Black racial group." Four dimensions of racial identity (racial salience, racial ideology, racial regard, racial centrality) are included in the MMRI.

The extent to which race is an important aspect of an individual's self-concept at a particular time in a specific context is racial salience. Racial ideology is an individual's attitudes and beliefs regarding how African Americans should act. The third dimension of racial identity is racial regard, or a person's evaluative judgment of his or her race. Two aspects of regard are defined: private (how an individual feels about African Americans) and public (an individual's view of how Blacks are seen by others). Racial centrality is the extent to which race is a central aspect of an individual's self-definition. In this study,

racial centrality is the variable of interest, and it is hypothesized to moderate the relationship between stereotype endorsement and self-perceptions. That is, for youth with high racial centrality, an inverse relationship is hypothesized between traditional stereotype endorsement and academic self-concept such that strong traditional stereotype endorsement is expected to be associated with lower ability perceptions. In contrast, among youth with low racial centrality, it is anticipated that stereotype endorsement will be unrelated to self beliefs. As described above, we found in two samples of African American middle school students that stereotype endorsement was related to academic self-concept only for youth who were high in racial centrality (Okeke, et al., in press).

In a study of racial identity and self-esteem in high school and college students, Rowley, Sellers, Chavous, and Smith (1998) found that students' opinions about Blacks predicted personal self-esteem for African American students with high racial centrality, but not for those with low racial centrality. Rowley et al. (1998) demonstrated the moderating role of racial centrality in the relation between private regard and self-esteem. In the present study, I extend prior research to examine the role of racial centrality as a moderator in the stereotype-self-concept relation among African American high school students.

Attributions as a Moderator in the Stereotype-Self-Concept Relation

Among Black adolescents, racial stereotype endorsement may be more strongly related to the self-perceptions of those who attribute race differences in achievement to attitudes and behaviors. More specifically, African American adolescents who endorse negative stereotypes about the academic achievement of members of their racial/ethnic group and who also believe that the differences in achievement are due to certain

attitudes or behaviors of Blacks (e.g., Black students don't work as hard as White students) may have lower self-perceptions of academic competence than those who believe that race differences are due to structural factors. To my knowledge, no research has examined attributions about race differences in academic achievement among African American adolescents.

Some research has examined attributions made for why people are poor. Though socioeconomic status and race are different, both poor individuals and African Americans are members of disadvantaged minority groups. Attributions about poverty have largely been grouped into internal (e.g., being lazy, lack of effort), external (e.g., discrimination, access to substandard education), and fatalistic (e.g., bad luck) explanations (Smith & Stone, 1989). Internal or individual explanations about poverty propose that attitudes and behaviors (lack of effort and hard work) of those living in poverty contribute to their economic disadvantage. External explanations attribute the cause of economic disadvantage to societal structures such as discrimination. Finally, fatalistic explanations attribute the cause of poverty to luck or chance.

Several studies suggest that non-poor individuals are more likely to make internal/individual attributions about poverty than external attributions (Cozzarelli, Wilkinson, & Tagler, 2001; Smith & Stone, 1989). For example, Cozzarelli et al. (2001) examined poverty attributions among a sample of college students. Individualistic (e.g., being lazy), societal (e.g., discrimination), and fatalistic (e.g., bad luck) attributions were assessed. Participants in their sample were more likely to make internal or individualistic attributions than they were to make external attributions. Smith and Stone (1989) also found that participants in their study identified internal/individual reasons as causes of

poverty. Though these studies suggest more individualistic attributions concerning the causes of poverty, other researchers have found race differences in attributions about poverty (e.g., Hunt, 1996). More specifically, some researchers have found that African Americans tend to be less individualistic and more external in their explanations for poverty than Whites (Hunt, 1996; Kluegel & Smith, 1986). Though these studies examine attributions about poverty among college students and other adults, the findings may be applicable to African American adolescents with regards to their explanations about race differences in academic achievement.

In classic attribution theory (Rotter, 1966; Weiner, 1985), the distinction is made between internal factors—in which the individual is assumed to be responsible for outcomes—and external factors—which are viewed as outside the individual and over which individuals usually have little control. Applying this distinction to the phenomenon of race differences in achievement outcomes, I propose that individuals make attributions about the reasons for these differences, and that these attributions may be classified as internal (attitudes/behaviors) or external (discrimination/lack of resources). Because African American adolescents are members of a stigmatized group and experience discrimination (Fisher, Wallace, & Fenton, 2000; Seaton, Caldwell, Sellers, & Jackson, 2008), it is plausible that they may be more likely to attribute race differences in achievement to external factors such as discrimination and a lack of resources than to individual factors such as attitudes and behaviors.

Thus, another goal of this study was to explore attributions about race differences in achievement among African American adolescents. Furthermore, I expected that beliefs about race differences in achievement would moderate the relation between race

stereotype endorsement and self-perceptions of competence so that the relation between the two would be stronger for individuals who attribute race differences in achievement to internal factors. If a Black student believes that Blacks are not as smart as Whites because of external factors (e.g., Blacks are more likely than Whites to attend schools with inadequate resources), then their self-perception of competence is not likely to be impacted. However, if the attribution is internal, then self-perceptions of competence may be at risk. A final goal of the project was to examine parental racial socialization as a possible buffer against the negative consequences of race stereotypes.

Parent Racial Socialization as a Protective Factor

Although Black students may endorse negative academic stereotypes about African Americans, African American parents probably play a role, through racial socialization, in reducing the possibility of stereotype endorsement and the negative ramifications of stereotypes on children's identity beliefs. Garcia Coll, Lamberty, Jenkins, McAdoo, Crnic, Wasik, and Garcia (1996), in their integrative model of minority child development, propose that ethnic minority families racially socialize their children as a way of dealing with the negative and chronic stressors that minorities face in society. Parental racial socialization is defined as the messages and values (implicit and explicit) that parents transmit to their children concerning race (Hughes & Chen, 1997). Because of the stereotypes commonly held in our society about ethnic minorities, parents use racial socialization messages to counter the negative views, help their children develop healthy racial identities, and prepare them for racial bias. In studies of racial socialization, researchers have identified common themes transmitted by parents.

One common theme described in the racial socialization literature is cultural socialization, which teaches children about Black history and cultural traditions (Boykin & Toms, 1985; Hughes & Chen, 1997; Hughes, Rodriguez, Smith, Johnson, Stevenson, & Spicer, 2006; Neblett, White, Ford, Philip, Nguyen, & Sellers, 2008). For example, parents who use cultural socialization may talk to their children about the accomplishments of African Americans, take them to events that celebrate Black history, and buy books and toys that feature other African Americans. Many studies of racial socialization document that these types of messages occur most frequently (Brega & Coleman, 1999; Hughes, 2003; Hughes & Chen, 1997; Hughes & Johnson, 2001).

Another theme described in the literature is preparation for bias (Hughes et al. 2006). Preparation for bias messages communicate to children that discrimination may occur because of one's racial status. An example of this sort of message is telling children that they "have to work twice as hard as Whites" to get ahead in life. One less common socialization theme is the promotion of mistrust of individuals of other races (Hughes & Chen 1999). In a nationally representative sample of African American adults, only about 2.7% of the sample reported telling children to stay away from Whites (Thornton, Chatters, Taylor, & Allen, 1990). A final message prominent in the racial socialization literature is egalitarianism messages or no mention of race (Boykin & Toms, 1985; Neblett et al., 2008). Parents who use these strategies either do not discuss race with their children or stress equality across races. These themes described in the socialization literature have also been associated with various child outcomes.

Racial socialization, particularly race pride or cultural socialization, is associated with a variety of positive outcomes in African American children and adolescents: ethnic

identity (Branch & Newcombe, 1986; Hughes & Johnson, 2001; Marshall, 1995), self-esteem (Constantine & Blackmon, 2002), coping behaviors (Phinney & Chavira, 1995), motivation (Bowman & Howard, 1985), cognitive/academic outcomes (Bowman & Howard, 1985; Caughy, O'Campo, Randolph, & Nickerson, 2002), and psychosocial outcomes (Caughy, O'Campo, Randolph, & Nickerson, 2002; Neblett et al., 2008) are positively associated with cultural socialization.

Constantine and Blackmon (2002) examined racial socialization and its relationship to self-esteem in a group of 6th, 7th, and 8th graders. They found that cultural pride socialization messages were positively related to Black peer self-esteem. Using an observational measure of racial socialization, Caughy et al. (2002) found that Afrocentric items in the home were related to preschool children's greater factual knowledge and problem solving skills measured by the Kaufman Assessment Battery for Children (K-ABC). Thus, even those messages that are not verbal but communicate pride in one's culture are positively related to academic achievement outcomes. Findings from this literature suggest that racial socialization, but especially messages of cultural pride, may serve as a buffer against the potentially deleterious impact of being a member of a stigmatized ethnic minority group.

While many of the studies cited above examine the themes (i.e., cultural socialization, preparation for bias, etc.) and their relationship to variables independently, fewer studies have focused on the interaction of racial socialization messages. Racial socialization messages such as cultural pride and preparation for bias do not occur independently of each other. Rather, parents combine those messages when discussing race with their children (Neblett et al., 2008). In a longitudinal study describing patterns

of racial socialization and their relationship with racial discrimination experiences, Neblett and colleagues (2008) questioned 361 African American adolescents (grades 7-11) about messages they receive from their parents surrounding race, discrimination experiences, and their psychological health/adjustment (i.e., perceived stress, depression, problem behaviors, and well-being). Using latent class analyses, the researchers identified 4 racial socialization patterns (i.e., moderate positive, high positive, low frequency, moderate negative).

Each of these patterns differed in the frequency of messages (i.e., racial pride, racial barrier, self-worth, egalitarian, and negative messages regarding African Americans) transmitted from parent to child. For example, the moderate positive cluster was characterized by relatively high scores on the racial pride and self-worth subscales, average scores on the racial barrier and egalitarian subscales, and low scores on the negative subscale. Additionally, child outcomes differed across clusters. Individuals in the high positive cluster (characterized by high scores on all subscales except for the negative message subscale) reported the most favorable psychological outcomes (e.g., low depression and low perceived stress). In contrast, the low frequency cluster (typified by low scores on all subscales with the exception of self-worth) had significantly higher levels of depression and perceived stress than the high positive cluster. Furthermore, messages about racial pride, racial barriers, and self-worth seemed to serve as a buffer against the deleterious consequences of discrimination experiences: Racial discrimination experiences were unrelated to perceived stress and problem behaviors for youth in the high positive cluster. Findings from this study illustrate that racial socialization messages

do not occur independently of each other but rather interact in different ways in conjunction with racial discrimination to influence child psychological outcomes.

While no studies have assessed the impact of racial socialization messages on adolescent stereotype endorsement, it is possible that they may be related. In a longitudinal study about parental attitudes influencing children's racial attitude development, Branch and Newcombe (1986) found that parents who reported racial socialization messages had children with more racial preference than parents who did not report using these sorts of messages. This study suggests that messages about race transmitted from parent to child may help children develop positive in-group attitudes and beliefs. Thus, it is possible that certain clusters of racial socialization messages may serve as buffers, either decreasing the likelihood that African American adolescents endorse negative stereotypes regarding their ethnic/racial group, or reducing the negative effects of stereotype endorsement.

Study Purpose

The developmental progression of stereotype endorsement was examined by using data collected from a sample of 253 African American youth when they were in middle school, and collecting new data from them during their junior year in high school. Middle school data were compared with new data to assess the changes in the academic stereotype endorsement of African American adolescents across that time period. Ideas about why race differences in academic achievement may exist were examined at Time 2. In addition, the relationships between early and concurrent stereotype endorsement and later self-perceptions of competence were also examined. Because African Americans vary in the extent to which being Black is a central part of their self-definition, it was

important to examine racial centrality as a moderator in the relationship between academic stereotype endorsement and perceptions of competence. Finally, the relationship between parental racial socialization and stereotype endorsement was examined.

My primary hypotheses were as follows: (1) With age, students would increasingly endorse negative academic race stereotypes so that stereotype endorsement would be higher for high school juniors than for eighth graders. Students may be experiencing more tracking in high school than in middle school, with African American students disproportionately represented in low-achieving tracks. Thus, I expected higher endorsement of stereotypes in high school than in middle school. (2) I expected high school juniors to attribute race differences in academic achievement to external factors (e.g., racial discrimination and lack of access to resources) rather than to attitudes and behaviors of African Americans. (3) Race stereotype endorsement at Time 1, independent of achievement, would be negatively related to self-perceptions at both time points, and this relationship would be stronger at Time 1 than at Time 2. Because of improved abstract reasoning skills, high school students would be better able than younger youth to separate themselves from their ethnic/racial group with regards to racial stereotypes. Consequently, while they may endorse the stereotype that African Americans are not as smart as Whites, they may not believe that this stereotype is personally relevant. (4) Racial centrality and attributional beliefs would moderate the relationship between stereotype endorsement and self-perceptions. This relationship will be stronger for those with high (1 *SD* above the mean) levels of racial centrality than for those with lower racial centrality, and stronger for those with high (1SD above mean)

levels of internal attributions versus those with higher external attributions. (5) Students who reported receiving more racial socialization messages about cultural pride from their parents would report lower race stereotype endorsement than students who reported fewer cultural pride messages. Exploratory analyses were conducted to determine whether certain clusters of racial socialization themes were related to lower stereotype endorsement than other clusters.

Method

Participants

Data for this study were taken from a larger study focused on understanding gender differences in the academic achievement of African American students. At Time 1, 253 African American (143 girls and 110 boys) seventh and eighth graders from a rural and urban school district in the southeastern United States participated in the study. A majority of the students in the participating schools (62-73%) are Black. For the second wave of data collection, youth from the rural school district were targeted. At Time 2, 115 (49 boys and 66 girls) youth participated again as 11th graders. At Time 1, the mean age of these students was 13.8 years; at Time 2, their mean age was 17.1 years (see Table 1).

Time 1 data were collected in 2 waves, so some youth were already in 12th grade during the year that Time 2 data were collected. Thus, only youth who were in 11th grade were recruited for Time 2. Seventeen of the 134 students who originally participated in the rural district could not be located in any of the 3 high schools of that district. One student who had moved out of the rural district was located. Of the students located, approximately 91% returned their consent forms and most of them (95%) agreed to participate. Of those who agreed to participate, 3 did not complete the survey.

As mentioned above, I originally planned to recruit only youth from the rural school district, but because of concerns about sample size, selective recruitment was done in the urban school district. Forty-five families from the urban district were mailed consent forms. Seventeen families responded to the mailing and 15 of them participated.

Seventy-three parents participated in the study at Time 2 (see Table 1). Of these parents, 71 reported their relationship to the target child (68 mothers, 2 fathers, and 1 guardian).

Procedure

At Time 1, written parental permission was required for study participation. Parents and students were told that the research study was about how parents talk with their children about race and gender and what factors predict academic success. Trained research assistants distributed consent forms to youth in their homeroom classes. About 67% of students returned consent forms and most of them (97%) agreed to participate. Research assistants distributed questionnaires and answered any questions that arose. Additional Time 1 measures that are not included in this report were collected. For their participation, students were given a \$5 restaurant gift certificate.

At Time 2, before the academic year began, officials from the rural school district were contacted and reminded of the study. They agreed for our research team to conduct the study at the 3 high schools in their county. Students were located with assistance from school officials in the school district. At the beginning of the school year, principals at each of the 3 high schools were contacted and permission was obtained to distribute consent forms and administer questionnaires to their students.

Trained African American research assistants reminded the students of their participation in Wave 1 of the study and provided them with information about Wave 2. Students were instructed to take two consent and two assent forms home and bring back one copy with their signature and one copy with the signature of their parent indicating whether or not they had decided to participate. In the consent and assent forms, parents and students were told that the research study was about how parents talk with their

adolescents about race and what factors predict academic success in African American students.

Research assistants distributed questionnaires to students in small groups at their schools and answered any questions that arose. For their participation, students were given the opportunity to visit the University of North Carolina at Chapel Hill on a Saturday afternoon. Students were driven in activity buses provided by their schools to UNC to watch a cultural show (i.e., drama and dance performances), hear UNC admissions representatives speak about the university, take a campus tour, and have lunch. After the campus visit, we thanked the students and they returned to their schools.

Once student data were collected, parents were mailed a survey to complete. Parents were asked to complete the survey and return it in an enclosed self-addressed, stamped envelope. For their participation, parents were given their choice of a \$20 check or gift card to a grocery store of their choice.

Measures

When participants were in eighth grade, they completed measures of academic self-concept, race stereotypes, racial socialization, and racial centrality. Those measures are described below and were used again in the students' 11th grade year (see Appendix A). In addition, achievement measures were collected from archived records as described below. Parents reported demographic characteristics (marital status, race, educational level, household income) and racial socialization (see Appendix B). Additional data were collected that are not included in this report.

Academic Self-concept. Students ranked their academic self-concept on several items by circling a stick figure in a column of 25 figures (Nichols, 1978). Ratings were

made in relation to other agemates on seven items: math, science, language arts, writing, history, intelligence, and school grades. In addition, non-academic items were included in the measure as well (e.g., sports, music, art), but were not used for the purposes of this study. Figures at the top of the columns represented the best in each category and figures at the bottom represented the worst. Higher scores indicated higher academic self-concept, with a possible range of 1 to 25. Item scores were averaged across the seven academic items to yield a single measure of academic self-concept. Alpha reliability for this measure with the eighth grade sample was 0.79 and 0.81 with the eleventh grade sample.

Race Stereotype Endorsement. Race stereotype endorsement was measured in both 8th and 11th grade using visual analogue scales (Rowley et al., 2007). Students marked on a 100-mm line how well Black and White students perform in several academic domains (i.e., math, science, reading, writing, and school grades). Questions regarding the performance of Black children were separate from questions regarding the performance of White children. Several non-academic items were included in the measure as well (e.g., sports, music, making friends) that are not used in this study. An example of an item is: "I think that in math, Black children do this well," with "not well at all" on the far left side (0 millimeters) and "very well" on the far right side (100 millimeters). Item scores were calculated by measuring the distance in millimeters from the left anchor to the student's mark. The five items were averaged to obtain a group competence score for Blacks and a separate group competence score for Whites. To obtain a stereotype score, the student's score for Blacks was subtracted from the student's score for Whites. Higher positive scores are an indication of more traditional views

(Whites do better academically than Blacks) while scores near zero represent egalitarian views, and negative scores indicate non-traditional beliefs. Alpha reliability at both time points was acceptable, $\alpha = 0.84$ and 0.76 .

Racial Socialization. Time 2 parent racial socialization was reported by students and their parents using items from Hughes and Chen's (1997) Racial Socialization scale and from the Racial Socialization Questionnaire-teen (RSQ-t) measure (Lesane-Brown, Scottham, and Nguyễn, & Sellers, 2006). Our measure consisted of 5 subscales: Cultural Socialization, Preparation for Bias, Egalitarian, Self-Worth, and Negative messages. For all items, students and parents were asked how often in the past year the parent engaged in certain behaviors, (1 = Never, 5 = More than 10 times). The cultural socialization subscale (e.g., "Taken me/my child to a Black cultural event;" "Done things to celebrate Black history") included 6 items and had an alpha reliability of 0.81 for students and 0.87 for parents. The preparation for bias subscale included 6 items (e.g., "Told me/my child that people might treat me/them badly due to my/their race;" "Told me/my child that Black kids must be better than White kids to get the same rewards") and had strong reliability, $\alpha = 0.87$ for students and $\alpha = 0.91$ for parents. The egalitarian subscale included 5 items that measure the extent to which racial equality is emphasized (e.g., "Told you/your child that Blacks and Whites should try to understand each other so they can get along"), $\alpha = .74$ and $\alpha = 0.84$ for parents. The self-worth subscale included 7 items that measure messages that emphasize positive aspects of the child (e.g., "Told you/your child that you/they are somebody special, no matter what anyone says"), $\alpha = .81$ and $\alpha = 0.82$ for parents. The negative subscale included 6 items communicating negative messages about African Americans (e.g., "Told you/your child that learning

about Black history is not that important”), $\alpha = 0.66$ and $\alpha = 0.61$ for parents. Previous studies have reported strong reliability and validity of these subscales (e.g. Lesane-Brown, et al., 2006; Neblett et al., 2008).

Racial Centrality. Racial Centrality was measured in both 8th and 11th grade using a subscale of the Multidimensional Inventory of Black Identity (MIBI) (Sellers et al., 1997). The MIBI measures four dimensions (centrality, salience, ideology, and regard) of Black identity. I used 6 items from the centrality subscale, which measures the extent to which being Black is central to the participants' definition of themselves. On a 5-point Likert scale, participants rated the extent to which they agreed with each item (e.g., “Being Black is an important part of my self-image” and “I have a strong sense of belonging with Black people”). Higher scores on this scale indicated that race was a more central aspect of an individual’s self definition. In our sample of middle school students, alpha reliability for the scale was 0.70. In our high school sample, the alpha reliability was 0.75.

Stereotype Attributions. Stereotype attributions were measured in Grade 11 with a 12-item stereotype attribution scale developed for this study. On a 4-point Likert scale, participants rated the extent to which they agreed with each item. The measure was prefaced with the following instructions: “Some Black students don’t do as well as White students in school. For the items below, indicate how strongly you disagree or agree, on the 1-4 scale, that each reason would explain why some Black students don’t do as well as some White students in school.” A factor analysis was conducted to determine the number of distinct dimensions in the scale. Analyses revealed the presence of two distinct

factors, accounting for about 31% and 58% of the variability. Two items were removed from the scale because they did not load strongly on either of the factors.

The two factors that emerged represented a discrimination/lack of resources dimension and an attitudes/behavior dimension. Five items were used to assess attributions to discrimination (e.g., Black kids don't have as many advantages as Whites that help them at school; Teachers expect White kids to do better in school than Blacks). Five items assessed attitudes and behaviors that Blacks students have that may hinder their achievement (e.g., Black kids don't work as hard as White kids; Black students don't care as much about school success as White students). Item scores were averaged to create an internal (attitudes/behaviors) and external (discrimination/resources) composite score for each student, $\alpha = .88$ and $.79$, respectively.

Achievement Scores. Participants' state required end-of-grade standardized math and language arts achievement test scores at 8th grade were averaged and used as an indicator of academic achievement. Raw scores for math and language arts were converted into percentile scores based on statewide performance within each grade.

Demographic Information. Parents reported their marital status, relationship to the target child, education, and household income. Marital status was reported with a single item in which the parent checked one of 5 choices (1 = married; 2 = separated; 3 = divorced; 4 = widowed; 5 = single, never married). Relationship to the child was reported with an item in which the parent checked one of 6 choices (1 = mother; 2 = father; 3 = grandfather; 4 = other relative; 5 = guardian; 6 = other) Parents reported their education level on a 10-point scale that ranged from "less than high school" to "completed doctoral or professional degree (e.g., Ph.D., M.D., J.D.). Household income

was reported on an 11-point scale (1 = less than \$10,000; 6 = \$50,000-\$59,999; 11 = greater than \$100,000).

Results

Preliminary Analyses

Power analyses were conducted to determine the sample size necessary to detect significant findings when assessing the relationship between race stereotype endorsement and academic self-concept. According to the analysis conducted, to have an 80% chance of detecting an effect size of .17 at $p = .05$, a sample size of at least 81 would be required (Cohen, 1988).

Before testing the regression models, diagnostics were performed to ensure that the data met the assumptions of linear regression. In addition, scale diagnostics were performed and each measure used had acceptable alpha reliability. One sample t -tests were conducted to determine whether participants who only completed the first wave of data collection differed on major study variables (academic self-concept, academic race stereotype endorsement, and racial centrality) from those who completed both waves of data collection. Students who completed both waves of data collection had less traditional stereotype endorsement at Time 1 than students who only completed the first wave of data collection, $t(113) = -2.66, p = .01$. There were no other significant differences between the two groups on any of the other major study variables.

ANOVAs were conducted to determine whether any of the study variables differed significantly by gender. Although there were no gender differences in academic race stereotype endorsement, $F(1, 112) = .012, p = .91$, or racial centrality, $F(1, 111) = 2.91, p = .09$, academic self-concept differed significantly by gender, $F(1, 112) = 7.52, p = .01$, with boys reporting higher levels than girls. Because of this finding, gender was

used as a covariate for all analyses. Academic achievement data (i.e., EOG percentile scores), were also controlled in all analyses. To ensure that nonsignificant results were not due to insufficient power, all analyses were conducted with and without gender controlled; however, results did not differ with this change. Thus, analyses with gender and achievement controlled are reported below.

Table 2 presents descriptive statistics of Time 1 and Time 2 study variables. Consistent with past research findings, on average, participants in this study reported high levels of academic self-concept ($M = 17.1$, and 17.0 on a 25-point response scale) at Time 1 and Time 2, respectively. With respect to general beliefs about African Americans' and Whites' academic competence, students reported a mean score of 62.7 for African Americans and 76.2 for Whites at Time 1 and 58.5 for African Americans and a score of 72.5 for Whites at Time 2. At both time points, participants endorsed relatively traditional academic race stereotypes (i.e., White students are smarter than Black students, $M's = 13.5$ and 14.0 , respectively). For descriptive purposes, frequencies were calculated in 5-point increments of students' reported stereotypes. Using a cut-off of 5 points difference on the 100-point scale as indicative of traditional stereotypes (i.e., the competence of Whites was reported as 5 or more points greater than the competence of Blacks), 75% of the students in Grade 8 and 77% of the students in Grade 11 reported traditional stereotypes (see Figures 1 and 2).

At Times 1 and 2, participants were slightly above the midpoint on the racial centrality scale (3.6 and 3.5) indicating that race was a central aspect of the participants' self-definition. At Time 2, students reported receiving cultural pride, racial barriers, self-worth, and egalitarian racial socialization messages from their parents approximately 3 to

4 times in the past year (see Table 2; M 's ranged from 2.8 to 4.4). They reported receiving negative messages ($M = 1.2$, $SD = .48$) from their parents much less than any of the other types of messages. Parents reported giving cultural pride, racial barriers, self-worth, and egalitarian messages to their children 3 to 4 times in the past year (see Table 2; M 's ranged from 3.0 to 4.5) and negative messages ($M = 1.2$, $SD = .39$) about 1 time in the past year. Students' scores on discrimination/resource and attitude/behavior attributions fell slightly above the midpoint of the scale, ($M = 2.4$) indicating that, on average, they believed that discrimination/lack of resources *and* attitude/behaviors contributed to race differences in academic achievement.

Associations among study variables were assessed using zero-order correlations (see Table 3). There were significant bivariate relationships between study variables at Time 1 and the same variables at Time 2. For example, higher levels of academic self-concept at Time 1 were related to higher levels of academic self-concept at Time 2. The same relationships were found between racial centrality at Time 1 and Time 2. Though race stereotype endorsement at Time 1 was related to endorsement at Time 2, the correlation between the two was not very large, $r = .25$, $p = .01$. Similarly, Black academic competence at Time 1 was weakly related to Black academic competence at Time 2, $r = .24$, $p < .01$. Academic race stereotype endorsement at Time 1 was positively related to racial centrality at Time 1 and Time 2. Thus, students who held more traditional stereotypes about race differences in academic achievement at Time 1 had higher racial centrality scores at Times 1 and 2. Time 1 and Time 2 racial centrality was positively related to discrimination/lack of resources attributions; thus, students who felt

that race was a central aspect of their identity were more likely than low-race central students to attribute race differences in achievement to discrimination/lack of resources.

Child reports of racial socialization themes were highly related (see Table 3). That is, cultural socialization, preparation for bias, egalitarian, self worth, and negative messages were all correlated. Parent reports of cultural pride, preparation for bias, and egalitarian messages were also related to each other.

Hypothesis 1: Developmental Change in Stereotypes

In Hypothesis 1, I expected that students would increasingly endorse negative academic race stereotypes, so that academic competence ratings for Blacks would be lower for high school juniors than for eighth graders. To determine whether beliefs about the academic competence of Blacks versus Whites differed at Grades 8 and 11, Group competence (Black and White) and Time (Grade 8 and Grade 11) were entered as within-subjects variables, resulting in a 2 (Group competence) x 2 (Time) repeated measures ANOVA. The main effect of Group competence was significant, $F(1, 113) = 71.45, p < .001$, and was qualified by a significant Group competence x Time interaction: 8th graders evaluated the competence of Blacks more positively than 11th graders, $F(1, 113) = 9.51, p < .01$. White competence scores did not differ across time.

Hypothesis 2: Attributions Regarding Race Differences in Achievement

The next hypothesis tested was that high school juniors would attribute race-related differences in academic achievement to discrimination and lack of resources more than to attitudes and behaviors. In order to test this hypothesis, a *t*-test was conducted comparing students' discrimination/resource attribution scores to their attitude/behavior

attribution scores. These means did not differ from one another, $t(111) = .29, p = .774$, thus Hypothesis 2 was not supported.

Hypothesis 3: Stereotype Endorsement and Racial Centrality as Predictors of Academic Self-Concept

According to Hypothesis 3, race stereotype endorsement and racial centrality would be related to self-perceptions of competence at both time points; however, the relationship was expected to be stronger at Time 1 than at Time 2. Hierarchical multiple regression analyses were used to examine the extent to which academic race stereotype endorsement and racial centrality contributed to the variability in academic self-concept at Time 1, Time 2, and across time. First, for each time point, analyses were conducted to test the effects of academic race stereotype endorsement and racial centrality on academic self-concept. For both time points, the control variables (i.e., gender and academic achievement) were entered in block 1, and race stereotype endorsement (i.e., student's academic competence score for Blacks subtracted from the student's academic competence score for Whites) and racial centrality were added in block 2 (see Tables 5 and 6), with academic self-concept as the dependent variable. For Time 1, the full regression model was statistically significant, $F(4, 229) = 13.80, p < 0.001$, with an adjusted R^2 of 0.18. Race stereotype endorsement was a significant predictor of academic self-concept, $\beta = -.14, p < .05$. Academic achievement and gender were also significant predictors (see Table 5).

At Time 2, the full model was also significant, $F(4, 106) = 5.04, p = 0.001$, with an adjusted R^2 of 0.13. Unlike Time 1, however, stereotype endorsement was not a significant predictor of academic self-concept. The only significant predictors of self-

concept were gender and academic achievement (see Table 6). I expected that the influence of stereotype endorsement on self-perceptions of academic competence would be stronger at Time 1 than at Time 2. Because stereotypes did not predict self-concept at Time 2, this hypothesis was not tested.ⁱ

To examine the longitudinal influence of race stereotype endorsement and racial centrality on later academic self-concept, Time 1 race stereotype endorsement and racial centrality were entered into a regression model with Time 2 academic self-concept as the dependent variable. For this model, gender, academic achievement, Time 2 race stereotype endorsement and Time 2 racial centrality were all entered as control variables. The full model was significant, $F(7, 104) = 4.42$, $p < 0.01$, with an adjusted R^2 of 0.18. Only the control variables—gender, academic achievement, and Time 2 stereotype endorsement—were significant predictors of Time 2 self-concept (see Table 7); thus, Hypothesis 3 was not supported by the data.

Hypothesis 4: The Moderating Role of Racial Centrality

Hypothesis 4 stated that, at both time points and over time, racial centrality would moderate the relationship between stereotype endorsement and self-perceptions. Thus, it was expected that the relationship between the variables would be stronger among students with high (1 *SD* above the mean) levels of racial centrality than among students with lower levels of racial centrality.

To test this hypothesis, an interaction term of stereotype endorsement by centrality was added to each of the regression models calculated previously. Specifically,

ⁱ Additional analyses were conducted to determine whether academic self-concept predicted academic race stereotype endorsement. A regression analysis with Time 1 and Time 2 academic self-concept as the independent variables and Time 1 and Time 2 race stereotype endorsement as the dependent variables was conducted. Academic achievement and gender were controlled. The regression model was not significant.

Time 1 stereotype endorsement, racial centrality and the interaction of the two were entered in a regression model as independent variables with gender and academic achievement controlled. For the first analysis, academic self-concept at Time 1 was entered as the dependent variable. For this time point, the full regression model was statistically significant, $F(5, 228) = 13.44$, $p < 0.001$, with an adjusted R-square of 0.21 (see Table 5). The change in R-square and the academic race stereotypes x racial centrality interaction were significant, $\beta = -0.90$, $p < .01$.

The same regression analysis was conducted with Time 2 variables. Similarly, the full regression model was statistically significant, $F(5, 105) = 5.66$, $p < 0.001$, with an adjusted R-square of 0.18 (see Table 6). The change in R-square and the academic race stereotypes x racial centrality interaction were significant, $\beta = -0.98$, $p < .01$.

To probe the significant interaction terms, the conditional effects of race stereotype endorsement at high (1 *SD* above the mean score), medium (mean score), and low (1 *SD* below the mean score) levels of racial centrality were plotted. At Time 1, the simple slope of academic stereotype endorsement was only significant at high levels of racial centrality, $\beta = -.05$, $p < .001$ (see Figure 3). Thus, endorsement of traditional stereotypes about race differences in academic ability was related to more negative academic self-concepts for youth who had relatively high levels of racial centrality (1 *SD* above the mean). Similarly, at Time 2, the simple slope of academic stereotypes was only significant at high levels of racial centrality, $\beta = -.06$, $p < .05$ (see Figure 4). It may be the case that the significant interaction found at Time 1 is stronger than that found at Time 2. As youth become older, regardless of their racial centrality, and as a result of more higher-order cognitive thinking abilities, stereotype endorsement may be less linked

to students' self-perceptions of competence. In order to assess this hypothesis, a t -value was calculated to determine whether the simple slope found at Time 1 was significantly different from the simple slope at Time 2. The equation used is as follows:

$$t_{\text{calc}} = \frac{b_{1(T1)} - b_{1(T2)}}{\sqrt{se(b_{1(T1)})^2 + se(b_{1(T2)})^2}}$$

The critical t -value for this test was -1.96 at the .05 level. In this sample, $t_{\text{calc}} = .053$.

Because t_{calc} was smaller than t_{crit} , I concluded that the simple slopes at Time 1 and Time 2 did not differ.

To determine whether racial centrality at Time 1 moderates the relationship between Time 1 race stereotype endorsement and Time 2 academic self-concept, the interaction between Time 1 stereotype endorsement and Time 1 racial centrality were entered into the regression model predicting Time 2 self-concept (see Table 7). The overall model was significant, $F(8, 103) = 5.67, p < 0.001$, with an adjusted R-square of 0.25. The academic race stereotypes by racial centrality interaction was also significant, $\beta = -1.70, p < .01$. When the significant longitudinal interaction was probed, similar to Times 1 and 2, the simple slope of academic stereotype endorsement was only significant at high levels of racial centrality, $\beta = -.06, p < .01$ (see Figure 5). Thus, racial centrality moderated the relationship between stereotype endorsement and academic self-concept in both Grade 8 and Grade 11, and in predicting Grade 11 self-concept from Grade 8 stereotypes.

Hypothesis 4: The Moderating Role of Stereotype Attributions

To test the moderating role of stereotype attributions on the relationship between academic race stereotype endorsement and academic self-concept, race stereotype endorsement, attributions, and the interaction of the two were entered into a regression

equation. Academic self-concept was the dependent variable. Gender and academic achievement were entered as control variables. Two analyses were conducted: one using endorsement of discrimination/lack of resources attribution scores, and the second using attitudes/behaviors attribution scores. The overall models for discrimination/lack of resources and attitudes/behaviors attribution scores were significant, $F(5, 107) = 4.22$ and 3.96 , $p < 0.01$; adjusted R-square = 0.13 and 0.12 , respectively. The race stereotype x discrimination/lack of resources attributions interaction was not significant, $\beta = -.080$, $p = .379$. Likewise, the race stereotype x attitudes/behaviors interaction was also not significant, $\beta = .04$, $p = .658$ (see Tables 8 and 9). The only significant predictors of self-concept were gender and academic achievement. Thus, the hypothesis of attributions moderating the relationship between stereotype endorsement and self-concept was not supported in these data.

Hypothesis 5: The Influence of Racial Socialization on Race Stereotype Endorsement

According to Hypothesis 5, students who report receiving more parental messages of cultural pride at Time 2 would have lower traditional race stereotype endorsement (Time 2) than students who report less cultural pride socialization. The relation between cultural pride socialization and race stereotype endorsement was assessed by entering the student report of cultural pride socialization into a multiple regression equation. Gender and academic achievement were entered as control variables. The regression model was not significant, $F(3, 109) = .463$, $p = .71$. Times 1 and 2 parental reports of cultural pride were entered into two multiple regression equations with stereotype endorsement at Time 2 as the dependent variable. Gender and academic achievement were entered as control variables. The model for Time 1 parental report of racial socialization was not

significant, $F(3, 91) = .171$, $p = .92$. Similarly, the regression model for Time 2 parental report of cultural pride was not significant, $F(3, 68) = .407$, $p = .75$.

Finally, to determine whether certain patterns of racial socialization themes were related to less traditional stereotype endorsement than other patterns, Ward's cluster analysis method was used to determine whether distinct clusters of students emerged based on Time 2 racial socialization. Student reports of racial socialization were used for these analyses because the amount of parent data at Time 2 was insufficient. Ward's method has been found to be an effective way to construct clusters (Borgen & Barnett, 1987). A three-cluster solution was chosen because in the 4 and 5 cluster solutions some participants were less similar to other participants, but not dissimilar enough to warrant a 4th or 5th cluster solution. In the 3-cluster solution, all of the groups are of a moderate size. In addition, prior researchers examining patterns of racial socialization also find 3-cluster solutions (Neblett, Smalls, Ford, Nguyễn, & Sellers, 2009).

Differences between clusters in racial socialization themes were examined in post hoc comparisons with Tukey's HSD test. Between cluster differences show statistically significant differences in cultural pride, racial barriers, and egalitarian reports of racial socialization in this sample of adolescents; however reports of negative messages in Cluster 1 ($M = 1.1$) and Cluster 2 ($M = 1.1$) were not significantly different from each other, $p = .951$. Additionally, reports of self-worth messages in Cluster 2 ($M = 4.6$) and Cluster 3 ($M = 4.6$) were not significantly different from one another, $p = .933$. This finding is not surprising, because while individuals in a particular cluster may differ from others in another cluster, it is likely that similarities between clusters also exist.

Cluster 1 ($n = 25$) was characterized by relatively low scores on the five socialization subscales. Racial socialization scores were below the sample mean on all 5 of the subscales. One exception to the low scores in this cluster was self-worth messages. Though mean levels of self-worth messages in this cluster were below the sample average, scores were still higher than the midpoint of the scale (see Table 10 and Figure 6).

Cluster 2 ($n = 53$) was characterized by moderately high, positive racial socialization messages. Scores in this cluster were at or near the sample mean on most of the subscales. Though students in this cluster had moderately high levels of cultural pride and preparation for bias, their levels of egalitarian and self-worth messages were higher than the other types of messages reported. Reports of negative messages in this cluster were below the sample mean.

Cluster 3 ($n = 36$) was characterized by high racial socialization messages. Scores in this cluster were above the sample mean on all 5 racial socialization subscales.

I expected that stereotype endorsement might differ across groups. However, racial socialization clusters were not significantly associated with race stereotype endorsement, $F(2, 111) = .271$, $p = ns$.

Discussion

Motivation to succeed in academic domains is influenced by several factors. For African American adolescents in particular, race-related constructs may directly and indirectly influence achievement motivation. One such race-related construct is academic race stereotype endorsement. A prevalent racial stereotype in the United States is that African Americans are not as intelligent as Whites (Devine & Elliott, 2000; Steele, 1997). Knowledge and endorsement of this stereotype may be detrimental to students' academic self-concepts, and as a consequence, to their achievement motivation. Thus, understanding the developmental progression of stereotype endorsement in African American adolescents may shed light on their achievement motivation and academic outcomes.

One primary purpose of this study was to examine the developmental progression of stereotype endorsement in African American adolescents. In addition, in order to better understand why students may endorse negative stereotypes about their racial/ethnic group, stereotype attributions were examined. Another aim of this study was to understand whether the influence of race stereotype endorsement on academic self-concept in African American adolescents changes over time. In assessing these relationships, the moderating role of racial centrality was examined. Finally, the impact of parental racial socialization on race stereotype endorsement was investigated.

On average, beliefs about African American students' academic competence changed from middle school to high school. In addition, students were just as likely to attribute race differences in academic achievement to factors such as discrimination and

lack of resources as to factors such as attitudes and behaviors. Results of this study showed that in middle school, high school, and even over time, students who endorsed the stereotype that Black students are not as smart as White students had lower academic self-concepts *only* when they reported that race was a significant aspect of their identity. Contrary to study hypotheses, stereotype attributions did not moderate the relation between stereotypes and self-concept. Finally, students' reports of parental racial socialization were not significantly associated with stereotype endorsement. In the following sections, I will comment on implications of the study findings for developmental theories of achievement motivation and identity, and I will end with study limitations and suggestions for future research.

Developmental Progression of Stereotype Endorsement

For our sample, on average, students' beliefs about the academic competence of African Americans decreased from middle school to high school. That is, participants held more positive beliefs about the competence of Black students in middle school than they did when they were in high school. Though mean level differences were found in overall Black group competence scores, correlations between Time 1 and 2 Black group competence scores indicate that beliefs about Black students' academic competence were not very stable from middle school to high school. Therefore, among youth in this study, prior beliefs were not reliable predictors of later beliefs. It is possible that some students became more traditional, some became less traditional, while others became more egalitarian over time. Several factors may explain the relative instability of stereotype endorsement from middle to high school.

Bronfenbrenner and Morris (1998) posit that, when examining development, environmental context (immediate and remote) must be considered. More specific to Black youth, Spencer (1999), in the Phenomenological Variant of Ecological Systems Theory (PVEST), proposes that perceptions of experiences in diverse contexts impact identity development and self-perceptions. These theories suggest that culture and context matter when examining African American youths' achievement-related beliefs, psychological functioning, and achievement outcomes. One such contextual factor that may explain variation in race stereotype endorsement over time is the school climate/environment.

A very subtle form of academic tracking begins even as early as elementary school. Academic tracking is the practice of grouping students by level of academic skill or performance (Akos, Lambie, Milsom, & Gilbert, 2007; Oakes, 1987). Children are often identified as “gifted” as early as elementary school. In order to keep these students challenged, they are periodically pulled out of their regular classes and grouped with other “gifted” children. African American students are underrepresented in gifted and talented programs (Callahan, 2005; Donovan & Cross, 2002). As a result of this underrepresentation, students may begin noticing race differences in academic performance quite early and start to form stereotypes regarding ethnic/racial group differences in achievement outcomes. These stereotypes/beliefs about race differences in academic achievement that develop early are likely to increase during the transition to middle school as academic tracking intensifies.

In middle school and throughout high school, classes are often labeled as advanced, remedial, college preparatory, or vocational, and hierarchies are formed based

on membership in these tracks (Oakes, 1987). Because ability tracking begins quite subtly in elementary school, becomes more obvious in middle school, and is blatant in most public high schools, it is possible that some students form beliefs about achievement quite early on and, by middle school, these beliefs are well defined, continue to be confirmed, and remain relatively stable over time. In our sample, the correlation of .24 between Time 1 and Time 2 Black academic competence is rather small, but still significant and noteworthy. While some students may have relatively stable beliefs, other students' views about race differences in achievement may become more or less traditional depending on school racial composition and other school characteristics.

If African American students transition from middle schools in which most of the students are Black into high schools in which Blacks do not make up the majority, the preponderance of Whites in Advanced Placement and Honors courses may lead to stronger stereotype endorsement. Students who are in contact with individuals of differing races are in positions to make social comparisons based on race (Cooper, Garcia Coll, Thorne, & Orellana, 2005) and, as a consequence, may be more aware of race and race-related issues. Thus, students who endorse relatively traditional views concerning race differences in academic achievement and attend predominantly Black middle schools may endorse even more traditional views if they move into majority White high schools with academic tracking. In these settings, students have more direct contact with Whites and may witness, firsthand, a disproportionate number of Blacks represented in high achieving (e.g., Honors, Advanced Placement, International Baccalaureate) tracks.

In the present study, students attended middle schools in which approximately 67% of the school population was Black and high schools in which approximately 63%

of the school population was Black. Though study participants did not move into more race heterogeneous high schools, their classroom race composition may have changed. Some students may have experienced predominantly Black classrooms in middle and high school, some may have experienced predominantly White classrooms in middle and high school, and some may have experienced change across time. Classroom race composition was not measured in the present study, but may have played a significant role in the stability and change in endorsement beliefs over time. For example, if class racial composition changed over time (majority Black classes to majority White classes), and students perceived discrimination in the classroom context, stereotype endorsement may have become more traditional for those students, while other students may have had race-related experiences (e.g., a teacher who was particularly affirming of high-achieving Black students) that resulted in less-stereotyped views. Studies have suggested that students experience discrimination in the classroom context (e.g., Fisher, Wallace, & Fenton, 2000), and this discrimination may lead students to believe that African Americans are not as smart as Whites. Findings from the current study highlight the importance of understanding which school and classroom contextual factors are related to beliefs about race differences in achievement and the processes by which these factors influence stereotype endorsement.

Attributions Regarding Race Differences in Achievement

Data from the current study did not support the hypothesis that, when explaining race differences in academic achievement, high school juniors would attribute differences to discrimination and lack of resources more than to attitudes and behaviors. On average, high school juniors were just as likely to attribute race-related differences in academic

achievement to discrimination and lack of resources as they were to attribute achievement differences to attitudes and behaviors. Several reasons could explain this finding.

In the instructions, participants were told, “some Black students don’t do as well as White students in school. For the items below, indicate how strongly you disagree or agree, on the 1-4 scale, that each reason would explain why some Black students don’t do as well as some White students in school.” The mean for both subscales was about 2.4 on a 4-point scale. Indeed, items from both subscales are probably true for *some* African American students, and participants in our sample indicated that fact. In addition, items from the measure may also be true for *some* White students as well. A scale that measured the same items for both Whites and Blacks would have been useful to compare attributions for achievement outcomes in White students to attributions for achievement outcomes in Black students.

High school students in this study revealed their awareness about the complexity of race differences in academic achievement. These students demonstrated their understanding that, while race differences in academic achievement may exist because of certain attitudes held by some individuals, a lack of resources, discrimination, and other structural issues may also explain the variability. It is probable that students’ beliefs about the reasons underlying race differences in academic achievement may change and become more complex and differentiated over time. In the self-concept literature, researchers propose that with age, children’s self-concepts become more differentiated and complex (Harter, 1999). In childhood, self-concepts are largely uni-dimensional and unrealistic. As children progress to adolescence and gain the ability to use higher-order thinking, their self-conceptions change and become multidimensional and more realistic.

As with self-concept, adolescents' attributions about race differences in achievement may become more complex and realistic over time as a result of advanced cognitive abilities and life experiences.

The Relation between Academic Stereotype Endorsement and Academic Self-Concept

At Time 1, race stereotype endorsement was significantly and negatively associated with academic self-concept so that students who endorsed traditional academic stereotypes (i.e., White children are smarter than Black children) had lower academic self-concepts. Even after controlling for achievement and gender, this relation among middle school youth still existed. This finding is in line with expectancy-value theory which suggests that stereotype endorsement should be related to their self-perceptions of competence (Eccles et al., 1983). For youth at a critical developmental period, the fact that stereotype endorsement may be related to self-perceptions of competence has serious implications for academic achievement motivation, achievement outcomes and future educational aspirations. Motivational theorists propose that perceptions of competence are important determinants of achievement striving (Bandura, 1997; Deci & Ryan, 1985; Eccles & Wigfield, 2002). Thus, the more efficacious an individual feels about a certain domain, the more motivated he or she is to pursue that domain. If an individual is not academically motivated, their school performance may suffer. Academic performance in middle school often has implications for later school completion and overall educational attainment, and accordingly, if students begin to fail academically in middle school, they may be less likely to do well in high school and even to enroll in higher education.

In middle school, high school, and even across time, the relation between race stereotype endorsement and academic self-concept existed only among students for

whom race was a central aspect of their identity. For students who reported that race was an important aspect of their identity, traditional stereotype endorsement was associated with lower levels of academic self-concept. These findings are in line with Rosenberg's (1979) idea that identification with a social group is necessary for stereotypes to influence self-perceptions of competence. These findings also highlight the important fact that African Americans are not homogenous. Indeed, race may be salient to one individual in a particular racial/ethnic group, but not salient or central to another individual (Rowley et al., 1998). Our results are in line with those of other researchers who have also found that racial identity moderates the relationship between race-related variables and psychological outcomes (Rowley et al., 1998; Sellers & Shelton, 2003). Researchers must consider the role of racial centrality when examining race-related constructs.

It appears that, when examining race stereotype endorsement and racial centrality independently, one may miss an important interaction. Interestingly, at Time 2, the main effects of race stereotype endorsement and racial centrality were not significant. Thus, without considering the moderating role of racial centrality on the stereotype and self-concept relation, one may be led to believe that, for African American high school juniors in this sample, traditional stereotype endorsement and racial centrality are not negatively related to academic self-concept. Among high school juniors, it was *only* when the interaction between race stereotype endorsement and racial centrality was examined that significant findings emerged. Moreover, in spite of the relatively low stability of stereotypes from Grade 8 to Grade 11, students' Grade 8 stereotypes were significantly related to Grade 11 academic self-concept for youth who reported high race centrality.

These results were found with achievement controlled, which means that it was not the case that the significant relations were due to ability-level differences.

One aspect of these findings that may be a bit troubling is the fact that racial centrality, an aspect of racial identity appears to be a risk factor in the current study. Other work has pointed to the protective function of racial identity (e.g., Cross, 1991). For example, Sellers and Shelton (2003) examined the influence of racial identity on perceived discrimination. In a sample of Black college students, they found that racial ideology and public regard (two aspects of racial identity) served as buffers in the relation between perceived racial discrimination and negative mental health outcomes. Other researchers have found that racial identity is positively related to academic achievement outcomes (Altschul, Oyserman, & Bybee, 2006).

In light of other research examining racial identity in African Americans, findings from this study cannot be used to conclude that racial identity is a risk factor because racial centrality is only one aspect of racial identity. Also, it is possible that aspects of racial identity may serve a protective role in some cases, and serve as a risk factor for other outcomes.

Though endorsement of negative academic race stereotypes does not impact *all* Black high school students' self-perceptions of academic competence, that is not to say that stereotypes have no effect. Stereotype threat could be one possible way that stereotypes negatively influence most African American adolescents. Steele (1997) proposes that individuals do not necessarily have to endorse the negative stereotype in order to experience stereotype threat. Experiencing stereotype threat in a particular academic domain negatively impacts academic performance significantly more than

those who do not experience this threat (Kellow & Jones, 2008; Schmader, Johns, & Forbes, 2008; Steele, 1997; Steele & Aronson, 1995). Interestingly, if that threat condition is not present, performance of the stereotyped group is equal to or even in some cases higher than other groups.

The Moderating Role of Stereotype Attributions

Although attributions are known to be important in many domains, no prior studies had examined attributions about reasons for race differences in academic achievement. It was expected that students' beliefs about race differences in academic achievement would moderate the relation between stereotype endorsement and academic self-concept so that stereotypes would be unrelated to academic self-concept among students who endorsed discrimination/resource attributions. For example, students with more internal attributions about the cause of race differences in achievement may believe, because African American students' attitudes and behaviors cause differences in achievement, that they as African Americans may also possess these same attitudes. In this case, academic self-concept may be negatively influenced by stereotype endorsement. In contrast, external attributions might be less likely to harm self-perceptions of competence. The data did not support this hypothesis. Moreover, correlational analyses showed no relation between Time 2 stereotype endorsement and attributions or Time 2 academic self-concept and attributions. Our attributional measure was recently developed and not tested on other samples, thus results should be interpreted with caution.

The Influence of Racial Socialization on Stereotype Endorsement

Garcia Coll and colleagues (1996), in their integrative model of minority child development, propose that ethnic minority families provide racial socialization to their children as a way of dealing with the negative and chronic stressors that minorities face. They posit that racial socialization impacts developmental competencies such as dealing with racism and discrimination, as well as adjusting to a racially hostile environment. From this model, it is not unreasonable to hypothesize that racial socialization can influence a child's attitudes about the world in general and about their racial group more specifically. In the present study, a direct link between socialization (parent and child reported) and academic race stereotype endorsement was not found. To my knowledge, no prior research had examined the influence of racial socialization on stereotype endorsement. Although these associations had not been examined prior to this study, other research points to the positive impact that racial socialization, specifically cultural pride socialization, has on children's outcomes (Branch & Newcombe, 1986; Caughy, O'Campo, Randolph, & Nickerson, 2002; Constantine & Blackmon, 2002; Hughes & Johnson, 2001; Marshall, 1995). It is likely that if there is a link between academic race stereotype endorsement and racial socialization, the link is indirect and is mediated by factors such as general self-esteem or awareness of the complexity of race factors in U.S. society.

Limitations of the Study and Suggestion for Future Research

Though this study adds to the body of knowledge concerning one's own stereotype endorsement and its influence on academic self-concept throughout adolescence, some study findings should be interpreted with caution. Though, on

average, students' ratings of Black academic competence changed over time, individual differences exist. There could be differing patterns of stereotype endorsement that show change over time for some individuals and stability for others. Cluster analyses should be conducted to examine patterns of change in the race stereotype endorsement of African American adolescents. Additionally, because we cannot infer from a single study that, on average, beliefs about the academic competence of Black students decrease over time, more research should be conducted to investigate race stereotype endorsement in early childhood and its development through middle school and high school, with a special focus on contextual and individual level factors. Finally, the test-retest reliability of the measure of stereotype endorsement has not been established. While individual factors impact change and stability in stereotypes, measurement error may also account for some of the variance.

Findings related to attributions about why race differences in achievement exist should also be interpreted with caution. Though complexity in beliefs may explain the study findings, measurement issues should also be considered. The 4-point scale used in this study allowed very limited variability in responses. Research examining the reliability of response scales suggests that two, three, and four item scales have statistically lower reliability than scales with 7, 8, 9, or 10 response categories (Preston & Colman, 2000). Using a scale with more variability such as a 5-point Likert scale or even a Visual Analog Scale may yield greater variability. It is also possible that items from both scales may have been sensitive for respondents and, as a result, students may not have felt comfortable choosing extreme scores. In addition, once the scale was

developed, pilot testing would have been useful to have initial ideas about its psychometric properties.

Use of qualitative methods could also be informative in addressing these research questions. When constructing the stereotype attribution scale, it would have been informative to conduct focus groups with African American adolescents (Hughes & DuMont, 1993). Focus groups may have led to better measurement development. From the groups, we could hear, firsthand, the ideas of African American adolescents about why race differences in achievement exist and also get their feedback about our own ideas. Additionally, individual interviews with a subset of the sample may have provided information concerning ideas about stereotype endorsement and attributions. Future research should examine these phenomena using multiple methods. Students' attributions may change over time, becoming more complex and differentiated. More research is warranted to examine these phenomena during the early years of high school.

Findings revealed that stereotype endorsement only influenced the academic self-concept of high centrality youth, thus a study that examines contextual factors may shed more light on the stereotype-self-concept link. For instance, stereotype endorsement may differentially impact high school students' self-concept depending on school or even classroom racial composition. Students' perceptions of teacher supportiveness and of peer characteristics are also likely to influence the stereotype-self-concept link. In school, African American students are more likely to have White teachers than Black teachers, and not many teachers have multicultural training (Ford & Harris, 1997). Research has suggested a positive relation between perceptions of teacher support and high expectations and school achievement outcomes among African American youth

(Honora, 2003). For students who endorse negative race stereotypes about their ethnic/racial groups, self-perceptions of competence may be negatively impacted in the absence of teacher support and high expectations.

Another limitation of the current study is that gender differences were not examined. African American males reported higher academic self-concept than African American girls, but because of sample size considerations, analyses were not conducted separately for boys and girls. Because of the robust literature on gender differences among African American boys and girls, the role of gender must also be examined. By middle school, African American boys are performing significantly worse academically than their female counterparts (Mickelson & Greene, 2006). Research shows that Black boys are less likely to graduate from high school and complete college (Noguera, 2003). Additionally, Black boys seem to have lower educational expectations than Black girls (Wood, Kaplan, & McLoyd, 2007). Research suggests that even parents hold lowered expectations for African American boys than they do for African American girls (Wood, Kurtz-Costes, Rowley, & Okeke, 2008). Given the robust literature on gender differences between African American boys and girls and the negative societal perceptions of African American males (Hudley & Graham, 2001), it is not unlikely to assume differing impacts of stereotype endorsement on African American males and females.

Finally, in this study, the direct relation between race stereotype endorsement and parental racial socialization was examined. Though this direct link is important, indirect paths should be examined. Primarily, researchers interested in understanding racial socialization have examined the nature and content of racial socialization messages, sociodemographic and environmental variables that correlate with discussions regarding

race, and associated child/adolescent outcomes (Bowman & Howard, 1985; Boykin & Toms, 1985; Hughes, 2003; Hughes & Chen, 1997; Phinney & Chavira, 1995; Thornton, Chatters, Taylor, & Allen, 1990). However, less attention has been given to the indirect influences of racial socialization. The influence of racial socialization messages on stereotype endorsement may be mediated by the parent-child relationship, racial identity, friendship selection, or by personal characteristics such as self-esteem. Future research should examine direct and indirect relationships between racial socialization and stereotype endorsement.

Table 1

Sample Demographic Characteristics

Variable Name	Time 1	Time 2
Child age	13.8 (8.2)	17.1 (5.9)
Parent marital status		
Married	53%	52%
Single/never married	21%	18%
Separated /divorced/widowed	26%	30%
Parent education		
Some high school	5%	4%
High school graduate/GED	24%	13%
Some college	47%	41%
Junior college	15%	18%
College graduate	7%	15%
Master's degree & beyond	2%	9%
Household income		
<\$30,000	57%	45%
\$30,000-\$59,000	25%	30%
\$60,000 or more	18%	25%

Table 2

Descriptive statistics for Time 1 and Time 2 variables

Study Variables (Time 1)	Mean (SD)	Minimum	Maximum
Academic self-concept	17.1 (3.6)	1.8	25.0
Race stereotype endorsement	13.5 (20.8)	-51.1	73.1
Perceived competence of Blacks	62.7 (17.6)	1.7	100
Perceived competence of Whites	76.2 (16.8)	1	100
Racial centrality	3.6 (0.76)	1.3	5.0
Academic achievement	43.8 (24.2)	1.0	99.0
Study Variables (Time 2)	Mean (SD)	Minimum	Maximum
Academic self-concept	17.0 (3.8)	6.2	25.0
Race stereotype endorsement	14.0 (18.8)	-27.6	64.4
Perceived competence of Blacks	58.5 (13.2)	28.6	93.3
Perceived competence of Whites	72.5 (15.3)	43.1	100
Racial centrality	3.5 (0.75)	1.3	5.0
Child cultural pride messages	3.1 (0.94)	1.0	5.0
Child racial barriers messages	2.8 (1.1)	1.0	5.0
Child self-worth messages	4.4 (.72)	1.7	5.0
Child negative messages	1.2 (.48)	1.0	4.0
Child egalitarian messages	3.8 (.97)	1.5	5.0
Parent cultural pride messages	3.4 (1.0)	1.2	5.0
Parent racial barriers messages	3.0 (1.2)	1.0	5.0

Parent self-worth messages	4.5 (.67)	2.0	5.0
Parent negative messages	1.2 (.39)	1.0	2.8
Parent egalitarian messages	4.2 (.90)	2.0	5.0
Discrimination attributions	2.4 (.67)	1.0	4.0
Attitudes/behavior attributions	2.4(.80)	1.0	4.0

Table 3

Intercorrelations of study variables

Study Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Race ster. endorse. (T1)	-																	
2. Race ster. endorse.(T2)	.25**	-																
3. Acad. self-concpt (T1)	-.04	.02	-															
4. Acad. self-concpt (T2)	-.12	-.03	.46**	-														
5. Racial central. (T1)	.12*	-.04	.07	.11	-													
6 Racial central. (T2)	.19*	.08	.11	.11	.46**	-												
7.Discrim./Resource	-.08	.11	.07	-.02	.24**	.41**	-											
8. Attit./Behav.	.19*	.11	.01	.03	.03	.15	.37**	-										
9. Cult. pride mess. (T2)	.13	-.08	.11	.24*	.22*	.20*	.05	.06	-									
10. Prep for bias (T2)	.11	-.04	.16	.19*	.16	.27**	.10	.09	.70**	-								
11. Egal. mess. (T2)	.07	.02	.08	.19*	.05	.13	-.01	.12	.58**	.54**	-							
12. Self-wo. mess. (T2)	.10	-.04	.08	.09	.20*	.26*	-.01	.09	.46**	.40**	.63**	-						
13. Neg mess. (T2)	-.07	-.05	-.07	.16	.02	.13	.09	.11	.30**	.30*	.20*	-.01	-					
14. Achieve.	.00	.06	.38**	.34**	-.08	.20*	.11	.07	.00	.20*	.21*	.09	-.04	-				

15. Blck grp comp. (T1)	-.66**	-.16	.21**	.17	.02	-.18	-.05	-.08	-.06	-.04	.01	-.02	.08	-.09	-			
16. Blck grp comp. (T2)	-.18	-.59**	.12	.16	.03	.01	-.06	.01	.29**	.16	.06	.08	.24**	-.11	.24**	.-		
17. White grp comp. (T1)	.61**	.14	.06	.03	.04	.06	-.13	.15	.10	.09	.10	.10	-.01	-.04	.19**	.04	-	
18. White grp comp. (T2)	.15	.72**	.12	.10	-.02	.11	.08	.15	.15	.09	.07	.03	.15	-.03	.01	.13	.20*	-

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

Table 4

Intercorrelations of parent and child racial socialization messages with stereotype endorsement

Study Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Cultural Pride-c	-											
2. Prep for bias-c	.70**	-										
3. Egalitarian-c	.58**	.54**	-									
4. Self-worth-c	.46**	.39**	.63**	-								
5. Negative -c	.30**	.30**	.20*	-.01	-							
6. Cultural Pride-p	.24**	.29*	.07	.06	.16	-						
7. Prep for bias-p	.24*	.46**	.22	.19	.13	.76**	-					
8. Egalitarian-p	.16	.18	.11	-.02	.14	.71**	.56**	-				
9. Self-worth-p	.27*	.22	.12	.11	.05	.57**	.42*	.70**	-			
10. Negative-p	-.01	.10	.02	-.02	.18	.01	.11	-.14	-.40**	-		
11. T1 endorsement	.13	.11	.07	.10	-.07	.13	.10	.04	.05	-.08	-	
12. T2 endorsement	-.08	-.04	.02	-.04	-.05	.09	.10	.01	-.10	-.02	.25**	-

* $p < .05$. ** $p < .01$.

Table 5

Hierarchical regression analyses predicting academic self-concept: Time 1

Variable	B	Model 1	β	B	Model 2	β	B	Model 3	β
		SE B			SE B			SE B	
Gender (M = 1/F = 0)	1.11	.44	.15*	1.10	.434	.151*	1.10	.426	.151*
Achievement	.06	.01	.39**	.06	.01	.39**	.06	.01	.37**
Stereotype Endorsement				-.03	.01	-.14*	.13	.05	.73*
Racial Centrality				-.06	.29	-.01	.60	.35	.13
Stereotype X Centrality							-.042	.01	-.90**
R ²		.18			.19			.23	
Adjusted R ²		.17			.18			.21	
F for change in R ²		25.0**			1.8			10.2**	

* $p < .05$ ** $p < .01$.

Table 6

Hierarchical regression analyses predicting academic self-concept: Time 2

Variable	B	Model 1	β	B	Model 2	β	B	Model 3	β
		SE B			SE B			SE B	
Gender (M = 1/F = 0)	1.56	.69	.20*	1.55	.705	.198*	1.44	.69	.18*
Achievement	.06	.02	.33**	.06	.02	.33**	.06	.02	.32**
Stereotype Endorsement				-.02	.02	-.07	.19	.08	.87*
Racial Centrality				.05	.48	.01	.81	.55	.16
Stereotype X Centrality							-.06	.02	-.98**
R ²		.16			.16			.21	
Adjusted R ²		.14			.13			.18	
F for change in R ²		9.93**			.28			7.00*	

* $p < .05$ ** $p < .01$

Table 7

Hierarchical regression analyses predicting academic self-concept: Time 1 predicting Time 2

Variable	B	Model 1	β	B	Model 2	β	B	Model 3	β
		SE B			SE B			SE B	
Gender (M = 1/F = 0)	1.5	.68	.19*	1.5	.68	.20*	1.5	.65	.19*
Achievement	.05	.02	.30**	.05	.02	.28**	.04	.02	.25**
Stereotype Endorsement (Time 2)				.22	.08	1.1**	.18	.08	.87*
Racial Centrality (Time 2)				1.0	.62	.19	1.0	.59	.19
Stereotype X Centrality (Time 2)				-.06	.02	-1.1**	-.05	.02	-.93*
Stereotype Endorsement (Time 1)				-.027	.02	-.14	.29	.096	1.5**
Racial Centrality (Time 1)				.19	.51	.04	.96	.53	.18
Stereotype X Centrality (Time 1)							-.08	.02	-1.7**
R ²		.21			.23			.31	
Adjusted R ²		.18			.18			.25	

* $p < .05$ ** $p < .01$

Table 8

Hierarchical regression with discrimination/resource attributions predicting academic self-concept

Variable	B	Model 1	β	B	Model 2	β	B	Model 3	β
		SE B			SE B			SE B	
Gender (M = 1/F = 0)	1.59	.68	.20*	1.59	.69	.204*	1.61	.69	.21*
Achievement	.06	.02	.32**	.06	.02	.33**	.06	.02	.32**
Stereotype Endorsement				-.01	.02	-.04	-.004	.02	-.02
Discrimination/ Resource Attributions				-.36	.52	-.06	-.31	.52	-.05
Stereotype X Discrim/Resource							-.02	.02	-.080
R ²		.15			.16			.17	
Adjusted R ²		.14			.13			.13	

* $p < .05$ ** $p < .01$

Table 9

Hierarchical regression with attitude/behavior attributions predicting academic self-concept

Variable	B	Model 1	β	B	Model 2	β	B	Model 3	β
		SE B			SE B			SE B	
Gender (M = 1/F = 0)	1.58	.68	.20*	1.59	.70	.204*	1.60	.71	.21*
Achievement	.06	.02	.32**	.06	.02	.32**	.06	.02	.33**
Stereotype Endorsement				-.01	.02	-.04	-.009	.02	-.05
Attitude/Behavior Attributions				-.04	.45	-.01	-.02	.45	-.01
Stereotype X Att/Behav							.01	.03	.04
R ²		.15			.16			.16	
Adjusted R ²		.14			.12			.12	

* $p < .05$ ** $p < .01$

Table 10

Means of racial socialization subscales by clusters

Variable	Low Frequency <i>n</i> = 25	Moderate Positive <i>n</i> = 53	High Frequency <i>n</i> = 36
Cultural Pride	2.0	3.0	4.1
Preparation for Bias	1.8	2.7	3.9
Negative	1.1	1.1	1.6
Egalitarian	2.6	3.8	4.5
Self-worth	3.5	4.6	4.6

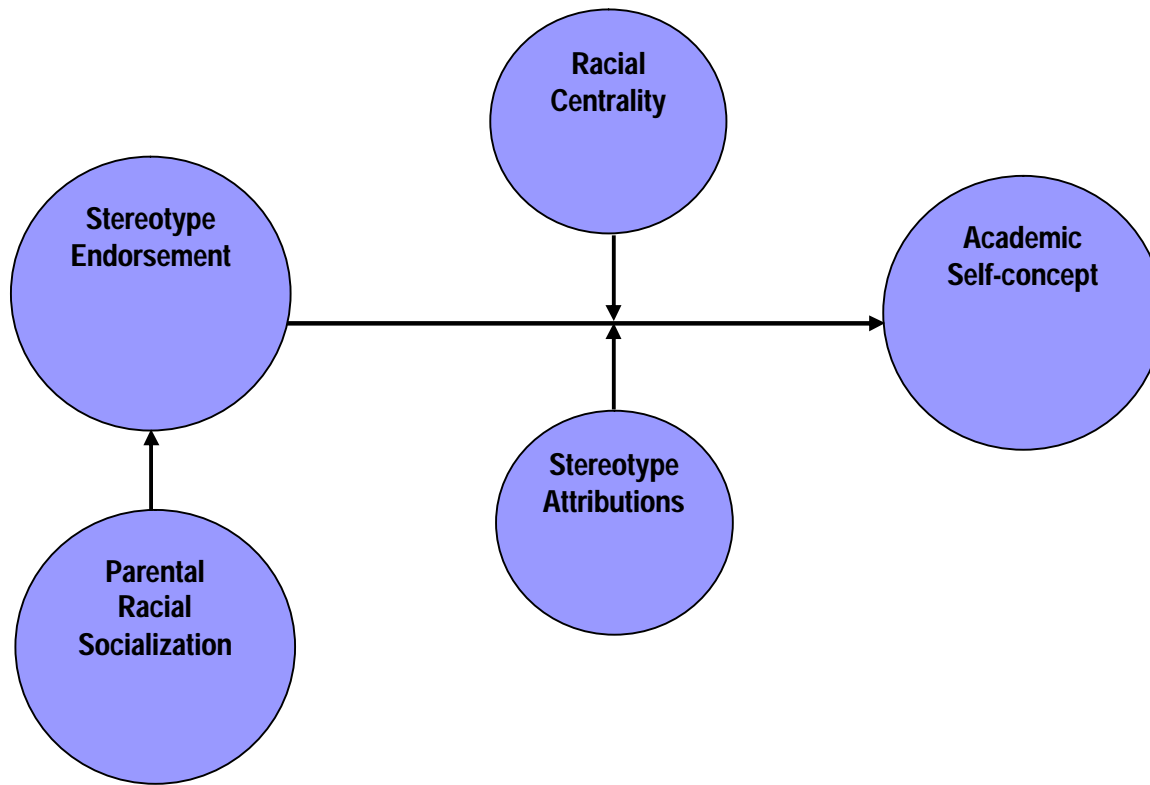


Figure 1. Conceptual Model

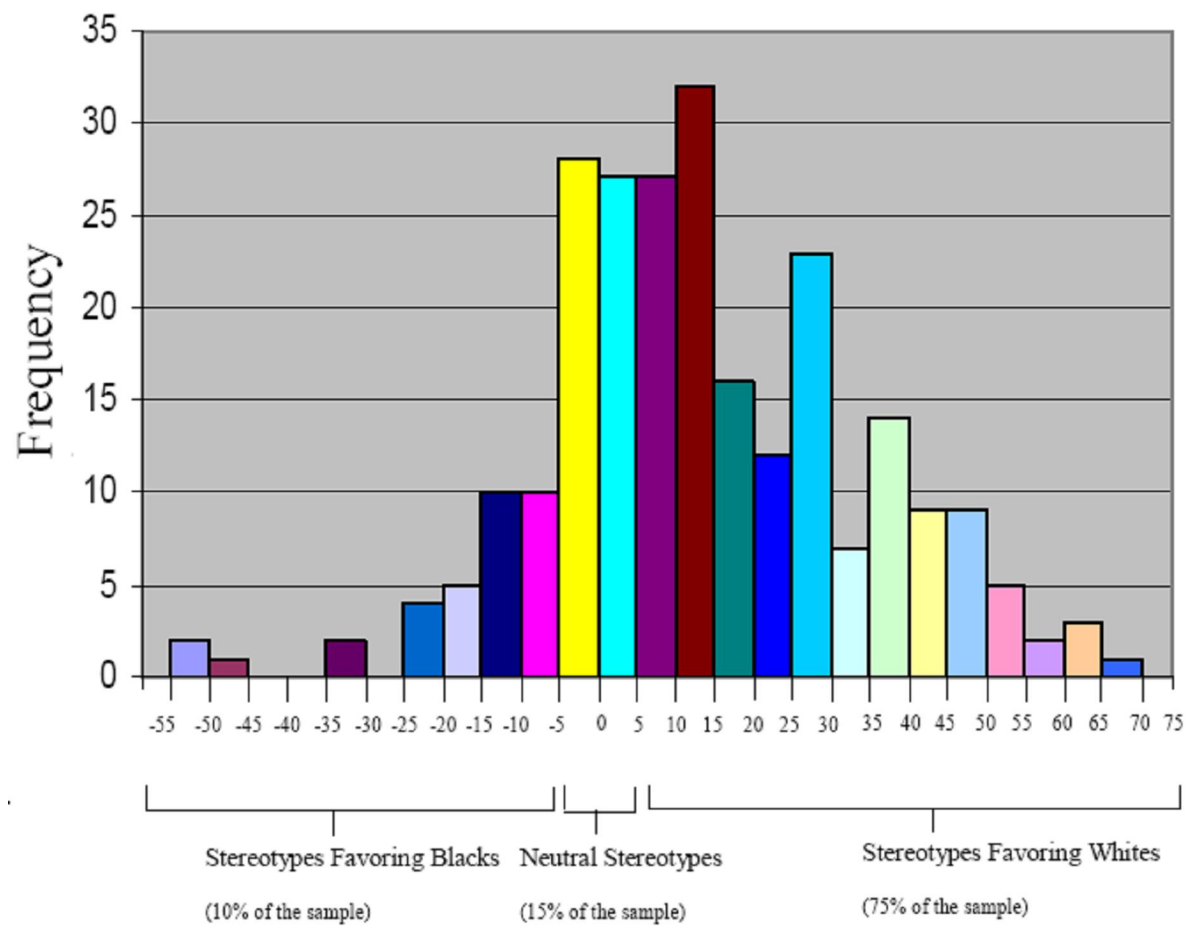


Figure 2. Time 1 Stereotype Endorsement Frequency Distribution

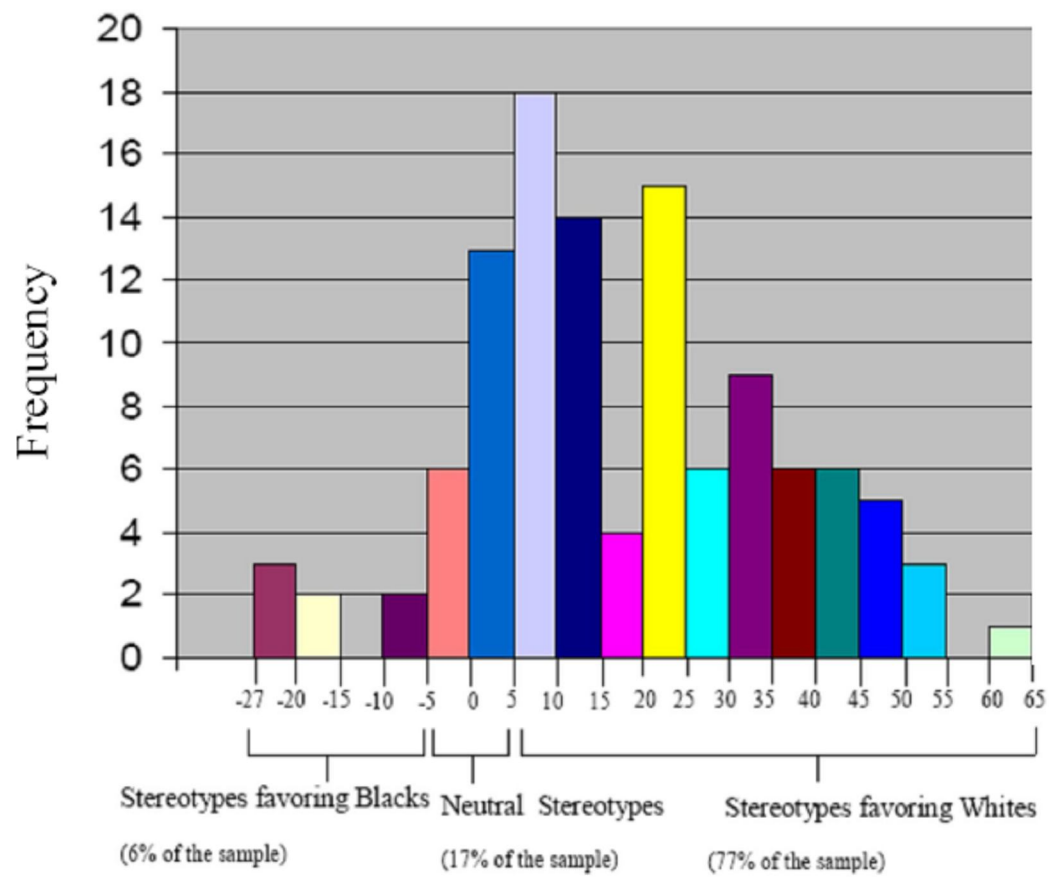


Figure 3. Time 2 Stereotype Endorsement Frequency Distribution

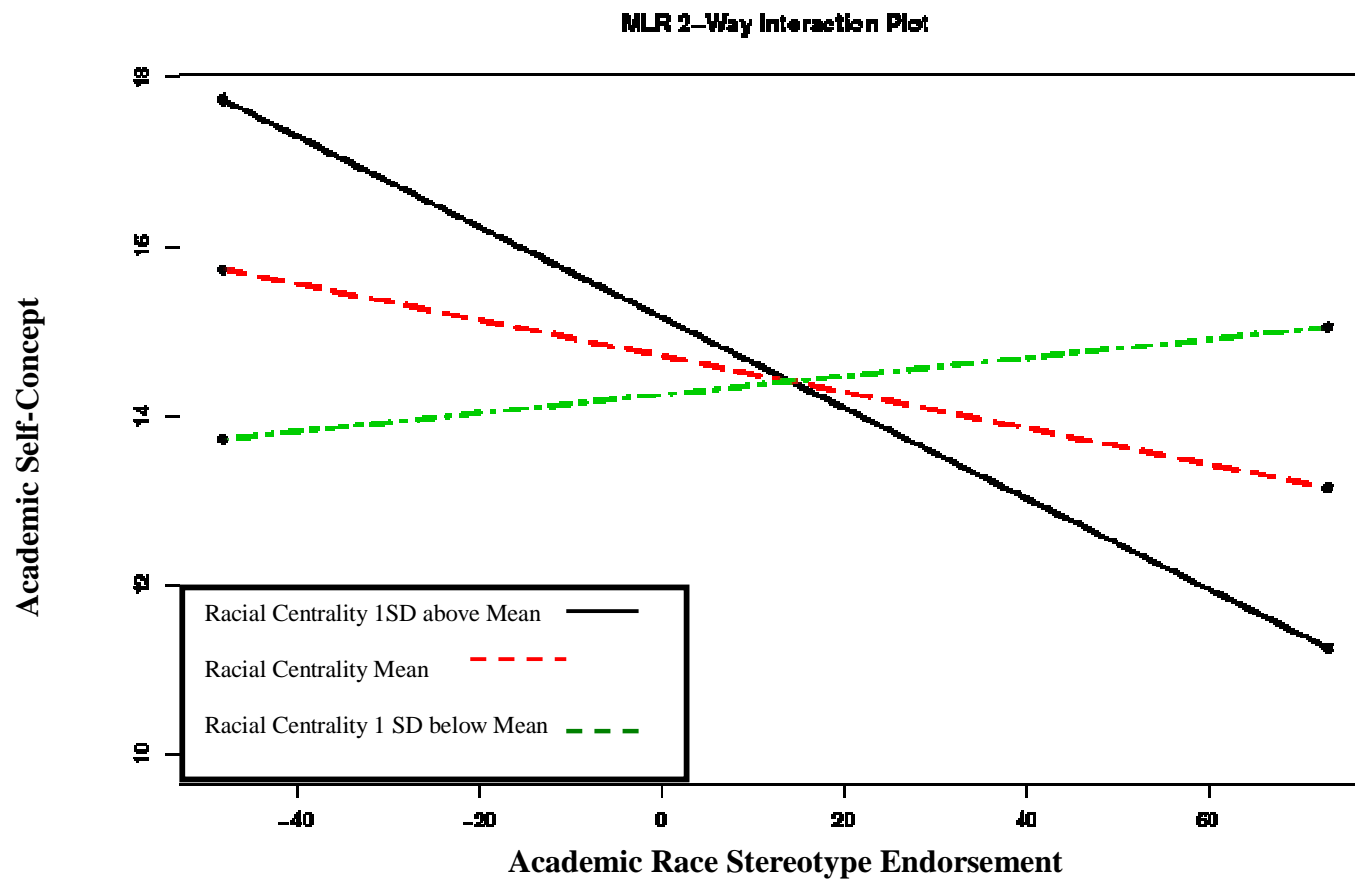


Figure 4. Time 1 Stereotype x Centrality Interaction

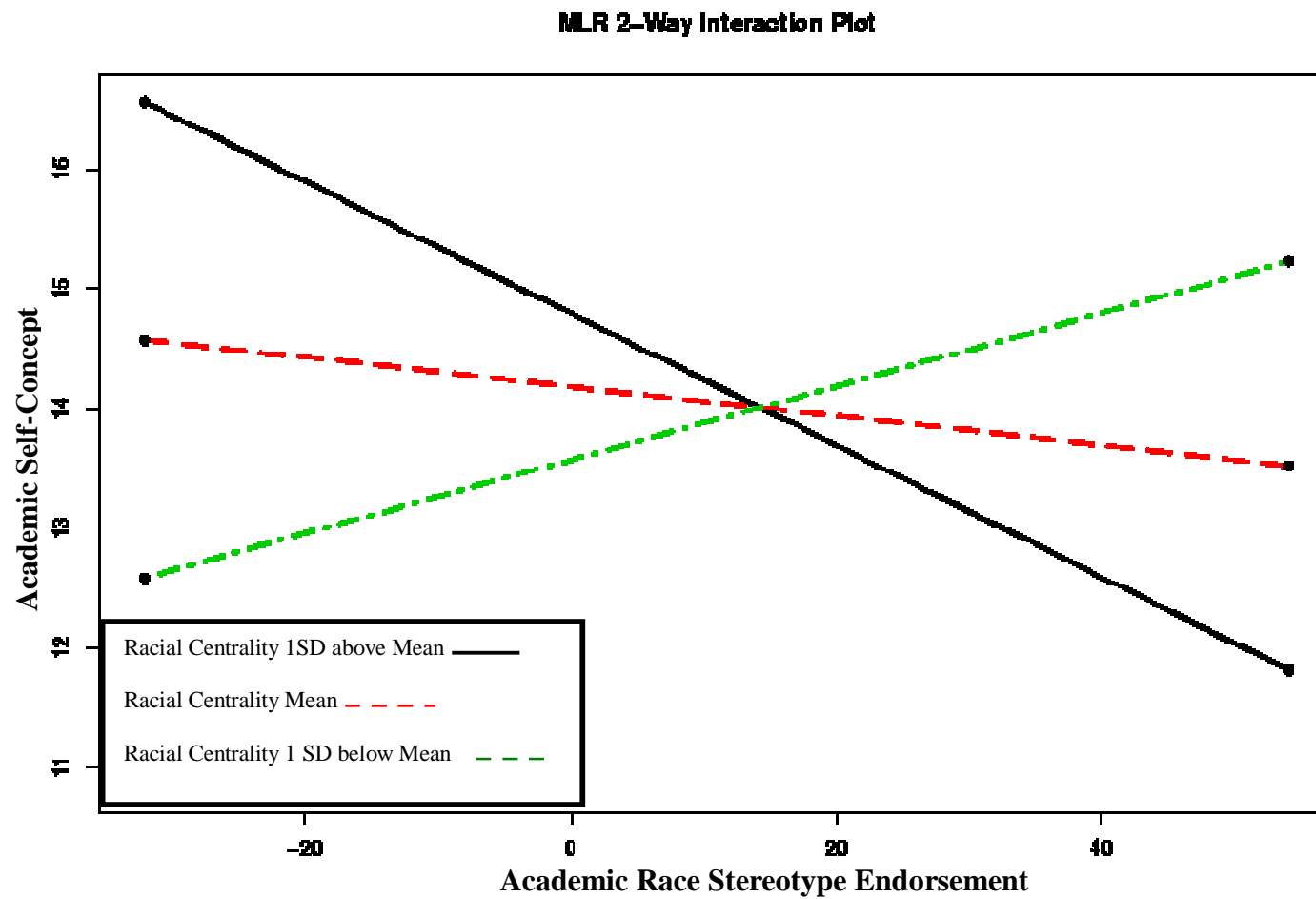


Figure 5. Time 2 Stereotype x Centrality Interaction

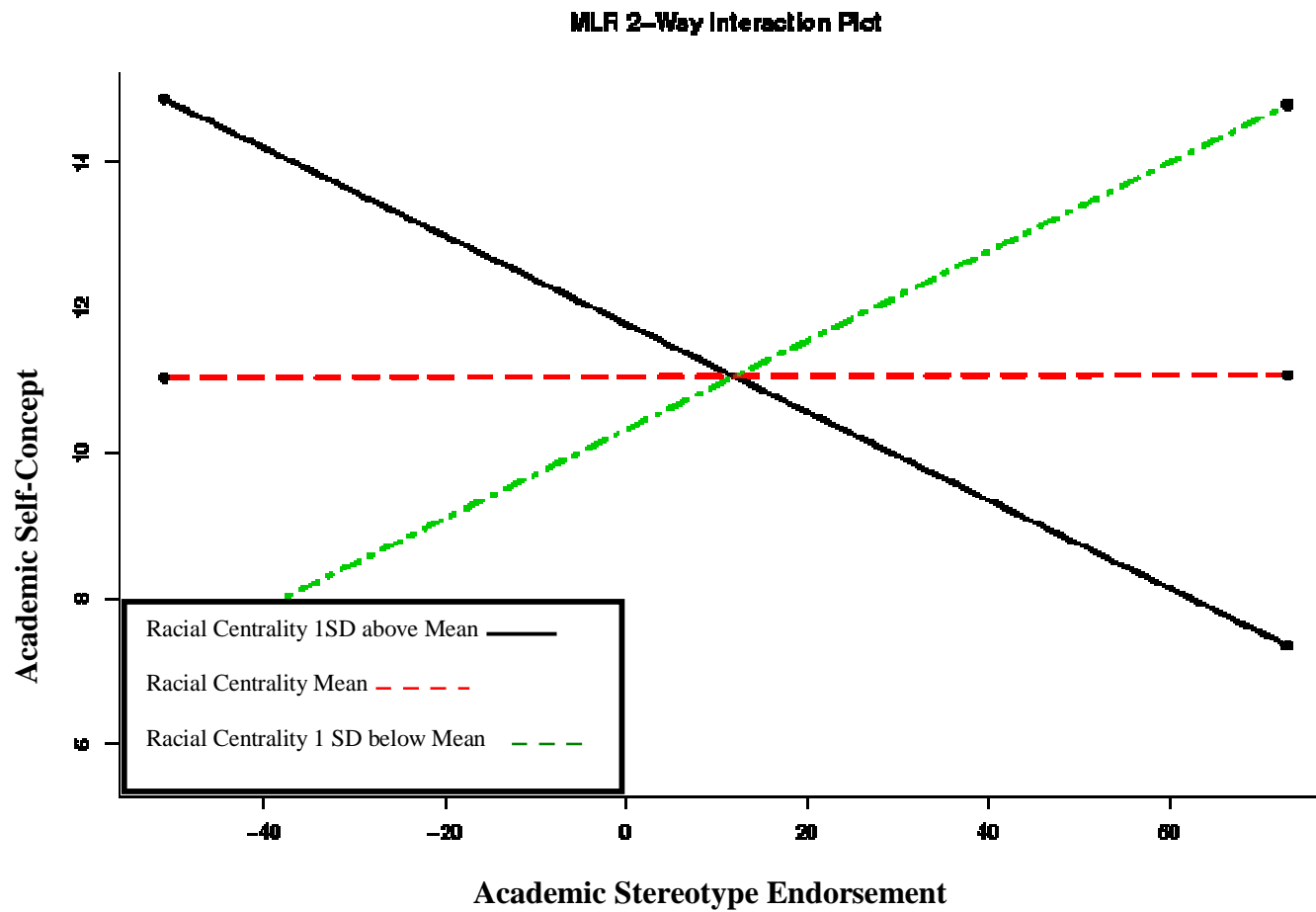


Figure 6. Longitudinal Stereotype x Centrality Interaction

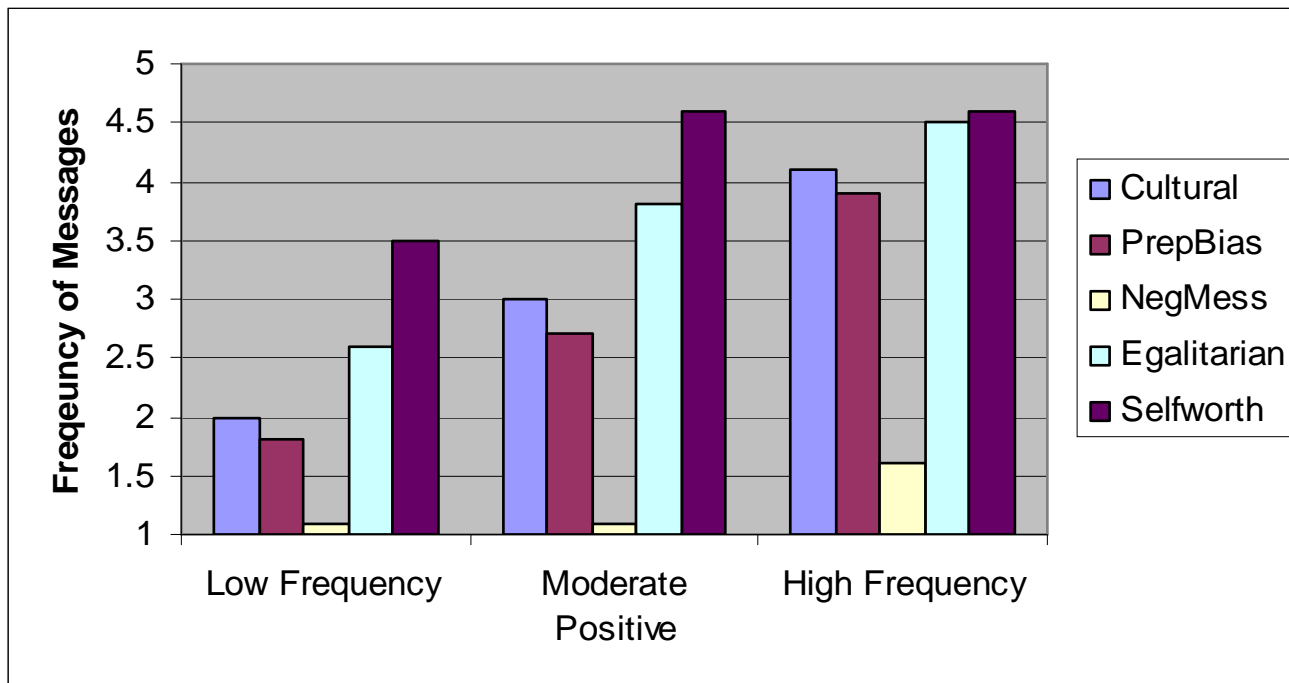


Figure 7: Profiles of Racial Socialization Messages

Appendix A

Adolescent Identity Project

Time 2 Youth Questionnaire
Grade 11



University of North Carolina at Chapel Hill, Department of Psychology

Racial Socialization

Sometimes, parents talk or have discussions with their kids about what it means to be Black. During the past year, how many times have your parents done the following things?

	Never	Once or Twice	3 to 5 Times	6 to 10 Times	More than 10 Times
1. Talked to you about racism.	0	1-2	3-5	6-10	10+
2. Read Black history books to you.	0	1-2	3-5	6-10	10+
3. Said that people might treat you badly due to race.	0	1-2	3-5	6-10	10+
4. Read Black storybooks to you.	0	1-2	3-5	6-10	10+
5. Explained something you saw on TV that showed poor treatment of Blacks.	0	1-2	3-5	6-10	10+
6. Talked to you about Black people's fight for the same rights that other people have.	0	1-2	3-5	6-10	10+
7. Said that people might try to limit you because of race.	0	1-2	3-5	6-10	10+
8. Taken you to Black cultural events.	0	1-2	3-5	6-10	10+
9. Done things to celebrate Black history.	0	1-2	3-5	6-10	10+
10. Talked to you about a different view of things you learned in school.	0	1-2	3-5	6-10	10+
11. Taken you to get Black clothes or hair styles.	0	1-2	3-5	6-10	10+
12. Talked about people being proud to be Black.	0	1-2	3-5	6-10	10+

13. Told you that Black kids must be better than White kids to get the same rewards.	0	1-2	3-5	6-10	10+
14. Talked about the accomplishments of Black individuals.	0	1-2	3-5	6-10	10+
15. Talked about race with someone else when you could overhear what was said.	0	1-2	3-5	6-10	10+
16. Talked to you about race differences in physical features.	0	1-2	3-5	6-10	10+
17. Bought Black toys or games for you.	0	1-2	3-5	6-10	10+
18. Told you that learning about Black history is not that important.	0	1-2	3-5	6-10	10+
19. Told you it is best to act like Whites.	0	1-2	3-5	6-10	10+
20. Told you that because of opportunities today, hardworking Blacks have the same chance to succeed as anyone else.	0	1-2	3-5	6-10	10+
21. Stressed the importance of respecting others, regardless of their race.	0	1-2	3-5	6-10	10+
22. Told you that you should try to have friends of all different races.	0	1-2	3-5	6-10	10+
23. Told you that being Black is nothing to be proud of.	0	1-2	3-5	6-10	10+
24. Told you that you can learn things from people of different races.	0	1-2	3-5	6-10	10+
25. Told you White businesses are more reliable than Black businesses.	0	1-2	3-5	6-10	10+
26. Told you Blacks are not as smart as people of other races.	0	1-2	3-5	6-10	10+

27. Told you to treat others as you would like to be treated.	0	1-2	3-5	6-10	10+
28. Told you that Blacks and Whites should try to understand each other so they can get along.	0	1-2	3-5	6-10	10+
29. Told you that getting a good education is the best way to succeed in life.	0	1-2	3-5	6-10	10+
30. Told you that you are somebody special, no matter what anybody says.	0	1-2	3-5	6-10	10+
31. Told you to be proud of who you are.	0	1-2	3-5	6-10	10+
32. Told you that skin color does not define who you are.	0	1-2	3-5	6-10	10+
33. Told you that you can be whatever you want to be.	0	1-2	3-5	6-10	10+
34. Told you to have self-discipline in order to be successful.	0	1-2	3-5	6-10	10+
35. Told you to treat others as you would like to be treated.	0	1-2	3-5	6-10	10+

Racial Centrality

Each of us is a member of one or more ethnic groups (e.g., Black, Asian, Latino, etc.) Please read each statement below and indicate the extent to which you agree or disagree.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Being Black is an important part of my self-image.	1	2	3	4	5
2. I have a strong sense of belonging with Black people.	1	2	3	4	5
3. I feel close to other Black people.	1	2	3	4	5
4. Most of my friends are Black.	1	2	3	4	5
5. I prefer to read books in which Blacks are the main characters.	1	2	3	4	5
6. I prefer to watch movies or television programs in which Blacks are the main characters.	1	2	3	4	5

VAS Practice Items

On the lines below, put a line (|) showing how well you think you do at each activity. The lines on the scales below show you where the middle is.

1. I think that in **DRAWING** I do this well:

Not well at all ←-----|-----→ very well

2. I think that in **COOKING** I do this well:

Not well at all ←-----|-----→ very well

Group Competence Measure

On the lines below, put a line (|) showing how well you think **BOYS** do at each activity. The lines on the scales below show you where the middle is.

3. I think that in **MATH** boys do this well:

Not well at all ←-----|-----→ very well

4. I think that in **SCIENCE** boys do this well:

Not well at all ←-----|-----→ very well

5. I think that in **READING** boys do this well:

Not well at all ←-----|-----→ very well

6. I think that in **WRITING** boys do this well:

Not well at all ←-----|-----→ very well

7. I think that in **MUSIC** boys do this well:

Not well at all ←-----|-----→ very well

8. I think that in **SPORTS** boys do this well:

Not well at all ←-----|-----→ very well

9. I think that boys' **SCHOOL GRADES** are:

Not good at all ←-----|-----→ very good

10. I think boys are this **SMART**:

Not smart at all ←-----|-----→ very smart

On the lines below, put a line (|) showing how well you think **BLACK CHILDREN** do at each activity. The lines on the scales below show you where the middle is.

11. I think that in **MATH** Black children do this well:

Not well at all ←-----|-----→ very well

12. I think that in **SCIENCE** Black children do this well:

Not well at all ←-----|-----→ very well

13. I think that in **READING** Black children do this well:

Not well at all ←-----|-----→ very well

14. I think that in **WRITING** Black children do this well:

Not well at all ←-----|-----→ very well

15. I think that in **MUSIC** Black children do this well:

Not well at all ←-----|-----→ very well

16. I think that in **SPORTS** Black children do this well:

Not well at all ←-----|-----→ very well

17. I think that Black children's **SCHOOL GRADES** are:

Not good at all ←-----|-----→ very good

18. I think Black children are this **SMART**:

Not smart at all ←-----|-----→ very smart

On the lines below, put a line (|) showing how well you think **GIRLS** do at each activity. The lines on the scales below show you where the middle is.

19. I think that in **MATH** girls do this well:

Not well at all ←-----|-----→ very well

20. I think that in **SCIENCE** girls do this well:

Not well at all ←-----|-----→ very well

21. I think that in **READING** girls do this well:

Not well at all ←-----|-----→ very well

22. I think that in **WRITING** girls do this well:

Not well at all ←-----|-----→ very well

23. I think that in **MUSIC** girls do this well:

Not well at all ←-----|-----→ very well

24. I think that in **SPORTS** girls do this well:

Not well at all ←-----|-----→ very well

25. I think that girls' **SCHOOL GRADES** are:

Not good at all ←-----|-----→ very good

26. I think girls are this **SMART**:

Not smart at all ←-----|-----→ very smart

On the lines below, put a line (|) showing how well you think **WHITE CHILDREN** do at each activity. The lines on the scales below show you where the middle is.

27. I think that in **MATH** White children do this well:

Not well at all ←-----|-----→ very well

28. I think that in **SCIENCE** White children do this well:

Not well at all ←-----|-----→ very well

29. I think that in **READING** White children do this well:

Not well at all ←-----|-----→ very well

30. I think that in **WRITING** White children do this well:

Not well at all ←-----|-----→ very well

31. I think that in **MUSIC** White children do this well:

Not well at all ←-----|-----→ very well

32. I think that in **SPORTS** White children do this well:

Not well at all ←-----|-----→ very well

33. I think that White children's **SCHOOL GRADES** are:

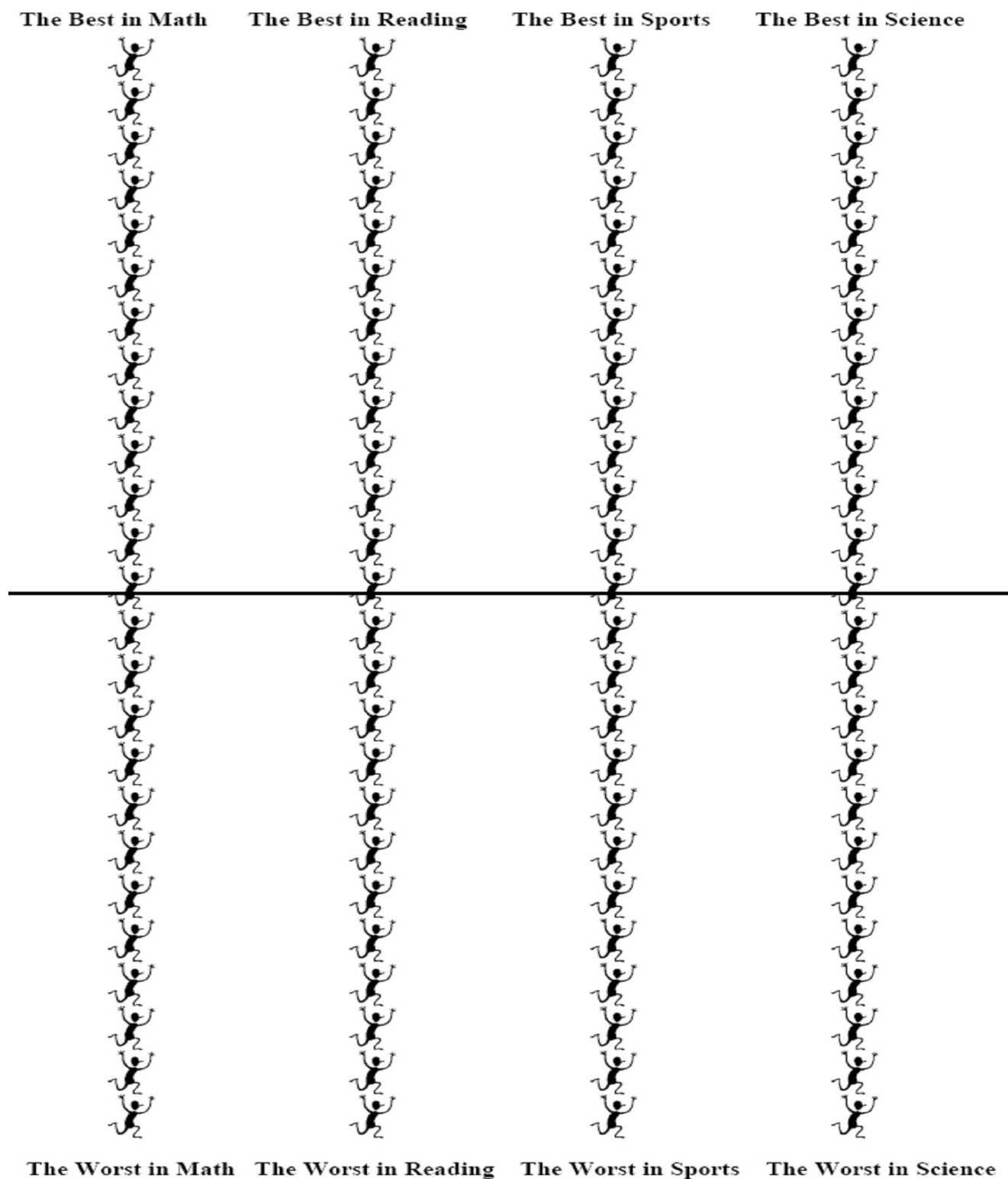
Not good at all ←-----|-----→ very good

34. I think White children are this **SMART**:

Not smart at all ←-----|-----→ very smart

Perceived Competence

Each column of people represents a group of students. People near the top of each column are the best in the category listed, people at the line are average, and people near the bottom are the worst in the category listed. For each category, circle the person that shows where YOU are in comparison to other people in your grade.



The Best in Writing

The Best at Making
Friends

The Best Grades

The Best in Music

The Smartest

The Worst in Writing

The Worst at Making
Friends

The Worst Grades

The Worst in Music

The Least Smart

Attribution Scale

Some Black students are very smart and are at the top of their classes. However sometimes Black students fail. Please rate your agreement or disagreement with the following statements that give reasons why some Black fail.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. Black kids don't have as many advantages as Whites that help them at school.	1	2	3	4
2. Teachers expect White kids to do better in school than Blacks.	1	2	3	4
3. Because of their race, Black kids are usually placed in lower achieving classes than Whites.	1	2	3	4
4. White students usually go to schools with more resources (e.g., computers, books, lab equipment) than Black students.	1	2	3	4
5. Black students are often discouraged from being in Honors or AP classes.	1	2	3	4
6. Black kids don't work as hard as White kids.	1	2	3	4
7. Black students don't study very much.	1	2	3	4
8. Studying a lot is not cool.	1	2	3	4
9. Black students don't care as much about school success as White students.	1	2	3	4
10. For Black students, doing well in school is not important in order to become successful.	1	2	3	4
11. White students are smarter than Black students.	1	2	3	4
12. Black teenagers are better at sports and music than at school work.	1	2	3	4

Adolescent Identity Project

Time 2 Parent Questionnaire



University of North Carolina at Chapel Hill, Department of Psychology

Racial Socialization

Sometimes, parents talk or have discussions with their kids about what it means to be Black. During the past year, how often have you talked about or done the following items with your child?

	Never	Once or Twice	3 to 5 Times	6 to 10 Times	More than 10 Times
1. Talked to your child about racism.	0	1-2	3-5	6-10	10+
2. Told your child people might treat him/her badly due to race.	0	1-2	3-5	6-10	10+
3. Talked to your child about Black literature.	0	1-2	3-5	6-10	10+
4. Explained to your child something he or she saw on TV that showed poor treatment of Blacks.	0	1-2	3-5	6-10	10+
5. Talked to your child about the fight for equality among Blacks.	0	1-2	3-5	6-10	10+
6. Told your child people might try to limit him/her because of race.	0	1-2	3-5	6-10	10+
7. Taken your child to Black cultural events.	0	1-2	3-5	6-10	10+
8. Done things to celebrate Black history.	0	1-2	3-5	6-10	10+
9. Talked to your child about a different view of things they learned in school.	0	1-2	3-5	6-10	10+
10. Talked about being proud to be Black.	0	1-2	3-5	6-10	10+
11. Told your child s/he must be better than White kids to get the same rewards.	0	1-2	3-5	6-10	10+
12. Talked about being proud of the accomplishments of Black individuals.	0	1-2	3-5	6-10	10+
13. Bought your child Black movies or music.	0	1-2	3-5	6-10	10+
14. Told your child that learning about Black history is not that important.	0	1-2	3-5	6-10	10+
15. Told your child it is best to act like Whites.	0	1-2	3-5	6-10	10+
16. Told your child that because of opportunities today, hardworking Blacks have the same chance to succeed as anyone else.	0	1-2	3-5	6-10	10+

17. Stressed to your child the importance of respecting others, regardless of their race.	0	1-2	3-5	6-10	10+
18. Told your child that he/she should try to have friends of all different races.	0	1-2	3-5	6-10	10+
19. Told your child that being Black is nothing to be proud of.	0	1-2	3-5	6-10	10+
20. Told your child that you can learn things from people of different races.	0	1-2	3-5	6-10	10+
21. Told your child that White businesses are more reliable than Black businesses.	0	1-2	3-5	6-10	10+
22. Told your child that Blacks are not as smart as people of other races.	0	1-2	3-5	6-10	10+
23. Told your child to treat others as he/she would like to be treated.	0	1-2	3-5	6-10	10+
24. Told your child that Blacks and Whites should try to understand each other so they can get along.	0	1-2	3-5	6-10	10+
25. Told your child that getting a good education is the best way to succeed in life.	0	1-2	3-5	6-10	10+
26. Told your child that he/she is somebody special, no matter what anybody says.	0	1-2	3-5	6-10	10+
27. Told your child to be proud of who he/she is.	0	1-2	3-5	6-10	10+
28. Told your child that skin color does not define who they are.	0	1-2	3-5	6-10	10+
29. Told your child that he/she can be whatever they want to be.	0	1-2	3-5	6-10	10+
30. Told your child to have self-discipline in order to be successful.	0	1-2	3-5	6-10	10+

General Information Form

Please answer the following questions. The term “target child” refers to your son or daughter who participated in our project.

1. What is your relationship to the target child?

- _____ 1) Mother
- _____ 2) Father
- _____ 3) Grandparent (SPECIFY _____)
- _____ 4) Other relative (SPECIFY _____)
- _____ 5) Guardian (SPECIFY _____)
- _____ 6) Other (SPECIFY _____)

2. How many adults live in your household? _____

(check all that apply)

- _____ 1) Child’s mother (or stepmother)
- _____ 2) Child’s father (or stepfather)
- _____ 3) Romantic partner of parent
- _____ 4) Child’s grandparent
- _____ 5) Other adult relative (SPECIFY _____)
- _____ 6) Other adult non-relative (SPECIFY _____)

3. How many children live in your household? _____

4. Which of these best describes your race?

- _____ 1) African American/Black
- _____ 2) Caucasian/White
- _____ 3) Hispanic/Latino(a)
- _____ 4) Asian American
- _____ 5) Native American/ Indian
- _____ 6) Other (SPECIFY _____)

5. Which of these best describes the race of your child in our study?

- _____ 1) African American/Black
- _____ 2) Caucasian/White
- _____ 3) Hispanic/Latino(a)
- _____ 4) Asian American
- _____ 5) Native American/ Indian
- _____ 6) Other (SPECIFY _____)

6. Which of these best describes your marital status?

- ☐ 1) Married (and living together)
- ☐ 2) Married, but separated
- ☐ 3) Divorced
- ☐ 4) Widowed
- ☐ 5) Single, Never Married

7. Please indicate your household income before taxes. You may either report your YEARLY or WEEKLY income.

YEARLY:

- ☐ Under \$10,000 yearly
- ☐ \$10,000 to \$19,999 yearly
- ☐ \$20,000 to \$29,999 yearly
- ☐ \$30,000 to \$39,999 yearly
- ☐ \$40,000 to \$49,999 yearly
- ☐ \$50,000 to \$59,999 yearly
- ☐ \$60,000 to \$69,999 yearly
- ☐ \$70,000 to \$79,999 yearly
- ☐ \$80,000 to \$89,999 yearly
- ☐ \$90,000 to \$99,999 yearly
- ☐ Over \$100,000 yearly

OR

WEEKLY:

- ☐ Under \$200 weekly
- ☐ \$200 to \$399 weekly
- ☐ \$400 to \$599 weekly
- ☐ \$600 to \$799 weekly
- ☐ \$800 to \$999 weekly
- ☐ \$1000 to \$1199 weekly
- ☐ \$1200 to \$1399 weekly
- ☐ \$1400 to \$1599 weekly
- ☐ \$1600 to \$1799 weekly
- ☐ \$1800 to \$1999 weekly
- ☐ Over \$2000 weekly

8. How far did you go in school?

- ☐ 1) Less than high school
- ☐ 2) Some high school
- ☐ 3) High school graduate
- ☐ 4) GED
- ☐ 5) Some technical school
- ☐ 6) Some college
- ☐ 7) Junior College Degree (AA, AS)
- ☐ 8) College Graduate (BA, BS)
- ☐ 9) Master's Degree
- ☐ 10) Doctoral Degree (Ph.D., MD, JD etc.)

9. How far did your spouse or partner go in school?

- _____ 1) Less than high school
- _____ 2) Some high school
- _____ 3) High school graduate
- _____ 4) GED
- _____ 5) Some technical school
- _____ 6) Some college
- _____ 7) Junior College Degree (AA, AS)
- _____ 8) College Graduate (BA, BS)
- _____ 9) Master's Degree
- _____ 10) Doctoral Degree (Ph.D., MD, JD, etc.)

10. What is your current work status?

- _____ 1) Working, full-time
- _____ 2) Working, part-time
- _____ 3) Full-time parent/homemaker
- _____ 4) Not working

11. What is your current occupation? _____

If you are currently unemployed, please indicate your most recent occupation.

12. What is your spouse/partner's current occupation? _____

If he/she is currently unemployed indicate his or her most recent occupation.

13. What is the birth date, month _____ day _____
year _____ of the child who participated in our study?

Thank you very much!
We greatly appreciate your help.



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