SOCIAL HAZARDS ON THE JOB: WORKPLACE ABUSE, SEXUAL HARASSMENT, AND RACIAL DISCRIMINATION—A STUDY OF BLACK, LATINO, AND WHITE LOW-INCOME WOMEN AND MEN WORKERS IN THE UNITED STATES

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This study documents the prevalence of workplace abuse, sexual harassment at work, and lifetime experiences of racial discrimination among the United for Health cohort of 1,202 predominantly black, Latino, and white women and men low-income union workers in the Greater Boston area. Overall, 85 percent of the cohort reported exposure to at least one of these three social hazards; exposure to all three reached 20 to 30 percent among black women and women and men in racial/ethnic groups other than white, black, or Latino. Workplace abuse in the past year, reported by slightly more than half the workers, was most frequently reported by the white men (69%). Sexual harassment at work in the past year was reported by 26 percent of the women and 22 percent of the men, with values of 20 percent or more in all racial/ethnic-gender groups other than Latinas and white men. High exposure to racial discrimination was reported by 37 percent of the workers of color, compared with 10 percent of the white workers, with black workers reporting the greatest exposure (44%). Together, these findings imply that the lived—and combined—experiences of class, race, and gender inequities and their attendant assaults on human dignity are highly germane to analyses of workers' health.

Workplace hazards. Typically, these are defined—and their health effects analyzed—in relation to important physical exposures at work, such as chemicals, dust, fumes, noise, and ergonomic strain, and also unsafe conditions, such as inadequate guards on machines, slippery surfaces, and poor lighting (1). Also warranting concern are psychosocial job characteristics that can potentially harm health,

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including job strain (2) (whether defined in terms of job control-demand-support (3) or effort-reward imbalance (4)); a related strand of psychosocial research focuses on links between disease and social status defined in relation to rank in an occupational hierarchy (5).

Yet while work is fundamentally a locus of production of commodities and value, via contractually recognized chains of command that involve the purchase and sale of people's physical and mental labor (as well as the extraction of surplus value) (6–8), it is also more than this. Work necessarily is also a site of social engagement, within and across job categories (6–10). For any given person in any given job at any given worksite, working entails interactions with permutations of peers, subordinates, and supervisors or superiors—and, in some jobs, interacting also with external clients or customers, including the public at large. Moreover, the "any given person" in any particular job is not simply a lump sum of "human capital" with a specified amount of experience, skill, and education. Instead, each worker is necessarily embedded in her or his societal context, and thus simultaneously embodies and brings to the work her or his social position in relation to key societal divisions involving property and power, including class, gender, sexuality, race/ethnicity, nationality, and citizen status, to name a few (11, 12). From this embodied perspective, as elaborated by ecosocial theory (11–13), work is a locus not only of economic production but also of social reproduction of social relationships of the society at large.

In other words, "the worker" is not simply a "worker." Within a U.S. context, this person is or self-identifies as or is labeled as: a woman or a man (or perhaps transsexual or transgendered); heterosexual or lesbian, gay, or bisexual; white, black, Latino/a, Asian, Pacific Islander, American Indian, or some other race/ethnicity not included in the major categories used by the U.S. census; U.S.-born or foreign-born; and legal citizen or resident, or illegal and undocumented resident. It manifestly follows that worksites, like any other social domain, will be arenas in which these social relations are expressed and contested. The net implication is that, in a context of societal equality, additional workplace hazards can plausibly include racial discrimination, sexual harassment, and workplace abuse—with the first two also encompassing experiences that occur both in and outside work (7, 9–11, 14–20). A fuller analysis of workers' health and workplace hazards thus translates to a concern with not only job-specific hazards but also the broader societal context in which workers live their lives and do their work (21).

To date, however, relatively little public health research has empirically assessed the prevalence and health impact of social hazards at work, singly and combined, especially simultaneously in relation to class, race/ethnicity, gender, and sexuality (14–20). Although there is a growing body of work on sexual harassment, workplace abuse, and health (19, 20, 22–25), acknowledged shortcomings include a lack of research on these hazards among multi-racial/ethnic

low-wage working-class women and men, whether singly, together, or also in relation to racial discrimination (20). Conversely, among new work investigating links between racial discrimination and health (14, 26), little has characterized the types and extent of self-reported experiences of racial discrimination among specifically working-class populations, and few studies provide data on racial/ethnic groups other than the African American and white population (14, 26, 27). Extant evidence, however, suggests that workplace abuse is most likely to be experienced by subordinate workers, both men and women (19). Sexual harassment in turn has been documented to affect chiefly women workers, especially women of color, with the caveat that among the few studies conducted among predominantly working-class populations, most found women and men reported similar levels (19, 20). Research has also shown that self-reported experiences of racial discrimination are most likely to be reported by African Americans and least likely to be reported by white Americans (14, 26). The net result is a marked dearth of data on the social patterning of social hazards at work, singly, combined, or in conjunction with physical hazards.

To address these knowledge gaps, we established the United for Health study to assess the prevalence of social and physical hazards at work and ascertain their combined health impact on workers' health among a multi-racial/ethnic working-class population of women and men (27, 28). This article reports, as a first step, the distribution of three key social hazards—workplace abuse, sexual harassment, and racial discrimination—by the workers' race/ethnicity, gender, and wage level, defined in relation to a living wage. Based on the limited extant evidence, we hypothesized that low-wage workers of color would be most likely to experience the greatest combined burden of these three social hazards, with the women especially at risk for exposure to sexual harassment.

METHODS

Study Population

Study participants (N = 1,202) were members of the United for Health study, consisting of union members, age 25 to 64, employed in a variety of workplaces located in or near Boston, Massachusetts (27, 28). We chose to recruit participants through labor unions rather than worksites because unions (*a*) provide a reliable and trusted vehicle for recruiting workers to discuss the study's exposures and health outcomes, separate from the purview of management; (*b*) could provide access to workers across a variety of worksites with varied exposures; and (*c*) are empowered to use the findings to advocate for improved working conditions as well as disseminate the results to their membership (above and beyond the study participants) (28). Recruitment took place from March 2003 through August 2004.

Study Protocol

Study staff worked with the leadership of the selected unions and management of participating worksites to design the recruitment protocol. Permission of management was required to gain entry to the worksites. A draft survey was pretested with members of the participating union, with feedback provided by focus groups. Management, union, and the funders did not have access to study data, nor did management or funders have any role in the collection, analysis, or interpretation of the data or preparation, review, or approval of the study's scientific papers. All participants received an informed consent reference sheet and provided verbal informed consent; conduct of the study was approved by the Dana-Farber Cancer Institute's Office for the Protection of Research Subjects, the Human Subjects Committees of the Harvard School of Public Health, and the Institutional Review Board of the University of Massachusetts.

Table 1 delineates the recruitment and interview protocol, including eligibility criteria, incentives, and response rate (72%). Briefly, workers were screened and recruited on-site by study staff, after having been sent an introductory letter, based on a list of union members by worksite. The main survey was administered on-site, typically during work hours, in a private room, and consisted of a 40- to 45-minute survey, administered by computer (in either English or Spanish), followed by a 15-minute health check. We used Audio-Computer Assisted Self-Interviewing (ACASI) both to improve the likelihood of obtaining sensitive information and to enable persons with low literacy to respond (29). With ACASI, questions shown on the screen are also read out-loud, over a headphone, via the digitally recorded audio component; participants respond by pressing the indicated keys on a masked keyboard. The Spanish version of the survey was translated from English and then back-translated to ensure accuracy. One or more of the interview staff were bilingual in English and Spanish and were available to answer participants' questions.

Sociodemographic and Worksite Variables

All data on race/ethnicity, gender, sexuality, age, country of birth of participants and their parents, socioeconomic position, and worksite characteristics were based on self-report, per the categories employed in Table 2 (pp. 60-62); language of survey administration was also tracked. For race/ethnicity, participants could indicate membership in up to eight groups; all persons who indicated they were Hispanic or Latino were included in the Latino group. Extensive data were obtained on worksite and job characteristics plus the participants' socioeconomic position and resources. In this study, we respectively report on (*a*) the type of worksite in which the participants worked (manufacturing, retail, transportation) and the gender and racial/ethnic composition of their coworkers, and (*b*) the participants' occupational class (based on the class position of their primary job),

Table 1

Study recruitment protocol and participation rates, United for Health study, Greater Boston area, 2003–2004

Recruitment and survey protocol	Participants	Number
Recruitment pool: list of union members, by worksite (14 of 21 worksites (67%) agreed to permit recruitment) *Eligible:* 25–64 years old; employed at worksite 2+ months; English or Spanish speaking	Initial pool of selected participants Unable to contact ↓	2,323 369
Interview mode: Audio-Computer Self-Interviewing (ACASI) *Incentive:* at completion, given $25 prepaid grocery card and 1-hour paid work release or, if no paid work release, $50 prepaid grocery card	Total contacted Could not be included (n = 672): Ineligible Refused No show ↓	1,954 443 197 32
	Completed eligible surveys (response rate = 72%) ↓	1,282
Analytic data set: only participants who met the eligibility critera	Excluded from analytic data set (n = 80): Missing age <25 years old 65+ years old ↓	 43 2 35
	Final analytic data set	N = 1,202

operationalized as being a supervisory or nonsupervisory employee, self-employed, or employing others, using a modified version (30, 31) of the class relations schema proposed by Wright (6) and now employed in the United Kingdom's new National Statistics Socio-Economic Classification System (8, 32, 33); hourly wage; household poverty level (in relation to the U.S. poverty line, taking into account the number and age of persons in the household); and highest level of education completed. In 2003, the U.S. federal poverty line for a household of two adults and two children was $18,660 (34). Wages were categorized in relation to the estimated living wage for the Greater Boston area, equal to $10.54/hour in 2003 (35).

Measures of Social Hazards

We included self-report measures for three social hazards: workplace abuse, sexual harassment, and racial discrimination. All three measures are conceptualized as measuring "self-reported experiences," rather than "perceived experiences," because while self-reported experiences must be perceived, not all perceived experiences are reported, depending upon individuals' willingness or ability to report them (14, 27). Given the sensitivity of the topics addressed, we also included a five-item validated social desirability scale (36), which assesses the tendency of respondents to represent themselves favorably in accord with what they deem to be socially approved behaviors, feelings, or views, so as to control for its effect on responses to questions about the social hazards under investigation.

Workplace Abuse. To measure workplace abuse we used a reduced eight-item version of the Generalized Workplace Abuse (GWA) instrument developed by Richman and colleagues (19). The original 29-item GWA measure, developed from focus groups, was designed to tap into five domains of non-gender-specific abuse: "verbal aggression," "disrespectful behavior," "isolation/exclusion," "threats/bribes," and "physical aggression" (19). Due to time constraints for survey administration, we could not employ the full instrument and instead included a subset of the eight items most salient to our study population, as determined by the focus group discussions we held with union members to refine the study instrument. Examples of items included were: being yelled or sworn at, being talked down to, or being treated unfairly (see Table 3, pp. 64-66). For each of these items participants were asked whether the experience happened "never," "once," or "more than once" in the past 12 months in their work setting. Respondents were also asked to indicate whether the perpetrator was their boss, coworker, subordinate, or other individual. Minor changes to question wording were made for low literacy. We computed a summary score by adding up the number of items for which participants reported at least one experience of abuse (each item scored in relation to frequency of occurrence; score range: 0–32), calculated Cronbach's alpha for the measure, and also determined the percentage of participants who reported at least one type of abuse.

Sexual Harassment at Work. To measure experiences of sexual harassment in the worksite we used five items adapted from two validated instruments focused on the three major domains of sexual harassment: sexual coercion, unwanted sexual attention, and gender-based hostility (37). All three domains pertain to the legal construct of sexual harassment, whereby the first corresponds to the most explicit "quid pro quo" form of sexual harassment (i.e., get rewarded if do and punished if do not have sex with the harasser), and the latter two constitute

elements of a gender-specific "hostile environment" (22, 37, 38). To measure sexual coercion we used two items from a modified version of the validated and widely used Sexual Experiences Questionnaire (SEQ) (see Table 4 (p. 67), items 1 and 2) (19). To capture unwanted sexual attention and gender-based hostility, we adapted three items from Goldenhar and colleagues' measure of sexual harassment and discrimination (Table 4, items 3a, 4a, 5a) (39) and, following Richman and colleagues (19), asked persons who responded "yes" if these experiences "were extreme enough to get in the way of your doing your job" (Table 4, items 3b, 4b, 5b). As with the workplace abuse questions, the referent period was set as the past 12 months, questions were edited to accommodate low literacy, and response options were simplified to "yes" versus "no." We computed a summary score by adding up the number of items for which participants reported at least one experience of sexual harassment (each item with a score of 1; score range: 0–5), calculated Cronbach's alpha for the measure, and also determined the percentage of participants who reported at least one type of sexual harassment. Lastly, we also included a single item regarding whether or not the respondent believed he or she had been sexually harassed at work (19).

Experiences of Racial Discrimination. We employed the newly validated "Experiences of Discrimination" (EOD) questionnaire (27), an instrument based on the earlier closed-format questions developed by Krieger (40) and used in the CARDIA study (41) and other investigations regarding self-reported experiences of racial discrimination and health (14, 15, 26). This instrument asks respondents whether they have "ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior" in diverse specified situations "because of your race, ethnicity, or color." The revised version, used in this study, newly asked about the frequency of occurrence, plus added two situations ("getting service in a store or restaurant" and "getting credit, bank loans, or a mortgage") to the original seven; the nine situations are listed in Table 5 (pp. 68-70). The "situation" version was scored by counting the number of situations in which a participant reported experiencing racial discrimination. The "frequency" version measured total occurrences, assigning the value of 0 to "never," 1 to "once," 2.5 to "two to three times," and 5 to "four or more times," and summed across items (score range: 0–45). Because evidence indicates lifelong everyday experiences of racial discrimination can start in childhood, span several domains, and have a cumulative adverse impact on health (14, 26), the timeframe for the question was "ever" rather than during the past 12 months. Psychometric validation of the instrument was conducted on a subset of the United for Health study population (27). Results indicated scale reliability was high, as demonstrated by confirmatory factor analysis, Cronbach's alpha (0.74 or greater), and test-retest reliability coefficients (0.70); structural equation modeling demonstrated the EOD had the higher correlation ($r = 0.79$) with an underlying

discrimination construct compared with the additional self-report discrimination measures used in the validation survey.

Statistical Analysis

The analytic data set included the 1,202 eligible participants with a known age between 25 and 64 years old, and excluded the 80 participants with an unknown or ineligible age (Table 1). Descriptive analyses quantified the distribution of and correlations between the participants' sociodemographic and worksite characteristics, along with exposure to the study's three social hazards (singly and combined). We generated these data both for the total study population and as stratified by race/ethnicity and gender; persons with "missing data" were retained as a category to provide information on the extent of missingness of data for each variable. We then employed multivariable linear regression models to estimate risk of exposure to each of the social hazards in relation to the three variables of interest (race/ethnicity, gender, and wage-level), controlling for relevant covariates. All analyses were conducted in SAS (42).

RESULTS

Study Population:
Sociodemographic and Workplace Characteristics

Among the 1,202 workers included in the analytic data set (36.0% women, 61.1% men, and 2.4% with missing data on gender), 480 (39.9%) were black, 274 (22.8%) were Latino, and 289 (24.0%) were white (Table 2, pp. 60-62). The remaining 121 (10.1%) participants belonged to additional racial/ethnic groups (2 American Indian, 28 Asian, 1 South Asian, 1 Native Hawaiian, and 77 who selected two more "races" plus 12 who selected "other"), while 38 (3.2%) had missing data on race/ethnicity. The extent of missing data on sociodemographic and workplace characteristics was less than 5 percent for all racial/ethnic-gender groups except Latinos, among whom 5 to 10 percent had missing data on own and parents' birthplace and on sexuality, and up to approximately 15 percent were missing data on class position, hourly wage, poverty level, and educational level.

Overall, as shown in Table 2, the study population was evenly divided among participants ages 25 to 44 and 45 to 64 years old; most were heterosexual (with 14% identifying as lesbian, gay, bisexual, transgender, or non-heterosexual); and about half the participants and their parents were born outside the United States. These patterns varied by race/ethnicity: white workers were most likely and Latino workers least likely to be age 45 to 64; about 85 percent of the white and black workers compared with about 70 percent of the Latino workers identified as heterosexual; and white workers and their parents were two to four times more likely to be U.S.-born, compared with participants in other racial/ethnic groups. The social desirability score did not vary by gender

within racial/ethnic groups and ranged from 30 among white women to 49 among black women.

With regard to socioeconomic resources (Table 2), approximately one-third of the study participants earned less than a living wage, 40 percent lived below the poverty line, nearly a quarter had less than a high school education, while about 10 percent had completed at least four years of college or had a graduate degree. Fully 60 percent of participants were nonsupervisory employees. The proportion stating they worked chiefly with men ranged from a high of 55 percent among black men to a low of 5 percent among Latina women, the latter being the group most likely (25%) to say they worked chiefly with women. The proportion reporting their gender mix of coworkers was "about even" was higher for women than men in each racial/ethnic group, and ranged from 50 percent among black women to nearly 70 percent among the white and Latina women. Overall, nearly half the participants stated they worked chiefly with workers of different race/ethnicities.

Prevalence of Social Hazards: Singly and Combined

Workplace Abuse. Within the total study cohort, 52 percent of the workers reported having experienced during the past 12 months at least one of the eight types of workplace abuse queried about in the survey; this proportion ranged from a high of 69 percent among white men to a low of 38 percent among Latinas (Table 3, p. 64). The workplace summary score, combining information across the eight types of abuse (Cronbach's alpha 0.7–0.8), yielded a similar pattern, with these same two groups having the highest (5.2) and lowest (2.9) scores. Wage-level was inconsistently related to workplace abuse score across the racial/ethnic-gender groups. The highest scores occurred among workers earning less than a living wage among the black women, black men, and Latino men, but among workers earning more than a living wage among the remaining groups. Overall, the extent of missing data was low, only 0.8 percent to at most 2.5 percent, considered across the eight items.

The most common form of workplace abuse, "being screamed or yelled at," reported by 44 percent of the study population, was equally likely to be perpetrated by the participants' boss, coworker, someone at a lower job level, or someone else (e.g., a customer) (Table 3). Coworkers were most likely to be identified as the perpetrators for "being subjected to a hostile or offensive gesture" or "being sworn at," with each of these types of abuse reported by about 15 to 20 percent of participants in all racial/ethnic-gender groups, except white men, for whom the prevalence was 25 to 35 percent. By contrast, bosses were most likely to be reported as the perpetrator for "trying to control nonwork time" and for "treating participants unfairly in work assignments" (reported by approximately 10% to 16% of participants, more or less equally across racial/ethnic-gender groups), and

Table 2

Workers' sociodemographic and worksite characteristics, overall and by race/ethnicity-gender, United for Health study, Boston, 2003–2004

Characteristic	Total (N = 1,202)	Black		Latino		White		Other race/ethnicity	
		Men (n = 308)	Women (n = 158)	Men (n = 152)	Women (n = 115)	Men (n = 182)	Women (n = 102)	Men (n = 73)	Women (n = 45)
Age:									
25–44 years	49.3%	38.3%	55.1%	64.5%	68.7%	39.6%	45.1%	47.9%	62.2%
45–64 years	50.7	61.7	44.9	35.5	31.3	60.4	54.9	52.1	37.8
Sexuality:									
Lesbian/gay/bisexual/transgender (LGBT)	5.6	1.9	3.2	8.6	8.7	6.6	8.8	2.7	8.9
Heterosexual	79.5	84.7	86.1	71.1	66.1	86.3	85.3	84.9	75.6
Other	8.7	8.8	7.6	11.2	15.7	4.9	2.0	9.6	11.1
Missing	6.2	4.5	3.2	9.2	9.6	2.2	4.9	2.7	4.4
Nativity:									
Born in U.S. state or territory	47.8	26.9	67.7	27.0	24.3	86.8	92.2	27.4	44.4
Foreign-born	47.8	71.8	32.3	63.2	67.0	13.2	7.8	67.1	55.6
Missing	4.4	1.3	0.0	9.9	8.7	0.0	0.0	5.5	0.0
Parents' nativity:									
1 or both parents born in U.S.	43.9	27.9	63.3	16.4	11.3	82.4	85.3	30.1	42.2
Both parents born outside U.S.	51.5	70.5	36.7	74.3	80.0	17.0	12.7	65.8	55.6
Missing	4.6	1.6	0.0	9.2	8.7	0.5	2.0	4.1	2.2
Language of survey:									
English	83.0	99.0	99.4	34.9	21.7	98.9	100.0	100.0	97.8
Spanish	17.0	1.0	0.6	65.1	78.3	1.1	0.0	0.0	2.2

Type of worksite:									
Manufacturing	29.0	2.3	2.5	73.0	70.4	40.7	25.5	23.3	15.6
Retail	32.6	18.5	54.4	16.4	25.2	41.2	64.7	21.9	55.6
Transportation	38.4	79.2	43.0	10.5	4.3	18.1	9.8	54.8	28.9
Currently a union member:									
Yes	90.4	93.2	91.8	84.2	69.6	96.7	99.0	89.0	91.1
No	8.7	6.8	8.2	14.5	27.8	2.2	1.0	11.0	8.9
Missing	0.8	0.0	0.0	1.3	2.6	1.1	0.0	0.0	0.0
Worksite gender composition of coworkers:									
Mostly men	36.2	55.5	36.1	21.7	5.2	45.1	19.6	45.2	20.0
Mostly women	13.3	6.5	12.7	19.7	25.2	10.4	11.8	17.8	13.3
About even	50.0	37.7	50.0	58.6	69.6	44.5	68.6	35.6	66.7
Missing	0.5	0.3	1.3	0.0	0.0	0.0	0.0	1.4	0.0
Worksite racial/ethnic composition of coworkers:									
Mostly same	25.6	30.5	24.1	27.6	32.2	21.4	9.8	34.2	22.2
Mostly different	46.7	43.5	50.6	39.5	33.0	50.0	58.8	49.3	53.3
About even	27.4	26.0	24.7	32.9	33.9	28.6	31.4	16.4	24.4
Missing	0.3	0.0	0.6	0.0	0.9	0.0	0.0	0.0	0.0
Class position:									
Own or run business	4.7	7.1	4.4	5.9	3.5	4.9	1.0	4.1	4.4
Self-employed/freelance	6.2	5.8	2.5	13.8	8.7	3.8	2.0	5.5	6.7
Supervisory employee	23.0	28.2	21.5	13.8	20.0	23.1	24.5	27.4	31.1
Nonsupervisory employee	58.9	56.2	69.0	52.6	49.6	68.1	68.6	58.9	55.6
Missing	7.1	2.6	2.5	13.8	18.3	0.0	3.9	4.1	2.2

Table 2 (Cont'd.)

Characteristic	Total (N = 1,202)	Black		Latino		White		Other race/ethnicity	
		Men (n = 308)	Women (n = 158)	Men (n = 152)	Women (n = 115)	Men (n = 182)	Women (n = 102)	Men (n = 73)	Women (n = 45)
Hourly wage, as % of living wage (LW):									
$6.00–$10.54/hr (≤100% LW)	31.5	15.9	43.7	47.4	60.0	19.8	38.2	21.9	40.0
$10.55–$13.16/hr (>100%, <125% LW)	12.8	4.9	7.6	15.1	14.8	20.9	24.5	15.1	15.6
$13.17–$15.80/hr (125%–149% LW)	8.9	6.5	6.3	8.6	5.2	14.8	9.8	8.2	11.1
≥$15.81/hr (≥150% LW)	38.6	69.5	38.0	13.8	5.2	43.4	24.5	49.3	28.9
Missing	8.2	3.2	4.4	15.1	14.8	1.1	2.9	5.5	4.4
Poverty level (household):									
<100% poverty	40.4	46.8	48.7	46.7	56.5	21.4	29.4	32.9	48.9
100%–199% poverty	22.5	21.8	22.2	20.4	17.4	33.5	24.5	24.7	8.9
≥200% poverty	26.8	25.0	22.8	16.4	11.3	43.4	40.2	31.5	33.3
Missing	10.2	6.5	6.3	16.4	14.8	1.6	5.9	11.0	8.9
Education: highest level completed:									
<12th grade	22.8	20.1	15.2	35.5	36.5	20.3	20.6	12.3	28.9
High school degree/GED	36.9	37.7	50.0	23.7	27.8	44.5	40.2	34.2	35.6
Some college/vocational school	22.2	27.6	24.1	14.5	14.8	21.4	26.5	26.0	24.4
4 years of college	6.0	6.5	2.5	6.6	3.5	9.3	7.8	9.6	4.4
Graduate degree	3.2	4.2	3.8	1.3	1.7	2.7	3.9	6.8	0.0
Missing	9.0	3.9	4.4	18.4	15.7	1.6	1.0	11.0	6.7
Social desirability score: mean (SD)	35.0 (32.0)	36.9 (31.0)	49.1 (34.8)	33.2 (31.2)	31.7 (30.2)	27.7 (29.9)	29.8 (32.8)	26.6 (29.3)	36.0 (29.7)

Note: Data on the 1,202 workers include the 38 with data missing on race/ethnicity and the 29 with data missing on gender. The data shown by race/ethnicity and gender do not include: among the 480 total black workers, the 14 missing data on gender; among the 274 total Latino workers, the 7 missing data on gender; among the 289 white workers, the 5 missing data on gender; and among the 121 workers belonging to other racial/ethnic groups, the 3 missing data on gender.

also for "asking someone to do work not part of her/his job" (reported by 25% of participants, ranging from 14% for Latinas to 40% for white men).

Sexual Harassment. Nearly one-quarter of the study population, including 26 percent of women and 22 percent of men, reported having experienced at least one of the five types of sexual harassment included in the survey instrument, with exposure spanning from just under or about 20 percent for the Latina and white women to around 30 to 35 percent for the black women and women from other racial/ethnic groups (Table 4, p. 67). The same patterning of exposure was evident for the sexual harassment summary score, which combined information across the five types of sexual harassment (Cronbach's alpha 0.5–0.8). Of note, fewer than 4 percent of participants within each racial/ethnic-gender group replied "yes" to the question asking if they believed they had been sexually harassed at work (as opposed to being asked about behaviors that constitute sexual harassment), with only two exceptions: 9 percent of black women and 16 percent of women in the additional racial/ethnic groups endorsed this statement (Table 4).

Among women, the two most common types of sexual harassment reported, each by about 10 percent of participants, were (*a*) "quid pro quo" harassment: "might get a reward if engaged in sexual behavior" and (*b*) in the domain of gender-hostility: "feeling mistreated at work because of gender" (Table 4). Similar patterns and frequencies of reported experiences of sexual harassment were evident among men, except for white men, who were most likely to report "being subjected to unwanted suggestions about or references to sexual activity" (7%). Among both the women and men reporting any of the three types of sexual harassment constituting gender hostility, between one-third to one-half stated the exposure was extreme enough to get in the way of doing their job (Table 4).

Racial Discrimination. Fully 58 percent of the workers of color (65% of the black participants, 45% of the Latino participants, and 63% of the participants of additional race/ethnicities), compared with 37 percent of the white participants, reported having experienced racial discrimination in at least one of the nine situations included in the survey instrument (Table 5, pp. 68–70). The first three groups together, moreover, were 3.5 times more likely than the white participants to have encountered racial discrimination in three or more specified situations (36.7% vs. 10.2%), with black workers at greatest risk (4.3-fold). The same two- to three-fold difference in exposure was evident using the summary score (Cronbach's alpha 0.7–0.9), which also took into account frequency of exposure (Table 5).

In relation to having ever experienced racial discrimination at work, black men (25%) were most likely—and white women and men equally least likely (11%)—to report this exposure (Table 5). Additionally, among the black workers, the prevalence of having frequently experienced racial discrimination

Table 3

Exposure to workplace abuse in past 12 months, overall and by race/ethnicity-gender, United for Health study, Boston, 2003–2004

		Black		Latino		White		Other race/ethnicity	
Exposure: workplace abuse	Total (N = 1,202)	Men (n = 308)	Women (n = 158)	Men (n = 152)	Women (n = 115)	Men (n = 182)	Women (n = 102)	Men (n = 73)	Women (n = 45)
1. Screamed or yelled at:									
Never	56.1%	63.3%	54.4%	62.5%	64.3%	47.8%	44.1%	43.8%	57.8%
By boss	21.5	14.3	29.7	24.3	14.8	28.6	20.6	24.7	24.4
By coworker	19.9	15.3	18.4	13.8	18.3	28.0	27.5	26.0	24.4
By someone at lower job level	11.5	11.7	13.3	7.9	6.1	14.3	10.8	16.4	15.6
By someone else	17.4	17.5	16.5	12.5	11.3	22.5	22.5	21.9	17.8
2. Subjected to hostile or offensive gesture:									
Never	69.7	75.3	70.3	70.4	73.9	64.3	69.6	60.3	68.9
By boss	9.3	8.1	8.9	11.8	9.6	6.6	8.8	13.7	8.9
By coworker	15.9	11.0	15.2	15.1	14.8	24.7	17.6	17.8	11.1
By someone at lower job level	7.8	6.2	8.2	7.2	4.3	12.6	5.9	12.3	2.2
By someone else	10.1	9.1	12.7	9.2	6.1	12.1	5.9	15.1	8.9
3. Sworn at:									
Never	67.9	71.8	73.4	69.7	70.4	53.8	74.5	61.6	71.1
By boss	9.1	7.8	9.5	10.5	8.7	13.2	2.9	15.1	2.2
By coworker	19.2	15.6	13.9	15.8	15.7	35.2	13.7	26.0	17.8
By someone at lower job level	10.0	9.4	8.2	9.2	6.1	16.5	5.9	15.1	2.2
By someone else	13.2	11.7	11.4	7.2	7.8	21.4	13.7	23.3	13.3

4. Talked down to, as though inferior:									
Never	62.1	67.2	53.8	67.8	74.8	54.4	52.9	60.3	62.2
By boss	21.3	17.5	31.0	19.7	10.4	26.4	24.5	23.3	22.2
By coworker	15.6	11.4	15.2	13.2	11.3	23.6	25.5	17.8	8.9
By someone at lower job level	7.6	7.5	6.3	5.3	5.2	13.7	4.9	8.2	6.7
By someone else	12.9	13.3	10.8	10.5	5.2	17.0	16.7	15.1	17.8
5. Treated as though not as good at job as really is:									
Never	73.7	79.9	73.4	68.4	72.2	74.7	62.7	78.1	73.3
By boss	14.0	8.8	17.7	18.4	12.2	15.9	14.7	15.1	15.6
By coworker	11.5	8.8	9.5	14.5	13.9	12.1	18.6	9.6	8.9
By someone at lower job level	4.8	4.5	4.4	4.6	3.5	6.6	3.9	5.5	8.9
By someone else	7.6	5.5	8.9	7.9	9.6	7.1	8.8	8.2	11.1
6. Someone at work tried to control nonwork time:									
Never	78.3	77.9	77.8	78.3	82.6	73.6	81.0	80.8	80.0
By boss	10.6	11.7	12.7	12.5	12.2	11.5	8.3	11.0	4.4
By coworker	8.4	7.1	8.9	7.9	8.7	9.9	8.3	8.2	8.9
By someone at lower job level	3.6	4.2	3.2	3.3	3.5	4.4	2.5	2.7	2.2
By someone else	5.0	5.8	5.1	4.6	3.5	5.5	4.1	5.5	2.2
7. Treated unfairly in work assignments:									
Never	74.0	78.9	70.9	73.7	80.0	68.7	71.9	67.1	77.8
By boss	16.2	13.6	19.6	14.5	10.4	20.9	21.5	24.7	17.8
By coworker	8.2	6.8	6.3	7.9	6.1	13.2	9.9	11.0	8.9
By someone at lower job level	3.2	2.6	5.7	2.6	1.7	4.4	4.1	4.1	4.4
By someone else	6.6	5.8	5.1	5.3	7.0	9.3	9.1	6.8	13.3

Table 3 (Cont'd.)

Exposure: workplace abuse	Total (N = 1,202)	Black		Latino		White		Other race/ethnicity	
		Men (n = 308)	Women (n = 158)	Men (n = 152)	Women (n = 115)	Men (n = 182)	Women (n = 102)	Men (n = 73)	Women (n = 45)
8. Asked to do work not part of job:									
Never	61.9	72.4	56.3	63.8	73.9	45.6	62.8	61.6	62.2
By boss	24.5	16.6	27.8	23.7	13.9	40.1	25.6	24.7	28.9
By coworker	13.6	9.4	17.1	9.9	11.3	20.3	12.4	12.3	13.3
By someone at lower job level	5.6	6.2	5.1	2.6	4.3	8.2	5.0	6.8	2.2
By someone else	11.4	9.7	9.5	10.5	8.7	17.6	14.0	12.3	17.8
Experienced at least one type of workplace abuse	51.7	41.9	51.9	52.6	38.3	68.7	50.4	49.3	55.6
Workplace abuse summary score:									
Mean (SD)	3.7 (4.6)	3.1 (4.6)	4.0 (4.3)	3.4 (4.2)	2.9 (4.1)	5.2 (5.4)	4.2 (5.3)	4.6 (6.0)	3.7 (4.0)
Cronbach's alpha	0.79	0.80	0.78	0.83	0.80	0.75	0.85	0.87	0.78

Table 4

Exposure to sexual harassment in past 12 months, overall and by race/ethnicity-gender, United for Health study, Boston, 2003–2004

		Black		Latino		White		Other race/ethnicity	
Exposure: sexual harassment	Total (N = 1,202)	Men (n = 308)	Women (n = 158)	Men (n = 152)	Women (n = 115)	Men (n = 182)	Women (n = 102)	Men (n = 73)	Women (n = 45)
1. Made you feel like you might get some reward or special treatment if you engaged in sexual behavior with them	10.3%	12.7%	10.8%	11.2%	12.2%	5.5%	4.9%	17.8%	8.9%
2. Made you feel like you might get punished in some way if you weren't sexually cooperative	6.2	6.5	5.1	5.9	5.2	4.4	4.9	12.3	4.4
3a. Made unwanted suggestions about or references to sexual activity	8.7	8.1	15.2	5.9	3.5	7.1	5.9	16.4	8.9
3b. Extreme enough to get in way of doing job	4.0	4.5	5.1	3.9	2.6	1.1	1.0	8.2	6.7
4a. On the job, have experienced unwanted physical contact, including sexual	5.7	6.2	6.3	7.9	4.3	3.3	2.9	8.2	4.4
4b. Extreme enough to get in way of doing job	3.2	3.2	4.4	3.9	3.5	2.2	0.0	6.8	2.2
5a. Feel mistreated at work because of gender	9.5	9.7	10.1	8.6	7.0	6.0	9.8	8.2	24.4
5b. Extreme enough to get in way of doing job	4.2	2.9	3.8	6.6	2.6	1.6	2.0	6.8	11.1
Reported at least one type of sexual harassment	23.6	25.3	27.8	22.4	17.4	19.2	20.6	26.0	33.3
Believed have been sexually harassed at work	4.7	3.9	8.9	2.0	2.6	3.8	2.9	2.7	15.6
Sexual harassment summary score:									
Mean (SD)	0.4 (0.9)	0.4 (0.9)	0.5 (1.0)	0.4 (0.9)	0.3 (0.9)	0.3 (0.6)	0.3 (0.7)	0.6 (1.4)	0.5 (0.8)
Cronbach's alpha	0.69	0.67	0.68	0.72	0.79	0.46	0.50	0.89	0.52

Table 5

Exposure to racial discrimination (ever), overall and by race/ethnicity-gender, United for Health study, Boston, 2003–2004

Exposure: racial discrimination	Total (N = 1,202)	Black		Latino		White		Other race/ethnicity	
		Men (n = 308)	Women (n = 158)	Men (n = 152)	Women (n = 115)	Men (n = 182)	Women (n = 102)	Men (n = 73)	Women (n = 45)
1. At school:									
Never	84.6%	75.0%	80.4%	90.8%	90.4%	92.3%	92.2%	75.3%	86.7%
Once	4.1	4.9	4.4	2.0	4.3	3.3	2.0	6.8	6.7
2–3 times	5.1	8.1	9.5	2.6	2.6	1.6	3.9	5.5	4.4
4 or more times	6.2	12.0	5.7	4.6	2.6	2.7	2.0	12.3	2.2
2. Getting hired or getting a job:									
Never	76.9	62.7	77.2	77.6	90.4	85.7	89.2	64.4	82.2
Once	7.2	7.8	10.1	7.2	5.2	6.0	3.9	8.2	8.9
2–3 times	9.2	16.6	7.6	7.2	2.6	6.6	4.9	13.7	4.4
4 or more times	6.7	13.0	5.1	7.9	1.7	1.6	2.0	13.7	4.4
3. At work:									
Never	83.6	75.0	84.8	82.9	92.2	89.6	89.2	78.1	84.4
Once	5.4	7.5	6.3	6.6	3.5	3.3	2.0	6.8	4.4
2–3 times	5.5	8.1	5.1	6.6	2.6	3.3	6.9	5.5	4.4
4 or more times	5.5	9.4	3.8	3.9	1.7	3.8	2.0	9.6	6.7

4. Getting housing:									
Never	82.5	70.8	73.4	89.5	91.3	95.1	91.2	75.3	82.2
Once	7.2	9.7	11.4	5.9	3.5	2.2	6.9	12.3	4.4
2–3 times	6.7	10.7	11.4	3.9	4.3	2.2	2.0	9.6	6.7
4 or more times	3.6	8.8	3.8	0.7	0.9	0.5	0.0	2.7	6.7
5. Getting medical care:									
Never	86.8	79.9	82.9	83.6	92.2	96.2	94.1	89.0	77.8
Once	5.4	6.2	8.9	10.5	2.6	2.2	1.0	2.7	8.9
2–3 times	4.3	8.1	5.1	3.3	2.6	0.5	2.9	2.7	4.4
4 or more times	3.5	5.8	3.2	2.6	2.6	1.1	2.0	5.5	8.9
6. Getting service in a store or restaurant:									
Never	72.5	57.1	53.8	76.3	87.0	92.3	93.1	60.3	71.1
Once	6.7	8.8	9.5	8.6	6.1	2.7	2.9	6.8	6.7
2–3 times	12.0	17.9	24.7	9.9	3.5	3.3	2.0	15.1	15.6
4 or more times	8.8	16.2	12.0	5.3	3.5	1.6	2.0	17.8	6.7
7. Getting credit, bank loans, or mortgage:									
Never	80.0	68.5	73.4	82.9	89.6	96.2	90.2	72.6	73.3
Once	6.8	8.8	8.2	7.9	4.3	1.6	2.9	8.2	13.3
2–3 times	6.9	10.7	8.9	5.9	4.3	1.6	5.9	9.6	2.2
4 or more times	6.2	12.0	9.5	3.3	1.7	0.5	1.0	9.6	11.1
8. On the street or in a public setting:									
Never	72.2	61.0	65.8	74.3	80.9	83.5	88.2	60.3	75.6
Once	6.7	8.8	7.6	7.9	8.7	1.1	2.0	8.2	4.4
2–3 times	11.9	15.3	17.7	9.2	8.7	7.7	7.8	12.3	13.3
4 or more times	9.2	14.9	8.9	8.6	1.7	7.7	2.0	19.2	6.7

Table 5 (Cont'd.)

Exposure: racial discrimination	Total (N = 1,202)	Black		Latino		White		Other race/ethnicity	
		Men (n = 308)	Women (n = 158)	Men (n = 152)	Women (n = 115)	Men (n = 182)	Women (n = 102)	Men (n = 73)	Women (n = 45)
9. From the police or in the courts:									
Never	77.6	56.2	76.6	78.3	89.6	93.4	96.1	69.9	88.9
Once	7.6	10.7	8.9	9.2	6.1	2.2	1.0	13.7	6.7
2–3 times	7.3	14.3	10.1	7.2	3.5	3.3	2.0	2.7	0.0
4 or more times	7.5	18.8	4.4	5.3	0.9	1.1	1.0	13.7	4.4
Number of situations mentioned:									
0	46.8	33.4	32.3	51.3	60.0	62.6	62.7	35.6	40.0
1–2	23.6	18.5	30.4	19.7	25.2	26.9	27.5	20.5	33.3
3+	29.6	48.1	37.3	28.9	14.8	10.4	9.8	43.8	26.7
Racial discrimination summary score:									
Mean (SD)	5.2 (8.4)	9.1 (11.0)	6.2 (8.2)	4.2 (6.7)	2.2 (4.2)	2.0 (3.8)	1.9 (3.9)	7.8 (11.0)	4.9 (9.0)
Cronbach's alpha	0.85	0.86	0.83	0.82	0.73	0.72	0.75	0.85	0.74

in a particular situation (four or more times) ranged, among men, from 6 percent (getting medical care) to 19 percent (from police and in the courts) and, among women, from 3 percent (getting medical care) to 12 percent (getting services in a store or restaurant). By contrast, for the white workers, this level of frequent exposure typically was reported by only 1 to 2 percent of the participants. Latino workers were intermediate compared with black and white workers, while the prevalence of frequent exposure among workers of additional racial/ethnic groups resembled that of the black workers (Table 5).

Combined Prevalence of Social Hazards. Fully 85 percent of the study cohort reported exposure to at least one of the three social hazards, with 36 percent reporting only one, 37 percent reporting two, and 12 percent reporting all three (Table 6, p. 72). Among black women and men, the most common combination was racial discrimination plus workplace abuse (33% and 37%, respectively); additionally, 20 percent of the black women and 14 percent of the black men reported exposure to all three types of social hazards. Among the Latino workers, the combination of racial discrimination and workplace abuse was the most common permutation among the women (30%) and second only to workplace abuse among the men (24% and 29%, respectively); both groups were much less likely than black workers to report all three types of social hazards (5% and 7%, respectively). White workers were most likely to report exposure only to workplace abuse (43% for both women and men); 13 percent of white women and 8 percent of white men reported exposure to all three social hazards. Among workers in the additional racial/ethnic groups, the most common combination for men was racial discrimination and workplace abuse (44%), whereas among women about a third each reported workplace abuse only, racial discrimination and workplace abuse only, and all three social hazards.

Risk of Exposure to Social Hazards: Univariate and Multivariate Analyses

Table 7 provides univariate and multivariable linear regression analysis of risk of exposure to social hazards, in relation to race/ethnicity, gender, and wage level (below or at least equaling a living wage). For each social hazard, the first set of models (a–c) provides the effect estimate for each predictor variable, separately. The second model adjusts for relevant sociodemographic and workplace covariates, and the third model additionally controls for the other two social hazards, to assess whether effects of the social hazards were independent—and, by implication, potentially compounding.

Workplace Abuse. Univariate analyses indicated, per the descriptive distributional data, that white workers were at significantly greater risk of exposure to workplace abuse than black and Latino workers (by 1.3 to 1.5 units on the workplace abuse summary score) (model 1a). Adjusting solely for the additional sociodemographic

Table 6

Exposure to combinations of social hazards: workplace abuse, sexual harassment, and racial discrimination, overall and by race/ethnicity-gender, United for Health study, Boston, 2003–2004

		Black		Latino		White		Other race/ethnicity	
Combinations of social hazards	Total (N = 1,202)	Men (n = 308)	Women (n = 158)	Men (n = 152)	Women (n = 115)	Men (n = 182)	Women (n = 102)	Men (n = 73)	Women (n = 45)
None	14.9%	15.6%	11.4%	19.7%	20.9%	8.8%	13.7%	0.0%	0.0%
Racial discrimination only	8.7	11.7	11.4	9.2	8.7	3.8	2.9	0.0	0.0
Sexual harassment only	3.7	4.5	1.9	6.6	4.3	3.8	0.0	0.0	0.0
Workplace abuse only	23.5	10.7	16.5	19.1	28.7	42.9	43.1	26.0	33.3
Racial discrimination + sexual harassment only	3.0	4.2	3.2	2.6	1.7	0.5	2.0	0.0	0.0
Racial discrimination + workplace abuse only	29.3	36.7	32.9	29.6	24.3	25.3	19.6	43.9	31.1
Sexual harassment + workplace abuse only	4.6	2.6	2.5	5.9	6.1	7.1	5.9	6.9	6.7
All three	12.3	14.0	20.3	7.2	5.2	7.7	12.7	23.3	28.9

Note: Exposure defined as one or more self-reported experiences of the social hazard; timeframe of exposure: past 12 months for workplace abuse and sexual harassment; ever for racial discrimination.

and workplace covariates reduced this risk to statistical nonsignificance (model 2), but after additionally controlling for sexual harassment and racial discrimination (model 3), both of which were significantly associated with workplace abuse, the white workers tended to score 0.75 unit higher on the workplace abuse summary score compared with black workers. Neither gender nor wage level was significantly associated with risk of exposure to workplace abuse in any of the models (model 1b, lc, 2, and 3). In the final model (model 3), risk of workplace abuse was significantly lower for workers who were born outside rather than in the United States, took the survey in Spanish versus English, and worked in transportation compared with retail; a higher social desirability score was also significantly associated with less reporting of workplace abuse (model 3).

Sexual Harassment. Univariate analyses (models 4a–c) showed that, compared with white workers, both black workers and those of additional racial/ethnic groups other than Latino were significantly more likely to report sexual harassment (by 0.2 to 0.3 unit on the sexual harassment summary score). Neither gender nor wage level was significantly associated with sexual harassment in any of the models. Adjusting for additional covariates slightly reduced the excess risk among black workers and further indicated that risk for sexual harassment was elevated among lesbian, gay, bisexual, and transgender compared with heterosexual workers, and also among workers whose coworkers were mostly of different compared with same gender (model 5). Further adjustment for workplace abuse and racial discrimination did not materially change these results but did indicate that both of these social hazards were positively associated with risk of sexual harassment.

Racial Discrimination. Univariate analyses (models 7a–c) indicated that, compared with white workers, black workers and those of additional racial/ethnic groups other than Latino were significantly more likely to report exposure to racial discrimination (by 5.5 and 4.2 units on the racial discrimination summary score). These models also showed that women were significantly less likely to report racial discrimination than men, by 2.0 units; the association with wage level was not statistically significant. After adjusting for the sociodemographic and workplace covariates, however, all racial/ethnic groups of color were at significantly increased risk of experiencing racial discrimination compared with white workers. Additional adjustment for exposure to sexual harassment and workplace abuse (model 9) did not notably alter any parameter estimates, but did provide evidence that exposure to these two social hazards was significantly and positively associated with exposure to racial discrimination.

DISCUSSION

Workplace abuse, sexual harassment at work, and lifetime experiences of racial discrimination were common self-reported social hazards among the United for

Table 7

Univariate and multivariable analyses of social hazards in relation to race/ethnicity, gender, and wage level, United for Health study, Boston, 2003–2004

	Workplace abuse: $\hat{\beta}$ (95% confidence interval)		
	Univariate	Multivariable	
Variable	Model 1a–c	Model 2	Model 3
Predictors			
Race/ethnicity			
White (ref.)	0.00	0.00	0.00
Black	–1.33 (–1.97, –0.68)	0.13 (–0.64, 0.91)	–0.74 (–1.48, 0.01)
Latino	–1.58 (–2.32, –0.84)	–0.04 (–1.09, 1.01)	–0.44 (–1.42, 0.55)
Other	–0.54 (–1.50, 0.42)	0.36 (–0.64, 1.35)	–0.56 (–1.50, 0.39)
Gender			
Men (ref.)	0.00	0.00	0.00
Women	–0.31 (–0.86, 0.24)	–0.79 (–1.37, –0.21)	–0.50 (–1.05, 0.05)
Living wage			
Yes (≥$10.54/hr (ref.)	0.00	0.00	0.00
No (<$10.54/hr)	0.25 (–0.31, 0.82)	–0.29 (–0.99, 0.40)	–0.45 (–1.10, 0.20)
Covariates			
Age		–0.04 (–0.07, –0.01)	–0.03 (–0.05, 0.00)
Social desirability		–0.02 (–0.03, –0.01)	–0.02 (–0.03, –0.01)
Sexuality			
Heterosexual (ref.)		0.00	0.00
LGBT		–0.49 (–1.61, 0.63)	–0.48 (–1.54, 0.58)
Other sexuality		–0.23 (–1.15, 0.70)	–0.23 (–1.10, 0.64)
Nativity			
U.S. born (ref.)		0.00	0.00
Foreign-born		–.181 (–1.79, –0.57)	–0.77 (–1.35, –0.19)
Survey language			
English (ref.)		0.00	0.00
Spanish		–1.61 (–2.80, –0.42)	–1.55 (–2.67, –0.43)
Education			
≥4 yrs college (ref.)		0.00	0.00
≥ HS, <4 yrs college		0.55 (–0.16, 1.26)	0.46 (–0.20, 1.13)
< High school (HS)		0.49 (–0.34, 1.32)	0.29 (–0.05, 1.07)
Poverty			
≥200% poverty line (ref.)		0.00	0.00
100%–199% poverty line		–0.11 (–0.79, 0.58)	0.02 (–0.63, 0.66)
<100% poverty line		0.42 (–0.22, 1.06)	0.34 (–0.26, 0.94)
Workplace			
Retail (ref.)		0.00	0.00
Manufacturing		0.39 (–0.44, 1.21)	0.38 (–0.39, 1.16)
Transportation		–1.60 (–2.45, –0.75)	–2.10 (–2.90, –1.30)
Union member			
Yes (ref.)		0.00	0.00
No		–0.20 (–1.13, 0.74)	0.04 (–0.84, 0.93)
Class position			
Supervisory employee (ref.)		0.00	0.00
Nonsupervisory employee		0.38 (–0.22, 0.97)	0.25 (–0.31, 0.81)
Owner/self-employed		0.32 (–0.61, 1.25)	–0.27 (–1.14, 0.61)
Coworker gender			
Mostly same (ref.)		0.00	0.00
Mostly different		1.39 (0.58, 2.20)	1.18 (0.42, 1.94)
About even		–0.10 (–0.71, 0.51)	0.19 (–0.39, 0.76)
Coworker race/ethnicity			
Mostly same (ref.)		0.00	0.00
Mostly different		0.69 (0.06, 1.32)	0.67 (0.07, 1.26)
About even		–0.34 (–1.06, 0.38)	–0.23 (–0.90, 0.44)
Social hazard			
Sexual harassment summary score			0.68 (0.41, 0.95)
Racial discrimination summary score			0.17 (0.14, 0.20)
Workplace abuse summary score			

Table 7 (Cont'd.)

	Sexual harassment: $\hat{\beta}$ (95% confidence interval)					
	Univariate		Multivariable			
Variable	Model 4a–c		Model 5		Model 6	
Predictors						
Race/ethnicity						
White (ref.)	1.00		1.00		1.00	
Black	0.16	(0.03, 0.29)	0.11	(–0.04, 0.27)	0.04	(–0.12, 0.20)
Latino	0.06	(–0.08, 0.21)	0.04	(–0.17, 0.26)	0.01	(–0.19, 0.22)
Other	0.32	(0.13, 0.51)	0.24	(0.05, 0.44)	0.17	(–0.03, 0.36)
Gender						
Men (ref.)	1.00		1.00		1.00	
Women	–0.04	(–0.14, 0.07)	–0.01	(–0.12, 0.11)	0.04	(–0.07, 0.16)
Living wage						
Yes (≥$10.54/hr (ref.)	1.00		1.00		1.00	
No (<$10.54/hr)	0.03	(–0.08, 0.14)	0.10	(–0.04, 0.24)	0.10	(–0.04, 0.23)
Covariates						
Age			0.00	(–0.01, 0.01)	0.00	(0.00, 0.01)
Social desirability			0.00	(0.00, 0.00)	0.00	(0.00, 0.00)
Sexuality						
Heterosexual (ref.)			1.00		1.00	
LGBT			0.38	(0.15, 0.60)	0.42	(0.20, 0.64)
Other sexuality			0.09	(–0.09, 0.28)	0.10	(–0.08, 0.28)
Nativity						
U.S. born (ref.)			1.00		1.00	
Foreign-born			–0.03	(–0.15, 0.09)	0.04	(–0.08, 0.16)
Survey language						
English (ref.)			1.00		1.00	
Spanish			–0.21	(–0.45, 0.03)	–0.17	(–0.40, 0.07)
Education						
≥4 yrs college (ref.)			1.00		1.00	
≥ HS, <4 yrs college			–0.07	(–0.22, 0.07)	–0.10	(–0.24, 0.04)
< High school (HS)			0.02	(–0.15, 0.19)	–0.01	(–0.17, 0.15)
Poverty						
≥200% poverty line (ref.)			1.00		1.00	
100%–199% poverty line			–0.04	(–0.18, 0.10)	–0.03	(–0.16, 0.11)
<100% poverty line			0.07	(–0.06, 0.20)	0.05	(–0.07, 0.18)
Workplace						
Retail (ref.)			1.00		1.00	
Manufacturing			0.11	(–0.06, 0.27)	0.10	(–0.06, 0.26)
Transportation			0.16	(–0.01, 0.33)	0.17	(0.00, 0.34)
Union member						
Yes (ref.)			1.00		1.00	
No			0.13	(–0.06, 0.32)	0.17	(–0.02, 0.35)
Class position						
Supervisory employee (ref.)			1.00		1.00	
Nonsupervisory employee			–0.05	(–0.17, 0.07)	–0.08	(–0.20, 0.37)
Owner/self-employed			0.24	(0.05, 0.42)	0.19	(0.01, 0.37)
Coworker gender						
Mostly same (ref.)			1.00		1.00	
Mostly different			0.18	(0.02, 0.35)	0.13	(–0.02, 0.29)
About even			–0.01	(–0.13, 0.12)	0.02	(–0.10, 0.14)
Coworker race/ethnicity						
Mostly same (ref.)			1.00		1.00	
Mostly different			–0.10	(–0.23, 0.03)	–0.13	(–0.25, 0.00)
About even			–0.03	(–0.17, 0.11)	–0.01	(–0.15, 0.13)
Social hazard						
Sexual harassment summary score						
Racial discrimination summary score					0.02	(0.01, 0.02)
Workplace abuse summary score					0.03	(0.02, 0.04)

Table 7 (Cont'd.)

Variable	Racial discrimination: $\hat{\beta}$ (95% confidence interval)		
	Univariate	Multivariable	
	Model 7a–c	Model 8	Model 9
Predictors			
Race/ethnicity			
White (ref.)	1.00	1.00	1.00
Black	5.50 (4.37, 6.63)	4.70 (3.33, 6.06)	4.51 (3.22, 5.79)
Latino	0.90 (–0.40, 2.19)	2.14 (0.29, 3.99)	2.12 (0.38, 3.85)
Other	4.24 (2.56, 5.92)	4.46 (2.71, 6.21)	4.01 (2.36, 5.66)
Gender			
Men (ref.)	1.00	1.00	1.00
Women	–1.96 (–2.94, –0.97)	–1.73 (–2.75, –0.70)	–1.31 (–2.28, –0.34)
Living wage			
Yes (≥$10.54/hr (ref.)	1.00	1.00	1.00
No (<$10.54/hr)	–0.93 (–1.95, 0.09)	0.52 (–0.70, 1.75)	0.58 (–0.58, 1.73)
Covariates			
Age		–0.07 (–0.13, –0.02)	–0.05 (–0.10, –0.01)
Social desirability		0.02 (0.00, 0.03)	0.03 (0.02, 0.04)
Sexuality			
Heterosexual (ref.)		1.00	1.00
LGBT		–1.57 (–3.54, 0.40)	–1.72 (–3.59, 0.14)
Other sexuality		–0.33 (–1.95, 1.29)	–0.31 (–1.84, 1.21)
Nativity			
U.S. born (ref.)		1.00	1.00
Foreign-born		–2.31 (–3.38, –1.24)	–1.66 (–2.68, –0.65)
Survey language			
English (ref.)		1.00	1.00
Spanish		0.51 (–1.58, 2.60)	1.57 (–0.41, 3.54)
Education			
≥4 yrs college (ref.)		1.00	1.00
≥ HS, <4 yrs college		0.80 (–0.45, 2.05)	0.59 (–0.58, 1.77)
< High school (HS)		1.09 (–0.37, 2.55)	0.81 (–0.56, 2.18)
Poverty			
≥200% poverty line (ref.)		1.00	1.00
100%–199% poverty line		–0.59 (–1.80, 0.62)	–0.50 (–1.63, 0.64)
<100% poverty line		0.21 (–0.92, 1.33)	–0.09 (–1.14, 0.97)
Workplace			
Retail (ref.)		1.00	1.00
Manufacturing		–0.43 (–1.88, 1.02)	–0.74 (–2.11, 0.62)
Transportation		2.38 (0.88, 3.87)	3.04 (1.62, 4.46)
Union member			
Yes (ref.)		1.00	1.00
No		–1.96 (–3.61, –0.32)	–2.00 (–3.55, –0.45)
Class position			
Supervisory employee (ref.)		1.00	1.00
Nonsupervisory employee		1.00 (–0.05, 2.04)	0.86 (–0.13, 1.84)
Owner/self-employed		2.55 (0.92, 4.19)	2.13 (0.59, 3.67)
Coworker gender			
Mostly same (ref.)		1.00	1.00
Mostly different		0.49 (–0.93, 1.92)	–0.43 (–1.77, 0.92)
About even		–1.67 (–2.74, –0.59)	–1.61 (–2.62, –0.59)
Coworker race/ethnicity			
Mostly same (ref.)		1.00	1.00
Mostly different		0.54 (–0.57, 1.65)	0.29 (–0.76, 1.34)
About even		–0.52 (–1.79, 0.74)	–0.32 (–1.50, 0.87)
Social hazard			
Sexual harassment summary score			1.07 (0.59, 1.55)
Racial discrimination summary score			
Workplace abuse summary score			0.52 (0.43, 0.62)

Health cohort of 1,202 predominantly black, Latino, and white women and men low-income union workers (Greater Boston area, 2003–2004). Key findings were that, overall, 85 percent of the cohort reported exposure to at least one of these three social hazards; exposure to all three reached 20 to 30 percent among black women and among women and men in racial/ethnic groups other than white, black, or Latino. Workplace abuse in the past year, reported by slightly more than half the workers, was most frequently reported by white men (69%). Sexual harassment at work in the past year was reported by 26 percent of women and 22 percent of men, with values of 20 percent or more in all racial/ethnic-gender groups other than Latinas and white men; multivariate analyses additionally revealed that sexual minority workers (lesbian, gay, bisexual, transgender) were also at increased risk compared with their heterosexual counterparts. High exposure to racial discrimination was reported by 47 percent of the workers of color, compared with 10 percent of the white workers, with black workers reporting the greatest exposure (44%). Within a context of overall low incomes, as manifested by 40 percent of the study cohort being below the U.S. poverty line (despite being union members), risk of exposure to any of the three social hazards did not notably differ among workers earning below versus at least a living wage. Together, these findings imply that the lived—and combined—experiences of class, race, and gender inequities and their attendant assaults on human dignity are highly germane to analyses of workers' health.

Before considering the public health and policy implications of these findings, it is important to consider their limitations. In our study, we relied on self-report measures of social hazards, which necessarily are subject to the diverse social and cognitive limitations affecting any self-report measure (27, 36, 43, 44). Possible problems include both over- and underreporting of exposures, due to factors affecting perception and interpretation of exposures, and disclosure of experiences (27, 36, 43, 44). As one step toward addressing this concern, we controlled for the impact of social desirability on responses, since evidence indicates that people may be less or more likely to report sensitive data, depending on whether they think this information will lead to negative or positive judgments of them (29, 36, 43). We also controlled for the participants' nativity and that of their parents, plus language of administration of the survey, since these factors could plausibly influence likelihood of reporting social hazards—for example, country-specific differences in discourses about and awareness or experience of these phenomena (38). Thus, while self-report measures of social hazards may not be strictly comparable across different social groups, they nevertheless constitute the only gauge of whether people perceive (and are able or willing to name, especially given fear of retaliation (45)) that they have experienced the types of mistreatment described (14, 27). An additional and related caveat is that our results pertain to a particular cohort of workers and thus cannot necessarily be generalized to other populations, whether employed in other industries or in other regions in the United States.

Despite these potential limitations, several aspects of the study lend credence to its findings. First, the study response rate was high (72%), reducing likelihood of selection bias and increasing the internal validity of the study. Second, to minimize effects of low literacy and interviewer-interviewee dynamics on data collection, we employed the ACASI methodology for interview administration, in both English and Spanish (29). Third, our exposure measures for the social hazards were drawn from preexisting validated measures (19, 27, 39), with the psychometric validation of the measure of racial discrimination having been conducted on a subset of the United for Health study cohort (27). In the case of workplace abuse, the instrument from which we derived our measures described the relevant behaviors without using any value-laden language requiring individuals to determine whether the behaviors were abusive or not (19); moreover, the Cronbach's alpha for the subset of items we employed ranged between 0.7 and 0.8, suggesting adequate internal consistency (46). In the case of sexual harassment, we likewise used items that strictly described the relevant behaviors (19, 37, 39), and we restricted the items asked to those closely dovetailing the U.S. legal definition of sexual harassment on the grounds that estimates of prevalence are likely to have more policy salience than are more broadly defined measures of sexual harassment and can better indicate the magnitude of the problem that is potentially subject to grievances and legal action (47). Additionally, as with earlier studies (48), we showed that estimates of exposure to sexual harassment were higher if based on the behavior-oriented questions rather than on participants' beliefs as to whether or not they have been sexually harassed.

Comparing Results to Earlier Research: The Limitations of Scant Evidence

Assuming, then, that our results have reasonable internal validity, several findings are of note and are consonant with and extend the limited literature on workers' exposure to these social hazards. First, our estimate that upward of 50 percent of our working-class cohort was exposed to at least one type of generalized workplace abuse is consistent with the relatively scant U.S. and European research on this topic. For example, a 1996 survey found that the prevalence of generalized workplace abuse reported by U.S. women and men employed as service workers and in clerical jobs at a university ranged between 64 and 77 percent (19). A study of employees at a Danish manufacturing company reported that 88 percent had been exposed to "aggressive interpersonal acts" at work during the prior six months (49), while a study of municipal employees in a Finnish town found that, although only about 15 percent of all employees had experienced workplace bullying, this proportion rose to 43 percent among fire department employees, the one non-white-collar sector of this workforce (50). However, contrary to our expectations, in our cohort the highest prevalence of workplace abuse was reported by the white men. Rendering it difficult to place this finding in

context, we were unable to locate any U.S. literature with data on exposure to generalized workplace abuse stratified by race/ethnicity, let alone by race/ethnicity and gender. Nevertheless, one speculative explanation, warranting testing in ethnographic research, is that white working-class men, precisely because they are white and because they are men, are more likely to expect a better level of treatment at work than workers of color and/or women, and thus are more likely to identify and name workplace abuse as such.

With regard to sexual harassment, our finding of little overall gender difference in the prevalence of sexual harassment is in accord with other studies of U.S. working-class populations, which have found that working-class men, compared with working-class women, report as much if not more "hostile work environment" sexual harassment, chiefly perpetrated by other men, even as they report much less "quid pro quo" sexual harassment (19, 20, 51–54). To explain these results, a new body of research concerned with the social construction of masculinities (55) has been investigating sexual harassment as a form of "gender policing" and gender dominance, in which men use the behaviors classified as sexual harassment—but perhaps more appropriately termed "gender harassment" (56)—to maintain and shore up their own position in masculinized hierarchies at work (16, 20, 51–54, 56). Together, this new research, along with earlier work focused on working-class women (16, 57, 58), underscores how sexual harassment is fundamentally about power, and especially male domination, not sex per se (16, 20, 51–54).

Our finding that black and Latina women were, respectively, the most and least likely to report sexual harassment is likewise in agreement with prior research (20), as was the finding of increased risk for workers whose coworkers were mainly of different gender (59). A small body of research indicates, for example, that black women are uniquely exposed to racialized types of sexual harassment, exploiting racial as well as gender stereotypes, leading to their being more likely than white women to be sexually propositioned at work (17, 60). Regarding the low levels reported by the Latinas in our study (70% of whom were foreign-born), one study has shown that less-"acculturated" compared with more-"acculturated Latinas report less sexual harassment (61), with these differences potentially reflecting cross-country variation in public discourse about and legal prohibitions of sexual harassment (i.e., more common in the United States than in Latin American countries) (38). Additionally, one other study has, like ours, found that self-reports of sexual harassment at work are higher among lesbian and gay than among heterosexual workers (62). The overall paucity of research on sexual harassment in relation to class, race/ethnicity, gender, and sexuality (20), however, renders tentative any broad generalizations about the social patterning of sexual harassment in U.S. working-class populations.

Turning next to self-reported experiences of racial discrimination, while only a handful of studies on this topic have focused specifically on working-class populations (14, 26, 27), the prevalences documented are akin to what we

observed. For example, in the 1993–1995 San Francisco Muni Health and Safety study, 79 percent of the African American bus drivers reported having ever experienced racial discrimination, using a measure similar to that employed in our study, compared with 44 percent of the Latino and 59 percent of the white bus drivers; the proportions reporting racial discrimination in three or more domains were 48, 11, and 22 percent, respectively (15). A population-based survey conducted in metro Atlanta (1999–2001) likewise reported that 61 percent of the 349 African American participants (40% with a yearly household income under $30,000) had experienced racial discrimination at work (63). Hardly any studies have described self-reported experiences of racial discrimination among Latino working-class populations; one study, however, of predominantly Hispanic and Anglo school employees found that 40 percent reported experiencing at least one of four types of ethnic harassment at work (64).Taken together, the limited extant evidence combined with our results suggests that exposure to racial discrimination among working-class populations of color is widespread.

Implications for Future Research and Policy

In summary, results of our study highlight the importance of considering exposures to the social hazards of workplace abuse, sexual harassment, and racial discrimination, singly and combined, when conducting public health research on U.S. working-class populations. Nor can these populations be viewed simply as an assemblage of disembodied de-sexed and deracialized "workers." Instead, underscoring the necessity of taking into account the embodied realities of race/ethnicity, gender, and sexuality, we found that exposure to all three social hazards was greatest among black women and among both women and men in the additional nonwhite, non-Latino racial/ethnic groups, and also that risk of sexual harassment at work was greater for sexual minority than for heterosexual workers.

These findings have implications for both future research and policy. First, given the scarcity of data on the prevalence of these social hazards in working-class populations in the United States (as well as in, other countries), additional investigations conducted among diverse working-class cohorts should check whether they can replicate our results (or not), so as to gain a better picture of the actual population distribution of these exposures, including among racial/ethnic groups not well represented in our cohort (e.g., Asian and Pacific Islanders, American Indians). These data are important for both unions and management, with regard to clarifying the magnitude of the exposure to social hazards at work and the workplace organizational policies and practices that need to be changed to stop the problem (22, 57, 65). Second, ethnographic research is needed to aid interpretation of such unexpected findings as the higher reporting of workplace abuse by white workers, as well as to test the hypotheses that "gender policing" accounts for the similarity in prevalence of sexual harassment

reported by men and women workers, and that lower levels of reporting of social hazards by Latino workers, especially those not born in the United States, in part reflect country-specific differences in social and legal discourses about these social hazards. Third, from an occupational health perspective, our findings suggest that conceptualization of and research on psychosocial hazards at work should not be limited solely to job strain (2–4) (or perception of position in a social hierarchy (5)) and instead should be expanded to include consideration of workplace abuse, sexual harassment, and racial discrimination.

More fundamentally, our results suggest that analyses of workers' health, including those focused on physical hazards encountered at work, would be well-advised to consider the health impact of the three social hazards described here, whether as potentially important confounders or modifiers or as outright exposures in their own right; our next step will be precisely to do this, in relation to a variety of health outcomes and behaviors (28). After all, our bodies daily integrate—and embody—our social and physical experiences (11–14); it is time that our health research and our policies did the same.

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