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Racial Identity, Racial Discrimination, Perceived Stress, and Psychological Distress among African American Young Adults*

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This study examines the direct and indirect relationships among racial identity, racial discrimination, perceived stress, and psychological distress in a sample of 555 African American young adults. A prospective study design was used to assess the influence of two dimensions of racial identity attitudes (i.e., centrality and public regard) on other study variables to investigate the relationship between racial identity attitudes and psychological distress. The results show some evidence of a direct relationship between racial centrality and psychological distress, as well as evidence of indirect relationships for both centrality and public regard through the impact of racial discrimination and perceived stress. In addition, racial centrality was both a risk factor for experiencing discrimination and a protective factor in buffering the negative impact of discrimination on psychological distress. Results are discussed within the context of identifying multiple pathways to psychological well-being for African American young adults within the context of racial discrimination.

Racial identity has been linked to the psychological health and well-being of African Americans (Horowitz 1939). The concepts have not only been linked, but they have often been conflated (for a complete review, see Cross 1991). Although evidence bearing on the nature of the relationship between racial identity and psychological functioning in African Americans remains equivocal, recent conceptualizations and empirical investigations have begun to more effectively examine this relationship. Researchers, for example, have focused on examining a direct link between racial identity and mental health functioning using the Racial Identity Attitude Scale (Parham and Helms 1985) to operationalize

African American racial identity. The Racial Identity Attitude Scale is conceptually based on Cross's (1971) Nigrescence model of racial identity, and consists of four subscales corresponding to four stages of racial identity among African Americans. Persons in the pre-encounter stage hold anti-black and pro-white attitudes. Persons in the encounter stage are faced with a profound experience or a collection of events directly linked to their race that encourages individuals to re-examine their current identity and find or further develop their black identity. Persons in the immersion/emersion stage externally hold very pro-black and anti-white attitudes, but have not internally made a commitment to a new black identity. Persons in the final stage, internalization, have an inner security and comfort about being black that is accompanied by a less idealized view of what it means to be black.

Several studies have found some relationship between the Racial Identity Attitude Scale and various mental health outcomes (Carter 1991; Munford 1994; Parham and Helms

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1985; Neville, Hepner, and Wang 1997; Neville and Lilly 2000; Pyant and Yanico 1991). Pyant and Yanico (1991) found that pre-encounter scores were negatively associated with both general psychological well-being and self-esteem, and both pre-encounter and encounter scores were negatively associated with depressive symptoms. Neville and Lilly (2000) used a person-centered approach to determine whether differing racial identity profiles were associated with differences on the nine psychological functioning subscales of the Brief Symptom Inventory. Using cluster analyses, the authors derived five racial identity clusters or profiles: an Engaged Internalization group, an Undifferentiated group, a Committed Internalization group, a Dormant group, and a Dissonance Internalization group. In general, individuals in the Engaged Internalization cluster reported more positive well-being than individuals in the Undifferentiated cluster.

Some concerns have been raised regarding both the psychometric properties of the Racial Identity Attitude Scale (e.g., poor internal consistency, face validity) and the analytic strategies used; these concerns call into question findings based on this measure (Akbar 1989; Ponterotto and Wise 1987; Rowley and Sellers 1998; Stokes et al. 1998). Sellers and his colleagues recently proposed the Multidimensional Model of Racial Identity as an alternative approach for describing different dimensions of the racial identity of African Americans (Sellers et al. 1998). The Multidimensional Model of Racial Identity is concerned with both the significance the individual places on race in defining himself or herself and the individual's interpretations of what it means to be black. The Multidimensional Model of Racial Identity proposes four dimensions of racial identity in African Americans: the salience of identity; the centrality of the identity; the ideology associated with the identity; and the regard with which the person holds the group associated with the identity. Racial identity salience refers to the extent to which a person's race is a relevant part of his or her self-concept at a particular moment in time. The centrality dimension refers to the extent to which a person normatively defines herself or himself with regard to race. Ideology is the individual's beliefs, opinions, and attitudes with respect to the way she or he feels blacks should act. The fourth dimension—

regard—refers to a person's affective and evaluative judgment of his or her race. The regard dimension consists of both a private and a public component. Private regard refers to the extent to which individuals hold positive or negative attitudes towards blacks and their membership in that group. On the other hand, public regard refers to the extent to which individuals feel that others view blacks positively or negatively.

Unlike research using the Racial Identity Attitude Scale to assess the level of racial identity development, Neblett, Shelton, and Sellers (forthcoming) do not find any direct relationships between any of the situationally-stable dimensions (centrality, ideology, and regard) of the Multidimensional Model of Racial Identity and indicators of depression, anxiety, and perceived stress in a sample of African American college students. Although these differences in findings may be explained by the use of different conceptual and methodological approaches, several researchers have questioned why we should expect a direct relationship between racial identity and mental health (Cross 1991; Penn, Gaines, and Phillips 1993), arguing instead for more complex indirect models linking multiple racial identity profiles and other relevant phenomena with mental health outcomes (Cross, Parham, and Helms 1998; Sellers, Morgan, and Brown 2001).

INDIRECT LINKS BETWEEN RACIAL IDENTITY AND MENTAL HEALTH

One phenomenon that may play a vital role in an indirect relationship between racial identity and mental health in African Americans is the experience of racial discrimination (Cross et al. 1998; Sellers et al. 2001). Recent empirical work has found a consistent link between individuals' racial identity attitudes and their experiences with racial discrimination (Neblett et al. forthcoming; Operario and Fiske 2001; Sellers and Shelton 2003; Shelton and Sellers 2000). Operario and Fiske (2001) found that high ethnically identified minorities (Asian, black, and Latino) reported more personal experiences with ethnic discrimination than did less ethnically identified minorities. In addition, Shelton and Sellers (2000) found that African Americans for whom race was a central component of their identity were more likely to attribute an ambiguous discriminatory

event to race than African Americans for whom race was a less central component of identity. Individuals' beliefs about other groups' racial attitudes also appear to be related to their perceived experiences with racial discrimination (Branscombe, Schmitt, and Harvey 1999; Neblett et al. forthcoming; Sellers and Shelton 2003). In a prospective study, Sellers and Shelton (2003) found that African American college students who felt that other groups hold more negative attitudes towards blacks (low public regard) reported experiencing more subsequent racist hassles even after accounting for previous experiences with racial discrimination.

A growing body of research suggests that experiencing discriminatory events can have adverse mental health consequences for African Americans (Broman 1997; Jackson et al. 1996; Kessler, Mickelson, and Williams 1999; Landrine and Klonoff 1996; Sanders-Thompson 1996). Using panel data from the National Survey of Black Americans, Jackson et al. (1996) found that participants' reports of racial mistreatment were prospectively linked to higher levels of psychological distress. Landrine and Klonoff (1996) found that their indicators of both one-year and lifetime prevalence rates for experiencing racism were related to higher rates of psychiatric symptoms in their sample of African Americans (e.g., anxiety, depression, obsessive-compulsive, interpersonal sensitivity, and somatization). They also found that the level of stress individuals experienced resulting from a racist event was associated with poorer mental health outcomes. In addition to these studies, two journals have devoted special issues to the link between racial discrimination and mental health (*American Journal of Orthopsychiatry*, January 2000 and *Journal of Counseling and Development*, Winter 1999).

Despite recent empirical findings directly linking racial discrimination and mental health, it is also possible that other factors mediate this relationship. Perceived stress may be one such mediator. A number of researchers have suggested that viewing racial discrimination within a stress and coping framework may help to delineate the mechanism through which experiencing racial discrimination may impact mental health (e.g., Contrada et al. 2001; Landrine and Klonoff 1996; Miller and Major 2000; Sellers et al. 2001). Stress has long been associated with mental health (for

review, see Moore and Burrows 1996). Although few studies to date have directly tested such a mediating link, there is some empirical evidence that points to the stress process as a possible mediator. Neblett et al. (forthcoming) found that experiencing more racist hassles was related to subsequent levels of perceived stress. Taken together, these two sets of findings suggest that stress could be a mediating link between racial discrimination in the form of racist hassles and mental health in African Americans. Caldwell et al. (2002) used structural equation modeling to investigate the links among maternal support, racial identity, and mental health in a sample of African American adolescents. They found a significant link between centrality and perceived stress such that viewing race as more central to one's identity was associated with higher levels of stress and, in turn, more symptoms of depression and anxiety. They speculated that individuals for whom race is a more central part of their identity may perceive more experiences of discrimination because they are also likely to perceive racially ambiguous situations as being discrimination, which could contribute to higher levels of stress in their lives. An obvious omission in this and other studies is a test of a stress mediation hypothesis where stress mediates the relationship between racial discrimination and mental health.

RACIAL IDENTITY AS A POTENTIAL BUFFER

Cross et al. (1998) argue that a primary function of an internalized racial identity for African Americans is to buffer them against the potential deleterious impact of racism on their psychological well-being. Yet few studies empirically investigating the proposed buffering ability of racial identity have been reported. A few recent studies, however, do suggest that the centrality of racial identities may moderate the relationship between racial discrimination and mental health. Sellers and colleagues have repeatedly found that individuals' levels of racial centrality seem to moderate the influence of their attitudes regarding the meaning of being black (regard and ideology attitudes) on other age-relevant outcomes (Rowley et al. 1998; Sellers et al. 1998). Neblett et al. (forthcoming) also found that experiencing racial discrimination was associ-

ated with poorer mental health outcomes only for individuals for whom race was not a central identity. They suggested that high race central individuals may have more varied and effective racial coping repertoires because they have had more experience coping with racial hassles.

OVERVIEW OF THE PRESENT STUDY

In the present study, we investigate possible direct, mediating, and moderating relationships among racial identity, racial discrimination, perceived stress, and mental health outcomes in a longitudinal study of African American young adults. Specifically, we focus on two components of racial identity: the extent to which race is a central identity for the participants (racial centrality) and the extent to which the participants believe that other groups hold negative attitudes towards them (public regard). The first objective of this study is to describe direct relationships between racial identity, racial discrimination, and perceived stress and psychological distress, as two indicators of mental health. The second objective is to determine whether experiences of racial discrimination and stress mediate different racial identity attitude (i.e., centrality and public regard) relationships to subsequent indicators of mental health. We hypothesize that racial centrality will be associated with more experiences of racial discrimination, which, in turn, will be associated with higher levels of stress and, subsequently, poorer mental health outcomes. We also expect that individuals who feel that others hold more negative attitudes towards blacks will report more racial discrimination, which, in turn, will be associated with higher levels of stress and, subsequently, poorer mental health outcomes. While we predict that stress will serve as a mediator between racial discrimination and mental health outcomes, we make no prediction as to whether it will partially mediate or fully mediate the relationship. The third objective is to test direct relationships between the two racial identity attitudes and subsequent mental health. We predict that the relationships among racial centrality and public regard and mental health outcomes will be fully mediated by racial discrimination and stress such that no direct link will be evident once the mediators are accounted for in our analysis. The final objective is to

investigate whether racial centrality moderates the relationships among experiences of discrimination, stress, and subsequent mental health. We predict that racial centrality will buffer the effect of racial discrimination on stress and, thus, subsequent mental health outcomes. Specifically, we predict that these relationships will be stronger for individuals for whom race is more central than for those for whom race is less central. The prospective nature of this study also allows us to examine how previous and concurrent measures of racial identity influence later reports of racial discrimination, perceived stress, and psychological distress, after controlling for previous levels of distress. Because previous research has found socioeconomic differences in psychological distress (e.g., Kessler and Neighbors 1986), we control for this relationship in our analyses.

METHODS

Sample

The sample was drawn from a larger longitudinal study of students who were academically at risk in an urban school district in Michigan ($N = 850$). Ninth-grade students enrolled in the school district at the beginning of the 1994–1995 school year who had a GPA of 3.0 or below during the previous school year were selected to participate in the larger study. Students diagnosed by the schools to be emotionally or developmentally impaired were excluded from the sample (see Zimmerman, Salem, and Notaro 2000 for a full description of the sample). The sample in the present study consists of 555 African American students who participated in the fourth and fifth waves of the study. This represents an 81 percent response rate from the original (1994) sample of 681 African American youths. Fifty-four percent of the sample ($N = 301$) are females. The average age of the sample was 17.8 ($SD = .65$), and the mean self-reported family socioeconomic status level was 39.8 (equivalent to production/repair work or administrative support) at wave 4 of the study. Sixty-nine percent of the sample were enrolled in high school during wave 4 of the study. At wave 5, two years after high school, the average age of the sample was 20 years old, 23 percent of the sample enrolled in a 4-year college, and 9 percent

enrolled in a 2-year institution. In addition, 26 percent of the sample reported that they had not received a high school diploma or general equivalency diploma and were not currently enrolled in school.

Procedure

Structured, face-to-face interviews were conducted with students in school during school hours. Participants who were not enrolled in school were interviewed in a community setting. The interviews lasted 50 to 60 minutes. Participants completed a self-administered, paper-and-pencil questionnaire about drug and alcohol use, sexual behavior, racial identity, and discrimination. They were informed that all information was confidential. Initial data were collected from participants in the ninth grade, with subsequent data collections occurring at one-year intervals for waves 2 through 4. Wave 5 (1999–2000) data were collected approximately two years after wave 4.

Measures

Racial identity. We use two racial identity scales: “centrality” and “public regard.” Participants completed shortened versions of the centrality and public regard subscales of the Multidimensional Inventory of Black Identity (Sellers et al. 1997) at waves 4 and 5 of the study. One item from the centrality scale was dropped (“My future is tied to the future of other blacks.”) because of increased internal reliability (Cronbach’s alpha) of the scale without this item and because of its factor loading in a confirmatory factors analysis of less than .40. This item also has questionable face validity (i.e., conceptual consistency) for the construct. Two items from the public regard scale were dropped from the measures for the same reasons. In addition, these two items were worded in opposite directions and may have caused some confusion for respondents. Finally, exploratory factor analyses indicated two factors for public regard, with the two dropped items loading on a second factor accounting for little variance.

The revised centrality scale (wave 4 $\alpha = .66$; wave 5 $\alpha = .67$) consists of three items assessing the extent to which race was an important

part of how respondents defined themselves. Sample items include, “Being black is a major part of my identity,” and “I feel close to other black people.” The revised public regard scale (wave 4 $\alpha = .63$; wave 5 $\alpha = .52$) consists of two items assessing the individual’s perceptions of how positively or negatively other groups view blacks. The items were, “In general, other groups view blacks in a positive manner,” and “Blacks are considered to be good by society.” Both subscales used a seven-point Likert response scale (1 = strongly disagree to 7 = strongly agree). Higher scores on the centrality subscale denote race as a more central identity, and higher scores on the public regard subscale denote the belief that other groups hold more positive attitudes towards blacks.

Perceived racial discrimination. Participants’ perceived experiences with racial discrimination were assessed during wave 5 (Harrell 1997). Participants were asked to rate the frequency with which they experienced each of 20 hassles within the past year. Sample items include, “Others reacting to you as if they were afraid or intimidated,” “Being insulted, called a name or harassed,” and “Not being hired for a job.” Participants were asked to rate each of the 20 racial hassles using a six-point scale for how often this event occurred (0 = never; 5 = once a week or more). A mean score for frequency of discrimination was created by averaging across the 20 items. Higher scores denote a greater frequency of racial discrimination.

Perceived stress. Participants’ levels of stress at wave 5 were measured using a shortened version of the Perceived Stress Scale (Cohen, Kamarck, and Mermelstein 1983). The shortened version of the Perceived Stress scale ($\alpha = .82$) consists of 12 items that ask how often in the last month the participants experienced symptoms of stress. Sample items include: “felt stressed,” “felt in control” (reverse coded), and “had problems dealing with responsibilities.” Participants used a 5-point response scale (1 = never to 5 = very often). Higher scores on the scale denote experiencing more stress.

Psychological distress. Participants completed the six-item depression subscale (wave 4 $\alpha = .86$; wave 5 $\alpha = .83$) and the six-item anxiety subscale (wave 4 $\alpha = .88$; wave 5 $\alpha = .81$) of the Brief Symptom Inventory during waves 4 and 5 of the study (Derogatis and

Spencer 1982). Participants used a five-point response scale (1 = never to 5 = very often) to rate their level of depressive symptoms and anxiety. Participants' responses to each item were averaged together to create a depression index and an anxiety index. Because of the high correlation between the depression and anxiety indexes ($r = .84$ for wave 4 and $r = .73$ for wave 5), we decided to use the two indexes as indicators for a latent psychological distress variable in our subsequent structural models. Using the two scales as indicators on one latent variable instead of six items for two separate latent variables significantly decreased the number of parameters to be estimated, while not affecting the relationships of the other variables. Thus, higher scores denote greater levels of psychological distress.

Socioeconomic status. Socioeconomic status was assessed via prestige scores of parents' occupation based on students' reports of their parents' occupations (Nakao and Treas 1990). In cases where students reported the occupation of more than one parent, the highest prestige score was used as an indicator of the students' socioeconomic statuses.

RESULTS

Descriptive Information and Bivariate Relationships

Table 1 presents the means, standard deviations, and correlations of the variables in the study. Centrality is the only variable with a mean above the midpoint on the response scale. Three percent of the sample ($N = 16$) reported experiencing all 20 of the racist hassles during the previous year, whereas 16 per-

cent of the sample ($N = 89$) reported not having experienced any racist hassles in the previous year. On any given racial hassle item, 38 percent of the sample, on average, reported experiencing the event at least once during the previous year. Participants reported experiencing a median of six racist hassles.

The bivariate analyses shown in Table 1 indicate that centrality, public regard, and psychological distress are relatively stable over time (correlations range from .32 to .44). Higher levels of centrality are associated with lower levels of stress and psychological distress. Wave 4 public regard is negatively correlated with racial discrimination such that individuals who believe that other groups feel more positive towards blacks report experiencing less racial discrimination. Public regard at wave 4 is unrelated to perceived stress and psychological distress. At wave 5, public regard is negatively associated with stress and psychological distress. Greater experiences with racial discrimination are associated with negative mental health such as elevated stress, as well as past and current psychological distress. Individuals' levels of perceived stress are related to psychological distress. Finally, socioeconomic status is only related to wave 5 psychological distress.

Confirmatory Factor Analysis and the Creation of Latent Variables

Following procedures described by Jöreskog and Sörbom (1993) and Byrne (2001), who suggest development of the measurement model before assessing path models, we conducted confirmatory factor analyses (using AMOS [4.0]) to create latent variables repre-

TABLE 1. Mean, Standard Deviation, and Pearson Product Correlations for Racial Identity, Discrimination, Stress, and Psychological Distress Variables

	1	2	3	4	5	6	7	8	9
1. Centrality wave 4	1.0								
2. Centrality wave 5	.35*	1.0							
3. Public regard wave 4	.31*	.19*	1.0						
4. Public regard wave 5	.08	.21*	.44*	1.0					
5. Discrimination wave 5	.03	.04	-.18*	-.20*	1.0				
6. Stress wave 5	-.17*	-.13*	-.03	-.13*	.23*	1.0			
7. Distress wave 4	-.03	-.02	-.07	-.07*	.22*	.22*	1.0		
8. Distress wave 5	-.17*	-.16*	-.09	-.12*	.35*	.53*	.32*	1.0	
9. Socioeconomic status	.02	.06	-.06	-.03	.05	-.06	-.01	-.13*	1.0
Mean	5.88	4.15	1.77	6.22	0.78	43.07	2.26	1.65	39.81
Standard Deviation	1.30	1.75	.88	1.17	0.86	4.22	.64	.61	10.42

* $p < .05$

senting racial centrality, public regard, stress, and psychological distress (Arbuckle and Wothke 1999). We proposed a model with two latent factors, entitled centrality and public regard. Two error variances were correlated between these two latent factors. We proposed a model with four latent factors, entitled centrality at wave 4, centrality at wave 5, public regard at wave 4, and public regard at wave 5. Items from the racial centrality and public regard scales loaded on the centrality and public regard latent variables, respectively, with the two wave 4 latent factors correlated, and centrality and public regard at wave 4 correlated to their wave 5 counterparts. The resulting fit of the model was acceptable ($\chi^2 = 68.188$, $df = 28$, $p < .001$; $\chi^2/df = 2.435$; CFI = .997; NNFI = .993; RMSEA = .051), with the wave 4 racial centrality and public regard latent factors correlated ($r = .30$, $p < .05$) and wave 4 centrality and public regard correlated with wave 5 centrality and public regard, respectively ($r = .47$ and $.62$, respectively, $p < .05$). The resulting latent variables were used in subsequent path models for the structural equations.

The twelve items from the perceived stress scale were used to comprise a stress latent factor. A model was fit to the data in which the twelve items loaded onto a single stress latent variable. To create a better fit, three items were dropped because their factor loadings were less than .40. The final fit of the model was acceptable ($\chi^2 = 119.790$, $df = 27$, $p < .001$; $\chi^2/df = 4.437$; CFI = .987; NNFI = .979; RMSEA = .079). Finally, we created latent factors entitled psychological distress at waves 4 and 5 from the composite scores of the depression and anxiety scales. A model consisting of composite scores loading on the psychological distress factors was fit to the data. The correlation between the factors was .35, and the model was a good fit ($\chi^2 = 12.600$, $df = 1$, $p < .001$; $\chi^2/df = 12.600$; CFI = .997; NNFI = .974; RMSEA = .145). Additionally, four sets of error variances were correlated between stress items and wave 5 depression, and one set of error variances were correlated between a stress item and wave 5 anxiety.

Racial Identity and Psychological Distress

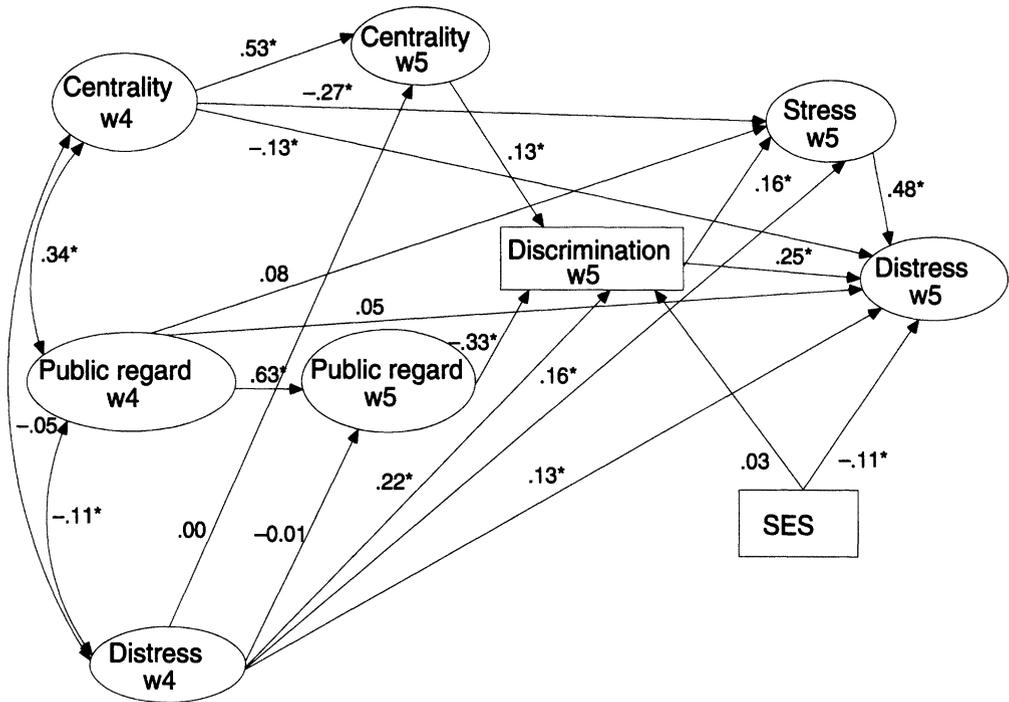
In order to examine whether racial centrality and public regard attitudes were directly related to psychological distress, we tested the

fit of a model in which both centrality and public regard at wave 4 were directly related to psychological distress at wave 5. This model also proposed that centrality and public regard were correlated with each other. Overall, the model fit the data adequately, but suggested improvement was possible ($\chi^2 = 532.400$, $df = 115$, $p < .001$; $\chi^2/df = 4.630$; CFI = .975; NNFI = .966; RMSEA = .081). A significant path was found between centrality and psychological distress (results not presented) such that individuals for whom race is more central reported lower levels of subsequent psychological distress, but public regard did not significantly predict psychological distress. Centrality and public regard were correlated such that individuals for whom race is a more central identity felt that other groups had a more positive view about blacks ($r = .38$, $p < .05$).

Full Model

In order to test our full model, centrality at wave 5, public regard at wave 5, discrimination and stress were added as mediators to the previous model as latent variables; these results are presented in Figure 1. Additionally, psychological distress at wave 4 was added as a control for all wave 5 variables, and socioeconomic status was added with direct paths only to discrimination and psychological distress at wave 5. The overall model fit index is good ($\chi^2 = 455.968$, $df = 248$, $p < .001$; $\chi^2/df = 1.839$; CFI = .992; NNFI = .989; RMSEA = .039). Psychological distress at wave 4 was related to more discrimination, stress and psychological distress in wave 5. Higher socioeconomic status was related to less psychological distress. There was a significant level of stability for the racial identity variables (centrality beta = .53; public regard beta = .62) across the two waves. Both racial centrality and public regard at wave 4 had indirect relationships to discrimination through the wave 5 version of the variables. Higher levels of racial centrality and beliefs that other groups hold more negative attitudes towards African Americans were associated with greater experiences of racial discrimination. There were also direct paths between centrality at wave 4 and stress and distress at wave 5 such that higher levels of centrality were related to lower levels of subsequent stress and distress. Discrimination at wave 5 had both

FIGURE 1. Full Model (standardized coefficients shown)



* $p < .05$

Note: $\chi^2(248) = 455.968$; $p = .001$; $\chi^2/df = 1.839$; CFI = .992; NNFI = .989; RMSEA = .039; w4 = wave 4; w5 = wave 5.

significant direct and indirect relationships with distress at wave 5. The direct path suggested that higher levels of discrimination were associated with more psychological distress. The indirect relationship between discrimination and distress had stress at wave 5 as a mediator such that higher levels of racial discrimination were associated with higher levels of perceived stress, which, in turn, were related to greater psychological distress.

The effect sizes for the latent variable on psychological distress are listed in Table 2. These show that centrality at wave 4 has an overall negative effect on psychological distress, with 24.4 percent of the variance explained. Public regard at wave 4 has very little total effect on psychological distress, with 1.7 percent of the variance explained. Discrimination shows a large positive effect on psychological distress, explaining 28.9 percent of the variance. Finally, stress also has a large positive effect on psychological distress, explaining 48.4 percent of the variance in this model.

Proposed Mediation Model

In order to compare our proposed model with the full model, the proposed model was tested with only the significant paths from the full model included (see Figure 2). All of the significant paths that were found for the full mediation model were also significant in the proposed model. The proposed model was a good fit to the data ($\chi^2 = 458.629$, $df = 254$, $p < .001$; $\chi^2/df = 1.806$; CFI = .992; NNFI = .990; RMSEA = .038), but it did not fit the data significantly better than the full model (χ^2 difference = 2.661). For the sake of parsimony, the proposed mediation model is the preferred model to explain the present results.

Racial Centrality as a Moderator

In order to test the potential moderating effect of racial centrality, we ran a three-group design based on participants' racial centrality levels at wave 4 to test whether the paths differed by level of racial centrality in a model

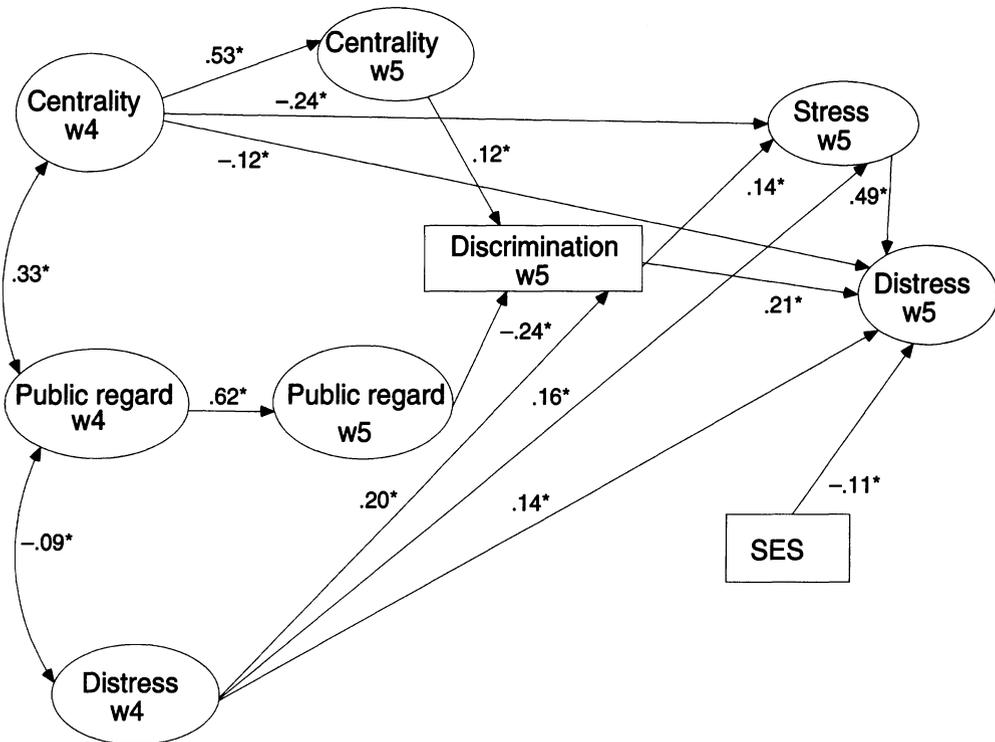
TABLE 2. Effect Sizes for Variable by Paths on Psychological Distress from the Full Mediation Model

Variable	Direct	Through Stress	Through Discrimination	Through Stress & Discrimination	Total
Centrality wave 4	-.130	-.133	.014	.005	-.244
Public regard wave 4	.024	.036	-.032	-.011	.017
Centrality wave 5	—	—	.026	.009	.035
Public regard wave 5	—	—	-.051	-.018	-.069
Discrimination wave 5	.211	.077	—	—	.289
Stress wave 5	.487	—	—	—	.484
Socioeconomic status	-.109	—	.006	.002	-.102
Distress wave 4	.148	.078	.043	.016	.281

testing the relationships among racial discrimination, perceived stress, and psychological distress. Specifically, the model included paths where discrimination at wave 5 both directly and indirectly (through stress at wave 5) predicts psychological distress at wave 5. (The model also included direct paths from psychological distress at wave 4 and socioeconomic status to psychological distress at wave 5). In order to trichotomize our sample on racial centrality, the sample was split at scores of 5.25

and 6.25 on the centrality at wave 4 variable creating low ($N = 191$), medium ($N = 225$) and high ($N = 152$) groups. The model fit was good ($\chi^2 = 504.803$, $df = 255$, $p < .001$; $\chi^2/df = 1.980$, $CFI = .982$, $NNFI = .975$, $RMSEA = .042$). The paths from discrimination to psychological distress and stress to psychological distress were significant and positive for all three groups (see Table 3). The groups, however, differed on the path from discrimination to stress. For the low and medium centrality

FIGURE 2. Proposed Mediation Model (standardized coefficients shown)



* $p < .05$

Note: $\chi^2(254) = 458.629$, $p = .001$; $\chi^2/df = 1.806$; $CFI = .992$; $NNFI = .990$; $RMSEA = .038$; w4 = wave 4; w5 = wave 5.

TABLE 3. Path Weights (standardized betas) by Level of Racial Centrality

	Low Centrality	Medium Centrality	High Centrality
Discrimination wave 5 → Stress wave 5	.22 ^{*a}	.23 ^{*a}	-.10 ^b
Discrimination wave 5 → Distress wave 5	.24 ^{*a}	.20 ^{*a}	.31 ^{*a}
Stress wave 5 → Distress wave 5	.55 ^{*a}	.47 ^{*a}	.45 ^{*a}
Distress wave 4 → Stress wave 5	.33 ^{*a}	.11 ^b	.20 ^{*a,b}
Distress wave 4 → Discrimination wave 5	.17 ^a	.15 ^{*a}	.32 ^{*a}
Distress W4 → Distress W5	.20 ^{*a}	.29 ^{*a}	.04 ^b
SES → Discrimination wave 5	.10 ^{a,b}	.16 ^{*a}	-.10 ^b
SES → Distress W5	-.14 ^{*a}	-.14 ^{*a}	-.05 ^b

* *p* < .05 (one-tailed test)

Note: Path weights with the same letter are not significantly different within each analysis

groups, discrimination predicted stress; however, for the high centrality group this path was not significant. The results suggest a moderating effect of racial centrality on the relationship between racial discrimination and perceived stress, with high racial centrality buffering the impact of racial discrimination and perceived stress.

DISCUSSION

Overall, our results indicate a relationship between racial identity variables and African American psychological functioning. Both our bivariate correlations and our direct effects model suggest that individuals for whom race is a more central identity were more likely to report lower levels of subsequent psychological distress. These findings are consistent with studies using the Racial Identity Attitude Scale that found stronger identification with race was associated with better mental health (Carter 1991; Munford 1994; Parham and Helms 1985; Pyant and Yanico 1991). Interestingly, the direct relationship between individuals' level of racial centrality at wave 4 and subsequent distress remains even after accounting for other indirect paths. These results suggest that strongly identifying with one's race may be beneficial to young African American adults. On the other hand, we find far less evidence of a direct relationship between individuals' public regard beliefs and their psychological well-being. Individuals' beliefs about how others view their group are unrelated to their overall mental health.

Our results also provide strong evidence for indirect relationships of racial centrality and public regard on psychological distress through the effect of racial discrimination and perceived stress, even after controlling for the

influence of socioeconomic status. Our results suggest that stress may be one pathway by which experiencing racial discrimination may have deleterious effects on individuals' mental health. Racial hassles seem to make life more stressful for African Americans, which, in turn, has an effect on their levels of anxiety and depression. Perceived stress was only a partial mediator, however. Our results also suggested a direct pathway between racial discrimination and psychological distress. Because of the many ways in which stress has been operationalized, it is an open question as to whether other measures of stress would account for this direct relationship. A few studies have reported links between racially-noxious stimuli and psychophysiological indicators of stress (e.g., Fang and Myers 2001), but there is a clear need for future research to assess more multi-method measures of stress.

Our mediation model indicates that higher levels of racial centrality may serve as a risk factor for perceiving more racial discrimination. One set of explanations as to why racial centrality attitudes might be associated with greater perceptions of racial discrimination focuses on how the situation is appraised. For instance, because high race central individuals are more likely to be sensitive to race-related cues in more ambiguous situations (Operario and Fiske 2001; Sellers and Shelton 2003), they may also be more likely to make attributions about racial discrimination than low race central individuals (Branscombe et al. 1999). This interpretation is consistent with the measure of racist hassles used in this study. The measure requires individuals to make an attribution regarding whether the event was race related. It is also possible that high race central individuals possess characteristics that result in individuals from other races discriminating against them more than low race central indi-

viduals. In their national study of African Americans, Keith and Herring (1991) concluded that light-skinned African Americans experienced higher attainment than dark-skinned African Americans because American society holds more negative attitudes towards dark-skinned African Americans. Whites may also be sensitive to African Americans' levels of centrality. High race central African Americans may make race salient to whites (e.g., through wearing ethnic clothing, hairstyles, and using ethnic language styles), thus triggering more out-group bias behavior from them (Tajfel and Turner 1986).

Our results suggest that racial discrimination may mediate the effect of individuals' racial centrality beliefs and their perceived stress levels. As noted before, Caldwell et al. (2002) hypothesized that much of the positive relationship they found between racial centrality and perceived stress may be capturing stressful experiences with racial discrimination among African Americans. We were able to test this hypothesis in the present study and found that racial centrality was associated with lower levels of perceived stress, once the effects of racial discrimination were accounted for as a mediator between centrality and perceived stress. In other words, high race central individuals report experiencing less perceived stress that is not race-related than low race central individuals. These findings demonstrate the importance of distinguishing between race-specific and general indicators of stress (Neville et al. 1997).

Results from our multi-group analysis indicate that, although high race central individuals reported experiencing more racial discrimination than low race central individuals, greater experiences with racial discrimination were not related to higher levels of distress for them. Greater experiences with racial discrimination were associated with higher levels of distress only for individuals for whom race is a less central identity. The moderating effect of centrality can be interpreted as a protective effect in resilience theory. Resilience refers to those factors and processes that reduce the effects of risks for predicting a negative outcome (Garmezy 1991; Rutter 1987). The risk-protective model of resilience is said to occur when one factor moderates the relationship between a risk and a negative outcome (Zimmerman and Arunkumar 1994). Our results are consistent with such a model of

resilience because centrality reduced (i.e., moderated) the effects of discrimination on perceived stress. Young adults whose racial identity is central to their self-concept appear to be resilient in the face of risks posed by racial discrimination.

One possible explanation for the protective properties of racial centrality is that high race central individuals may possess a more effective coping repertoire for dealing with racist hassles as a result of greater practice dealing with racist experiences. Another explanation could be that high race central individuals may be shielded from the negative effects of discriminatory experiences because their self-confidence about being black helps them dismiss the experience rather than internalize it as one about themselves (Cross et al. 1998). Still another possible explanation for the buffering effect of racial centrality is that low race central individuals report experiencing different types of racist events than the high race central individuals. Because it may take a more blatantly racist or severe event for them to interpret the event as racist, the events that low race central individuals are interpreting may be more inherently stressful than the racist events identified by high race central individuals. More research is needed at the level of the specific event that investigates how high and low race central individuals cope with events (see Neville et al. 1997). Such research will help to explicate why having race as a central identity is protective for African Americans in the face of racist hassles. Our results, coupled with those of Neblett et al. (forthcoming), suggest that higher levels of racial centrality provide an effective buffer of the negative effects of experiencing racial discrimination for young African American adults.

The findings from the present study make several contributions to the research literature. The present study represents one of the few longitudinal empirical studies of African American racial identity. Although most of the models of racial identity suggest some stability in racial identity attitudes (e.g., Cross 1991; Sellers et al. 1998), there is a dearth of longitudinal data testing this assumption. The findings from the present study provide some evidence of the stability of African American young adults' racial centrality and public regard beliefs. The fact that this stability occurs during a period that developmental theorists (e.g., Erikson 1968; Phinney 1989) have

argued is marked by significant identity development is noteworthy. The prospective nature of the present study also provides us with more information regarding the possible nature of causation underlying the significant associations that we observed in our data. Our results, for example, suggest that the association between racial centrality beliefs and psychological distress were more likely the result of individuals' racial centrality beliefs influencing their psychological distress than individuals' previous level of psychological distress impacting their racial centrality beliefs. In addition, even though individuals' previous levels of distress were associated with their subsequent perceptions of racial discrimination, this association did not explain all of the relationship between racial discrimination and psychological distress measured at wave 5. Individuals' perceptions of racial discrimination were associated (both directly and indirectly) with psychological distress, even after controlling for the stability in psychological distress. More research using longitudinal and experimental designs is needed before more definitive conclusions can be made regarding the causal nature of the relationships found in the present study; however, the findings from this study allow for more inferences regarding causality than the many cross-sectional studies that comprise much of the extant research literature.

Despite the contributions made by the present study, several limitations should be noted. First, the original sample did not include the most academically achieving youth. It is notable, however, that by the 12th grade (the time of this study) the grade-point average of the sample included a more normal distribution of all grades (Zimmerman, Caldwell, and Bernat 2002). Second, because we did not have data on individuals' perceptions of discrimination at wave 4, we were unable to investigate the stability of discrimination across the two waves; nor were we able to control for the influence of earlier perceptions of discrimination on stress and psychological distress at wave 5. Third, our psychological distress measure only assessed symptoms. A more sensitive assessment of the multi-dimensional characteristics of psychological distress may have provided more support for the model. It may also allow for a more nuanced analysis of the effects of both identity and discrimination on various components of psychological distress.

Finally, some of the overall effect sizes that we found were small. Abelson (1985), however, pointed out that the percent variance accounted for may be a misleading index of influence because it does not consider the notion that cumulative influence may produce meaningful outcomes. He also suggested that the effect, however small, may be theoretically relevant. Our results are meaningful because of both issues. First, this study adds to the cumulative evidence that racial identity is associated with psychological well-being and distress (e.g., Caldwell et al. 2002). Although the effect may not be large, it is fairly consistent in a complex web of factors associated with mental health and distress outcomes. Second, the results support a priori hypothesized relationships, and they fit into the larger theoretical framework posed by several researchers regarding the role of racial identity in individuals' experiences with racial discrimination (Cross 1971; Neville and Lilly 2000; Sellers et al. 1998).

Further research is warranted in several areas to examine the generalizability of the present results. First, there is a need to replicate these findings in both older and younger age groups. There may be critical age and cohort effects that may influence the present results. Similarly, regional differences in African Americans' racial identity attitudes have been reported (Thornton, Tran, and Taylor 1997). Another issue that warrants further research involves the type of racial discrimination examined. The present study investigated racial discrimination at the level of everyday hassles. It remains an open question as to whether a different pattern of relationships would emerge if one were examining major racist events (Landreville and Vezina 1992). Low race central individuals may be even more vulnerable to the impact of major racist events (Sellers et al. 2001). Finally, further research is needed to determine whether the present findings regarding the buffering effects of racial centrality extend to physical health outcomes (Krieger and Sidney 1996; Williams, Spencer, and Jackson 1999). Nonetheless, the present study represents a critical first step for understanding the complex relationships among racial identity, racial discrimination, and psychological distress and provides a strong foundation upon which future studies may build.

CONCLUSION

As more and more researchers begin to investigate the adverse impact of racial discrimination, as a result of new initiatives to understand racial disparities in health outcomes, it is important that we do not fall into the trap of viewing African Americans as simply passive victims of racial discrimination. While our findings further document the adverse impact of experiencing racial discrimination, they also demonstrate the resilient nature of African Americans. In documenting this resilient nature, the present study provides strong evidence of individuals' racial identity beliefs as important protective factors. Thus, it is imperative that future research focus not only on the impact of racial discrimination but also on the protective factors and processes that allow the majority of African Americans to lead psychologically healthy lives.

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