

Racial Discrimination, Psychological Distress, and Self-Rated Health Among US-Born and Foreign-Born Black Americans

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Despite growing evidence that racial discrimination harms health,¹⁻⁴ its toll on the everyday well-being of Black Americans remains poorly understood. Surprisingly few community-based studies have quantified its impact on the US Black population's relative risk of either psychological distress³⁻⁷ or self-rated health.⁸⁻¹¹

Further adding to gaps in knowledge are the dynamics of immigration. Between 1980 and 2005, the percentage of the US Black population that was foreign born tripled and currently stands at 10% nationally and upwards of 30% in such major metropolitan areas as New York City; Boston, Massachusetts; Miami, Florida; and Washington, DC.¹² A small but provocative literature suggests that recent Black immigrants may be less likely than are their US-born counterparts to report racial discrimination, even when they are exposed to similar types of discriminatory treatment, and also that the levels they report rise with longer duration in the United States.¹³⁻¹⁵ Only a handful of studies, however, have directly focused on the health implications of these findings,^{9,16-18} with 2 of the larger investigations hinting that the adverse impact of self-reported experiences of racial discrimination may be greater among US-born than foreign-born Black Americans.^{9,18}

We thus sought to estimate and compare the prevalence of self-reported experiences of racial discrimination and its association with psychological distress and self-rated health among US-born Black Americans versus foreign-born Black Americans. Our a priori hypotheses were that levels of self-reported racial discrimination would be higher among US-born than among foreign-born Black participants (and would be positively associated in the latter group with duration of time in the United States) and that estimates of the association between racial discrimination and health outcomes would be biased in analyses that failed to take into account nativity. We conducted these cross-sectional analyses

Objectives. We investigated associations among racial discrimination, psychological distress, and self-rated health among US-born and immigrant Black Americans.

Methods. We conducted a cross-sectional analysis of a cohort of employed working-class Black Americans (193 US-born, 275 foreign-born).

Results. Both US-born and foreign-born Black participants had high levels of exposure to poverty (51% and 57%, respectively) and racial discrimination (76% and 60%) and reported high levels of severe psychological distress (14% and 16% had a Kessler 6 [K6] score of 13 or greater); 17% and 7% reported fair or poor health. After controlling for relevant covariates, their risk parameters for racial discrimination (high vs no exposure) were 4.0 (95% confidence interval [CI]=2.3, 5.6) and 3.3 (95% CI=2.1, 4.5), respectively, for continuous K6 score; corresponding odds ratios for severe psychological distress were 6.9 (95% CI=1.4, 35.7) and 6.8 (95% CI=2.5, 18.3). No associations existed between racial discrimination and self-reported health, suggesting that an underlying propensity to report adversity does not account for our psychological distress findings.

Conclusions. Our results attest to the salience of racial discrimination, nativity, and socioeconomic position in understanding the experiences and psychological health of Black Americans. (*Am J Public Health.* 2011;101:1704-1713. doi:10.2105/AJPH.2011.300168)

within a study population that consisted of employed working-class adults, a group representing the majority of the working-age population in both groups,^{12,19} and that lived in a major US urban area in which almost one third of the Black residents were immigrants.

METHODS

As described previously,²⁰ study participants were members of the United for Health cohort, recruited between March 2003 and August 2004 from the rosters of 2 amalgamated unions whose members were employed at 14 worksites in the greater Boston area. We focused on this population because of the dearth of research jointly investigating social and occupational determinants of health inequities, including inequities among employed working-class populations with diverse racial/ethnic backgrounds.²⁰ Spanning a variety of occupations, participants worked in retail grocery stores, as school bus drivers, in electrical

manufacturing, and in meat processing. The study incentive was either a 1-hour paid work release along with a \$25 prepaid grocery card (provided after completion of the survey) or, if paid work release was not an option, a \$50 prepaid grocery card.

The unions initially sent their members at each worksite an introductory letter, after which study staff screened and recruited workers and administered the survey to workers on-site. The 40- to 45-minute survey, conducted via audio computer-assisted self-interviewing (ACASI) to enable individuals of low literacy to respond and to enhance the likelihood of obtaining sensitive information,²¹ was administered (in English or Spanish) in a private room, followed by a 15-minute physical health check. The English version of the survey was translated into Spanish and then back-translated to ensure accuracy. Interview staff bilingual in English and Spanish were available to answer participants' questions.

Among the 2323 individuals listed on the union rosters, 1776 stated they met the study

eligibility criteria for age (25–64 years) and length of employment (at least 2 months); that is, they were adult workers with experience in the workforce and in their particular occupation. Of these individuals, 1282 (72%) completed the survey, of whom 80 were excluded because their age information was missing or their age was outside the eligible range. Among the remaining 1202 age-eligible workers, 468 self-identified as being black American (193 US born, 275 foreign born).

As described in detail in our prior publications,^{20,22} we obtained self-reported data on sociodemographic characteristics (age, gender, race/ethnicity, nativity, and relationship status), socioeconomic position (e.g., educational level and household poverty, assessed in relation to US federal thresholds for 2003–2004²³), and worksite characteristics. In addition, for the foreign-born participants, we obtained data on age at immigration and years of residence in the United States, which we jointly used to quantify percentage of lifetime spent in the United States.

We measured exposure to racial discrimination with the validated 9-item Experiences of Discrimination instrument (validated in a subset of the United for Health cohort in which 24% of the 159 Black participants were foreign born), which asks respondents whether they have ever experienced racial/ethnic discrimination in 9 different domains (involving work, school, housing, finances, medical care, service, public settings, and the police and courts).^{1,24} Two additional questions ask about usual responses to unfair treatment (“accept it as a fact of life” vs “try to do something about it,” “talk to other people about it” vs “keep it to yourself”).^{1,24} On the basis of previous research,^{1,24} we defined exposure categories as no exposure (0 situations), moderate exposure (1 or 2 situations), and high exposure (3 or more situations). To control for how self-presentation might affect these responses, we used a 5-item validated social desirability scale.²⁵

We measured psychological distress using the validated Kessler 6 (K6) scale, a 6-item instrument that asks respondents how often during the preceding 30 days, from none of the time (scored as 0) to all of the time (scored as 4), they felt sad, nervous, restless, hopeless, worthless, or “that everything was an effort”; scores of 13 and higher (total range: 0–24), categorized as severe psychological distress,

have been shown to be associated with clinically diagnosed mental illness (e.g., depression).²⁶ To measure self-rated health, we used a question from the 12-Item Short-Form Health Survey: “In general, would you say your health is excellent, very good, good, fair, or poor?”²⁷ The question was scored from 1 (excellent) to 5 (poor).

To assess the distribution of each variable and bivariate relationships between the exposure and both the outcome variables and other covariates, we first tabulated the data stratified by nativity and performed appropriate χ^2 , trend, and *t* tests. Observing no departures from linearity and no associations of the exposure or outcomes with either worksite or relationship status, we then ran analytic models on the remaining variables. To address the modest level of missing data (typically <5% for any given variable), we created 10 imputed data sets, using Amelia II,²⁸ with the imputation variables composed of all variables included in the analytic models.

We conducted multivariable analyses separately for the US-born and foreign-born Black participants and used linear regression for the continuous version of the K6 score and logistic regression for the dichotomous K6 score (<13 vs ≥ 13) and self-rated health (excellent or good vs fair or poor). Model 1 focused on bivariate associations; model 2 adjusted for age, gender, response to unfair treatment, and social desirability; and model 3 adjusted for poverty and education in addition to the variables just listed. Among the foreign-born participants, model 4 built on model 1 by also adjusting for percentage of lifetime spent in the United States, and model 5 further adjusted for poverty and education. To gauge the impact of not taking into account immigration, model 6 applied model 3 to the total Black population (i.e., the US-born and foreign-born Black participants combined) and deliberately ignored both nativity and immigrants’ duration of time in the United States. SAS Version 9.1 (SAS Institute, Cary, NC) was used in conducting all of the analyses.²⁹

RESULTS

Table 1 presents the observed (nonimputed) distribution of self-reported experiences of racial discrimination, psychological health, self-reported health, and selected sociodemographic characteristics for the US-born (n=193) and

foreign-born (n=275) Black participants, of whom slightly more than half were aged 45 to 64 years. Despite being union members, approximately half in each group were below the US poverty line. Fully 83% (n=227) of the Black immigrants were from the Caribbean, with 77% from Haiti; 43 of the remaining 48 were from the African continent. On average, the Black immigrants were aged 24 years when they arrived in the United States and had lived slightly more than half of their life in the United States, with 44% having been in the country for at least 20 years.

Compared with the US-born Black participants, the Black immigrants were nearly twice as likely to report having never experienced racial discrimination (40% vs 24%, $P<.02$; Figure 1); the 2 groups, however, reported similar high levels of exposure (41% vs 49%). Among the Black immigrants, self-reports of the number of situations in which racial discrimination was experienced (ranging from 0 to 9) significantly increased with higher percentages of time spent in the United States (b=0.2; 95% confidence interval [CI]=0.1, 0.3). Comparably high percentages were categorized as having clinically significant psychological distress scores: 16% among foreign-born participants and 14% among US-born participants. By contrast, only 7% of foreign-born versus 17% of US-born participants reported fair or poor health.

Strong associations existed between psychological distress and self-reported experiences of racial discrimination (high vs no exposure) among both the US-born and foreign-born Black participants, before as well as after control for relevant covariates. In bivariate analyses (observed data), 4.6%, 7.7%, and 22.6% of US-born participants reporting no, moderate, and high exposure to racial discrimination, respectively, were categorized as having severe psychological distress ($\chi^2_2=10.48$, df=2, $P<.006$; Cochran-Armitage test for trend: $Z=-3.0759$, 1-sided $P<.001$); corresponding percentages among foreign-born participants were 7.0%, 13.0%, and 25.0% ($\chi^2_2=12.82$, df=2, $P<.002$; Cochran-Armitage test for trend: $Z=-3.5463$, 1-sided $P<.002$).

In multivariable analyses (Table 2; imputed data) adjusted for age, gender, education, poverty, response to unfair treatment, and social desirability (and, for the Black immigrants,

TABLE 1—Sociodemographic Characteristics, Self-Reported Experiences of Racial Discrimination, and Health Outcomes: Black US-Born and Foreign-Born Participants in the United for Health Study, Boston, Massachusetts, 2003–2004

	Total (n = 468)		US Born (n = 193)		Foreign Born (n = 275)	
	Observed Data	Missing, No. (%)	Observed Data	Missing, No. (%)	Observed Data	Missing, No. (%)
Sociodemographic characteristics						
Age, y, no. (%)		0 (0.0)		0 (0.0)		0 (0.0)
24–44	205 (43.8)		85 (44.0)		120 (43.6)	
45–64	263 (56.2)		108 (56.0)		155 (56.4)	
Gender, no. (%)		6 (1.3)		2 (1.4)		4 (1.5)
Women	158 (34.2)		108 (56.5)		50 (18.5)	
Men	304 (65.8)		83 (43.5)		221 (81.5)	
Household poverty level, percentage of poverty line, no. (%)		30 (6.4)		9 (4.7)		21 (7.6)
100	222 (50.7)		78 (42.4)		144 (56.7)	
100–199	103 (23.5)		41 (22.3)		62 (24.4)	
≥200	113 (25.8)		65 (35.3)		48 (18.9)	
Educational level, no. (%)		18 (3.9)		6 (3.1)		12 (4.4)
< 12th grade	87 (19.3)		34 (18.2)		53 (20.2)	
High school diploma or equivalent	197 (43.8)		93 (49.7)		104 (39.5)	
Some college/vocational school	123 (27.3)		48 (25.7)		75 (28.5)	
4 y of college	24 (5.3)		3 (1.6)		21 (8.0)	
Graduate degree	19 (4.2)		9 (4.8)		10 (3.8)	
Relationship status, no. (%)		3 (0.6)		0 (0.0)		3 (1.1)
Currently married	217 (46.7)		45 (23.3)		172 (63.2)	
Divorced, separated, or widowed	105 (22.6)		56 (29.0)		49 (18.0)	
Not married, lives with partner or in serious relationship	59 (12.7)		36 (18.7)		23 (8.5)	
Single and never legally married	68 (14.6)		44 (22.8)		24 (8.8)	
Other	16 (3.4)		12 (6.2)		4 (1.5)	
Type of worksite, no. (%)		0 (0.0)		0 (0.0)		0 (0.0)
Manufacturing	10 (2.1)		3 (1.6)		7 (2.6)	
Retail	142 (30.3)		110 (57.0)		32 (11.6)	
Transportation	316 (67.5)		80 (41.4)		236 (85.8)	
Birthplace, ^a no. (%)		0 (0.0)		0 (0.0)		0 (0.0)
US or US territory	193 (41.2)		193 (100)			
Caribbean	227 (48.5)				227 (82.6)	
Africa	43 (9.2)				43 (15.6)	
Latin America	3 (0.6)				3 (1.1)	
Europe	2 (0.4)				2 (0.7)	
Age at immigration, y, mean (SD)					24 (8.0)	16 (5.8)
Age at immigration, y, no. (%)						16 (5.8)
<18					56 (21.6)	
18–24					67 (25.9)	
25–45					136 (52.5)	
Y residing in the US, no. (%)						2 (0.7)
<10					45 (16.5)	
10–19					108 (39.6)	
20–45					120 (44.0)	
% of lifetime lived in the US, mean (SD)					53.6 (17.4)	16 (5.8)

Continued

TABLE 1—Continued

Experiences of racial discrimination, responses to unfair treatment, and social desirability						
Experiences of racial discrimination, mean no. (SD)	2.8 (2.8)	19 (4.1)	3.2 (2.8)	3 (1.6)	2.4 (2.7)	16 (5.8)
Experiences of racial discrimination, no. (%):		19 (4.1)		3 (1.6)		16 (5.8)
0	150 (33.4)		45 (23.7)		105 (40.5)	
1-2	99 (22.1)		52 (27.4)		47 (18.2)	
≥3	200 (44.5)		93 (49.0)		107 (41.3)	
Domain in which exposure occurred, no. (%)						
At school	110 (23.8)	6 (1.3)	59 (30.7)	1 (0.5)	51 (18.9)	5 (1.8)
Getting hired or getting a job	151 (32.8)	7 (1.5)	69 (36.1)	2 (1.0)	82 (30.4)	5 (1.8)
At work	101 (21.9)	7 (1.5)	46 (24.1)	2 (1.0)	55 (20.4)	5 (1.8)
Getting housing	131 (28.4)	6 (1.3)	71 (37.2)	2 (1.0)	60 (22.1)	4 (1.5)
Getting medical care	93 (20.0)	2 (0.4)	45 (23.4)	1 (0.5)	48 (17.5)	1 (0.4)
Getting service in a store or restaurant	204 (44.0)	4 (0.9)	108 (56.3)	1 (0.5)	96 (35.3)	3 (1.1)
Getting credit, bank loans, or a mortgage	141 (30.5)	5 (1.1)	66 (34.6)	2 (1.0)	75 (27.6)	3 (1.1)
On the street or in a public setting	176 (38.2)	7 (1.5)	80 (41.7)	1 (0.5)	96 (35.7)	6 (2.2)
From the police or in the courts	173 (37.7)	9 (1.9)	78 (40.6)	1 (0.5)	95 (35.6)	8 (2.9)
Response to unfair treatment, no. (%)		17 (3.6)		4 (2.1)		13 (4.7)
Act/talk	207 (45.9)		105 (55.6)		102 (38.9)	
Act/quiet	42 (9.3)		13 (6.9)		29 (11.1)	
Accept/talk	121 (26.8)		40 (21.2)		81 (30.9)	
Accept/quiet	81 (18.0)		31 (16.4)		50 (19.1)	
Social desirability score, mean (SD)	42.6 (32.4)	16 (3.4)	52.8 (35.2)	2 (1.04)	35.2 (28.0)	14 (5.1)
		Health outcomes				
Psychological distress (Kessler 6 score), mean (SD)	7.6 (4.9)	18 (3.9)	6.6 (5.0)	3 (1.6)	8.3 (4.7)	15 (5.5)
Clinically significant distress (Kessler 6 score ≥ 13), no. (%)	69 (15.3)	18 (3.9)	27 (14.2)	3 (1.6)	42 (16.2)	15 (5.5)
Self-rated health, no. (%)		1 (0.2)		0 (0.0)		1 (0.4)
Excellent	132 (28.3)		39 (20.2)		93 (33.9)	
Very good	132 (28.3)		46 (23.8)		86 (31.4)	
Good	152 (32.6)		75 (38.9)		77 (28.1)	
Fair	48 (10.3)		31 (16.1)		17 (6.2)	
Poor	3 (0.6)		2 (1.0)		1 (0.4)	

^aAmong the 227 Caribbean-origin Black immigrants, the majority came from Haiti (175), followed by country not identified (26), Antigua (7), Barbados and Jamaica (6 each), Trinidad and Tobago (3), and Bahamas, Cayman Islands, Grenada, and St. Kitts and Nevis (1 each).

percentage of lifetime spent in the United States), K6 scores were higher among US-born (b=4.0; 95% CI=2.3, 5.6) and foreign-born participants (b=3.3; 95% CI=2.1, 4.5) reporting high levels of racial discrimination than among those reporting no discrimination. Among the foreign-born participants only, moderate exposure to racial discrimination also was associated with an increased risk of psychological distress, and higher education was inversely associated with severe psychological distress.

On the basis of the calculated R² values, these fully adjusted models explained 24% and 16% of the observed variance in K6 scores. For severe psychological distress, the corresponding

odds ratios (ORs) were 6.9 (95% CI=1.4, 35.7) and 6.8 (95% CI=2.5, 18.3). Had these analyses not taken into account nativity, the estimated increase in K6 score associated with high exposure to racial discrimination for the total Black population would have been 3.3 (95% CI=2.4, 4.3), and the odds ratio for severe psychological distress would have been 6.3 (95% CI=2.8, 14.0). Adjusting for nativity increased these estimates to 3.6 (95% CI=2.7, 4.6) and 6.5 (95% CI=2.9, 14.7), respectively.

Among US-born participants only, accepting unfair treatment as a fact of life, as opposed to taking action and talking to others about it,

was associated with significantly higher K6 scores (Table 2), whether they talked to others about it (b=1.8; 95% CI=0.0, 3.5) or kept it to themselves (b=2.8; 95% CI=0.8, 4.8). By contrast, both sets of responses were associated with increased odds of severe psychological distress among both US-born and foreign-born participants (Table 2, bottom; odds ratios ranged from 3.0 to 4.9), as was, among US-born participants only, the response of taking action but keeping it to oneself (OR=6.8; 95% CI=1.2, 37.8).

Conversely, neither self-reported experiences of racial discrimination nor response to unfair treatment was associated with self-rated

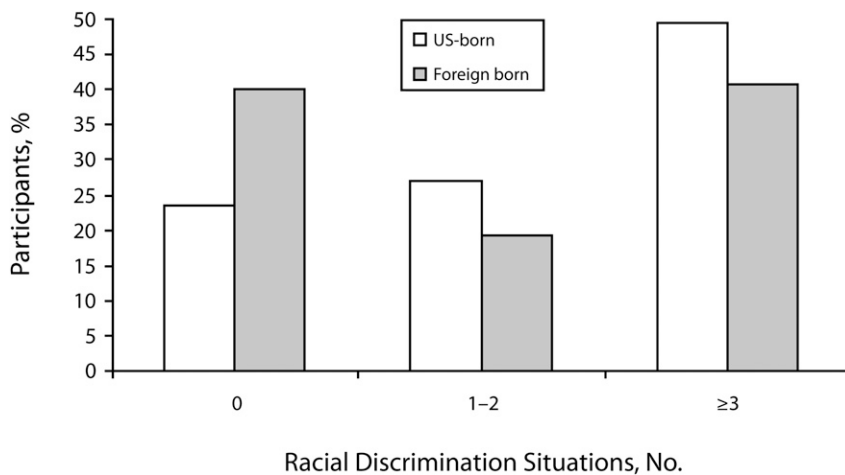


FIGURE 1—Self-reported experiences of racial discrimination, by nativity: Black participants in the United for Health study, Boston, Massachusetts, 2003–2004.

health, whether among the US-born participants, among the foreign-born participants, or in the model that analyzed the 2 groups together without regard to nativity (Table 3). Among the foreign-born participants, however, risk of fair or poor health tended to increase with increasing amounts of time spent in the United States (OR=1.2; 95% CI=0.9, 1.6).

DISCUSSION

Among a population of working-class Black Americans, half of whom were below the US poverty line, self-reported experiences of racial discrimination exhibited strong associations with risk of psychological distress, with odds ratios of nearly 7 among both US-born and foreign-born Black Americans. Reflecting the distribution of the exposure and its associated risk, 14% and 16% of our US-born and foreign-born participants, respectively, reported high levels of psychological distress. These prevalence rates were 4 and 8 times greater than were the 3.3% and 1.9% reported in contemporaneous versions of the 1998 to 2003 US National Health Interview Survey³⁰ for less impoverished US-born Black Americans (16% below the poverty line) and Black immigrants (11% below the poverty line), albeit closer to the 9.8% (adjusted for age; K6 score of ≥ 12) reported in a population-based survey for lower-income residents of New York City in 2002–2003.³¹

Study Limitations

Several study limitations need to be borne in mind when interpreting our findings. First, our study design was cross sectional. Prospective investigations, however, have shown that associations exist between concurrent adversity and increased psychological distress, above and beyond prior adverse exposures.³²

Second, we relied on self-report data; however, we used only validated instruments^{22,24,26,27} and the validated ACASI methodology,²¹ along with appropriate imputation techniques.²⁸ Although caution must be taken in interpreting the self-report data on racial discrimination (given ambiguities regarding whether a “never” response may variously reflect a true lack of exposure, an unwillingness to disclose the exposure, a lack of recognition of the exposure, or a conscious or unconscious denial of the exposure^{1,33,34}), in the case of severe psychological distress, the similarly high odds ratios for high exposure among both the US-born and foreign-born Black participants suggest that once experiences reach the point at which a person is willing and able to self-report high levels of racial discrimination, the association with psychological distress is not modified by nativity.

Furthermore, our results might not be generalizable to either more affluent or more impoverished Black Americans; however, our high response rate of 72% suggests that our results are germane to the majority of working-age Black Americans, given their concentration in

low-paying working-class occupations,¹⁹ and that they are probably applicable to analogous major US urban areas with high proportions of Black immigrants.¹² Relatedly, our finding of greater reports of racial discrimination among US-born participants than among foreign-born participants, with the difference diminishing with immigrants’ increasing duration of time in the United States, is consistent with extant research on this topic.^{13–15} Also consistent with extant literature was foreign-born participants’ better self-rated health and its decline with increasing time spent in the United States (after control for age and other covariates).^{9,30}

Interpreting Study Findings in Context

The null association we observed between self-reported experiences of racial discrimination and the self-rated health of Black Americans, whether US born or foreign born, adds to the 4 community-based studies that have investigated this topic and revealed either a null or modest association.^{8–11} Of note, controversy exists over the meaning and significance of self-rated health, including as a predictor of mortality and how this may vary by country of origin and cause of death.^{35–37}

Nevertheless, we included self-rated health as an outcome to determine what additional insight it could provide into analyses based on self-reported exposures and self-reported outcomes, given that evidence indicates nativity may modify the meaning of these variables.^{13–15,35} We accordingly underscore that our null findings with respect to self-rated health argue against an underlying propensity to report adversity as being the reason for the observed association of self-reported experiences of racial discrimination with psychological distress; these were evident even in models controlling for response to unfair treatment and social desirability, with the results also suggesting that individuals who took action and spoke to others in response to unfair treatment were at least risk of psychological distress.

The magnitude of the adverse associations we observed between self-reported experiences of racial discrimination and psychological distress, whether measured as a continuous variable or dichotomized to distinguish between severe and nonsevere psychological distress, is large and has not previously been

TABLE 2—Psychological Distress (K6 Score and Clinically Significant Distress) and Self-Reported Experiences of Racial Discrimination, Black US-Born and Foreign-Born Participants in the United for Health Study, Boston, Massachusetts, 2003–2004: Bivariate and Multivariable Regression Results

	US-Born Black Participants, Parameter Estimate ^a (95% CI)			Foreign-Born Black Participants, Parameter Estimate ^a (95% CI)			Black Participants Overall, Parameter Estimate ^a (95% CI)		
	Model 1 (Bivariate)	Model 2 (Multivariable)	Model 3 (Multivariable)	Model 1 (Bivariate)	Model 2 (Multivariable)	Model 3 (Multivariable)	Model 4 (Multivariable)	Model 5 (Multivariable)	Model 6 (Multivariable)
Outcome: K6 score (continuous; range: 0–24)									
Experiences of racial discrimination (categorical) (ref: 0 situations)									
1–2	1.93 (0.08, 3.78)	1.34 (-0.47, 3.15)	1.15 (-0.69, 2.99)	1.47 (-0.04, 2.98)	1.54 (0.07, 3.01)	1.58 (0.11, 3.06)	1.53 (0.06, 3.00)	1.57 (0.09, 3.05)	1.20 (0.06, 2.33)
≥3	4.50 (2.85, 6.15)	4.15 (2.52, 5.78)	3.96 (2.28, 5.64)	3.35 (2.16, 4.55)	3.23 (2.05, 4.42)	3.27 (2.09, 4.45)	3.27 (2.07, 4.46)	3.31 (2.11, 4.50)	3.34 (2.39, 4.29)
Sociodemographic characteristics									
Age, y (continuous)	-0.05 (-0.13, 0.02)	-0.06 (-0.12, 0.01)	-0.05 (-0.12, 0.01)	-0.11 (-0.18, -0.04)	-0.10 (-0.17, -0.03)	-0.11 (-0.18, -0.04)	-0.11 (-0.18, -0.04)	-0.11 (-0.18, -0.04)	-0.08 (-0.13, -0.04)
Men (ref: women)	0.41 (-1.02, 1.84)	-0.71 (-2.07, 0.65)	-0.68 (-2.04, 0.69)	-0.57 (-2.03, 0.88)	-0.39 (-1.79, 1.02)	-0.32 (-1.72, 1.08)	-0.39 (-1.79, 1.02)	-0.32 (-1.72, 1.08)	0.16 (-0.74, 1.06)
>Poverty level (ref: < poverty level)	0.46 (-0.97, 1.90)		0.18 (-1.18, 1.53)	-0.54 (-1.71, 0.63)		-0.08 (-1.19, 1.03)		-0.07 (-1.18, 1.05)	-0.16 (-1.01, 0.69)
≥High school education (ref: <high school)	1.48 (-0.24, 3.20)		0.91 (-0.69, 2.52)	-1.05 (-2.36, 0.26)		-1.20 (-2.46, 0.06)		-1.20 (-2.47, 0.06)	-0.33 (-1.32, 0.67)
% of lifetime spent in US				0.10 (-0.11, 0.32)			-0.05 (-0.27, 0.17)	-0.05 (-0.26, 0.17)	
Response to unfair treatment (ref: act/talk)									
Act/quiet	1.16 (-1.71, 4.02)	1.62 (-1.07, 4.30)	1.63 (-1.08, 4.35)	0.55 (-1.44, 2.54)	0.88 (-0.99, 2.75)	0.79 (-1.08, 2.66)	0.84 (-1.05, 2.73)	0.75 (-1.14, 2.63)	1.30 (-0.26, 2.86)
Accept/talk	1.78 (0.01, 3.54)	1.66 (0.04, 3.29)	1.67 (0.05, 3.30)	0.83 (-0.55, 2.20)	1.08 (-0.22, 2.38)	1.10 (-0.20, 2.40)	1.04 (-0.27, 2.35)	1.07 (-0.25, 2.38)	1.62 (0.61, 2.63)
Accept/quiet	2.78 (0.79, 4.76)	2.48 (0.64, 4.31)	2.57 (0.72, 4.43)	0.66 (-0.92, 2.24)	1.08 (-0.41, 2.56)	0.99 (-0.50, 2.48)	1.08 (-0.41, 2.57)	1.00 (-0.49, 2.49)	1.70 (0.55, 2.86)
Social desirability score (continuous)	-0.03 (-0.05, -0.01)	-0.03 (-0.04, -0.01)	-0.03 (-0.05, -0.01)	-0.02 (-0.04, 0.00)	-0.01 (-0.03, 0.00)	-0.01 (-0.03, 0.01)	-0.01 (-0.03, 0.00)	-0.01 (-0.03, 0.01)	-0.03 (-0.04, -0.01)
R ²		0.2325	0.2382		0.1511	0.1629	0.1517	0.1635	0.1785
Outcome analyzed: clinically significant psychological distress									
Experiences of racial discrimination (categorical) (ref: 0 situations)									
1–2	1.71 (0.30, 9.82)	1.15 (0.18, 7.41)	1.09 (0.16, 7.29)	2.22 (0.72, 6.90)	2.61 (0.81, 8.47)	2.84 (0.84, 9.60)	2.64 (0.81, 8.56)	2.83 (0.84, 9.60)	2.24 (0.84, 5.99)
≥3	5.85 (1.30, 26.21)	6.85 (1.40, 33.56)	6.93 (1.35, 35.70)	4.71 (1.97, 11.25)	5.01 (2.02, 12.45)	6.50 (2.45, 17.26)	5.31 (2.09, 13.47)	6.80 (2.53, 18.26)	6.28 (2.80, 14.07)

Continued

TABLE 2—Continued

Sociodemographic characteristics									
Age, y (continuous)	0.95 (0.92, 1.00)	0.95 (0.91, 1.00)	0.95 (0.91, 1.00)	0.94 (0.91, 0.98)	0.94 (0.89, 0.98)	0.91 (0.86, 0.96)	0.93 (0.89, 0.98)	0.91 (0.86, 0.96)	0.94 (0.91, 0.97)
Men (ref: women)	0.73 (0.32, 1.69)	0.34 (0.12, 1.01)	0.36 (0.12, 1.06)	0.68 (0.31, 1.50)	0.81 (0.32, 2.01)	0.93 (0.35, 2.45)	0.80 (0.32, 1.98)	0.93 (0.35, 2.44)	0.62 (0.33, 1.16)
>Above poverty level (ref: <poverty level)	0.90 (0.39, 2.05)		0.83 (0.30, 2.28)	0.78 (0.40, 1.53)		1.26 (0.57, 2.79)		1.26 (0.57, 2.79)	0.97 (0.54, 1.75)
≥High school education (ref: <high school)	1.61 (0.52, 4.95)		1.19 (0.33, 4.24)	0.32 (0.16, 0.64)		0.18 (0.08, 0.43)		0.18 (0.08, 0.43)	0.39 (0.21, 0.74)
% of lifetime spent in US				1.04 (0.92, 1.18)					
Response to unfair treatment (ref: act/talk)							0.96 (0.84, 1.09)		
Act/quiet	4.11 (0.93, 18.12)	7.18 (1.33, 38.83)	6.75 (1.21, 37.83)	1.16 (0.30, 4.44)	1.52 (0.37, 6.20)	1.43 (0.34, 6.03)	1.45 (0.35, 5.98)	1.38 (0.32, 5.86)	2.63 (0.91, 7.66)
Accept/talk	3.01 (1.05, 8.62)	3.01 (0.93, 9.68)	3.03 (0.94, 9.78)	2.76 (1.21, 6.33)	3.80 (1.54, 9.36)	4.81 (1.85, 12.50)	3.67 (1.48, 9.10)	4.68 (1.79, 12.23)	3.93 (1.94, 7.97)
Accept/quiet	3.50 (1.15, 10.64)	5.00 (1.40, 17.83)	4.92 (1.37, 17.64)	2.52 (0.99, 6.41)	3.79 (1.36, 10.50)	3.84 (1.30, 11.38)	3.82 (1.38, 10.61)	3.89 (1.32, 11.50)	3.79 (1.73, 8.32)
Social desirability score (continuous)	0.99 (0.97, 1.00)	0.98 (0.97, 1.00)	0.98 (0.97, 1.00)	0.99 (0.98, 1.00)	0.99 (0.98, 1.00)	0.99 (0.98, 1.01)	0.99 (0.98, 1.00)	0.99 (0.98, 1.01)	0.99 (0.98, 1.00)

Note. CI = confidence interval. Multivariable analyses include all variables in column for which parameter estimates are presented.

^ab for K6 score, odds ratio for clinically significant psychological distress (K6 score ≥ 13).

reported, even as past studies have revealed significant associations between the 2.¹⁻⁴ There are a pair of possible reasons for these results.

First, most studies on racial discrimination and mental health have concerned diagnosable mental illness rather than nonspecific psychological distress.^{2,4} Second, among those with nonspecific psychological distress as an outcome, community-based studies have focused chiefly on Black–White comparisons and reported only associations between everyday discrimination and psychological distress in which race/ethnicity (among other covariates) was controlled.⁵⁻⁷ Moreover, additional studies have enrolled largely or exclusively college students, graduate students, or university employees and typically reported only correlations and changes in variance explained rather than risk estimates.³⁸⁻⁴⁰

Notably, the true population prevalence of severe psychological distress among Black Americans and its association with racial discrimination are likely to be underestimated in both these prior studies and our investigation. The reason is that the noninstitutionalized civilian study participants did not include imprisoned individuals, a group that is disproportionately made up of Black Americans (in 2005, the incarceration rate was 2290 per 100 000 Black residents vs 412 per 100 000 White residents⁴¹) and documented to have high rates of both psychological distress⁴² and mental illness (estimated to have affected half of all US prisoners in 2005⁴³).

The high prevalence of severe psychological distress observed in our study—and its association with high levels of racial discrimination—is unlikely to be due to underlying diagnosable mental disorders. First, the study sample included only unionized working adults and therefore likely excluded less employable individuals with severe and persistent mental illness. Second, the high prevalence of high K6 scores in our study far exceeds the prevalence of current diagnosable mental illness detected among noninstitutionalized Black Americans.⁴⁴ Psychological distress or “demoralization” has long been recognized both as distinct from diagnosable mental illness and as a significant public health problem associated with adverse living conditions such as poverty.^{45,46} Our results suggest that greater attention to the

TABLE 3—Associations of Self-Rated Health With Self-Reported Experiences of Racial Discrimination and Other Selected Variables: Black US-Born and Foreign-Born Participants in the United for Health Study, Boston, Massachusetts, 2003–2004

	US-Born Black Participants (n = 193), OR (95% CI)			Foreign-Born Black Participants (n = 275), OR (95% CI)			Black Participants Overall (n = 468), OR (95% CI): Model 6 (Multivariable)
	Model 1 (Bivariate)	Model 2 (Multivariable)	Model 3 (Multivariable)	Model 1 (Bivariate)	Model 2 (Multivariable)	Model 3 (Multivariable)	
Experiences of racial discrimination (categorical) (ref: 0 situations)							
1–2	0.65 (0.23, 1.83)	0.63 (0.22, 1.83)	0.73 (0.24, 2.19)	3.54 (0.94, 13.36)	3.58 (0.93, 13.75)	3.90 (0.99, 15.43)	3.87 (0.97, 15.48)
≥3	0.62 (0.25, 1.54)	0.69 (0.27, 1.78)	0.89 (0.33, 2.37)	1.26 (0.35, 4.59)	1.23 (0.33, 4.53)	1.25 (0.34, 4.63)	1.05 (0.28, 3.97)
Sociodemographic characteristics							
Age, y (continuous)	0.97 (0.94, 1.01)	0.97 (0.94, 1.01)	0.97 (0.93, 1.01)	1.00 (0.95, 1.07)	1.01 (0.95, 1.07)	1.00 (0.94, 1.07)	1.03 (0.96, 1.11)
Men (ref: women)	0.59 (0.27, 1.31)	0.62 (0.27, 1.42)	0.59 (0.25, 1.38)	0.76 (0.22, 2.56)	0.67 (0.19, 2.41)	0.71 (0.19, 2.64)	0.64 (0.17, 2.37)
>Poverty level (ref: < poverty level)	0.50 (0.23, 1.09)		0.54 (0.24, 1.20)	0.82 (0.30, 2.26)		0.85 (0.28, 2.57)	0.83 (0.27, 2.53)
≥High school education (ref: < high school)	0.53 (0.23, 1.23)		0.46 (0.19, 1.14)	0.36 (0.13, 0.94)		0.39 (0.14, 1.09)	0.38 (0.13, 1.10)
Y in US, % of age				1.42 (0.92, 1.37)			1.23 (0.93, 1.63)
Response to unfair treatment (ref: act/talk)							
Act/quiet	2.68 (0.74, 9.74)			0.20 (0.00, 1.30) ^a			
Accept/talk	1.05 (0.38, 2.91)			0.42 (0.09, 1.49) ^a			
Accept/quiet	1.09 (0.36, 3.27)			0.52 (0.09, 2.08) ^a			
Social desirability score (continuous)	1.00 (0.99, 1.01)	1.00 (0.99, 1.01)	1.00 (0.99, 1.01)	0.98 (0.96, 1.00)	0.98 (0.96, 1.00)	0.98 (0.97, 1.01)	0.98 (0.96, 1.00)
							0.99 (0.97, 1.01)
							1.00 (0.99, 1.01)

Note. CI = confidence interval; OR = odds ratio. Multivariable analyses include all variables in column for which parameter estimates are presented.

^aExact (median unbiased) estimate of OR and its 95% CI.

burden of psychological distress and its societal determinants—including racial discrimination, not only poverty—is warranted.

Public Health Implications for Research and Health Inequities

As also underscored by our findings, public health and clinical research on the experiences and psychological health of Black Americans that empirically investigates the salience of racial discrimination, nativity, and socioeconomic position is urgently needed.^{1–3} Assuming appropriately large study populations sufficiently diverse in both geographic origin and socioeconomic position, examples of questions that could be addressed include whether associations between racial discrimination and health outcomes vary

1. by country of origin (for immigrant Black populations), region or state of birth (for US-born populations), or current geographic locale;
2. by birth cohort;
3. by lifetime socioeconomic position;
4. by choice of health outcome (e.g., self-reported vs measured outcomes); and
5. by approach to measuring exposure to racial discrimination (e.g., use of explicit questions vs use of methods less subject to bias than self-report, such as the Implicit Association Test^{33,34}).

Also relevant is assessing whether stratifying by or controlling for nativity affects estimates of the population burden of racial discrimination, the association of racial discrimination with a specified health outcome at any given level of exposure, and the population-attributable fraction (which depends on both the prevalence of exposure and its effect estimate⁴⁷).

In conclusion, the high prevalence of severe nonspecific psychological distress observed within our study’s Black working-class population and its strong association with self-reported experiences of racial discrimination—along with the high levels of reported exposure to racial discrimination among our US-born Black participants and the increasing levels reported by our foreign-born Black participants with increasing time spent in the United States—raise important caveats about analyses of Black Americans’ health that ignore nativity,

social class, and exposure to racial discrimination. The point is not to medicalize social problems; rather, it is to understand and address how social inequity harms health. ■

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Contributors

N. Krieger originated the study, guided the analyses, and drafted the article. A. Kosheleva and J. T. Chen conducted the statistical analyses, P. D. Waterman assisted with database management, and K. Koenen assisted with interpreting the findings on psychological distress. All of the authors contributed to the final article.

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