# CHILD DEVELOPMENT



Child Development, July/August 2012, Volume 83, Number 4, Pages 1196–1212

## Natural Mentors, Racial Identity, and Educational Attainment Among African American Adolescents: Exploring Pathways to Success

Noelle M. Hurd *University of Michigan* 

Bernadette Sánchez

DePaul University

Marc A. Zimmerman and Cleopatra H. Caldwell *University of Michigan* 

The present study explored how relationships with natural mentors may contribute to African American adolescents' long-term educational attainment by influencing adolescents' racial identity and academic beliefs. This study included 541 academically at-risk African American adolescents transitioning into adulthood. The mean age of participants at Time 1 was 17.8 (SD = .64) and slightly over half (54%) of study participants were female. Results of the current study indicated that relationships with natural mentors promoted more positive long-term educational attainment among participants through increased private regard (a dimension of racial identity) and stronger beliefs in the importance of doing well in school for future success. Implications of these findings and directions for future research are discussed.

Researchers have found that African American students face more achievement barriers and display less positive educational outcomes in comparison to White students (Kerpelman, Eryigit, & Stephens, 2007). Specifically, African American students have lower high school graduation rates (National Center for Educational Studies, 2002), as well as lower rates of enrollment in and graduation from college, in comparison to their White counterparts (Wilds, 2000). These disparities in educational attainment translate into higher rates of unemployment, poverty, and mental and physical health problems among African Americans compared to Whites (Brown & Jones, 2004). Initially, deficit models abounded as researchers attempted to explain this More gap. recently, researchers have documented the heterogeneity in academic achievement among African American students and have explored factors that may contribute to positive educational outcomes within this group (Gutman & Midgley, 2000; Sirin & Rogers-Sirin, 2005; Zand & Thomson, 2005). Among the factors that have been explored, racial identity has emerged as a construct that has been predictive of African American middle and late adolescents' academic outcomes (Chavous et al., 2003; Sanders, 1997; Ward, 1990). Researchers have, for example, found that stronger racial group affiliation and connectedness may promote more academic motivation among African American middle and high school students (Perry, Steele, & Hilliard, 2003; Spencer, Noll, Stoltzfus, & Harpalani, 2001). This increased motivation may stem from a heightened awareness of the institutional barriers African Americans have traditionally faced in accessing education and a desire to work hard in school to overcome these barriers. Furthermore, feeling connected to other African Americans may help African American adolescents reject the negative perceptions of their group held by members of other racial and ethnic groups (Ward, 1990).

#### Racial Identity and Educational Outcomes

Sellers, Smith, Shelton, Rowley, and Chavous (1998) have defined racial identity as a multidimensional construct that represents individuals' perceptions of the importance and meaning of race in their lives. In order to measure this complex construct, Sellers, Smith, et al. (1998) developed the

This research was supported by the National Institute on Drug Abuse, Grant DA07484 to the third author.

Correspondence concerning this article should be addressed to Noelle Hurd, Center for the Study of Black Youth in Context, University of Michigan, 610 E. University Ave., Room 1323, Ann Arbor, MI 48109. Electronic mail may be sent to nhurd@umich.edu.

multidimensional model of racial identity (MMRI). The MMRI includes four dimensions of African American racial identity: the centrality of race to one's identity, regard held for the racial group, the salience of race to one's identity, and the ideology associated with the identity. As researchers have begun to investigate relations between the various components of racial identity and educational outcomes, they have found that racial centrality and regard for one's racial group have demonstrated relevance to academic achievement among African American adolescents. Racial centrality represents the degree to which an individual normatively defines himself or herself in terms of his or her race. Regard for one's racial group includes both the individual's positive or negative perceptions of his or her racial group and his or her membership in that group (private regard) as well as the individual's perceptions of how society perceives his or her racial group (public regard).

Researchers have found an association between higher racial centrality and more positive academic performance among African American college students (Sellers, Chavous, & Cooke, 1998) indicating that seeing race as a central part of one's identity may contribute positively to one's academic performance. Relating to private regard, researchers have documented relations between a strong sense of group pride (private regard) and more positive academic attitudes and behavior among African American eighth graders (Sanders, 1997) and African American adolescents transitioning into adulthood (Chavous et al., 2003). Thus, feeling good about one's racial group may inspire African American adolescents to achieve academically.

Findings concerning public regard and African American adolescents' educational outcomes have been mixed. Theorists have postulated that when African American youth perceive that their racial group is devalued by the larger society, they are more likely to perceive societal barriers to their academic success (Fordham & Ogbu, 1986). Therefore, when African American adolescents perceive low public regard, they may engage with school less because they are less likely to see education as an opportunity for upward mobility. Mickelson (1990) found, for example, that African American early adolescents who perceived greater social barriers to educational success demonstrated lower school efficacy and engagement. Chavous et al. (2003) also found that African American late adolescents who reported perceptions of low public regard demonstrated more negative academic attitudes and lower educational attainment as they transitioned into

adulthood. Yet, this finding was only for adolescents who also endorsed low centrality and private regard. Participants who endorsed low public regard but high centrality and private regard demonstrated more positive academic attitudes and attainment. Thus, among African American adolescents who hold their racial group in high regard, feel connected to others in their group, and have an awareness of societal biases against their group, achieving in school may be seen as an opportunity to overcome negative stereotypes of their group held by society (Chavous et al., 2003; Sanders, 1997). In either case, believing that school achievement is necessary for future success appears to be a motivational belief that contributes to improved educational outcomes. Research on motivation supports this claim, suggesting that students' perceptions of the purpose, meaning, and value of a task influence how engaged they are with the task (Wigfield & Eccles, 1992). Moreover, researchers have documented a relation between seeing school as an opportunity for social mobility and improved academic performance among ethnic minority 12th graders (Colón & Sánchez, 2010).

Beyond testing direct relations between racial identity constructs and African American adolescents' school-related outcomes, researchers have also begun to explore the possibility that racial centrality may moderate the relation between regard and academic outcomes. Researchers have found, for example, that the relations between African American college students' private and public regard and their academic involvement and achievement were stronger among participants with higher reported racial centrality (Chavous, 2000; Sellers, Chavous, et al., 1998). In other studies, researchers have only found relations between private regard and psychosocial outcomes among African American high school and college students with high centrality (Rowley, Sellers, Chavous, & Smith, 1998). Accordingly, the potential for racial centrality to moderate the relation between regard and adolescents' psychosocial outcomes appears to be an important consideration for future research on racial identity and African American adolescents' academic achievement.

In sum, researchers are starting to uncover relations between African American adolescents' racial identities and their academic outcomes. Yet, researchers are only beginning to explore the factors that contribute to African American adolescents' racial identities. Hence, in addition to continuing to establish the potential effects of racial identity on adolescents' educational outcomes, more studies that focus on predictors of racial identity are needed. To date, research findings have suggested that racial socialization influences African American middle and high school students' racial identities (Neblett, Chavous, Nguyên, & Sellers, 2009; Neblett, Smalls, Ford, Nguyên, & Sellers, 2009; Stevenson, Reed, Bodison, & Bishop, 1997). Further, researchers have found that families are the primary source of racial socialization for African American youth (Harrison, Wilson, Pine, Chan, & Buriel, 1990; Thornton, Chatters, Taylor, & Allen, 1990). Researchers also have found that family support may have some bearing on racial attitudes and racial identity (Caldwell, Zimmerman, Bernat, Sellers, & Notaro, 2002; Stevenson, Reed, & Bodison, 1996). Specifically, Caldwell et al. (2002) documented relations between maternal support and racial centrality and private regard among African American 12th graders. These findings suggest a need for continued research on the potential influences of relationships with important adults on African American adolescents' racial identities. Although researchers have begun to consider parental influences, the role of nonparental adults in contributing to adolescents' racial identity development has been largely ignored.

#### Natural Mentors and Racial Identity

Relationships formed between supportive nonparental adults and youth are often referred to as mentoring relationships. Traditionally, mentors have been defined as experienced individuals who support, guide, and encourage their less experienced mentees (Zimmerman, Bingenheimer, & Notaro, 2002). Furthermore, scholars in the mentoring literature have made a distinction between formal and informal (natural) mentors. Formal mentors are those who are assigned to youth through a mentoring program such as Big Brothers Big Sisters (DuBois, Holloway, Valentine, & Cooper, 2002). Typically, youth do not have a connection with these mentors prior to entering the program and youth are often not given the opportunity to choose who this mentor will be.

Natural mentors, conversely, are adults from adolescents' preexisting social networks. Natural mentoring relationships form through mutual selection by the mentor and mentee (Zimmerman, Bingenheimer, & Behrendt, 2005). A thorough comparison of these two types of mentoring relationships has not been conducted; however, researchers have speculated that natural mentoring relationships may be longer lasting due to the fact that they

are formed among individuals who are tied through a social network (e.g., extended kin, neighborhood community) and develop organically through a mutual connection (Hurd & Zimmerman, 2010b; Zimmerman et al., 2005). This may be an advantage of natural mentoring relationships given that researchers have found connections between longer lasting mentoring relationships and more positive youth outcomes (Grossman & Rhodes, 2002; McLearn, Colasanto, & Schoen, 1998).

Although researchers have found associations between natural mentoring relationships and a variety of positive outcomes among adolescents and emerging adults (DuBois & Silverthorn, 2005; Hurd & Zimmerman, 2010a, 2010b; Rhodes, Ebert, & Fischer, 1992; Sánchez, Esparza, & Colón, 2008), few researchers have empirically tested a connection between mentoring and racial identity. Rhodes (2005) proposed a model of mentoring that includes identity development as a mediating variable between mentoring relationships and positive youth outcomes. Accordingly, adolescents' internalizations might change as they identify with their mentors or see them as role models, yielding changes in their sense of identity and social roles (Rhodes, 2005). Additionally, consistent with Cooley's (1902) construct of the looking-glass self, mentors may act as social mirrors into which youth look to form views of themselves. The opinions of their mentors that are reflected back at them may become integrated into mentees' sense of self and incorporated into their identity. Finally, mentors might provide their mentees with social opportunities that facilitate their identity development (Rhodes, 2005).

Specific to racial identity, it is possible that mentors, particularly natural mentors (who are often extended kin or adults from adolescents' neighborhoods), affect African American adolescents' racial identity development through their participation in the racial socialization process. Although research on racial socialization has primarily focused on parents as the socializing agents (Neblett, Chavous, et al., 2009), researchers suggest that other adult family members may play an equally important role in this process (Harrison et al., 1990; Stevenson, 1995). In fact, researchers have found that the potential effects of racial socialization messages on African Americans' racial identities may be more enduring when these messages originate from nonparental adult family members as opposed to parental figures (Sanders Thompson, 1994). Moreover, extended family, fictive kin (nonfamily individuals with family-like bonds), and adults from the community have a history of playing a significant role in raising African American youth (Hill, 1972; Stack, 1974). Given that racial socialization is often an adaptive strategy for members of ethnic minority groups living in the United States (Harrison et al., 1990), it is reasonable to expect that nonparental adults in adolescents' lives have contributed to this process. Because natural mentors are nonparental adults to whom adolescents feel especially connected, they may have increased opportunities to communicate racial socialization messages to their mentees.

Beyond contributing to African American adolescents' racial identity development via racial socialization, natural mentors may contribute to adolescents' racial identity formation through the provision of social support. Stevenson et al. (1996), for example, found that adolescents with higher levels of family support reported more positive racial socialization beliefs. This finding suggests that adolescents who feel supported may have more opportunities to explore and develop their racial identities in comparison to adolescents with lower levels of support. Therefore, relationships with natural mentors may contribute to adolescents' racial identity development via the provision of social support.

Despite the suggested connection between natural mentors and adolescents' racial identity development, few researchers have empirically investigated this association. Yet, findings from studies with African American adolescents suggest that important adults in their lives may shape their ethnic identities. Blash and Unger (1995), for example, found that having meaningful relationships with adults active in the African American community predicted 16- to 18-year-old African American male adolescents' ethnic identities. Furthermore, researchers have documented associations between relationships with important familial and nonfamilial adults (e.g., role models and formal mentors) and ethnic identity among ethnic minority youth. Kaplan, Turner, Piotrowski, and Silbert (2009) found that Latina middle school students who were assigned to and met regularly with a Latina college student mentor for 1 academic year displayed higher levels of ethnic identity at the end of the 1-year mentoring program. Yancey, Siegel, and McDaniel (2002) found that 12- to 17-year-old adolescents of color who identified a role model had stronger ethnic identities in comparison to their counterparts who did not have a role model. Further, adolescents who knew their role models had a stronger ethnic identity than those who did not personally know their role models. Collectively, these findings suggest that important nonparental adults

may influence the ways adolescents of color identify with their race and ethnicity. Also, these findings call for additional research attention to the potential of supportive relationships with nonparental adults (i.e., natural mentors) to influence multiple dimensions of adolescents' racial and ethnic identities.

## Natural Mentors and Educational Outcomes

Given that Rhodes's (2005) model proposes that mentoring promotes positive youth outcomes via identity development, racial identity may mediate the association between natural mentoring and adolescents' educational outcomes. To date, researchers have documented a positive association between natural mentor presence and educational outcomes among a variety of adolescent populations. Zimmerman et al. (2002) found natural mentor presence was associated with more positive attitudes toward school among urban African American 12th graders. Klaw, Rhodes, and Fitzgerald (2003) assessed the potential effects of natural mentoring relationships on academic outcomes among 11- to 19-year-old, unmarried, African American adolescent mothers and found that participants who reported long-term (i.e., 2-year) relationships with natural mentors were 3.5 times more likely to remain enrolled in school or graduate than participants who did not possess a mentor throughout the 2-year study. DuBois and Silverthorn (2005) also investigated potential long-term natural mentoring effects on adolescents' educational outcomes in a nationally representative sample of adolescents transitioning into adulthood. They found that participants who reported having a natural mentor at any time since the age of 14 had a greater likelihood of completing high school and attending college. Although sophisticated in their approaches to investigating the role of natural mentoring in adolescents' educational outcomes, researchers have yet to explore the underlying processes (i.e., mediating variables) that may explain the associations found between natural mentor presence and adolescents' academic outcomes. Informed by Rhodes's mentoring model, mentoring research that includes an assessment of the underlying processes that translate into more positive youth outcomes is needed to improve our understanding of why and how these relationships may yield benefits to adolescents.

## Current Study

We explored whether relationships with natural mentors may influence adolescents' attitudes about school and subsequent educational attainment via adolescents' racial identity beliefs. Our theoretical model that guided this study is presented in Figure 1. Based on Rhodes's (2005) mentoring model and previous research findings indicating family processes (e.g., support and racial socialization) are related to African American adolescents' multidimensional racial identities (Caldwell et al., 2002; Stevenson et al., 1996), we hypothesized that natural mentor presence would be associated with higher levels of both private regard and racial centrality and lower levels of public regard. In other words, we expected that natural mentors would help African American late adolescents to see their race as a central part of their identity, feel positively about themselves and other members of their race, and raise their awareness of the barriers and challenges they may face as a result of the biases that other racial groups hold against their race (i.e., societal racism). Whether through intentional racial socialization on the mentor's part or via the provision of a supportive relationship that allows adolescents to explore their racial identity, we expected that natural mentors would contribute to an adaptive set of racial identity beliefs (Chavous et al., 2003) that could promote more positive educational outcomes among their adolescent mentees.

We also hypothesized that having a natural mentor would be both directly and indirectly related to participants' (a) beliefs about the importance of school for future success and (b) long-term educational attainment through adolescents' racial identity beliefs. Researchers have documented associations between natural mentors and more positive attitudes toward school (Zimmerman et al., 2002) and educational attainment (DuBois & Silverthorn, 2005; Klaw et al., 2003) among older adolescents and emerging adults. Yet, this is one of the first studies to explore how adolescents' racial identity beliefs may mediate these previously documented associations between natural mentoring relationships and youths' educational outcomes. We hypothesized positive direct effects of natural mentor presence on participants' beliefs in the importance of school for future success and future educational attainment. We also hypothesized positive indirect effects of natural mentor presence on adolescents' educational outcomes via private regard and centrality. We expected that natural mentor presence would have a negative direct effect on public regard and lower levels of public regard would motivate youth to see school as an opportunity to work hard to overcome negative perceptions of their group held by others (Chavous et al., 2003), yielding stronger beliefs in the importance of school for future success and higher levels of subsequent educational attainment.

We also planned to test a moderating hypothesis for racial centrality. Given that older adolescents and emerging adults who see their race as a central part of their identity have been found to be more likely to have their academic outcomes influenced

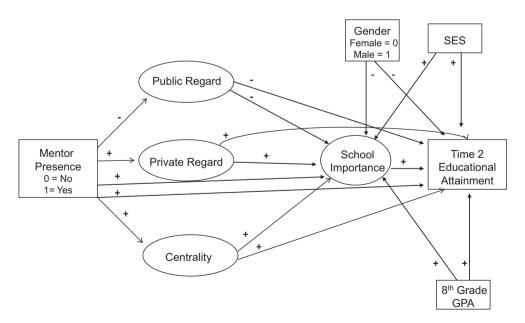


Figure 1. Theoretical model for the direct and indirect influences of natural mentor presence on adolescents' beliefs in the importance of school for future success and Time 2 educational attainment via adolescents' racial identity beliefs (public regard, private regard, and centrality).

by their beliefs about private and public regard (Chavous, 2000; Sellers, Chavous, et al., 1998), we hypothesized that the relations between adolescents' private and public regard and their beliefs in the importance of school for future success and long-term educational attainment would be stronger among participants who reported higher levels of racial centrality.

#### Method

## **Participants**

The study sample included 541 African American adolescents (54% female) who participated in a larger longitudinal study of high school dropout. Study inclusion criteria included an eighth-grade grade point average (GPA) of 3.0 or lower and the absence of an emotional or developmental disability. Participants were interviewed during their freshman year of high school (Wave 1) and then at 1-year intervals across the next 3 years (Waves 2–4). Participants who dropped out of high school were still contacted and included in the study. Wave 5 data were collected 2 years after Wave 4 and then data were collected at 1-year intervals across the subsequent 3 years (Waves 6-8). In our analyses, we included participants who participated in Wave 4 (Time 1 for the current study; year: 1998) and who had reported educational attainment at least once during Wave 6, Wave 7, or Wave 8 (Time 2 for the current study; years: 2001-2003). Of the 541 participants included in the current study, 57 were not in school at Wave 4. The mean age of participants at Wave 4 (Time 1) was 17.8 (SD = 0.64).

Eight hundred and fifty youth from four public high schools in the second largest school district in an urban, Midwestern city participated in the first wave of study data. These 850 youth who agreed to participate in the study represented 92% of all eligible participants. Participants in the fourth wave of data (when most students were completing their senior year of high school) included 770 youth (90% response rate from original Wave 1 sample). The sample was approximately 80% African American, 17% White, and 3% Biracial (as self-identified by respondents). The attrition rate from the first wave to the fourth wave did not differ between African American and White youth. We elected to only include African American youth in our sample because we were examining the associations between natural mentor presence, Black racial identity, and educational outcomes. Comparative analyses between the 615 African American participants

who participated in Wave 4 of the study and the 66 African American participants who did not participate in data collection at Wave 4 indicated no significant gender, age, or socioeconomic status (SES) differences. Of the 615 African American youth who participated in Wave 4, 541 had reported their educational status while participating in either Wave 6, Wave 7, or Wave 8 of the study. Attrition analyses comparing the 541 participants in the current study with the 74 participants who were not included in the study due to an absence of educational data across Waves 6, 7, and 8 yielded no significant differences for gender or family SES. We did find, however, that the participants who were excluded from the current study were a little older, t(613) = 2.7, p < .05, and had lower eighth-grade GPAs, t(613) = -2.4, p < .05, than the participants who were included in the current study.

#### Procedure

We received approval for our study from the Institutional Review Board at the University of Michigan and the staff at the schools where data were collected. Participant consent and parental (passive) consent for minors were obtained prior to study participation. Structured face-to-face interviews were conducted by project staff with youth participants. Interviews lasted approximately 50-60 min. Self-report questionnaires (paper-andpencil format) were administered following the interview to collect sensitive information regarding participants' sexual behavior, drug and alcohol use, and racial identity beliefs. Participants who were enrolled in school were interviewed at school, whereas those who were not enrolled in school were contacted and interviewed at home or at another location in the community. During Waves 5-8, all data collection occurred in participants' homes or in the community.

## Measures

Participants reported whether or not they had a relationship with a natural mentor, their racial identity beliefs (public regard, private regard, and centrality), their beliefs in the importance of school for future success (all completed at Time 1) and the highest level of schooling they had completed (Time 2). Table 1 includes ranges, means, standard deviations, and Cronbach alphas for our key study variables.

Natural mentor. The following item was used to assess for the presence of a natural mentor: "Is

Table 1
Ranges, Means, Standard Deviations, and Cronbach's Alphas for Study Variables

	Range	М	SD	α
Public regard	1–7	4.11	1.76	0.65
Private regard	1–7	6.09	1.08	0.66
Centrality	1–7	5.90	1.30	0.66
School importance	1–5	4.60	0.70	0.81
Educational attainment	1–6	3.14	1.16	
Eighth-grade GPA	0-4	2.07	0.68	

there an adult 25 years or older who you consider to be your mentor? That is, someone you can go to for support and guidance, or if you need to make an important decision, or who inspires you to do your best?" If participants responded in the affirmative, they were asked, "What is his/her relationship to you?" Participants who identified a parent or stepparent as their mentor were asked the first question again but asked if they could identify someone other than a parent or person who raised them. Participants who identified a mentor who was not a parent, stepparent, or person who raised them qualified as having a natural mentor. This item was used to create a dichotomous natural mentor variable (0 = no mentor, 1 = mentor).

Racial identity. Shortened versions of the public regard, private regard, and centrality subscales of the Multidimensional Inventory of Black Identity (MIBI) were used to assess racial identity beliefs (Sellers, Rowley, Chavous, Shelton, & Smith, 1997). Public regard refers to how adolescents feel that people from other races view their race. To assess participants' perceptions of public regard, we asked participants to indicate how much they agreed with the following statements: "In general, other groups view Blacks in a positive manner" and "Blacks are considered to be good by society." Private regard refers to how adolescents view people from their own race. Three items were used to assess this construct: "I am proud of Black people," "I feel that the Black community has made many valuable contributions to this society," and "I am happy that I am Black." Centrality refers to how central adolescents' race is to their identity. Centrality was assessed with the following three items: "Being Black is a major part of my identity," "I feel close to other Black people," and "Being Black is an important part of the way I see myself." For each statement, adolescents indicated how much they agreed on a scale of 1-7 (1 = strongly disagree, 7 = strongly agree).

Educational beliefs and attainment. In order to assess participants' beliefs about the importance of school for future success, participants were asked to indicate how much they agreed with the following three statements "Going to school will help me reach my goals," "I have to do well in school if I want to be a success," and "I think being successful in school is important" (Midgley, Maehr, & Urdan, 1993). Response options ranged from 1 to 5 (1 = nottrue, 5 = very true). Across Waves 6, 7, and 8, participants were asked to report their current educational status, including any degrees or certifications they had received (i.e., "What is the highest degree or certification you have received?"). Responses ranged from none (1) to bachelor's degree (6). In total, 54 participants (10%) in the current study reported no degree or certification, 68 (13%) completed a general education diploma (GED), 259 (48%) obtained a high school diploma, 81 (15%) completed a vocational training certification, 67 (12%) obtained an associate's degree, and 12 (2%) received a bachelor's degree. Although conventional wisdom dictates that a high school diploma and GED certification are equivalent, researchers have found substantial differences across a variety of outcomes (e.g., employment rates, wages, hours of work, the pursuit of postcertification education and training) as a function of high school versus GED completion with those who received their high school diplomas displaying more positive outcomes than their GED-earning counterparts (Cameron & Heckman, 1993). In fact, researchers have found that individuals with GEDs who pursue vocational training or postsecondary education earn less on average than high school graduates completing the same activity (Cameron & Heckman, 1993). Thus, in the current study, we assigned high school completion (i.e., received high school diploma) a higher value than GED completion. Our primary focus was on participants' responses at Wave 8 (Wave 8 data collection was 9 years after participants' freshman year of high school); however, in order to include participants who had attained a degree or certification but who did not participate in Wave 8 of the study, we also included data from Waves 6 and 7 for participants who did not participate in Wave 8 but who reported having attained a certification or degree at Wave 6 or Wave 7 (n = 70). Consequently, our outcome variable includes data collected across these three study waves (but primarily in Wave 8, n = 471) that we have labeled Time 2 educational attainment for the current study in an effort to be parsimonious.

Demographics. Information was collected regarding participants' gender, SES, and school-reported eighth-grade GPA. Self-reported participant gender was coded (0 = female, 1 = male) so we could account for potential gender effects in our model. As an indicator of family SES, participants were asked about their parents' occupations. These occupations were assigned prestige scores (Nakao & Treas, 1990a, 1990b), which ranged from 29.3 (private household work) to 64.5 (professional). If both parents had occupations, the higher of the two prestige scores was used. The mean for the sample at Time 1 was 39.7 (SD = 8.5). School-reported eighth-grade GPA was collected prior to adolescents' participation in the larger study and included in the current study to account for previous academic performance. The average eighthgrade GPA of the participants in the current study was 2.07 (SD = 0.68).

## Data Analysis

There were missing data on the racial identity items (< 7%), educational belief items (< 1%), and self-reported SES (< 11%). We completed estimation maximization in EQS (Bentler, 1995) to impute values for missing data prior to conducting our analyses. We then conducted descriptive analyses to identify mentor roles and comparative analyses to assess for differences on main study variables between participants who were and were not attending school at Time 1. Before testing our models, we conducted Pearson product-moment correlations to assess associations between our variables of interest. After we identified the direction and strength of the associations between our study variables, we used structural equation modeling (SEM) to test our proposed model (Bentler, 1995). We elected to use this approach because SEM allows for the simultaneous analysis of relations among multiple independent and dependent variables. In addition, SEM provides disattenuated estimates (i.e., estimates that are adjusted to be what they would be without any measurement error), which is particularly advantageous for self-report data.

In order to assess model fit, we started by examining the measurement model for our latent variables using confirmatory factor analysis. After confirming that our measured variables were good indicators of our latent factors, we tested the full structural model with all of the indicators, latent factors, and structural paths. Control variables in this model included gender, family SES, and eighth-grade GPA. We used the  $\chi^2$  value, BentlerBonett Non-normed fit index (NNFI), comparative fit index (CFI), and root meansquare error of approximation (RMSEA) to determine model fit (Klem, 2000). An NNFI and CFI above .95 suggest that the model fits the data well (Hu & Bentler, 1999). Because RMSEA represents model misfit, a value under .06 is ideal (Hu & Bentler, 1999).

We originally planned to test our moderation hypothesis by employing a multigroup analysis. In this analysis, we would have separated participants into two groups (median-split) based on whether they reported high versus low levels of racial centrality and then conducted a multigroup analysis that would have allowed us to assess for differences in the path values of the models between the two groups. This analysis would have allowed us to examine potential moderating effects of racial centrality on the relations between natural mentor presence, private and public regard, and participants' educational outcomes. Yet, our descriptive analyses indicated that the median centrality score (Mdn = 6.2) was well above the midpoint (4) of the scale. Therefore, our data did not permit the comparison of pathways for youth with low versus high levels of centrality and we did not proceed with our plans to conduct a multigroup analysis.

### Results

## Natural Mentors

Three hundred and forty participants (63%) reported having a natural mentor. Approximately 54% of the natural mentors identified were adult family members (i.e., aunts, uncles, grandparents, cousins, and older siblings) and the remaining 46% were unrelated adults (i.e., godparents, godsiblings, friends' parents, family friends, ministers, and teachers). None of the participants reported knowing their mentor through a formal mentoring program such as Big Brothers Big Sisters.

## Comparative Analyses

Participants who were not in school at Time 1 were not any less likely than participants in school at Time 1 to have a natural mentor ( $\chi^2 = 1.95$ , ns). We also found no differences between participants who were in school and those who were not in school at Time 1 for levels of public (t = -0.37, ns) or private regard (t = -1.50, ns). Participants not in school at Time 1 had lower levels of centrality (t = -2.10, p < .05, M = 5.53, SD = 1.35) and were less likely to believe that doing well in school was important for future success (t=-3.00, p<.05, M=4.32, SD=0.77) than their counterparts who were in school at Time 1 (M=5.94, SD=1.28 and M=4.64, SD=0.57, respectively). Although students not attending school at Time 1 had lower educational attainment at Time 2 in comparison to their counterparts who were in school at Time 1 (t=-6.21, p<.05, out of school Time 1: M=2.26, SD=1.13; in school Time 1: M=3.24, SD=1.12), most (n=41, 72%) of the participants who were not attending school at Time 1 went on to complete a GED (n=21), high school diploma (n=12), training certification (n=5), or associate's degree (n=3) by Time 2.

## Correlation Analyses

Correlations among all measured variables are presented in Table 2. Having a natural mentor was associated with higher values on all of the public regard, private regard, and racial centrality items, as well as higher values on the school importance for future success items. Having a mentor was also associated with having a higher eighth-grade GPA. All of the racial identity items were positively correlated with each other. Although not all of the cor-

relations between the school importance items and the racial identity items were significant, all of these correlations were positive. Being male was associated with lower values on all of the school importance items, as well as a lower eighth-grade GPA and lower educational attainment at Time 2. SES and eighth-grade GPA were positively correlated with each other, with all of the school importance items, and with Time 2 educational attainment. Higher values on each of the school importance items were associated with higher levels of educational attainment at Time 2.

#### Measurement Model

Results of the measurement model indicated that our hypothesized latent constructs fit the data well. The  $\chi^2$  statistic for the measurement model was 126.3 (df=38, n=541, p<.01). Given that the  $\chi^2$  statistic is susceptible to sample size, we considered several other fit indices to determine the model fit. The NNFI, CFI, and RMSEA indicated adequate fit of our model to the data (NNFI = .94, CFI = .95, RMSEA = .06). In addition, all of the measured variables loaded on their respective latent constructs. Factor loadings were all significant and ranged from .54 to .91. Furthermore, all of our

Table 2
Correlations Among Measured Study Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1															
2	.14*														
3	.10*	.48*													
4	.15*	.31*	.19*												
5	.09*	.26*	.20*	.45*											
6	.09*	.25*	.13*	.48*	.25*										
7	.13*	.37*	.11*	.31*	.30*	.38*									
8	.11*	.27*	.21*	.45*	.30*	.46*	.35*								
9	.09*	.24*	.16*	.49*	.41*	.43*	.49*	.36*							
10	.10*	.05	.05	.15*	.11*	.09*	.04	.03	.09*						
11	.17*	.09*	.08	.14*	.10*	.09*	.08	.07	.10*	.55*					
12	.17*	.04	.09*	.13*	.06	.08	.10*	.05	.11*	.51*	.69*				
13	.01	.03	.01	.04	.08	.03	.10*	.01	.03	12*	11*	09*			
14	.04	.05	.16*	.05	.06	.06	.05	.08	.04	.12*	.10*	.11*	0.06		
15	.09*	.02	.05	.02	.09*	.08	.03	.01	.06	.11*	.17*	.10*	15*	.21*	
16	.07	.04	.06	.09*	.08	.09*	.08	.02	.05	.17*	.14*	.14*	16*	.24*	.30*

Note. 1. Presence of natural mentor (0 = no, 1 = yes); 2. Public regard (groups view Blacks in positive manner); 3. Public regard (Blacks considered good by society); 4. Private regard (proud of Black people); 5. Private regard (Blacks have made valuable contributions); 6. Private regard (happy that I am Black); 7. Centrality (being Black is major part of my identity); 8. Centrality (feel close to other Black people); 9. Centrality (being Black is an important part of the way I see myself); 10. School importance (school will help me reach my goals); 11. School importance (have to do well in school if I want to be a success); 12. School importance (being successful in school is important); 13. Gender (female = 0, male = 1); 14. SES; 15. Eighth-grade GPA; 16. Time 2 educational attainment.

\*p < .05.

latent constructs (i.e., public regard, private regard, centrality, and school importance) were positively correlated with each other.

## Structural Model

After establishing that our measurement model was psychometrically sound, we proceeded to test our hypothesized structural model. Because some of our measured variables were not normally distributed, we elected to run our final model using maximum likelihood robustness estimators (Bentler, 1995). The  $\chi^2$  value was statistically significant (Satorra– Bentler  $\chi^2 = 183.4$ , df = 82, n = 541, p < .01); however, all other fit indices indicated that our model fit the data well (NNFI = .93, CFI = .95, RMSEA = .04).

The results of our final model are depicted in Figure 2. Only significant paths are included in this figure. Although not displayed in Figure 2, we found significant positive correlations between the disturbance variances of public regard and private regard (r = .46, p < .05), public regard and centrality (r = .49, p < .05), and private regard and centrality (r = .81, p < .05). Having a natural mentor predicted higher levels of public regard ( $\beta = .16$ , p < .05), private regard ( $\beta = .14$ , p < .05), and centrality ( $\beta = .12$ , p < .05). Private regard was positively related to participants' beliefs about the importance of school for future success ( $\beta$  = .27, p < .05) and results of the Sobel test supported the presence of an indirect effect of natural mentor presence on participants' beliefs in the importance of school for future success via private regard (z = 2.12, p < .05). Having a natural mentor was directly related to stronger beliefs in the importance of school for future success ( $\beta = .18$ , p < .05), and beliefs in the importance of school for future success predicted increased Time 2 educational attainment ( $\beta$  = .12, p < .05). Having a natural mentor was indirectly related to Time 2 educational attainment via beliefs about the importance of school for future success (Sobel test: z = 1.99, p < .05). Additionally, Sobel test results suggested that private regard indirectly affected participants' Time 2 educational attainment via participants' beliefs about the importance of school for future success (z = 2.25, p < .05).

We found that being male predicted weaker beliefs in the importance of school for future success ( $\beta = -12$ , p < .05), and higher SES was related to stronger beliefs in the importance of school for future success ( $\beta$  = .10, p < .05) and higher levels of educational attainment at Time 2 ( $\beta$  = .13, p < .05). Similarly, eighth-grade GPA was positively related to beliefs in the importance of school for future success ( $\beta = .10$ , p < .05) and Time 2 educational attainment ( $\beta$  = .21, p < .05). Overall, our model explained 12% of the variance in participants' beliefs in the importance of school for future success and 16% of the variance in Time 2 educational attainment.

## Additional Analyses

We also conducted additional analyses to determine whether natural mentor characteristics may

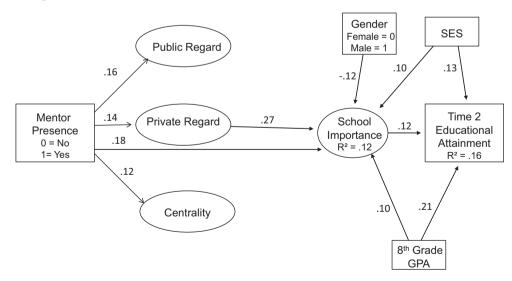


Figure 2. Structural equation model showing relations (standardized coefficients) between mentor presence, racial identity, school importance, and Time 2 educational attainment, controlling for gender, socioeconomic status (SES), and eighth-grade grade point average (GPA).

Note. Model only includes significant paths. Correlations among disturbances and among measured variables are not shown. Satorra-Bentler  $\chi^2(82) = 183.4$ , p < .01; NNFI = .93, CFI = .95, RMSEA = .04.

have influenced the relations we found in our structural model. Specifically, we removed the dichotomous mentor variable and replaced it with two dummy variables that we used to provide estimates of the effects of having a relationship with either a familial (n = 183) or a nonfamilial mentor (n = 157) in comparison to not having a relationship with a mentor (comparison group) on our intervening and outcome variables. We then constrained all of the paths from these dummy variables to our intervening and outcome variables to be equal to each other and subsequently released these equality constraints one at a time to determine whether freeing these parameters would result in improved model fit (as indicated by statistically significant reductions in the chi-square value for the model). Results of this set of analyses indicated no significant differences in path sizes between the two groups. In addition to these analyses, we also explored potential gender differences in our model. In these analyses, we removed gender from our model and completed a multigroup analysis by gender to assess whether the relations between study variables differed between male and female participants. We used a procedure similar to the one previously described to identify differences in associations between variables as a function of gender (i.e., constraining all paths to be equivalent across both groups and then freeing them one at a time and evaluating changes in the chi-square statistic). Although we did find that the model held for both females and males, we did not find significant differences in path coefficients between the two groups.

## Discussion

The results of this study represent an initial attempt to understand the relation between natural mentors and African American adolescents' academic beliefs and later educational attainment via their potential influence on adolescents' racial identity beliefs. Overall, our findings suggest that natural mentors may help shape adolescents' racial identity beliefs. Specifically, we found that having a natural mentor was associated with private regard, racial centrality, and public regard among our sample of African American late adolescents. Consistent with our hypotheses, having a natural mentor predicted increased private regard and centrality. This finding is consistent with previous research that has documented stronger and more positive ethnic identities among adolescents who look up to or have mentoring relationships with nonparental adults (Blash & Unger, 1995; Kaplan et al., 2009; Yancey et al., 2002). Moreover, this finding suggests that supportive nonparental adults in African American adolescents' extended families or larger social networks may contribute positively to adolescents' racial identity beliefs.

As suggested by Cooley's (1902) construct of the looking-glass self, mentees may be incorporating the positive feedback they receive from their mentors into their own identities. Through this process, adolescents may begin to feel more positively about themselves and by extension their racial group (i.e., elevated private regard). Furthermore, relationships with natural mentors may provide older adolescents with additional social opportunities wherein they can explore and develop their identities (Rhodes, 2005). Developing a healthy racial and ethnic identity is a critical task of adolescence for ethnic minority youth (Garcia Coll et al., 1996; Sellers et al., 1997). Thus, it is possible that mentors are providing older adolescents additional opportunities to think about the role of race in their identity (possibly leading to higher levels of centrality) and encouraging youth to hold positive perceptions of their racial group (i.e., higher private regard). Another possibility is that the additional support provided to older adolescents through these mentoring relationships allows them to further explore and develop their racial identities. This may be due to the fact that mentees have more resources to support their development or because natural mentoring relationships create a safe space wherein the identity development process can occur. Either way, our findings are consistent with previous study findings documenting more positive racial socialization beliefs among African American adolescents with higher levels of family support (Stevenson et al., 1996).

Beyond these more general processes, natural mentors may directly influence African American late adolescents' racial identity beliefs through the transmission of racial socialization messages. Given the instrumental role natural mentors play in adolescents' lives, they may intentionally communicate positive race-related messages. This may be seen as an opportunity to bolster adolescents' self-esteem while they are in high school and prepare them to cope with acts of racism or other adverse race-related experiences they may be increasingly likely to face as they transition into adulthood. Alternatively, natural mentors may engage in actions and behaviors that model the centrality of race in their own identities and their own positive beliefs about

other African Americans. For example, natural mentors may patronize African American-owned businesses or consume media that portrays positive images of African Americans. Watching their natural mentors engage in these types of activities may translate into higher levels of centrality and private regard among mentees while they are still in the process of developing their racial identity beliefs during the late stages of adolescence.

In addition to finding that having a natural mentor in high school related to higher levels of private regard and centrality among participants, we found that mentor presence was related to increased public regard among participants. Thus, participants who had a natural mentor thought that other groups held more positive perceptions of Blacks. This finding was contrary to our hypothesis. We expected that in their relationships with natural mentors, older adolescents would have opportunities to discuss their experiences living in a race-conscious society and to learn about societal biases against their racial group. Additionally, as adolescents experienced discriminatory treatment (which occurs with greater frequency among older African American adolescents as they interact with social institutions more independently; Fisher, Wallace, & Fenton, 2000), we imagined that their mentors would be trusted adults they could go to in an effort to make sense of the mistreatment they experienced. We hypothesized that natural mentors may have felt compelled to situate their mentees' experiences with racism within the larger context of societal racism as a means of buffering youth from the negative outcomes associated with experiencing racial discrimination (Caldwell, Kohn-Wood, Schmeelk-Cone, Chavous, & Zimmerman, 2004) and preparing them for future obstacles they may have to overcome (Neblett, Chavous, et al., 2009).

Yet, we found that having a relationship with a natural mentor predicted more positive perceptions of society's views of Blacks among participants. Although contrary to what we hypothesized, this finding suggests that African American adolescents' perceptions of public regard were influenced by their relationships with their natural mentors. Thus, relationships with natural mentors may provide older adolescents with opportunities to explore messages about race and discuss experiences with discrimination; however, instead of discussing societal biases against Blacks, the natural mentors identified in this study may have encouraged their mentees to understand experiences with racism as emanating from racist individuals as opposed to a racist society. It is possible that natural mentors believed that holding more positive beliefs about other groups' perceptions of Blacks would be associated with more positive outcomes among their mentees. For example, natural mentors may have imagined that these beliefs would encourage their mentees to perceive fewer barriers and more opportunities for future success.

Another possible explanation of this finding is that having a natural mentor from a different racial group may have led mentees to endorse higher levels of public regard (i.e., to believe that others outside of their racial group hold more positive beliefs about Blacks). Unfortunately, we did not assess natural mentors' race or ethnicity, but we did ask participants to report how they knew their natural mentors which allowed us to determine whether natural mentors were related to their mentees. We expected that nonfamilial mentors would have been less likely than familial mentors to be of the same race and ethnicity as their mentee. Also, having a nonfamilial mentor represented an opportunity for adolescents to get positive feedback from someone outside of their family. Therefore, even if nonfamilial natural mentors shared adolescents' race and ethnicity, the process of being positively evaluated by someone outside of their family may have encouraged youth to hold a more positive perception of how "outsiders" view them and by extension, Black people more generally. Yet, in our comparative analyses of the relative benefits of familial versus nonfamilial natural mentors in comparison to not having a mentor, we did not find differences in the path coefficients between the two groups. This finding suggests that the association we found between natural mentor presence and increased public regard may not differ by natural mentors' familial status. Nevertheless, it may be that feeling valued and esteemed by their natural mentors (regardless of who their natural mentors were) encouraged African American older adolescents to believe that others (both inside and outside of their racial and ethnic group) held positive perceptions of them and their racial group, as well.

We found that having a natural mentor directly contributed to stronger beliefs in the importance of school for future success among participants and also indirectly contributed to stronger beliefs about the importance of school for future success through participants' beliefs about their racial group (i.e., private regard). Further, stronger beliefs about the importance of school for future success in 12th grade predicted higher levels of educational attainment 5 years later. These results indicate that having a natural mentor in high school may encourage adolescents to see school as an opportunity for personal advancement, which may then motivate them to achieve in school and seek advanced education. Interestingly, only a handful of participants (n = 9) identified natural mentors who were teachers or other school staff, suggesting that the support and encouragement natural mentors provided youth were not confined to the academic realm. These findings build on previous studies that have demonstrated a link between natural mentors and more positive educational outcomes among older adolescents and emerging adults (DuBois & Silverthorn, 2005; Klaw et al., 2003; Zimmerman et al., 2002) by exploring possible mechanisms through which natural mentors positively influence older adolescents' academic beliefs and subsequent educational attainment.

In support of Rhodes's (2005) theory of mentoring, we found that natural mentors may positively influence adolescent outcomes by contributing to their identity development. Specifically, our findings suggest that through promoting increased regard for their racial group (a dimension of African American adolescents' racial identity), natural mentors may help their mentees believe that doing well in school will help them to be successful in the future, which may motivate them to pursue continuing or advanced education. It may be that feeling positively about other African Americans motivates African American late adolescents to see school not only as an opportunity for personal advancement but for the advancement of their race, particularly in light of the obstacles African Americans have faced and continue to face in accessing education (Spencer et al., 2001). The relationship between increased private regard and more positive academic beliefs and behaviors has been documented previously (Chavous et al., 2003). This is one of the first studies, however, to demonstrate a mediating relation between natural mentor presence and academic beliefs via adolescents' private regard and to link these beliefs to educational attainment over the transition to adulthood. Moreover, it is notable that we found these relations after accounting for the influences of gender, SES, and previous levels of academic performance (i.e., eighth-grade GPA).

Of note, private regard was the only racial identity construct that related to participants' academic attitudes and behavior. The potential influence of natural mentoring relationships on African American adolescents' educational outcomes was not mediated by adolescents' perceptions of societal views of their racial group (i.e., public regard) or the importance of race in youth's identities (i.e.,

centrality). Although we expected that lower levels of public regard would predict stronger beliefs in the importance of school for future success, we did acknowledge inconsistencies in previous study findings regarding this construct. Given that some researchers have documented protective effects of low public regard (Chavous et al., 2003; Sanders, 1997) whereas others have found low public regard to contribute to adolescents' risk of poor school outcomes (Mickelson, 1990), our null findings may be explained by effects operating in opposite directions among our study participants. Thus, for some participants, perceiving societal barriers may have strengthened their beliefs that doing well in school was necessary for their social mobility and future success, but for others, perceiving societal barriers may have been discouraging and led them to believe that no matter how hard they worked in school, they would be prevented from attaining future success (Fordham & Ogbu, 1986). These cross-effects would have canceled each other out leading us to find no relation between public regard and participants' educational outcomes. Another possibility is that our measure of academic beliefs was too general and did not capture participants' expectations of being subjected to unfair treatment in the future. If our assessment of adolescents' beliefs regarding the importance of doing well in school for future success had more explicitly asked about adolescents' expectations of facing discrimination when seeking future employment (suggesting that they either needed to achieve academically in order to help them overcome the discrimination they may face or that there was no point in working hard in school because discriminatory practices would limit their future opportunities), we may have been more likely to find a relation between public regard, participants' beliefs about the importance of doing well in school for future success, and subsequent educational attain-

The absence of a relation between participants' racial centrality and their educational outcomes was unexpected, as well, due to the consistency with which researchers have documented associations between levels of group connectedness and African American adolescents' academic outcomes (Sellers, Chavous, et al., 1998; Ward, 1990). Nevertheless, researchers have suggested that racial centrality may be more likely to modify the relations between other dimensions of racial identity and psychosocial outcomes, as opposed to exerting a direct effect on these outcomes (Chavous, 2000; Rowley et al., 1998; Sellers, Chavous, et al., 1998).

Unfortunately, we were unable to test this possibility with our data given that the median racial centrality score was well above the midpoint of the scale.

#### Limitations and Future Directions

A number of study limitations should be noted. To begin, we did not assess natural mentors' characteristics, qualities, or behaviors, nor did we assess any relationship variables that would have allowed us to better understand how relationships with natural mentors may contribute to African American adolescents' racial identities and educational beliefs and behaviors. Knowing basic demographic information (e.g., race, ethnicity, age, educational background) would have allowed us to consider whether these factors may have amplified or reduced the relations we found in the current study. Furthermore, exploring whether or not natural mentors are intentional about communicating race-related messages to their mentees and whether or not their mentees seek them out to discuss experiences with race-related stressors may be useful areas for future research. Additionally, investigating whether natural mentors discuss racial identity in the context of educational aspirations and school performance or whether they engage in other academic-oriented support activities would also inform our understanding of how natural mentors influence youth outcomes. Despite not fully assessing mentor attributes and aspects of the natural mentoring relationship, this study does provide some initial evidence that natural mentors may promote more positive long-term educational outcomes via their contributions to African American adolescents' regard for their racial group.

Given the observational nature of this study, we cannot determine a causal connection between natural mentoring relationships, adolescents' racial identity, and educational beliefs and behaviors. It is possible, for example, that African American adolescents who felt more positively about other African Americans were more oriented toward their community, as well, and therefore more likely to develop mentoring relationships with adults in their social networks. Furthermore, more resourceful youth or youth who were more invested in their futures may have been more likely to see the benefits of forming relationships with natural mentors as well as more inclined to complete high school and receive additional education or career training. Future studies that assess youth characteristics that may predict both natural mentoring relationships

and more positive youth outcomes, as well as future studies that measure youth outcomes both before and after the formation of natural mentoring relationships, will provide improved opportunities for determining causality. Yet, our study consisted entirely of academically at-risk African American youth (those with eighth-grade GPAs at or below 3.0), suggesting that our participants may have possessed similar baseline characteristics. Additionally, given that these mentoring relationships form naturally, implementing an experimental design to study the effects of these relationships would be difficult.

Although our study focused on influences of natural mentoring relationships during late adolescence through emerging adulthood, we acknowledge that racial identity and academic beliefs begin to be influenced at much earlier ages. Nevertheless, processes of identity formation are constantly evolving during late adolescence and even through the transition to adulthood (Arnett, 2000). Furthermore, although earlier academic, personal, and social experiences may shape adolescents' beliefs in the importance of school for future success, adolescents' academic beliefs likely fluctuate over time in response to an array of life experiences and developmental changes. Therefore, examining factors that may influence adolescents' perceptions of the importance of school for future success when they are facing decisions regarding high school or GED completion and possibly the pursuit of additional training or advanced degrees adds to our understanding of developmental processes occurring at this important transitionary period. Future studies that assess the influence of natural mentoring relationships on racial identity and school beliefs at earlier ages (e.g., childhood, early adolescence) will highlight similarities or differences in these pathways as dictated by developmental stage.

Our study was also limited by moderate reliability coefficients for the three racial identity dimensions. Although these reliability coefficients were less than ideal, numerous studies have demonstrated the stability, reliability, and validity of the MIBI as a measure of racial identity among African American adolescents and emerging adults (Cokley & Helm, 2001; Rowley et al., 1998; Sellers et al., 1997; Shelton & Sellers, 2000). Given that the MIBI is still a relatively nascent measure, additional studies will need to be conducted to further establish its psychometric properties. Yet, consistent with previous work, the results of the current study demonstrate the usefulness of the MIBI for assessing the multiple dimensions of racial identity and relating these dimensions to significant psychosocial outcomes among African Americans.

Lastly, the size of the relations we found between study constructs was fairly small. It is notable, however, that these relations emerged after accounting for prior levels of educational achievement. Also, it is worth noting that our final model explained 16% of the variance in educational attainment at Time 2. Thus, these findings suggest that continued investigation into the ways that natural mentors may influence African American adolescents' academic achievement, specifically via racial identity development, are needed. In addition to acknowledging these study limitations, care should be taken in generalizing this study's findings to other African American adolescents given that our sample was composed of academically at-risk, urban, African American adolescents transitioning into adulthood. These limitations notwithstanding, this study adds crucial information about the mechanisms by which natural mentors may contribute to more positive outcomes among at-risk youth.

#### Conclusion

Despite being considered at risk for high school dropout based on their eighth-grade GPAs, we documented substantial variance in educational outcomes among participants as they approached early adulthood. Thus, our findings denote diversity in outcomes among a group of demographically similar participants and underscore the importance of conducting within group analyses to identify factors that promote more positive academic outcomes in this population. Specifically, the results of this study suggest that relationships with natural mentors may foster resilience among academically at-risk African American adolescents by promoting more positive racial identity beliefs and strengthening their beliefs in the importance of school for future success. This is one of the first studies to document a potential pathway from natural mentoring relationships to adolescent outcomes via racial identity development. Therefore, continued research is needed to support the existence of this pathway as well as to further investigate its inherent complexities. Yet, the findings of this study contribute to a growing body of literature that supports the potential of natural mentors to promote resilience among ethnic minority adolescents (e.g., Hurd & Zimmerman, 2010a, 2010b; Klaw et al., 2003; Sánchez et al., 2008; Zimmerman et al., 2002).

In light of this mounting evidence, programs and policies that support and encourage the formation of natural mentoring relationships may be warranted. In contrast to formal mentoring programs, these initiatives may focus on strengthening bonds that youth already have with extended family members or other adults in adolescents' social networks. Additionally, these efforts may include fostering a shared sense of responsibility for the healthy socialization of youth among adults in the larger community. Creating a school climate that is more welcoming of nonparental adults, for example, could increase nonparental adults' opportunities to be involved with and feel responsible for adolescents in their extended families and communities, as well as fostering a greater affinity for and understanding of adults among adolescents. By disseminating messages about the potential benefits of natural mentoring relationships and engendering more opportunities for shared intergenerational activities within families and communities, practitioners, policy makers, and community leaders may help academically at-risk African American youth develop meaningful relationships that will contribute positively to their racial identity development, academic beliefs, and future educational attain-

## References

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469–480.

Bentler, P. M. (1995). EQS: Structural equations program manual. Encino, CA: Multivariate Software.

Blash, R. R., & Unger, D. G. (1995). Self-concept of African-American male youth: Self-esteem and ethnic identity. *Journal of Child and Family Studies*, 4, 359–373.

Brown, W. T., & Jones, J. M. (2004). Substance of things hoped for: A study of the future orientation, minority status perceptions, academic engagement, and academic performance of Black high school students. *Journal of Black Psychology*, 30, 248–273.

Caldwell, C. H., Kohn-Wood, L. P., Schmeelk-Cone, K. H., Chavous, T. M., & Zimmerman, M. A. (2004). Racial discrimination and racial identity as risk or protective factors for violent behaviors in African American young adults. *American Journal of Community Psychology*, 33, 91–105.

Caldwell, C. H., Zimmerman, M. A., Bernat, D. H., Sellers, R. M., & Notaro, P. C. (2002). Racial identity, maternal support, and psychological distress among African American adolescents. *Child Development*, 73, 1322–1336.

Cameron, S. V., & Heckman, J. J. (1993). The nonequivalence of high school equivalents. *Journal of Labor Eco*nomics, 11, 1–47.

- Chavous, T. M. (2000). The relationships among racial identity, perceived ethnic fit, and organizational involvement for African American students at a predominantly White university. Journal of Black Psychology, 26, 79-100.
- Chavous, T. M., Bernat, D. H., Schmeelk-Cone, K., Caldwell, C. H., Kohn-Wood, L., & Zimmerman, M. A. (2003). Racial identity and academic attainment among African American adolescents. Child Development, 74, 1076-1090.
- Cokley, K. O., & Helm, K. (2001). Testing the construct validity of scores on the Multidimensional Inventory of Black Identity. Measurement and Evaluation in Counseling and Development, 34, 80-95.
- Colón, Y., & Sánchez, B. (2010). Explaining the gender disparity in Latino youth's education: Acculturation and economic value of education. Urban Education, 45, 252-273.
- Cooley, C. H. (1902). Human nature and the social order. New York: Scribner.
- DuBois, D. L., Holloway, B. E., Valentine, J. C., & Cooper, H. (2002). Effectiveness of mentoring programs for youth: A meta-analytic review. American Journal of Community Psychology, 30, 157-197.
- DuBois, D. L., & Silverthorn, N. (2005). Natural mentoring relationships and adolescent health: Evidence from a national study. American Journal of Public Health, 95, 518-524.
- Fisher, C. B., Wallace, S. A., & Fenton, R. E. (2000). Discrimination distress during adolescence. Journal of Youth and Adolescence, 29, 679-695.
- Fordham, S., & Ogbu, J. (1986). Black students' school success: Coping with the burden of acting White. Urban Review, 18, 176-206.
- Garcia Coll, C., Crnic, K., Lamberty, G., Wasik, B. H., Jenkins, R., Vazquez Garcia, H., et al. (1996). An integrative model for the study of developmental competencies in minority children. Child Development, 67, 1891-1914.
- Grossman, J. B., & Rhodes, J. E. (2002). The test of time: Predictors and effects of duration in youth mentoring relationships. American Journal of Community Psychology, 30, 199-219.
- Gutman, L. M., & Midgley, C. (2000). The role of protective factors in supporting the academic achievement of poor African American students during the middle school transition. Journal of Youth and Adolescence, 29, 223-249.
- Harrison, A. O., Wilson, M. N., Pine, C. H., Chan, S. Q., & Buriel, R. (1990). Family ecologies of ethnic minority children. Child Development, 61, 347-362.
- Hill, R. (1972). The strengths of Black families. New York: Emerson Hall.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling, 6, 1-55.
- Hurd, N. M., & Zimmerman, M. A. (2010a). Natural mentoring relationships among adolescent mothers: A

- study of resilience. Journal of Research on Adolescence, 20, 789-809.
- Hurd, N. M., & Zimmerman, M. A. (2010b). Natural mentors and health outcomes: A longitudinal analysis of African American adolescents transitioning into adulthood. American Journal of Community Psychology, 46, 36-
- Kaplan, C. P., Turner, S. G., Piotrowski, C., & Silbert, E. (2009). Club Amigas: A promising response to the needs of adolescent Latinas. Child and Family Social Work, 2, 213-221.
- Kerpelman, J. L., Eryigit, S., & Stephens, C. J. (2007). African American adolescents' future education orientation: Associations with self-efficacy, ethnic identity, and perceived parental support. Journal of Youth and Adolescence, 37, 997-1008.
- Klaw, E. L., Rhodes, J. E., & Fitzgerald, L. F. (2003). Natural mentors in the lives of African American adolescent mothers: Tracking relationships over time. Journal of Youth and Adolescence, 32, 223–232.
- Klem, L. (2000). Structural equation modeling. In L. G. Grimm & P. R. Yarnold (Eds.), Reading and understanding multivariate statistics (pp. 227–257). Washington, DC: American Psychological Association.
- McLearn, K. T., Colasanto, D., & Schoen, C. (1998). Mentoring makes a difference: Findings from the Commonwealth Fund 1998 Survey of Adults Mentoring Young People. New York: The Commonwealth Fund.
- Mickelson, R. (1990). The attitude-achievement paradox among Black adolescents. Sociology of Education, 63, 44-
- Midgley, C., Maehr, M. L., & Urdan, T. (1993). Manuals for the Patterns of Adaptive Learning Survey (PALS). Ann Arbor: University of Michigan.
- Nakao, K., & Treas, J. (1990a). Computing 1989 occupational prestige scores (GSS Methodological Report No. 70). Chicago: National Opinion Research Center.
- Nakao, K., & Treas, J. (1990b). The 1989 socioeconomic index of occupations: Construction of the 1989 occupational prestige scores. (GSS Methodological Report No. 74). Chicago: National Opinion Research Center.
- National Center for Educational Studies. (2002). Summary data tables 2002. Washington, DC: U.S. Department of Education.
- Neblett, E. W., Jr., Chavous, T. M., Nguyên, H. X., & Sellers, R. M. (2009). "Say it loud-I'm Black and I'm proud": Parents' messages about race, racial discrimination, and academic achievement in African American boys. Journal of Negro Education, 78, 246-
- Neblett, E. W., Jr., Smalls, C. P., Ford, K. R., Nguyên, H. X., & Sellers, R. M. (2009). Racial socialization and racial identification: Messages about race as precursors to Black racial identity. Journal of Youth & Adolescence, 38, 189-203.
- Perry, T., Steele, C., & Hilliard, C. (2003). Young, gifted, and Black: Promoting higher achievement among African American students. Boston: Beacon Press.

- Rhodes, J. E.. (2005). A model of youth mentoring. In D. L. DuBois & M. J. Karcher (Eds.), *Handbook of youth mentoring* (pp.30–43). Thousand Oaks, CA: Sage.
- Rhodes, J. E., Ebert, L., & Fischer, K. (1992). Natural mentors: An overlooked resource in the social networks of young, African American mothers. *American Journal of Community Psychology*, 20, 445–461.
- Rowley, S. J., Sellers, R. M., Chavous, T. M., & Smith, M. A. (1998). The relationship between racial identity and self-esteem in African American college and high school students. *Journal of Social and Personality Psychology*, 74, 715–724.
- Sánchez, B., Esparza, P., & Colón, Y. (2008). Natural mentoring under the microscope: An investigation of mentoring relationships and Latino adolescents' academic adjustment. *Journal of Community Psychology*, 36, 468–482.
- Sanders, M. G. (1997). Overcoming obstacles: Academic achievement as a response to racism and discrimination. *Journal of Negro Education*, 66, 83–93.
- Sanders Thompson, V. L. (1994). Socialization to race and its relationship to racial identification among African Americans. *Journal of Black Psychology*, 20, 175–188.
- Sellers, R. M., Chavous, T. M., & Cooke, D. Y. (1998).
  Racial ideology and racial centrality as predictors of African American college students' academic performance. *Journal of Black Psychology*, 24, 8–27.
- Sellers, R. M., Rowley, S. J., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). Multidimensional Inventory of Black Identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology*, 73, 805–815.
- Sellers, R. M., Smith, M. A., Shelton, J. N., Rowley, S. J., & Chavous, T. M. (1998). Multidimensional model of racial identity: A reconceptualization of African American racial identity. *Personality and Social Psychology Review*, 2, 18–39.
- Shelton, J. N., & Sellers, R. M. (2000). Situational stability and variability in African American racial identity. *Journal of Black Psychology*, 26, 27–50.
- Sirin, S. R., & Rogers-Sirin, L. (2005). Components of school engagement among African American adolescents. *Applied Developmental Science*, 9, 5–13.
- Spencer, M. B., Noll, E., Stoltzfus, J., & Harpalani, V. (2001). Identity and school adjustment: Revisiting the

- "acting White" assumption. Educational Psychologist, 36, 21–30.
- Stack, C.. (1974). All our kin: Strategies for survival in the black community. New York: Harper & Row.
- Stevenson, H. C. (1995). Relationship of adolescent perceptions of racial socialization to racial identity. *Journal of Black Psychology*, 21, 49–70.
- Stevenson, H. C., Reed, J., & Bodison, P. (1996). Kinship social support and adolescent racial socialization beliefs: Extending the self to family. *Journal of Black Psychology*, 22, 498–508.
- Stevenson, H. C., Reed, J., Bodison, P., & Bishop, A. (1997). Racism stress management: Racial socialization beliefs and the experience of depression and anger in African American youth. Youth and Society, 29, 197–222.
- Thornton, M., Chatters, L. M., Taylor, R. J., & Allen, W. A. (1990). Socio-demographic and environmental correlates of racial socialization by Black parents. *Child Development*, 61, 401–409.
- Ward, J. V. (1990). Racial identity formation and transformation. In C. Gilligan, N. D. Lyons, & T. J. Hanmer (Eds.), Making connections: The relational worlds of adolescent girls at Emma Willard School (pp. 215–238). Cambridge, MA: Harvard University Press.
- Wigfield, A., & Eccles, J. S. (1992). The development of achievement task values: A theoretical analysis. *Devel-opmental Review*, 12, 265–310.
- Wilds, D. J. (2000). Minorities in higher education 1999– 2000. Washington, DC: American Council of Education.
- Yancey, A., Siegel, J., & McDaniel, K. (2002). Role models, ethnic identity, and health-risk behaviors in urban adolescents. *Archives of Pediatrics & Adolescent Medicine*, 156, 55–61.
- Zand, D. H., & Thomson, N. R. (2005). Academic achievement among African American adolescents: Direct and indirect effects of demographic, individual, and contextual variables. *Journal of Black Psychology*, 31, 352–368.
- Zimmerman, M. A., Bingenheimer, J. B., & Behrendt, D.
  E. (2005). Natural mentoring relationships. In D. L.
  DuBois & M. J. Karcher (Eds.), *Handbook of youth mentoring* (pp. 143–157). Thousand Oaks, CA: Sage.
- Zimmerman, M. A., Bingenheimer, J. B., & Notaro, P. C. (2002). Natural mentors and adolescent resiliency: A study with urban youth. *American Journal of Community Psychology*, 30, 221–243.