

Sociodemographic Variations in Self-Reported Racism in a Community Sample of Blacks and Latino(a)s

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This study investigated dimensions of socioeconomic status (SES) and self-reported racism among a convenience sample of 418 U.S.-born, Black and Latino(a) urban-dwelling adults. Predictors included indexes of individual and neighborhood SES. Self-reported racism was assessed with the Perceived Ethnic Discrimination Questionnaire–Community Version. Individuals at all levels of SES report racism, but the type of exposure varies by SES. Lower levels of SES predict higher levels of lifetime exposure to race-related stigmatization and threat/harassment, and more past-week discrimination. In contrast, higher levels of SES predict greater workplace discrimination. The findings highlight the importance of considering the complex ways in which SES and racism, 2 contributors to racial disparities in health, overlap and diverge.

Racial disparities in health status are well documented (National Heart, Lung, and Blood Institute, 2000; Williams, 1999), although the mechanisms accounting for these variations are not well understood. Investigators have suggested that racial/ethnic group variations in exposure to psychosocial stressors and access to coping resources may contribute to variations in health status (Anderson, Myers, Pickering, & Jackson, 1989; Brondolo, Kelly et al., 2005; Clark, Anderson, Clark, & Williams, 1999; Gallo & Matthews,

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2003; Krieger, 1999; Krieger, Rowley, Herman, Avery, & Phillips, 1993; Williams, 1999). Both racism and low socioeconomic status (SES) have been hypothesized to serve as psychosocial stressors, disproportionately affecting certain racial and ethnic minority groups and contributing to racial/ethnic disparities in health (Brondolo, Rieppi, Kelly, & Gerin, 2003; Clark et al., 1999; Williams, 1999).

Testing hypotheses about the differential contributions of low SES and racism to these racial/ethnic disparities is made difficult because these variables are interrelated. Researchers have suggested that racism and ethnic discrimination have played causal roles in the lower SES of many African Americans and members of other stigmatized minority groups (Williams & Williams-Morris, 2000). Without a clearer understanding of the degree to which variations in SES are associated with differences in self-reported racism, it will be difficult to identify the underlying psychophysiological mechanisms linking either of these psychosocial stressors to health.

The primary aim of the present study is to clarify the relationship of SES to self-reported racism. This approach can yield data that may be helpful in understanding how racism and SES contribute to between-group and within-group variations in health status (Klonoff & Landrine, 1999; Krieger, Smith, Naishadham, Hartman, & Barbeau, 2005; Landrine, Klonoff, Corral, Fernandez, & Roesch, 2006; Williams, 1999).

According to Clark et al. (1999), *racism* is defined as the “beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics or ethnic group affiliation” (p. 805). *Ethnic discrimination* is defined as unfair treatment received because of one’s ethnicity, where *ethnicity* refers to various groupings of individuals based on race or culture of origin (Contrada et al., 2000, 2001).

Racism can occur on multiple levels, including cultural, institutional, and interpersonal (Jones, 1997; Krieger, 1999). Racism can exert effects even when the target is not aware of the discrimination (Krieger et al., 2005). Much research, including the present study, concerns episodes of racism that are perceived by the targets and consequently can be self-reported (Paradies, 2006). This type of racism has been labeled *interpersonal racism*, which Krieger (1999) defined as “directly perceived discriminatory interactions between individuals, whether in their institutional roles or as public and private individuals” (p. 301). Interpersonal racism can occur between individuals from different ethnic groups (i.e., intergroup racism) or between individuals of the same ethnic group (i.e., intragroup racism; Clark et al., 1999).

SES is generally considered to reflect an individual’s level of access to material assets and prestige. SES commonly is assessed using objective

measures of education, income, and occupational prestige, although others have considered social capital or crowding as markers of SES (Adler & Newman, 2002; Krieger et al., 1993; Krieger, Williams, & Moss, 1997) or have included subjective indexes (Adler & Newman, 2002). These variables can be assessed at multiple levels (e.g., individual, household, community, neighborhood) and across the life course (e.g., past vs. current).

Associations between SES and self-reported racism are expected since variations in social class may correspond to variations in exposure to situations in which individuals are likely to experience discrimination. For example, individual occupational prestige or neighborhood affluence may affect the rate at which individuals have contact with members of other racial/ethnic groups or are likely to experience race-related workplace discrimination versus race-related harassment.

Few studies have explicitly examined SES variations in self-reported racism (Franzini, Caughy, Spears, & Esquer, 2005; Mays, Coleman, & Jackson, 1996; Schulz et al., 2000; Watson, Scarinci, Klesges, Slawson, & Beech, 2002). However, data are available from other studies in which analyses of SES–racism relationships were conducted in the context of investigating other questions (Brown, 2001; Gee, 2002; Kelaher et al., 2004; Kessler, Mickelson, & Williams, 1999; Klonoff & Landrine, 1999; Krieger, Sidney, & Coakley, 1998; Kwate, Valdimarsdottir, Guevarra, & Bovbjerg, 2003). The existing research on the relationship of SES to self-reported racism has yielded mixed findings, with some of the variations associated with the strategies for participant selection (i.e., population-based vs. convenience samples), the level of SES assessed (i.e., individual vs. neighborhood), the dimensions of SES investigated (i.e., education, income, occupational prestige), and the formats used when assessing racism.²

When individual-level measures of SES are considered, the most consistent effects have emerged from studies investigating the association between education and self-reported racism. Many studies, including those using population-based samples (Brown, 2001; Gee, 2002; Kelaher et al., 2004; Kessler et al., 1999) have indicated that those with higher levels of education are more likely to report perceived discrimination. However, two studies reported no relationship between education and self-reported racism for

²Several studies have looked at the relationship of racism and SES to a mental or physical health outcome, but did not specifically report SES variations in perceived racism (Karlsen & Nazroo, 2002; Krieger et al., 1998; Williams, 1999). Most of the prior research on the interaction of racial/ethnic discrimination and SES on health has examined the interaction of minority status and SES. Although members of stigmatized minority groups are likely to experience discrimination, there are substantial individual differences in the level and type of exposure. Skin color or other phenotypic characteristics may not be appropriate proxies for indexing the intensity of discrimination to which these individuals have been exposed (Krieger et al., 1998).

Black women (Kwate et al., 2003; Watson et al., 2002), and one study found an inverse relationship (Klonoff & Landrine, 1999). Two large-scale studies reported a positive association of income to discrimination (Brown, 2001; Gee, 2002), whereas another study failed to find an association (Kwate et al., 2003), and two studies found at least partial evidence for an inverse relationship (Kessler et al., 1999; Watson et al., 2002).

Very few studies have examined the relationship of occupational prestige (Watson et al., 2002) or even employment status (i.e., working or not working; Gee, 2002; Mays et al., 1996) to self-reported racism. Gee reported that among Asian Americans, those who were working were more likely to report having been exposed to discrimination than those who were not working. In contrast, two studies of Black women reported no relationship of self-reported racism to either employment status (Mays et al., 1996) or occupational prestige (Watson et al., 2002).

When neighborhood variations in SES have been examined in population-based samples, two studies indicated that individuals living in more impoverished communities report higher levels of unfair treatment or discrimination (Franzini et al., 2005; Schulz et al., 2000). However, another study of Chinese Americans found that those who live in relatively affluent areas were more likely to experience discrimination (Gee, 2002).

What accounts for the variations in these findings? Some variability is accounted for by the strategies for defining each dimension of SES. For example, some researchers (e.g., Mays et al., 1996; Schulz et al., 2000) do not include those with a high school diploma in a low-education group, while others do (Kelaheer et al., 2004; Kwate et al., 2003). However, very low levels of education may lead to more severe limits in economic and social opportunities, potentially increasing the likelihood that individuals will be confined to racially and economically segregated neighborhoods. Residents in these neighborhoods may have limited opportunities for potentially discriminatory interactions with members of other racial/ethnic groups, but may have ample exposure to a range of other race-related social stressors.

Variations in the methods used to assess self-reported racism may influence estimates of the prevalence and severity of exposure and may affect estimates of the relationship of SES to racism. Although most studies (Franzini et al., 2005; Kessler et al., 1999; Klonoff & Landrine, 1999; Kwate et al., 2003; Landrine & Klonoff, 1996; Mays et al., 1996) have used more detailed measures (e.g., Schedule of Racist Events or SRE; Landrine & Klonoff, 1996), several epidemiological studies have included measures with only one or two items inquiring about experiences of racial discrimination (Brown, 2001; Gee, 2002).

Several authors have noted that the format of the questions used to assess experiences of racism influence the association of SES to racism. Specifically,

there are differences in outcome depending on the level of specificity in the item (e.g., items that ask about exposure to discrimination vs. items that ask about exposure to a specific type of discriminatory incident; Brown, 2001; Kessler et al., 1999). For example, Kessler et al. reported that income was inversely associated with day-to-day discrimination, but was not associated with major lifetime discrimination. Questions inquiring about experiences of racial discrimination may be interpreted by participants to refer only to major episodes of maltreatment; thus, participants may discount their exposure to day-to-day episodes of racial discrimination.

Some measures specifically ask about episodes of racial discrimination or race-related maltreatment (e.g., the SRE; Landrine & Klonoff, 1996); whereas others include items that inquire about everyday maltreatment without explicit mention of race as a causal factor for the maltreatment (Schulz et al., 2000). Respondents may conclude that questions about discrimination refer only to episodes involving intergroup discrimination; whereas questions about unfair treatment may elicit responses reflective of episodes of both inter- and intragroup race-related maltreatment. Finally, Klonoff and Landrine (1999) indicated that the time frame in which the racism was experienced (i.e., past week, past year, or lifetime exposure) also appears to influence the relationship of racism to psychosocial outcomes.

The association of SES to interpersonal racism may vary depending on the dimension of racism assessed. Interpersonal racism encompasses different types of experiences, ranging from social exclusion or workplace discrimination to physical threat/harassment (Brondolo, Kelly et al., 2005; Brondolo, Thompson et al., 2005; Contrada et al., 2001). Only one study included analyses distinguishing among different types of racism (Kelaheer et al., 2004), and the results indicated that educational level was positively associated with perceptions of race-related unfair treatment, but not with race-related physical harassment (Kelaheer et al., 2004).

The aim of the present study is to investigate the relationship of SES to different forms of self-reported interpersonal racism. The analyses explicitly test the hypothesis that individuals at all levels of the SES spectrum will report some exposure to racism, but that the types of incidents will vary by SES. To resolve some of the inconsistencies in the literature, this study examines multiple dimensions of individual-level SES (i.e., education, income, occupational prestige, and assets) and neighborhood SES in the analyses.

We have chosen to focus primarily on relatively objective and asset-based indexes, to avoid inflating relationships of SES and racism as a result of common method variance, as our measures of racism rely on self-report. Different dimensions of racism are assessed separately, including social

exclusion, workplace discrimination, stigmatization, and threat/harassment. Additional analyses permit us to evaluate the effects of different formats for inquiring about self-reported racism.

Method

Participants and Recruitment

A convenience sample of participants was recruited and tested at primary-care practices affiliated with the Clinical Directors Network (CDN). Participants were also recruited through snowball sampling and flyer advertisements posted in targeted neighborhoods. Demographic details of the sample are presented in Table 1. The sample ($N = 418$; 237 female, 181 male) included U.S.-born Black (147 female, 106 male) and Latino/Latina (90 female, 75 male) adults residing in New York City, with a mean age of 40.1 years ($SD = 9.7$). Individuals were regarded as U.S.-born if they were born in the 50 United States or Puerto Rico. Most of the participants ($n = 284$; 67.9%) were single (i.e., unmarried, divorced, widowed, or separated), and half were employed either full- or part-time. Across the sample, 16% owned their own homes.

Data were collected during the screening visit for an ambulatory blood pressure (ABP) study. At this visit, measures of demographics and SES were assessed during a structured interview conducted by a Black or Latino(a) research assistant. Measures of self-reported racism were collected via computer through a program that permitted participants to hear the items read aloud at the time they were presented on the screen. The program permitted the experimenter to choose recordings in which the race or ethnicity of the actor reading the items was matched to the race or ethnicity of the participant.

Measures

Demographics. Participants responded to a number of demographic questions. They were asked about their age, self-reported race and ethnicity, gender, marital status, and employment (i.e., current or past).

Socioeconomic status. Measures of SES included education, income, occupational prestige, assets, and neighborhood SES. There were seven levels of education that were assessed (i.e., *grade school, less than high school, high school diploma or general equivalence diploma [GED], some college, technical school, completed college, and some graduate school or completed graduate school*).

Table 1
Individual and Neighborhood SES Measures, and Perceived Racism Among Blacks and Latino(a)s

	Full group (N = 418)	Blacks (n = 253)	Latino(a)s (n = 165)
Individual SES			
Educational level			
<H.S. diploma	106 (25%)	46 (18%)	60 (36%)*
H.S. diploma/GED	250 (60%)	164 (65%)	86 (52%)*
≥College degree	62 (15%)	43 (17%)	19 (12%)*
Employment			
Currently employed	206 (49%)	131 (52%)	75 (45%)
Occupational prestige	262.40 (123.19)	256.35 (123.19)	271.64 (125.71)
Income			
GHI (\$)	32,853 (48,961)	34,824 (56,157)	29,830 (35,133)
Income Level			
Group 1 (≤poverty level)	177 (42%)	104 (41%)	73 (44%)
Group 2 (≤2x poverty level)	96 (23%)	62 (25%)	34 (21%)
Group 3 (≤3x poverty level)	52 (12%)	29 (11%)	23 (14%)
Group 4 (>3x poverty level)	93 (22%)	58 (23%)	35 (21%)
Assets:			
Mean assets (\$)	21,567 (87,678)	25,150 (99,941)	16,075 (64,414)

Table 1 *Continued*

	Full group (<i>N</i> = 418)	Blacks (<i>n</i> = 253)	Latino(a)s (<i>n</i> = 165)
Assets group			
Low (\$0–100)	230 (55%)	148 (59%)	82 (50%)
Moderate (\$101–9,999)	107 (26%)	54 (21%)*	53 (32%)*
High (\$10K+)	81 (19%)	51 (20%)	30 (18%)
Neighborhood SES ^a (<i>N</i> = 380)	–1.71 (1.90)	–1.72 (1.59)	–1.69 (2.28)
Ethnic discrimination			
Lifetime total	2.16 (0.68)	2.22 (0.68)	2.08 (0.68)
Social exclusion	2.55 (0.79)	2.62 (0.77)	2.44 (0.81)
Workplace	2.21 (0.81)	2.26 (0.79)	2.14 (0.83)
Stigmatization	1.99 (0.85)	2.03 (0.85)	1.93 (0.85)
Threat/Aggression	1.69 (0.78)	1.74 (0.84)	1.61 (0.68)
Different settings	2.08 (0.81)	2.10 (0.81)	2.05 (0.82)
Past week	6.35 (6.75)	6.48 (6.76)	6.17 (6.75)

Note. Items for Lifetime PEDQ–CV and four subscales and the Discrimination in Different Settings scale were rated on a 5-point scale ranging from 1 (*never happened*) to 5 (*happened very often*). Scores reflect item means. Past-week discrimination items were rated on a 4-point scale ranging from 0 (*never in the past week*) to 3 (*three or more times in the past week*). Scores reflect the sum of the items.

^aComposite of standardized scores (against New York State 2000 Census) for family income; % college educated and % white collar.

*Between-groups differences, $p < .05$.

Income measurement for the individual participant and his or her spouse covered the following categories: wages, commissions or bonuses, self-employment income, interest, Social Security disability or supplemental income, retirement income or alimony, and investments. If other individuals were contributing to the household, we asked the participant to include their income in an estimate of gross household income (GHI).

Occupational prestige was coded using the *New York Times* prestige codes derived from the Year 2000 U.S. Census. Occupational prestige scores reflected current employment for those who reported being employed at the time of the study, and past employment for those who reported being unemployed at the time of the study. Non-home financial assets were calculated by summing the value for all non-income resources, including stocks, bonds, and savings accounts.

Neighborhood SES measures were derived from the 2000 Census data using block-group-level information. Three neighborhood measures were chosen based on their correspondence to the individual-level measures selected (i.e., median family income, percentage of white-collar occupations, percentage of college graduates). To further understand the neighborhood-level factors that influenced the potential for exposure to interpersonal racism, we obtained Census data on the racial/ethnic composition of the neighborhood (i.e., percentage of foreign-born, Asian, Black, Hispanic, and White individuals).

Self-reported racism. The Perceived Ethnic Discrimination Questionnaire–Community Version (PEDQ–CV; Brondolo, Kelly et al., 2005) was utilized to assess self-reported racism. The PEDQ–CV was derived from the Perceived Ethnic Discrimination Questionnaire (PEDQ; Contrada et al., 2001). The PEDQ–CV is a 70-item questionnaire consisting of five scales, three of which are included in the present study.

The first scale—PEDQ–CV Lifetime Discrimination—is a 34-item scale that assesses lifetime exposure to interpersonal racism; and that includes four subscales measuring social exclusion, workplace discrimination, stigmatization, and threat/harassment. Participants were asked to indicate how often they had ever “had these experiences during their lifetime.” Each item begins with the phrase “Because of your ethnicity/race . . .” and ends with a description of a specific event or interaction involving maltreatment.

The second scale—PEDQ–CV Discrimination in Different Settings—is an 11-item scale that assesses the degree to which the participant perceives himself or herself to have been treated in a discriminatory manner in any of 11 situations, including the criminal-justice system, looking for housing, employment, and in public settings. The total score on this scale represents the mean intensity of discrimination across the settings. This scale was

modeled after commonly used measures of major lifetime discrimination (e.g., Kessler et al., 1999; Krieger, 1999; Watson et al., 2002).

The third scale—PEDQ-CV Past-Week Discrimination scale—is a 10-item scale that assesses everyday experiences of social exclusion, stigmatization, and threat/harassment. The scale items are similar to those included in the Lifetime Discrimination scale, but the scale asks about the occurrence of these events during the past week.

Items for the PEDQ-CV Lifetime Discrimination scale (including the four subscales) and the Discrimination in Different Settings scale were rated on a 5-point Likert-type scale ranging from 1 (*never happened*) to 5 (*happened very often*). Past-Week Discrimination items were rated on a 4-point scale ranging from 0 (*never in the past week*) to 3 (*three or more times in the past week*). All PEDQ-CV scales and subscales had good internal consistency, and previous studies have provided evidence of construct validity (Brondolo, Kelly et al., 2005).

Data Analysis

Coding SES measures. Distributions of the SES measures in the current sample are presented in Table 1. For education, individuals were assigned to one of three degree-based groups: (a) less than a high school diploma (<H.S. diploma); (b) high school diploma/GED, which includes those with technical school or some college (H.S. diploma/GED); and (c) at least a college degree (\geq college degree).

For income, we categorized individuals into poverty-level groups because the GHI variable was not normally distributed. Participants were divided into income-level groups based on the ratio of their GHI to the poverty-level income for households with equivalent numbers of members, senior citizens, and children (18 years and younger). Four income-level groups were constructed: (a) Group 1 (\leq poverty level), income at or below poverty level for households of their size and composition; (b) Group 2 ($\leq 2x$ poverty level), income more than the poverty level, but less than twice the poverty level; (c) Group 3 ($\leq 3x$ poverty level), income more than twice the poverty level, but less than three times the poverty level; and (d) Group 4 ($> 3x$ poverty level), income more than three times the poverty level.

For occupational prestige, we considered participants' reports of current or past jobs. Occupational prestige scores ranged from a low of 440 (representing a maintenance worker) to a high of 1 (representing a physician). Note that low scores represent high prestige.

The data were not normally distributed. Therefore, we categorized individuals into three asset groups: (a) low (\$0–\$100); (b) moderate (\$101–\$9,999); and (c) high (\geq \$10,000).

For neighborhood SES, a composite score was created by summing the standardized scores for the three indexes of neighborhood-level SES. Scores for each measure were standardized using the mean and standard deviation of the New York State distribution of block-group scores for that variable. The three neighborhood measures were highly interrelated, with a Cronbach's alpha of .87.

Analytic strategy. Preliminary analyses were performed to determine if demographic variables should be included as covariates in analyses of the relationship of SES to racism. The first set examined racial/ethnic group (i.e., Black vs. Latino/a) differences in age and gender (t test and χ^2 test, respectively). The second set examined the relationships of demographic factors (i.e., age, gender, and race/ethnicity) to both SES (Spearman rank-order correlations for age and χ^2 test for gender and race/ethnicity) and self-reported racism (Pearson's correlations for age and t tests for gender and race/ethnicity).

The first set of primary analyses examined the unique and joint effects of individual-level measures of SES (i.e., education, poverty level, occupational prestige, and asset group) on different dimensions of self-reported racism. First, we employed an ANOVA to investigate SES differences in overall lifetime discrimination. Next, we performed a series of MANCOVAs, each of which employed a different measure of individual-level SES as the predictor variable. Outcome variables included the four discrimination subscale scores of the PEDQ-CV (i.e., social exclusion, workplace discrimination, stigmatization, and threat/harassment).

A significant main effect of the SES measure indicates that the index was associated with one or more of the four discrimination subscales. A significant interaction of the SES measure with the repeated-measures factor (e.g., Education \times Discrimination Subscale interaction) indicates that the associations of that SES measure (e.g., education) with the discrimination subscales varied across the subscales. Our hypothesis was that we would find interaction effects for the measures of SES, since we proposed that individuals at all levels of SES would experience racism/discrimination, but the type of exposure would vary, depending on SES. We further tested for race differences in any SES effects on discrimination by examining the three-way interaction term in the MANCOVAs (i.e., Race/Ethnicity \times SES Measure \times Discrimination).

A second set of MANCOVAs was employed to determine if SES effects on discrimination depended on the timeframe/format used to assess overall discrimination. In these analyses, individual SES measures served as the predictor variable, and the three PEDQ-CV scales (Lifetime Discrimination, Discrimination in Different Settings, and Past-Week Discrimination) served as the outcome variables.

MANCOVA was used for these analyses as a strategy to maintain the overall risk of Type I error at a prespecified alpha level for each analysis. In addition, a Bonferroni correction was used to control the alpha level across the four MANCOVA analyses, one for each SES measure. Where significant interaction effects were found during MANCOVA analyses, we conducted follow-up analyses using ANOVAs to evaluate the relationship of the SES measures to the individual discrimination scales or subscales.

An additional set of analyses examined composite neighborhood SES and its relationship to self-reported racism, both with and without adjustment for individual-level factors. Traditional regression methods, rather than formal multilevel modeling, were used for these analyses because the data were relatively unclustered (77% of the block groups had 1 participant, and 93% had 2 or fewer participants), as has been done in previous research (Cubbin, Hadden, & Winkleby, 2001; Cubbin & Winkleby, 2005; Lee & Cubbin, 2002). The high level of intercorrelation among the standardized scores for the neighborhood variables indicates that a composite score could serve as a reliable summary index of neighborhood SES characteristics. Neighborhood-level data were available on 380 individuals (90.9% of the total sample), as information was unavailable for the remaining individuals because of incomplete or invalid address information.

Results

Sample Characteristics

Table 1 contains information on demographic variables, SES, and self-reported racism for the full sample, and separately for Blacks and Latino(a)s. The sample contained participants representing a broad range of SES on both the individual and the neighborhood level. However, participants generally had low incomes, not only in absolute terms, but also in relative terms, as 67% of the participants reported GHIs less than the median family income for their block groups.

In addition, as a group, they were drawn largely from communities with lower SES than that of New York State as a whole. Specifically, participants came from block groups in which an average of only 15.4% of the residents were college educated. In contrast, across block groups in New York State, an average of 25.9% of residents are college educated. Similarly, participants in the study sample were drawn from block groups with an average median family income of \$35,048; whereas across all block groups in New York State, the average median family income is \$55,402.

Relations Among Demographic Variables

There were no gender differences in the proportion of Blacks in comparison to Latino(a)s or in mean age. However, Blacks were significantly older than were Latino(a)s, $t(416) = 2.24, p < .03$.

Association of Demographic Factors With SES

Women had higher occupational prestige than did men, $t(349) = 2.22, p < .03$; but none of the other SES measures differed by gender. Blacks were more highly educated than were Latino(a)s, $\chi^2(2, N = 418) = 17.74, p < .0001$. There were also racial/ethnic differences in the distribution of assets, $\chi^2(2, N = 418) = 6.14, p < .05$, with Latino(a)s being more likely than Blacks to belong to the moderate asset group. There were no racial differences in poverty group or occupational prestige. Spearman correlations examining the relationship of age to each index of SES indicate that age was significantly negatively related to poverty group ($r_s = -.19, p < .0001$) and asset group ($r_s = -.12, p < .02$). Older participants were more likely to have lower incomes and fewer assets.

Demographic Variations in Self-Reported Racism

Women reported significantly lower levels of discrimination on the PEDQ-CV Lifetime Discrimination scale, $t(416) = 2.29, p < .02$. MANOVAs testing the association of gender with the four Lifetime Discrimination subscale scores reveal an overall main effect of gender ($\lambda = .95$), $F(4, 413) = 5.24, p < .0004$; and a significant Gender \times Discrimination interaction, $F(3, 414) = 5.58, p < .0009$. The associated one-way ANOVAs reveal that women reported significantly lower levels of stigmatization, $t(416) = 3.54, p < .0005$; and threat/harassment, $t(416) = 1.95, p = .05$ than did men. The gender differences in levels of exclusion and workplace discrimination were nonsignificant (both $ps > .30$).

Controlling for age, Blacks reported more lifetime discrimination, $t(415) = 1.94, p = .05$, than did Latino(a)s. MANCOVAs examining the relationship of the four subscale scores to race/ethnicity, controlling for age, reveal no significant main effect or interaction. There was no relationship of age to any measure of self-reported racism. Given the associations of demographic factors with SES or self-reported racism, all primary analyses include age, gender, and race/ethnicity as covariates.

Interrelationships Among Individual SES Indexes

Individual measures of SES were strongly interrelated with all Spearman rank-order correlations between .32 and .58 (all p s < .0001).

Interrelationships Among Self-Reported Racism Measures

The self-reported Lifetime Discrimination measure was strongly correlated with the Discrimination in Different Settings ($r = .79, p < .0001$) and Past-Week Discrimination ($r = .66, p < .0001$) measures. PEDQ–CV Lifetime Discrimination subscale scores were also strongly interrelated (r s > .46, p s < .001).

Relationships of Individual SES Measures to Discrimination Subscales

Table 2 presents means and standard deviations for the three discrimination scales and the four discrimination subscales by SES. None of the four SES measures was significantly related to overall Lifetime Discrimination (all p s > .12). We next examined whether each SES measure might be related to some but not other Lifetime Discrimination subscales. MANCOVA analyses, controlling for age, gender, and race reveal that the association of each measure of SES was specific to the types of lifetime racism experienced. Specifically, there was no significant main effect of education on discrimination, but there was a significant Education \times Discrimination Subscale interaction ($\lambda = .93$), $F(3, 411) = 10.47, p < .0001$.³

Follow-up univariate analyses indicate that there was a highly significant association of education with threat/harassment, $t(413) = -4.54, p < .0001$; and a marginally significant association with stigmatization, $t(413) = 1.92, p = .06$. Individuals with less education experienced more threat/harassment and somewhat more stigmatization than did those with more education. The MANCOVA for poverty group reveals both a significant main effect ($\lambda = .92$), $F(4, 410) = 9.06, p < .0001$; and a significant interaction of poverty group by discrimination ($\lambda = .92$), $F(3, 411) = 11.58, p < .0001$.

Univariate ANCOVAs reveal that those with more income experienced less threat/harassment, $t(413) = -3.22, p < .002$; but more workplace discrimination, $t(413) = 2.32, p < .03$. Similarly, there was a significant main effect of asset group ($\lambda = .93$), $F(4, 410) = 7.82, p < .0001$; and a significant interaction

³Given that we have performed four MANCOVA analyses to address this question, one for each of the four SES measures, the nominal p value should be compared to the Bonferroni-corrected alpha level of .0125 (i.e., .05/4).

Table 2
Mean Scores as a Function of SES, Adjusted for Age, Gender, and Race/Ethnicity

	Educational level		Poverty level				Assets group			
	≤H.S. diploma (n = 106)	H.S. diploma /GED (n = 250)	≥College degree (n = 62)	Group 1	Group 2	Group 3	Group 4	Low (n = 230)	Moderate (n = 107)	High (n = 81)
				(≤poverty level) (n = 177)	(≤2x poverty level) (n = 96)	(≤3x poverty level) (n = 52)	(>3x poverty level) (n = 93)			
Ethnic discrimination										
Lifetime total	2.26	2.13	2.11	2.20	2.14	2.08	2.16	2.17	2.14	2.18
Exclusion	2.60	2.53	2.51	2.57	2.54	2.46	2.56	2.53	2.57	2.56
Workplace	2.15	2.22	2.28	2.13	2.20	2.28	2.36	2.14 _a	2.19	2.46 _a
Stigmatization	2.16 _a	1.93 _a	1.95	2.07	1.98	1.80	1.94	2.03	1.98	1.88
Threat/Aggression	1.95 _{ab}	1.65 _a	1.41 _b	1.82 _a	1.69	1.60	1.51 _a	1.76	1.61	1.59
Different settings	2.12	2.05	2.13	2.07	2.09	2.02	2.12	2.03	2.08	2.22
Past week	8.57 _{ab}	5.87 _a	4.57 _b	7.85 _a	5.54	5.44	4.89 _a	7.37 _{ab}	4.94 _a	5.32 _b

Note. N = 418. For the three SES measures, means in a row that share subscripts differ significantly at $p < .05$ in Tukey's post hoc analysis. Items for the Lifetime PEDQ-CV and the four subscales and the Discrimination in Different Settings scale were rated on a 5-point scale ranging from 1 (*never happened*) to 5 (*happened very often*), whereas past-week discrimination items were rated on a 4-point scale ranging from 0 (*never in the past week*) to 3 (*three or more times in the past week*).

of asset group by discrimination subscale ($\lambda = .93$), $F(3, 411) = 10.43$, $p < .0001$. Individual ANCOVAs indicate that those with more assets experienced significantly more workplace discrimination, $t(413) = 2.87$, $p < .005$; but marginally less threat/harassment, $t(413) = -1.90$, $p < .06$.

Lastly, the MANCOVA analysis for occupational prestige reveals a significant main effect ($\lambda = .94$), $F(4, 399) = 6.75$, $p < .0001$; and a significant Prestige \times Discrimination Subscale interaction ($\lambda = .94$), $F(3, 400) = 8.90$, $p < .0001$. As for poverty group and asset group, those with more prestigious jobs experienced more workplace discrimination, $t(402) = 2.42$, $p < .02$; and less threat harassment, $t(402) = -1.95$, $p = .05$. In sum, higher levels of education were associated with less race-related stigmatization and threat/harassment; whereas higher levels of income, assets, and occupational prestige were associated with more race-related workplace discrimination, but less threat/harassment.

Unique Effects of SES Measures on Perceived Racism, Controlling for Other SES Measures

The preceding analyses have examined the relationship of SES to perceived racism separately for each SES measure. The four measures of SES were interrelated, but each also contains some unique variance that is not shared with any of the others. Therefore, we conducted one additional analysis that included all four SES measures as predictors in order to determine if any dimension(s) remained significantly associated with self-reported racism, after controlling for the other three dimensions, as well as age, gender, and race. This MANCOVA suggests that there was a main effect for education ($\lambda = .97$), $F(4, 396) = 3.17$, $p < .014$, which is not quite statistically significant (criterion p value after Bonferroni correction is .0125). There was also a trend toward an interaction of occupational prestige by discrimination subscale ($\lambda = .98$), $F(3, 397) = 3.07$, $p < .03$; again, not statistically significant after Bonferroni correction.⁴

Variations Among Measurement Formats

MANCOVAs performed with one of the individual SES measures serving as the predictor and the three PEDQ–CV scales serving as the outcomes

⁴Although the MANCOVA result for education did not quite reach statistical significance, we think it is worth noting that the univariate ANCOVA predicting threat/harassment suggested that those with more education experience less threat/harassment, $t(399) = -3.23$, $p = 0.001$, even after controlling for income, assets, and occupational prestige.

reveal a significant main effect of educational level ($\lambda = .94$), $F(3, 408) = 7.61$, $p < .0006$; a significant Educational Level \times Format interaction ($\lambda = .97$), $F(2, 409) = 6.92$, $p < .002$; a significant main effect of income group ($\lambda = .95$), $F(3, 408) = 7.05$, $p < .001$; a significant Income Group \times Format interaction ($\lambda = .96$), $F(2, 409) = 8.00$, $p < .001$; a significant main effect of asset group ($\lambda = .94$), $F(3, 408) = 9.03$, $p < .0001$; a significant Asset Group \times Format interaction ($\lambda = .94$), $F(2, 409) = 12.22$, $p < .001$; a significant main effect of occupational prestige ($\lambda = .95$), $F(3, 392) = 6.48$, $p < .001$; and a significant Occupational Prestige \times Format interaction ($\lambda = .96$), $F(2, 398) = 8.71$, $p < .0002$. All effects remained significant following Bonferroni corrections.

Follow-up analyses reveal that the effects for SES emerged only for the Past-Week Discrimination scale. There were significant effects of education, $t(410) = -3.94$, $p < .0001$; income group, $t(410) = -3.54$, $p < .0004$; assets, $t(410) = -2.97$, $p < .003$; and occupational prestige, $t(399) = -2.11$, $p < .04$, on past-week discrimination, with lower levels of each SES measure associated with higher levels of past-week discrimination. None of the individual SES measures were significantly related to the Lifetime Discrimination scale or the Discrimination in Different Settings scale.

Neighborhood SES and Self-Reported Racism

The composite neighborhood SES measure was positively related to workplace discrimination ($r = .10$, $p < .05$). The effects were clearer when the analysis was confined to those who were currently employed ($r = .19$, $p < .01$). However, when individual-level SES measures were included, the relationship of neighborhood SES to workplace discrimination was no longer significant ($p < .08$).

Race/Ethnicity Analyses

There were no significant race/ethnicity differences in the association of any individual SES measure or composite neighborhood SES to self-reported racism. Specifically, in separate MANCOVA analyses evaluating the relationship of each individual SES measure to PEDQ-CV scales or subscales, none of the three-way interactions involving race/ethnicity were significant. Interactions of race/ethnicity and neighborhood SES predicting PEDQ-CV scales and subscales were also nonsignificant.

Discussion

Low SES and racism are two potent stressors that disproportionately affect racial/ethnic minority groups in the U.S. To develop plausible

biopsychosocial models explaining their association to health status, it is important to understand the relationships between these two stressors. The present study examined the association of individual- and neighborhood-level SES to several different dimensions of racism, including social exclusion, workplace discrimination, stigmatization, and threat/harassment.

The findings suggest that variations in individual-level SES are associated with variations in self-reported racism, but the effects depend on the dimension of racism assessed, as well as the format in which inquiries are made. Individuals with low SES (i.e., those with less than a high school education or with very low income, assets, or occupational prestige) reported higher levels of lifetime stigmatization and threat/harassment, and higher levels of discrimination over the past week. In contrast, those with relatively high SES (i.e., those living in more affluent areas or with higher levels of income, assets, or occupational prestige) reported more exposure to workplace discrimination.

The data are somewhat consistent with prior studies. The findings of the relationships of income, assets, and prestige to workplace discrimination are consistent with the prior literature indicating that individuals with higher SES report more discrimination (Brown, 2001; Gee, 2002; Kelaher et al., 2004; Kessler et al., 1999). However, the data on the relationship of low SES to stigmatization and harassment suggest that the relationship of SES to racism is more complex. These findings reinforce the notion that it is important to investigate multiple dimensions of racism, as SES influences the types of race or ethnicity-related maltreatment that individuals are likely to experience.

These findings may help to clarify some of the inconsistencies in the literature and underscore the importance of evidence by Brown (2001) that the format of the questions inquiring about exposure to discrimination influence the outcome of studies concerning the correlates of racism. In this sample, we observed SES variations in response to questions inquiring about exposure to specific types of ethnicity-based maltreatment (either over the lifetime or during the past week), but did not see SES variations in response to questions about exposure to discrimination in general (i.e., as is done in the Discrimination in Different Settings scale).

Questions that refer to specific behavioral acts (i.e., being ignored or threatened) versus specific venues (i.e., housing vs. criminal-justice system) may be more effective in eliciting recollections of maltreatment. Stigmatization, in particular, may include episodes of subtle, demeaning race-related maltreatment that targeted individuals may not consider when they respond to questions they interpret as referring to major events. Responses may vary if individuals interpret questions about discrimination as referring primarily to major, overt acts of discrimination. For example, if questions about

discrimination are interpreted as inquiring about blocked opportunities (i.e., workplace discrimination), then individuals with higher SES will report more discrimination. However, when a broader range of everyday interpersonal events is included, then SES variations emerge. A narrow interpretation will underestimate the race-related maltreatment experienced by low-SES individuals.

Overall, the data suggest that individuals at all levels of SES have, over the course of their lifetimes, faced discrimination in a variety of circumstances. However, there are important differences in both ongoing exposure and in the nature of the discriminatory experiences faced by individuals at different levels of SES. Specifically, there were no SES differences when examining total lifetime measures of discrimination (i.e., either the Lifetime Discrimination scale or the Discrimination in Different Settings scale). In contrast, there were SES differences in recent exposure, as indicated by the Past-Week Discrimination scale.

Individuals with lower levels of education, income, and assets reported more episodes of discrimination during the past week than did those with higher levels of SES. For example, individuals with a college degree reported an average of 4.57 incidents of race-related maltreatment in the previous week; whereas, those with less than a high school education reported almost 9 incidents. Low SES may worsen the health effects of racism, because the elevated frequency of exposure to race-related maltreatment may require sustained coping efforts and may provide limited opportunities to recover. In addition, low SES is associated with greater exposure to threat and stigmatization. In future research, it will be important to understand the physical and mental health correlates of these different types of discrimination.

The data suggest that when members of racial/ethnic minority groups overcome historical and structural barriers to advancement, they do not escape experiences of racism. Rather, they tend to experience racism in exactly the arena of life (i.e., the workplace) that is used to measure adult achievement. This may mean that for some racial/ethnic minority-group members, greater educational and economic achievement (i.e., higher education, occupational prestige, or income) may not be associated with the same level of personal benefit as experienced by members of nonstigmatized racial/ethnic groups.

The most important limitation to this study is the use of a convenience sample. There may have been selection biases associated with the choice to volunteer for this study that influenced the results. Individuals included in the sample represented a wide range of SES, but the sample overall was relatively low SES. However, the age, gender, and race/ethnicity differences that emerged in this study are similar to effects seen in prior studies using different samples (Brondolo, Thompson et al., 2005). Too few individuals lived in any

given block group to permit us to fully disentangle individual effects from neighborhood effects.

This was a cross-sectional study. Therefore, no causal or directional hypotheses can be tested. The relationships of SES and racism are likely to be bidirectional. Racism impedes the ability of targeted individuals to achieve socioeconomic gains, and SES appears to influence individual exposure to discrimination.

Despite these limitations, the present study provides insight into the relationship between SES and racism, two significant stressors facing a substantial proportion of the population. The findings highlight the ways in which racism and poverty can combine to produce chronic exposure to interpersonal maltreatment. The frequency and chronicity of this maltreatment may constitute a burden of stress that contributes to both racial and socioeconomic disparities in health.

The data reveal that individuals at all SES levels report experiences with racism, but the type and timeframe (e.g., past week) of the exposure can vary, depending on SES. Consequently, studies investigating the health consequences of race-related stress may need to consider variations in the type of exposure reported by individuals with different levels of economic resources. Overall, the findings underscore the need for further research to develop more refined models of the mechanisms through which racism and poverty undermine mental and physical health.

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