

The Role of Racial Identity and Implicit Racial Bias in Self-Reported Racial Discrimination: Implications for Depression Among African American Men

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Abstract

Racial discrimination is conceptualized as a psychosocial stressor that has negative implications for mental health. However, factors related to racial identity may influence whether negative experiences are interpreted as instances of racial discrimination and subsequently reported as such in survey instruments, particularly given the ambiguous nature of contemporary racism. Along these lines, dimensions of racial identity may moderate associations between racial discrimination and mental health outcomes. This

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study examined relationships between racial discrimination, racial identity, implicit racial bias, and depressive symptoms among African American men between 30 and 50 years of age ($n = 95$). Higher racial centrality was associated with greater reports of racial discrimination, while greater implicit anti-Black bias was associated with lower reports of racial discrimination. In models predicting elevated depressive symptoms, holding greater implicit anti-Black bias in tandem with reporting lower racial discrimination was associated with the highest risk. Results suggest that unconscious as well as conscious processes related to racial identity are important to consider in measuring racial discrimination, and should be integrated in studies of racial discrimination and mental health.

Keywords

African American men, racial identity, Implicit Association Test, racial discrimination, depression

Introduction

African Americans report high levels of racial discrimination in a number of domains, including in housing, employment, and in legal contexts; as well as routine and more chronic experiences of being treated with less courtesy or respect in everyday interactions (Clark, 2001; Jones, 2000; Pager & Shepherd, 2008; Williams, Neighbors, & Jackson, 2003; Williams, Yu, Jackson, & Anderson, 1997). Despite being expressly prohibited by law, racial discrimination in domains such as employment and housing continue to occur covertly (Mendez, Hogan, & Culhane, 2011; Pager & Shepherd, 2008). Court cases have documented redlining in the mortgage industry, with African Americans being unfairly denied loans or being charged higher interest rates compared with Whites (Kau, Keenan, & Munneke, 2012; Ropiequet, Naveja, & Noonan, 2013). Companies have also been found to improperly use background checks to exclude African American job applicants (U.S. Equal Employment Opportunity Commission, 2013). Recent media reports and empirical research studies conducted exclusively among African American men highlight that this group is particularly susceptible to experiencing racial discrimination, including forms of institutionalized violence emerging from the intersection between race and gender. For instance, legally sanctioned “stop-and-frisk” policies have been found to disproportionately affect racial minority men (Gelman, Fagan, & Kiss, 2007). Inequalities are also evident in the judicial system, with African Americans receiving harsher punishments compared with their White counterparts for similar offenses accounting for

criminal history (Stolzenberg, D'Alessio, & Eitle, 2013). Several studies have also noted higher reported racial discrimination among African American men compared with African American women (Banks, Kohn-Wood, & Spencer, 2006; Borrell, Kiefe, Williams, Diez-Roux, & Gordon-Larsen, 2006; Krieger & Sidney, 1996; Sellers & Shelton, 2003). These findings highlight how the intersection of race and gender increases African American men's susceptibility to racial discrimination, and the importance of studying the potential health implications of such experiences specifically in this population.

Studies find that more frequent self-reported racial discrimination experiences are associated with poorer mental health outcomes among African Americans, including greater risk for depression, anxiety, substance use, and global psychological distress (Banks et al., 2006; Chae, Lincoln, & Jackson, 2011; Pittman, 2011; Williams & Williams-Morris, 2000). Findings specifically on African American men indicate that racial discrimination is associated with more depressive symptomatology (Banks et al., 2006; Borrell et al., 2006; Brown et al., 2000; Hammond, 2012; Pieterse & Carter, 2007; Utsey & Payne, 2000; Watkins, Hudson, Caldwell, Siefert, & Jackson, 2011). Various mechanisms are posited to link racial discrimination and poor mental health, including indirect effects via residential segregation into socioeconomically disadvantaged neighborhoods, characterized by fewer employment opportunities and lower quality education (Darity, 2003; Williams, 1999; Williams & Collins, 2001). Indicators of deprivation at the neighborhood level, such as the presence of crime and poverty, have been linked to psychological tolls, such as depression and anxiety (Cromley, Wilson-Genderson, & Pruchno, 2012; Curry, Latkin, & Davey-Rothwell, 2008; Galea et al., 2007; Gapen et al., 2011).

People experiencing such stressors may also be less likely to effectively manage and cope with other daily hassles (Pearlin, Lieberman, Menaghan, & Mullan, 1981; Thoits, 1995). As a qualitatively unique source of stress, racial discrimination can also have more direct effects on mental health (Banks et al., 2006). Social identity theory posits that societal messages about the intrinsic worth of social groups are a source of self-evaluation (Tajfel & Turner, 1986); hence, racial discrimination may lead some individuals to internalize negative racial group attitudes, impeding the development of positive self-concept (Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). Furthermore, race and gender intersect in ways leading to qualitatively unique appraisals of racial discrimination. Experiences of racial discrimination may be evaluated as distinct threats and challenges to masculinity among African American men, which can further lead to detrimental mental health consequences (Essed, 1991; Hammond, Fleming, & Villa-Torres, 2016).

Although studies have generally documented robust relationships between racial discrimination and a number of psychological outcomes, increasingly, investigators have found evidence for more complex pathways (Chae et al., 2011; Fischer & Shaw, 1999; Matthews, Hammond, Nuru-Jeter, Cole-Lewis, & Melvin, 2012). Such research has generally relied on theories of stress appraisal, coping, and responses to racial discrimination, as well as issues related to the measurement of racial discrimination (Bennett, Merritt, Edwards, & Sollers, 2004; Branscombe, Schmitt, & Harvey, 1999; Scott, 2003). Given that contemporary forms of racism are often ambiguous and appraisal of the motivation for negative treatment can often be unclear, the perception and self-report of racial discrimination involves not only the experience of an adverse event but also its interpretation as being the result of racial bias (Corning & Bucchianeri, 2010; Sellers & Shelton, 2003). In contrast to “traditional” overtly racist discrimination, racially biased interpersonal interactions are often more subtle and occur without an overt racial component (e.g., “shopping while Black”; Banks et al., 2006; Williams et al., 2012). Furthermore, some experiences of racial discrimination do not necessarily have an identifiable perpetrator, as in the case of discrimination when applying for jobs (Carney, Banaji, & Krieger, 2010; Dovidio & Gaertner, 2000; Krieger et al., 2010). A study found that the race of job applicants, experimentally manipulated using “White” and “African American” names on resumes, was associated with the number of callbacks received (Bertrand & Mullainathan, 2004). There may be a subjective component to whether individuals perceive such experiences to be instances of racial discrimination (Bennett et al., 2004; Corning & Bucchianeri, 2010). Along these lines, more nuanced frameworks suggest that cognitive as well as unconscious processes are involved in the perception of racial discrimination, which may be shaped by various dimensions of racial identity as well as implicit attitudes about race; and additionally that associations between self-reported racial discrimination and health outcomes may be contingent on these racial identity dimensions (Chae et al., 2011; Fuller-Rowell et al., 2011; Sellers et al., 2003).

Racial Identity and Racial Discrimination

The report of racial discrimination depends on whether individuals appraise negative life experiences as racially motivated or biased—a process that is shaped by various dimensions of racial identity (Seaton, Yip, & Sellers, 2009; Sellers et al., 2003). For example, individuals who diminish the salience of race or the significance of racism may be less likely to interpret negative interactions as being instances of racial discrimination. On the other hand, those emphasizing the importance of race or who show a greater awareness

of systemic social inequalities may be more inclined to attribute motivationally ambiguous experiences of unfair treatment to racial discrimination. Accordingly, several racial identity dimensions may be relevant to reports of racial discrimination, including, as conceptualized in the Multidimensional Inventory of Black Identity: racial centrality, private regard, and public regard (Sellers, Rowley, Chavous, Shelton, & Smith, 1997). Racial centrality refers to the degree to which an individual defines himself/herself by their race. Private regard reflects personal evaluations of one's racial group, whereas public regard involves perceptions of how others view their racial group. As expected, measures of these constructs have been shown to be associated with self-reports of racial discrimination (Banks & Kohn-Wood, 2007). For example, studies have found that greater racial centrality was associated with greater reports of racial discrimination; whereas more positive public regard, or perceptions that others viewed one's racial group more positively, was associated with lower reports of racial discrimination among African Americans (Ashburn-Nardo, Monteith, Arthur, & Bain, 2007; Sellers, Copeland-Linder, Martin, & Lewis, 2006; Sellers et al., 2003).

Moreover, theories of prejudice and discrimination suggest that assessments of threat and attributing blame are important moderators of the association between adverse experiences and well-being (Crocker, Voelkl, Testa, & Major, 1991; LaVeist, Sellers, & Neighbors, 2001). For example, attributing blame to external factors may be protective because it lessens the focus on deficiencies of oneself or on the target group (Crocker & Major, 1989; Major, Kaiser, & McCoy, 2003). Previous research reports that African Americans who believe that others hold prejudicial beliefs about them are protected from the deleterious effects of racial discrimination (Crocker & Major, 1989). In contrast, those who internalize negative attitudes about one's own racial group may be more likely to perceive that negative experiences are deserved. This hypothesis is supported by other research showing that members of stigmatized groups who negatively evaluate their group may be particularly vulnerable to the impact of adverse life experiences (McCoy & Major, 2003).

Counterintuitive to what would be expected, this line of research also suggests that lower reports of racial discrimination may in fact be associated with poorer outcomes among some subgroups, and in particular, among those who also hold a negative in-group bias (Chae et al., 2014; Wyatt et al., 2003). Among those who hold negative attitudes about their own racial group, low reports of racial discrimination may reflect the denial of systematic racism, minimization of racial discrimination, and subsequent self-blame in response to failure or negative experiences. Conversely, those with positive racial group attitudes, while more likely to interpret adverse experiences as being

racially motivated, may be somewhat buffered against the negative impact of these events. Along these lines, some researchers hypothesize that attributing negative experiences as being motivated by race may have self-protective properties (Crocker & Major, 1989; Major et al., 2003).

Other theories suggest that experiences of racial discrimination are not necessarily internalized, and that those who maintain a positive racial identity in spite of these experiences may be afforded some mental health protection. Along these lines, the rejection-identification model posits that stronger in-group identification following racial discrimination may mitigate the negative mental health implications of these experiences (Branscombe et al., 1999; Ramos, Cassidy, Reicher, & Haslam, 2012). Accordingly, greater racial identification may serve as a resource for coping with sources of racial minority stress. Several studies have found similar results, including a study conducted among African Americans which reported that greater racial group identification was associated with better self-esteem, and also lessened the impact of discrimination on poor mental health (Harris-Britt, Valrie, & Kurtz-Costes, 2007). Other studies have found that greater centrality of race to self-definition had a protective effect and also buffered the effect of discrimination on psychological distress (Ashburn-Nardo et al., 2007; Rowley, Sellers, Chavous, & Smith, 1998).

The Role of Implicit Racial Bias

Taken together, prior studies suggest that dimensions of racial identity are important factors to consider in studies of racial discrimination and its association with mental health among African Americans. However, a limitation of this research is the reliance on survey measures of these constructs, which may be particularly susceptible to social desirability bias. Furthermore, individuals may be unaware of their own unconscious biases around race, and subsequently may not be measured in survey instruments. Along these lines, implicit attitudes around race may constitute an additional factor separate from more conscious processes involved in reports of racial identity, and may also influence whether individuals perceive discrimination. Implicit racial attitudes may additionally moderate associations between racial discrimination and mental health outcomes.

In light of the limitations of survey measures of racial attitudes, there is increasing research using the Black-White Implicit Association Test (IAT), a performance-based tool used to measure implicit or unconscious racial bias that does not rely on self-report (Nosek, Greenwald, & Banaji, 2007). The IAT measures the speed that participants match images of Black and White faces and positively (“good”) and negatively (“bad”) valenced words. Faster

pairings are posited to be more closely associated with representations in memory. The IAT has been used as a measure of unconscious racial bias (Devine, Forscher, Austin, & Cox, 2012). Prior studies using large national samples have found that approximately 70% of people in the United States display an anti-Black bias using the IAT, making faster categorizations when mapping the “African American/Bad” and “White/Good” condition versus the “African American/Good” and “White/Bad” condition. Studies have shown that performance on the IAT is not systematically altered by social desirability bias, environmental effects, or other extraneous factors (Nosek, Greenwald, & Banaji, 2005). Further supporting its validity, a study found that those with a stronger anti-Black bias as measured by the IAT reported greater explicit prejudice against Blacks and also had greater negative interactions with a Black experimenter as rated by an independent judge (McConnell & Leibold, 2001). Test-retest reliability of the IAT has also been shown to be high (Nosek et al., 2007).

Although approximately half of African Americans have been found to display an implicit anti-Black bias (Nosek et al., 2007), most of the research on the IAT has not been conducted specifically on African Americans. There have been a handful of studies that have found positive associations between holding an implicit anti-Black bias, explicit measures of racial attitudes, and discriminatory behavior toward African Americans, but these studies have been conducted in exclusively White samples (e.g., McConnell & Leibold, 2001), or did not examine associations specifically among African Americans (Cunningham, Preacher, & Banaji, 2001; Ziegert & Hanges, 2005). One study of African American undergraduate students found that holding more positive implicit in-group racial attitudes was associated with fewer depressive symptoms and greater psychological well-being (Ashburn-Nardo et al., 2007). Another study found that African Americans who perceive that others view their racial groups favorably in fact have a greater implicit anti-Black bias compared with those who perceive that others view their racial group negatively (Livingston, 2002). However, there have been no studies to our knowledge that have explicitly examined whether implicit in-group racial bias, as measured by the IAT, may influence whether individuals perceive and subsequently report experiences of racial discrimination among African Americans. Furthermore, no studies have examined whether the IAT may moderate associations between racial discrimination and mental health outcomes.

The Current Study

In this study, we focus on African American men, who have been found to be particularly susceptible to racial discrimination. Furthermore, the intersection

between race and gender influences how racial identity and how psychological distress is expressed in this group (Essed, 1991; Hammond, Fleming, & Villa-Torres, 2016). In light of the qualitatively distinct racialized experiences of African American men, there is a need to address the paucity of research examining relationships between racial discrimination, racial identity, and mental health outcomes specifically in this group. We contribute to this body of literature by additionally examining the potential role of implicit racial bias in self-reported racial discrimination and mental health.

Testing these associations is important given the salience of racial discrimination, and in particular those practices that African American men are more susceptible to (e.g., in policing and the judicial system), and their implications for mental health outcomes in this population. It extends previous research in this area by incorporating the IAT in addition to examining explicit reports of racial identity. This study has implications for the measurement of racial discrimination and research examining its association with health outcomes, and may also potentially yield insight for clinical practice and other points of intervention to address depression among African American men. In summary, we examine (1) whether racial centrality, private/public regard, and implicit racial bias are associated with African American men's self-reports of racial discrimination; and (2) explore if racial identity dimensions and implicit racial bias moderate the association between racial discrimination and depressive symptoms.

Method

Study Design and Procedures

Data are from the Bay Area Heart Health Study, a cross-sectional observational study of 95 African American men between 30 and 50 years of age in the San Francisco Bay Area. Data were collected from February 2010 to May 2010. Eligibility criteria were (1) self-identification as an African American man between 30 and 50 years of age, (2) U.S. nativity, (3) parental U.S. nativity, (4) absence of serious or unstable illness (e.g., HIV, cancer, hepatitis, tuberculosis), and (5) ability to read, write, and understand English. Personal and parental nativity criteria were used to screen Caribbean Blacks and African immigrants whose self-concept of race and experiences of discrimination may be qualitatively different from U.S.-born African American groups (Dominguez, Strong, Krieger, Gillman, & Rich-Edwards, 2009; Ida & Christie-Mizell, 2012).

Participants were recruited using purposive sampling techniques, in socio-economically diverse neighborhoods at venues where the target population

was accessible, including churches, barbershops, and community events; through self-referral from posted advertisements placed in strategic locations; and through word-of-mouth. Eligible participants were provided with an appointment time to meet with study staff in a private room. Study procedures included a brief face-to-face interview with a member of the study staff to assess basic demographic characteristics, administration of the IAT, and a computer-assisted self-administered questionnaire to measure more sensitive psychological and socioeconomic characteristics, including measures of racial discrimination and racial identity. Participants were compensated with a \$70.00 gift card for travel and time. All study protocols were approved by the University of California, San Francisco Committee on Human Research.

Measures

Racial Discrimination. Racial discrimination was measured using the situation version of the Experiences of Discrimination questionnaire (Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005). Participants were asked whether they had “ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior” because of their “race, ethnicity, or color” in nine situations: getting a job; at work; getting housing; getting medical care; getting service at a store or restaurant; getting credit, bank loans, or a mortgage; on the street or in other public settings; or from the police or in the courts. The number of situations in which racial discrimination was experienced was examined as a continuous variable. The Experiences of Discrimination questionnaire has been widely used in population studies to monitor racial discrimination and to examine associations with health outcomes among African Americans, and prior research has documented evidence for its reliability and validity (Krieger et al., 2005).

Implicit Racial Bias. Implicit racial bias was assessed using the Black-White IAT, administered on computer via Inquisit software (Nosek et al., 2007). Values for the IAT are continuous and range from -1 to 1 , with a score of zero reflecting no bias, scores of less than zero reflecting an implicit pro-Black bias, and scores greater than zero reflecting an implicit anti-Black bias. Given this range in values, IAT scores were multiplied by 10. Results from multivariable analyses are therefore interpreted as the effect estimate associated with each 0.10 change in the IAT score.

Racial Identity. Racial identity dimensions were measured using subscales from the Multidimensional Inventory of Black Identity (MIBI; Sellers et al., 1997). Specific MIBI subscales that were examined in this study were racial

centrality, private regard, and public regard. The MIBI has been used in psychological studies on the relationship between dimensions of racial identity and mental health among African American adults. Studies have found evidence for the construct validity of the subscales; subscales have ranged in reliability across studies but have generally been found to be acceptable to excellent (Cokley & Helm, 2001; Sellers et al., 1997).

Racial centrality was assessed using eight items, including: "Overall, being Black has little to do with how I feel about myself," and "In general, being Black is an important part of my self-image" ($\alpha = .62$). Six items were used to assess private regard including "I feel good about Black people," "I am happy I am Black," and "I often regret that I am Black" ($\alpha = .85$). Public regard was assessed using six items including "Overall, Blacks are considered good by others," "In general, others respect Black people," and "Blacks are not respected by the broader society" ($\alpha = .65$).

Each of the MIBI subscales were measured on a 7-point Likert-type scale, with values ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with items reflecting low centrality, and less positive public and private regard being reverse coded. In the current study, the means of items composing each of the subscales were examined continuously, with higher scores reflecting greater levels of racial centrality, and more positive private regard and public regard.

Depressive Symptoms. Depressive symptoms were measured using the 10-item version of the Center for Epidemiologic Studies Depression Scale (CES-D-10; Andresen, Malmgren, Carter, & Patrick, 1994). The CES-D-10 measures affective, cognitive, and somatic symptoms of depression in the past week, and has been found to be a reliable and valid measure that can usefully screen for depression. Response choices for each item ranged from 0 (*rarely or none of the time, or less than 1 day*) to 3 (*all of the time, or 5 to 7 days*). Positively valenced items were reverse coded and response values were summed, with greater scores reflecting higher levels of depressive mood ($\alpha = .75$). We used the cut-point of 8 for "possible depression" or elevated depressive symptoms based on Kohout's formula for short versions of the CES-D (Kohout, Berkman, Evans, & Cornoni Huntley, 1993). This cut-point has been proposed and used in previous studies of using the CES-D-10, including in a national study of African Americans (Andresen, Malmgren, Carter, & Patrick, 1994; Schulz et al., 2000; Torres, 2012; Win et al., 2011; Zauszniewski & Graham, 2009).

Sociodemographic Characteristics. Sociodemographic variables included self-reported age in years examined as a continuous variable. Marital status was

examined as currently married versus unmarried, which included those never married, divorced, or widowed. Educational attainment was examined as high school or less versus some college or more. Both marital status and education were coded dichotomously due to sample size considerations, and because examining these as categorical variables with more than two levels did not change results. Poverty was measured continuously as the ratio of household income to the poverty threshold accounting for family size (U.S. Census Bureau, 2010).

Data Analysis. For multi-item measures with missing data on 20% or fewer items, the within-subject mean of items with complete data was used to substitute for missing values. Using mean substitution for multi-item scales with at least 80% complete data has been shown to be an acceptable technique with little impact on statistical inferences (Roth, 1999).

After using mean substitution, there remained missing data on one participant for racial discrimination, three participants for public regard, four participants for poverty ratio, and one participant for education. In bivariate and multivariable analyses, missing data on these variables were handled using multiple imputation, in which five imputations for missing data were generated using a Markov Chain Monte Carlo technique assuming an arbitrary missing data pattern (Rubin, 1987; Schafer & Graham, 2002). Imputed values were truncated to fit within the range of possible values but were not rounded (Horton, Lipsitz, & Parzen, 2003). Multiple imputation has been found to properly take into account the uncertainty inherent in missing values and has been shown to result in valid statistical inferences (Allison, 2000).

Correlations between racial discrimination, implicit racial bias, and racial identity variables were examined to determine bivariate relations between these measures. In addition, an ordinary least squares regression model controlling for sociodemographic factors predicting racial discrimination was specified to examine associations between implicit racial bias and dimensions of racial identity after adjustment for one another. A logistic regression model predicting elevated depressive symptoms, including racial discrimination, implicit racial bias, and racial identity was also specified controlling for sociodemographic characteristics. Interactions between racial discrimination and implicit racial bias and each of the racial identity dimensions were tested. Component variables used to create interaction terms were centered in order to reduce the possibility of multicollinearity (Cohen, Cohen, West, & Aiken, 2003). In addition, multicollinearity was assessed in multivariable models using measures of tolerance and variance inflation factor (VIF). Tolerance and VIF values did not approach <0.10 or >10 , respectively, for any of the variables.

Table 1. Demographic Characteristics of Midlife African American Men in the Bay Area Heart Health Study ($n = 95$).

	Total ($N = 95$)
CESD-10 ≥ 8 , n (%)	
No	53 (55.8)
Yes	42 (44.2)
Racial discrimination, M (SD)	5.59 (2.78)
Implicit racial bias, M (SD)	-1.29 (3.54)
Racial centrality, M (SD)	5.02 (0.94)
Private regard, M (SD)	6.28 (1.07)
Public regard, M (SD)	4.10 (1.06)
Age, M (SD)	43.8 (5.8)
Relationship status, n (%)	
Married	22 (23.2)
Unmarried	73 (76.8)
Income-to-poverty ratio, M (SD)	2.04 (2.28)
Education, n (%)	
High school or less	39 (41.5)
Some college or more	55 (58.5)

Note. CESD-10 = Center for Epidemiologic Studies Depression Scale. Missing data on one participant for racial discrimination, three participants for public regard, four participants for income-to-poverty ratio, and one participant for education.

All analyses were conducted using Statistical Analysis Software (SAS Institute Inc., 2008). For analyses using multiple imputation, a final set of effect estimates was obtained using the PROC MIANALYZE procedure.

Results

Demographic and Descriptive Characteristics

The mean age of the sample was 43.8 years ($SD = 5.8$) and most participants were unmarried (77%). Overall, our sample could be characterized as having lower levels of socioeconomic attainment, with 42% having a high school education or less; on average, the sample had income levels that were twice the poverty threshold. Approximately 44% of participants exhibited elevated depressive symptoms. Participants reported experiencing racial discrimination in an average of five to six situations. Additional sample characteristics for implicit racial bias, racial identity dimensions, and demographic factors are presented in Table 1.

Table 2. Correlation Matrix of Discrimination, Implicit Racial Bias, and Racial Identity Variables Among Midlife African American Men in the Bay Area Heart Health Study ($n = 95$).

	2	3	4	5
1. Racial discrimination	-0.222*	0.268**	0.088	-0.160
2. Implicit racial bias	1.000	0.005	0.061	0.141
3. Racial centrality		1.000	0.394***	0.159
4. Private regard			1.000	0.209*
5. Public regard				1.000

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Implicit Racial Bias, Racial Identity, and Racial Discrimination

Intercorrelations between our primary predictors are presented in Table 2. Higher implicit anti-Black bias was associated with lower reports of racial discrimination. In contrast, greater explicit reports of racial centrality were positively associated with reports of racial discrimination. Racial centrality was positively correlated with private regard; private regard and public regard were also positively associated.

Results from the ordinary least squares regression model predicting racial discrimination by implicit racial bias, dimensions of racial identity, and sociodemographic factors is presented in Table 3. Implicit racial bias continued to be negatively associated with racial discrimination ($b = -0.15$, standard error [SE] = 0.08, $p < .05$) and racial centrality remained positively associated with racial discrimination ($b = 0.84$, $SE = 0.31$, $p < .01$).

Logistic Regression Predicting Elevated Depressive Symptoms

A logistic regression model predicting elevated depressive symptoms by racial discrimination, implicit racial bias, dimensions of racial identity, and controlling for sociodemographic factors is presented in Table 3. More positive public regard was associated with lower odds of elevated depressive symptoms (odds ratio [OR] = 0.57, 95% confidence interval [CI] = [0.36, 0.92]; $p < .05$).

Interactions between racial discrimination and implicit racial bias and each of the racial identity subscales were added to the model individually and in a single block group. The only interaction that was significant, either singularly or in combination with other interaction terms, was between racial discrimination and implicit racial bias ($\chi^2 = 4.4$, 1 df , $p <$

Table 3. Linear Regression Predicting Racial Discrimination and Logistic Regression Predicting Elevated Depressive Symptoms Among Midlife African American Men in the Bay Area Heart Health Study ($n = 95$).

	Racial discrimination <i>b</i> (SE)	CESD-10 ≥ 8 ; OR [95% CI]
Racial discrimination		0.96 [0.80, 1.14]
Implicit racial bias	-0.15 (0.08)*	1.00 [0.87, 1.13]
Racial centrality	0.84 (0.31)**	0.89 [0.52, 1.50]
Private regard	0.05 (0.28)	0.77 [0.47, 1.26]
Public regard	-0.48 (0.27)	0.57 [0.36, 0.92]*
Age	0.00 (0.05)	0.96 [0.88, 1.03]
Unmarried vs. married	0.02 (0.65)	1.00 [0.35, 2.89]
Income-to-poverty ratio	-0.27 (0.13)*	0.93 [0.76, 1.15]
Some college or more vs. high school or less	0.38 (0.56)	0.88 [0.35, 2.22]

Note. CESD-10 = Center for Epidemiologic Studies Depression Scale; OR = odds ratio; CI = confidence interval.

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

.05). This interaction is illustrated in Figure 1. Predicted probabilities of elevated depressive symptoms were constructed, choosing values of one standard deviation below the mean, the mean value, and one standard deviation above the mean to represent low, moderate, and high racial discrimination, respectively (Jaccard, 2001). Values of one standard deviation below and above the mean were chosen for implicit racial bias to represent those with a pro-Black versus anti-Black bias, respectively. Choosing alternative values for these variables did not substantively alter the shapes of graphs. Covariates and predictors not being graphed were set to their mean value to illustrate relationships for the average respondent. We observed that among participants with an implicit pro-Black bias, there was a positive association between reports of racial discrimination and the probability of having elevated depressive symptoms. However, among those with an implicit anti-Black bias, there was a negative relationship between reports of racial discrimination and the probability of having elevated depressive symptoms.

Discussion

Results from our study of African American men suggest that self-reports of racial discrimination are associated with both implicit racial bias and explicit

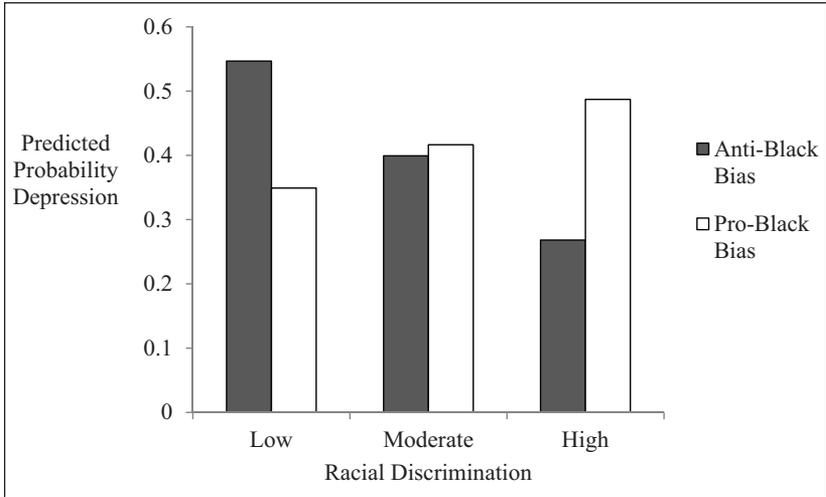


Figure 1. Interaction between implicit racial bias and racial discrimination predicting elevated depressive symptoms among midlife African American men in the Bay Area Heart Health Study ($n = 95$).

Note. Interaction between racial discrimination and implicit racial bias, $\chi^2 = 4.4$ (1 *df*), $p = .035$.

self-reports of racial identity, with greater racial centrality being associated with greater self-reports of racial discrimination (Rucker, Neblett, & Anyiwo, 2013). Greater emphasis on race to self-definition may affect whether individuals interpret negative life experiences as being racially motivated. Our findings indicated that unconscious racial bias is also associated with self-reports of racial discrimination, with greater anti-Black bias being associated with lower self-reports of racial discrimination. Interestingly, in our study we found no significant correlations between implicit racial bias and any of the explicit self-report measures of racial identity, and it was significantly associated with racial discrimination even after controlling for explicit measures of racial identity. The lack of significant correlations between the IAT and explicit measures of racial identity suggests that implicit racial bias may be separate from more cognitive processes involved in racial identity formation. Furthermore, individuals may be unaware of their own unconscious racial biases; self-report measures of racial identity may also be more prone to the provision of socially desirable responses. Our results suggest that unconscious processes may play a key role in African American men's interpretations of negative experiences and influence their appraisal of racial discrimination.

Consistent with what other studies have found, in multivariable models we also found that more positive public regard, or perceptions that non-Blacks view Blacks favorably, was associated with significantly lower odds of elevated depressive symptoms. This finding is in accordance with prior studies that have also found that positive public regard may protect against mental health problems (Bynum, Best, Barnes, & Burton, 2008; Sellers et al., 2003). Consistent with social identity theory, individuals may derive self-concept from the values that others attach to their social groups. Accordingly, perceptions of negative public regard may be related to poorer self-evaluation, which in turn increases the risk of depression.

We also found evidence for moderated associations between racial discrimination and depressive symptoms by implicit racial bias. Among those with an implicit pro-Black bias, as expected, we found a positive association between racial discrimination and the risk of having elevated depressive symptoms. However, among those with an implicit anti-Black bias, there was a negative relationship; and the highest risk was found among those with an implicit anti-Black bias and who reported low levels of racial discrimination. This finding suggests that implicit racial bias also influences the meaning and subsequent significance of self-reported racial discrimination for depressive symptoms—for example, that lower reports of racial discrimination reflect a denial of systemic racism which may be harmful among those with a negative bias against their own racial group. Accordingly, the internalization of racial bias in tandem with the denial of racial discrimination may be associated with poorer mental health. Indeed, we found that those with a pro-Black bias reported higher levels of racial discrimination; hence, those with a greater implicit anti-Black bias and who report low levels of racial discrimination may be more likely to attribute negative experiences to internal causes, subsequently leading to a greater risk of depression (Chae, Nuru-Jeter, & Adler, 2012). In this group, recognizing racial discrimination may in fact be adaptive.

There are several caveats to our findings based on the cross-sectional nature of our data. Deducing the temporal sequence and causal direction of the associations we found is limited. For example, we cannot conclude whether implicit racial bias or dimensions of racial identity influence perceptions of racial discrimination; or if experiences of racial discrimination affect implicit racial bias or racial identity. However, in agreement with models of racial identity, we posit a reciprocal relationship (Quintana, 2007). In addition, we cannot discount alternative interpretations of our findings, and it is possible that depression may have led to greater perceptions that other groups devalue Blacks. Future longitudinal research may help disentangle the relationships that we found. An additional limitation is related to the relatively

small number of participants in our study, which precluded us from running subanalyses on specific age groups, or among people in specific socioeconomic strata (e.g., poor vs. nonpoor), although we did adjust for these characteristics in our multivariable models. Other stigmatized identities that are associated with discrimination, such as sexual minority status, were also not measured.

Furthermore, because our study focused specifically on African American midlife men in the San Francisco Bay Area, our results may not be generalizable to African American women, those in other age groups or historical cohorts, or those who reside in other geographical areas. This study also specifically recruited those born in the United States and whose parents were also born in the United States, and accordingly, our findings may not be applicable to Caribbean Blacks or African immigrants. However, we focused specifically on this population given that experiences of discrimination and the ways in which racial identity is expressed are likely to be qualitatively different between these groups. In addition to recognizing heterogeneity in the Black population in the United States, this approach also reflects the understanding that associations between racial discrimination, racial identity, and mental health are informed by intersections between race and gender, as well as immigration history (Dominguez et al., 2009; Ida & Christie-Mizell, 2012).

Despite these limitations, findings from our study offer new directions for research on the mental health implications of racial discrimination that incorporates the role of racial identity dimensions and implicit racial bias. Our study suggests that both implicit racial bias as well as explicit measures of dimensions of racial identity may influence whether individuals interpret or recognize that negative experiences are racially motivated. Identifying psychosocial factors that influence reports of racial discrimination are particularly important given the shift from traditional overt forms of racially motivated discrimination to more subtle, aversive forms of racism (Dovidio, Kawakami, & Gaertner, 2002; Pager & Shepherd, 2008). Doing so also helps better interpret findings on the relationship between racial discrimination and mental health outcomes, and also helps inform future research in this area, which may be enhanced through the use of not only explicit self-report measures of racial identity but also implicit measures of racial attitudes. Our findings emphasize the importance of examining these typically understudied factors in studies of racial discrimination and mental health among African American men. Mental health issues among African American men may be addressed at multiple ecological levels, including through greater enforcement of antidiscrimination laws, social programs around targeting racism more broadly, as well as clinical practice. Our findings suggest that recognizing that negative experiences are motivated by racial discrimination may be associated with lower

depressive symptoms among those who have internalized an in-group racial bias. Furthermore, societal interventions should be concerned not only with reducing racial discrimination but also promoting positive in-group racial attitudes as ways to promote mental health in this population.

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