



RACIAL DIFFERENCES IN DISCRIMINATION EXPERIENCES AND RESPONSES AMONG MINORITY SUBSTANCE USERS

Thomas Miniour, MD, MPH; Sandro Galea, MD, DrPH; Jennifer Stuber, PhD; Jennifer Ahern, MPH; Danie Ompad, PhD

Objectives: Discrimination is associated with both mental and physical health, and may be a particularly important determinant of health among marginalized groups. This study assessed differences in discrimination experiences and responses to discrimination between Black and Latino active substance users in New York City.

Methods: 500 Black and 419 Latino active substance users were recruited through outreach workers, service agencies, and word of mouth. We collected data about different types of discrimination experienced (eg, discrimination due to race, gender, substance use), the domains in which it occurred (eg, at work, with police), and participants' responses to unfair treatment.

Results: Discrimination due to drug use was the most commonly reported type of discrimination among both Blacks and Latinos. Black respondents were more likely than Latinos to report discrimination due to their drug use (79% to 70%), race (39% to 23%), poverty (38% to 26%), gender (18% to 9%), and sexual orientation (38% to 6%). However, among those reporting discrimination due to drug use, Latinos experienced more rejection from family (81% to 70%), friends (73% to 60%), police (86% to 79%), employers (72% to 56%), and medical care professionals (29% to 18%). Black respondents were more likely to respond actively to discrimination, whereas Latino respondents were more likely to internalize experiences.

Conclusions: Substantial differences exist in discrimination experiences and responses to discrimination between Black and Latino substance users. These differences may help explain racial and ethnic differences in health among marginalized populations, and identify avenues for effective, targeted intervention. (*Ethn Dis.* 2003;13:521-527)

Key Words: Discrimination, Substance Use, Illicit Drug Use, Latino, Black, African American

Montefiore Medical Center, Bronx (TM), Center for Urban Epidemiologic Studies (SG, JA, DO), and the Division of Health and Science Policy, The New York Academy of Medicine, New York (JS), New York.

Address correspondence and reprint requests to Sandro Galea, MD, DrPH; The

INTRODUCTION

A growing body of literature is emerging which suggests that discrimination negatively affects health. Discrimination has been associated with increased rates of: hypertension^{1,2}; elevated systolic blood pressure³; diastolic blood pressure reactivity⁴; low birth weight⁵; poor mental health and mental illness^{2,6-12}; missed work⁷; cigarette smoking¹⁰; poor quality of life; and poor self-assessed overall health.^{2,7} Although models have been proposed to explain this relation,^{1,13} there is probably no single, discrete, causal mechanism that fully explains the relationship between discrimination and health. Several factors have been proposed to mediate or modify this relationship including the type of discrimination experienced (eg, due to race or gender), the domains in which it occurs (eg, at home, with family, from police), the cumulative burden of discrimination, and individual responses to unfair treatment. It is likely a combination of these and other factors that ultimately determines the impact that discrimination has on different individuals and groups. Although the links between discrimination and health have been observed within many different groups, only limited research has looked at multiple forms of discrimination at the same time. In addition, a paucity of literature has reported on different discrimination patterns between minority groups. Differences in these factors may possibly explain some variations in dis-

ease rates between different racial/ethnic groups.

Discrimination experiences are pervasive in daily life. National survey data estimate that more than one-third of the US population has experienced a major episode of discrimination, and more than 60% experience discrimination of any type on a daily basis.¹⁴ Although discrimination due to race is the most often studied, and appears to be the most prevalent form of discrimination in the general population,¹⁴ each type of discrimination affects health differently in specific population groups. For example, gender based discrimination in women has been associated both with hypertension and poor psychological well-being.¹¹ Discrimination based on sexual orientation has been associated with psychological distress among gays, lesbians, and bisexuals.^{12,15-16} Although few studies have explicitly assessed the relationships between different types of discrimination, 2 studies found that discrimination due to gender had a greater effect on minorities than on Whites.^{1,11} These findings suggest that people who experience discrimination due to multiple attributes (eg, both race and gender) may have greater health effects than those who face discrimination due to one type alone.

Research on the domains in which discrimination is experienced may also help explain individual differences in the impact of discrimination on health. In a study of King County residents in Washington,¹⁷ and again in a nationwide survey,¹⁴ discrimination was most commonly experienced in public settings and in the workplace. Other studies have reported similar findings.^{1,3} These findings are especially pertinent in light of other findings highlighting

Center for Urban Epidemiologic Studies, Room 556; The New York Academy of Medicine; 1216 Fifth Avenue; New York, NY 10029-5283; 212-822-7378; sgalea@nyam.org

the link between thwarted life aspirations, workplace-related discrimination in Blacks and prevalence of higher blood pressure in this population.¹⁸⁻¹⁹ Given the association between discrimination in the workplace and health, consideration of the impact of discrimination in other domains—and between different minority groups within these domains—may help explain the differential impacts of discrimination experiences on overall health.

Several studies have shown associations between individual responses to discrimination and health.^{1,19-20} These responses generally can be divided into internalizing and externalizing behaviors.^{1,3,16,19,21} Internalizing behaviors refer to those behaviors in which an individual accepts unfair treatment, keeps such experiences to themselves, feels guilty about speaking out about unfair treatment, or does nothing. Externalizing behaviors include speaking out against unfair treatment, becoming angry, actively turning to others, or generally “doing something.” In a study of Black and White males in Detroit, internalizing behaviors were associated with higher blood pressure.²² Elevated blood pressure or rates of hypertension were also associated with internalizing responses to discrimination among a sample of women subject to gender discrimination in Alameda County, Calif,¹ and among young adults recruited into a large multi-site community-based survey who reported racial discrimination.³ Internal suppression of psychological distress has been hypothesized as one pathway through which discrimination affects health. Findings on externalizing behaviors are much less clear. Although some studies have suggested that active responses to discrimination are protective for high blood pressure,³ there is evidence that African Americans who actively responded to unfair treatment, but had limited socioeconomic resources, had much higher blood pressures than those with socioeconomic resources.²³ This latter work suggests that the

*National survey data estimate that more than one-third of the US population has experienced a major episode of discrimination, and more than 60% experience discrimination of any type on a daily basis.*¹⁴

interaction between the response to discrimination and health may be modified by measures of socioeconomic status, and that different externalizing responses may have different effects on health.

Active substance users provide an important population in which to study discrimination, yet few studies have examined discrimination experienced by these individuals. Illicit substance users remain a stigmatized population in the United States,²⁴ apart from discrimination based on race or other social and economic characteristics. Evidence suggests that the stigma of substance abuse affects the psychosocial functioning of substance users and persists despite treatment.²⁵ Hence, effects of discrimination may be particularly important and long-lasting in active substance users. In addition, research has shown this stigma to be strongest for illicit substance use compared to more accepted addictions, such as smoking.²⁶ Substance users are often marginalized, poorly integrated into society, and isolated from available services, making them particularly vulnerable to the health effects of stigma and discrimination. Therefore, understanding how discrimination is experienced among illicit drug users and how it may affect their well being is important.

No study to date has compared differences in types of discrimination, the

domains in which it occurs, and responses to unfair treatment between minority groups within marginalized populations. Careful study of these factors can provide insight into the mechanisms through which discrimination affects health. This information may help in targeting appropriate health-based initiatives for different populations. In a first step towards understanding the role that these factors play in shaping racial and ethnic differences in health, we studied individual experiences of discrimination and responses to discrimination among Black and Latino substance users in New York City.

METHODS

Participants

Persons over the age of 18 who used cocaine, crack, or heroin in the last 2 months were eligible for inclusion in the study. Participants were recruited in the neighborhoods of Central Harlem, East Harlem and the South Bronx in New York City through several methods. These three neighborhoods are predominantly Black and Latino and are geographically clustered together. The neighborhoods share similar patterns of income, education, crime, and other socioeconomic indices, including high rates of smoking, substance abuse, and HIV. Project outreach workers approached substance users on the street, placed advertisements in service agencies, and handed out pamphlets to interested persons. New participants were also recruited by word of mouth from enrolled participants, using protocols described in previous research.²⁷⁻²⁸ These recruitment methods are particularly important when working with active substance users, and probably represent the most effective documented method of recruitment.^{29,30} Recruitment methods are continually refined through participant input and focus groups.

Study Design

Persons who agreed to participate in this study were interviewed by trained interviewers, in a confidential setting, at storefront research centers in Central Harlem. Participants first underwent a face-to-face screening interview to determine eligibility. Once participants were determined to be eligible for the study, trained interviewers explained the research protocol and obtained informed consent. Participants were given the option to be read the survey instrument in English or Spanish; and after the interview, all participants were offered counseling and appropriate service referral. Participants received \$15 compensation. The Institutional Review Board at the New York Academy of Medicine approved the study.

Instrument and Measures

The 45 minute survey instrument included questions about demographics, drug use, and discrimination. Participants' age, sex, race, educational level, income, and marital status were ascertained in addition to their history of homelessness and previous incarceration. Drug use was assessed by self-reporting in terms of the types of drugs used, the frequency of drug use, route of ingestion, and history of addiction treatment programs. The section on discrimination was modeled on measures used successfully in previous studies.^{1,3,20} Participants were asked, "Have you ever been prevented from doing something, or been hassled or made to feel inferior because of any of the following?" Participants were offered a list including age, race, sex, sexual orientation, being poor, drug use, having been in jail or prison, mental illness, physical illness or injury, lifestyle, or "other" and were encouraged to select as many of these types as were applicable.

Participants were then asked which type of discrimination had most impacted their life. For both discrimination due to substance use, and the type of discrimination that most impacted

their life, participants were asked a series of questions about the domains in which discrimination occurred, and their responses to discrimination. For these sections of questions we combined measures of internalizing behaviors,^{1,3} externalizing behaviors,^{1,3} and markers of stigma²⁰ used in previous literature. To assess the domains in which discrimination occurred, participants were asked, "Did your friends reject you because of [type of discrimination]?", "Did your family reject you because of [type of discrimination]?", "Have you been prevented from obtaining medical care because of [type of discrimination]?", "Have you not gotten jobs because you are [type of discrimination]?", "Do police treat you differently because you are [type of discrimination]?", and "Have you not gotten housing because other people know you are [type of discrimination]?"

To assess participants' responses to unfair treatment, participants were asked, "When you were prevented from doing something because of [type of discrimination], which of the following did you do?" Participants were offered a list of options including "talk about it to a lawyer," "talk about it to the police," "talk about it to clergy," "talk about it to friends and family," "talk about it with the person mistreating you," "try to avoid being in that situation again," "try to educate other people about [type of discrimination]," "become angry," "do nothing," and "other." Another set of questions asked "Do you feel ashamed that you are [type of discrimination]?", and "Do you feel you have to prove yourself because you are [type of discrimination]?"

Statistical Analyses

All analyses were carried out separately for Blacks and Latinos. Prevalences of the different types of discrimination by racial/ethnic group were calculated. We present detailed results of discrimination experiences and responses to the discrimination among the 3 most

commonly reported types of discrimination (discrimination due to drug use, history of incarceration, and race). Differences between groups were tested with two-tailed χ^2 test for categorical variables and with student *t* tests for continuous variables.

RESULTS

Overall, 1008 participants were enrolled in the study. This analysis is restricted to the participants who were Black (500) or Latino (419). Demographic characteristics stratified by race are displayed in Table 1. The majority of participants were male (62.7% for Blacks vs 68.2% for Latinos) and single (66.1% for Blacks vs 59.3% for Latinos). On average, Latino participants were significantly younger (Mean=37±8 for Latinos; Mean=43±7 for Blacks), and had completed significantly fewer years of education than their Black counterparts. An equally high prevalence of previous incarceration (91%) was reported for both groups. Black participants were more likely to report that they were HIV positive (27.6% vs 16.3%).

Patterns of drug use between the 2 groups were also different. Black participants were more likely to report the use of crack in the previous 6 months (93.4% vs 75.8%), whereas Latino participants were more likely to report heroin use (96.2% vs 78.8%) and intravenous drug use (86.3% vs 61.4%) in the previous 6 months. Prevalence of cocaine use was comparable between Black and Latino participants.

Overall, both Blacks and Latinos reported more discrimination due to drug use (79.0% for Blacks and 70.4% for Latinos) than any other category (Table 2). Discrimination due to previous incarceration ranked second as the most common form of discrimination for both groups (40.0% and 39.6%). Interestingly, Blacks reported significantly higher prevalences of discrimination for

Table 1. Characteristics of a sample of Black and Latino substance users in Harlem and the South Bronx, New York City

	Black (N=500)	Latino (N=419)*	
Sex: Male	311 (62.7%)	283 (68.2%)	
Female	180 (36.3%)	126 (30.4%)	
Age (years)			†
18-25	6 (1.2%)	35 (8.4%)	
25-34	48 (9.7%)	122 (29.3%)	
35-44	222 (44.8%)	173 (41.6%)	
45-54	193 (39.0%)	83 (20.0%)	
55+	26 (5.3%)	3 (0.7%)	
Marital status			
Single	330 (66.1%)	248 (59.3%)	
Married	60 (12.0%)	68 (16.2%)	
Other‡	109 (21.8%)	102 (24.5%)	
Years of education			†
Less than high school	219 (43.8%)	240 (57.3%)	
GED or high school graduate	160 (32.0%)	116 (27.7%)	
Some college	105 (21.0%)	53 (12.7%)	
College graduate	16 (3.2%)	10 (2.3%)	
Previous arrest	452 (90.8%)	381 (90.9%)	
HIV positive	119 (27.6%)	58 (16.3%)	†
Drug uses§			
Cocaine	487 (97.4%)	402 (96.2%)	
Crack	467 (93.4%)	316 (75.8%)	†
Heroin	394 (78.8%)	394 (96.2%)	†
Intravenous use	307 (61.4%)	359 (86.3%)	†

* May not add up to total due to missing values.
 † P<.001.
 ‡ Includes divorced, separated, widowed, or self-identified other individuals.
 § Includes any drug used in the last 2 months.

many types of discrimination: drug use (79.0% vs 70.4%), race (38.6% vs 23.2%), poverty (37.8% vs 26.3%), sexual orientation (37.8% vs 5.7%), sex (17.6% vs 8.8%), and physical illness (12.2% vs 7.4%). In addition, more Black participants reported experiencing discrimination on multiple fronts: 32% of Black participants reported 4 or more types of discrimination compared with 24.1% of Latinos, whereas that pattern reverses for those reporting no type of discrimination. Though there were race-based differences in discrimination prevalences, discrimination due to drug use, not race, was reported as "having the most impact on [their] lives" by both Blacks (47.2%) and Latinos (55.4%).

Although Blacks reported more types of discrimination than Latinos, Latinos experienced discrimination in more domains (Table 3). In discrimi-

nation due to substance use, Latinos reported more rejection from friends (72.7% vs 59.6%), family (81.3% vs 69.8%), in getting medical care (28.9% vs 18.1%), in getting jobs (72.3% vs 56.0%), from police (85.9% vs 79.1%), and in getting housing (36.9% vs 31.8%). These trends were similar, though not as pronounced, to discrimination due to a history of incarceration. Of particular note, Latinos reported significantly more discrimination in getting medical care because of substance use (28.9% vs 18.1%) and a history of incarceration (23.2% vs 1.2%), whereas Blacks reported more rejection in getting jobs because of their race (84.8% vs 65.5%).

Differences between Blacks and Latinos in responses to unfair treatment are shown in Table 4. In response to discrimination based on drug use, Black

participants more frequently used traditional externalizing coping mechanisms: educating others about drug use (36.4% vs 25.1%), becoming angry (49.0% vs 36.5%), trying to avoid the situation (46.2% vs 33.4%), talking about it to the person mistreating them (21.2% vs 12.7%), talking to clergy (10.6% vs 9.8%), or talking with friends and family (48.2% vs 42.9%). Latinos more frequently felt ashamed (76.4% vs 60.8%), avoided people (77.4% vs 70.1%), felt the need to prove themselves (59.0% vs 55.7%), or did nothing (11.9% vs 8.6%)—largely markers of internalizing behavior.

A similar pattern emerged for discrimination based on jail time and race. In discrimination due to jail time, Latino participants more frequently felt ashamed (73.0% vs 57.5%), avoided people (71.3% vs 51.1%), or did nothing (10.1% vs 8.1%). Though not statistically significant, Blacks reported higher levels of talking to family and friends, trying to educate others, and becoming angry about unfair treatment. When faced with discrimination due to their race, Black participants more frequently tried to educate others (53.3% vs 23.3%), became angry (68.3% vs 36.7%), or talked to the person mistreating them (33.3% vs 10.0%). Latino participants more frequently did nothing (13.3% vs 1.7%). No substantial differences in responses to questionnaires administered in English or Spanish, either within the overall sample or within the Latino respondents, were evident (data not shown).

DISCUSSION

Our findings agree with other studies suggesting that for certain populations, discrimination based on other defining group characteristics may be equally as important or more important than discrimination due to race and ethnicity. For example, in a national survey, women perceived more discrimination

Table 2. Discrimination experiences in a sample of Black and Latino substance users in New York City

	Black (N=500)	Latino (N=419)*	
Ever experienced discrimination due to . . .			
Age	106 (21.2%)	74 (17.7%)	
Race	193 (38.6%)	97 (23.2%)	†
Sex	88 (17.6%)	37 (8.8%)	†
Sexual orientation	66 (37.8%)	24 (5.7%)	†
Poverty	189 (37.8%)	110 (26.3%)	†
Drug use	395 (79.0%)	295 (70.4%)	‡
Jail time	200 (40.0%)	166 (39.6%)	
Mental illness	40 (8.0%)	41 (9.8%)	
Physical illness	61 (12.2%)	31 (7.4%)	‡
Lifestyle choice	74 (14.8%)	47 (11.2%)	
Number of different domains§			†
None	64 (12.8%)	94 (22.4%)	
1	108 (21.6%)	87 (20.8%)	
2	87 (17.4%)	91 (21.7%)	
3	79 (15.8%)	46 (11.0%)	
4+	162 (32.4%)	101 (24.1%)	
Most significant type of discrimination			‡
Race	42 (8.8%)	15 (3.8%)	
Drug use	223 (47.2%)	221 (55.4%)	
Jail time	51 (10.8%)	38 (9.5%)	
Other	147 (33.2%)	125 (31.3%)	

* May not add up to total due to missing values.

† P<.001.

‡ P<.05.

§ Refers to the types of discrimination listed above (age, race, sex, drug use, etc).

|| Refers to the type of discrimination that participants felt most impacted their life, if one or more were chosen.

due to their gender than their race.¹⁴ In a study of gay and bisexual Latino men, homophobia was a stronger predictor of psychological symptoms than racism.³⁰

The importance of discrimination due to drug use has also been suggested by work characterizing the stigma of illicit drug use.^{25,31} Stigmatized behaviors or characteristics are thought to affect

psychosocial functioning through several pathways, including direct labeling and discrimination of the stigmatized, and the subsequent adoption of behavioral patterns which conform with cultural stereotypes.³² The stigma of substance abuse is due to a variety of factors, such as persistent negative attitudes toward illicit drug users,²⁴ and has been

come increasingly complex due to its association with HIV infection.³³ This research is consistent with our observation that most substance users are exposed to direct discrimination because of their drug use, and suggests that they may be particularly susceptible to the consequences of these experiences.

Our findings also show that Blacks reported more discrimination than Latinos due to a multiple of different characteristics, and reported experiencing 4 or more different types of discrimination more frequently than Latinos. Similar findings were documented in the Midlife Development in the United States Survey, where Blacks reported discrimination occurring more frequently than all other races¹⁴ Several possible explanations may be responsible for this finding. First, Blacks may be subject to more direct discrimination. Second, the higher prevalence of racial discrimination targeting Blacks, both currently and historically,³⁴ may make Blacks more aware of prejudice and discrimination due to other attributes. Third, prevalences of discrimination between Black and Latinos may be similar, but Latinos may be less likely to recognize or report discrimination. Cultural familiarity with discrimination experiences, or possibly more varied levels of acculturation may account for this practice.⁶

Interestingly, although more Black participants reported discrimination due to drug use, Latinos experienced dis-

Table 3. Experiences with most significant types of discrimination for Black and Latino substance users in New York City

Discriminated because of . . .	Drug Use		Race		Jail Time	
	Black (N=500)	Latino (N=419)	Black (N=60)	Latino (N=30)	Black (N=88)	Latino (N=101)
Rejected by friends	59.6%	72.7%†	—*	—*	41.2%	49.5%
Rejected by family	69.8%	81.3%†	—*	—*	45.9%	56.1%
Prevented from getting medical care	18.1%	28.9%†	18.6%	26.7%	1.2%	23.2%†
Prevented from getting job	56.0%	72.3%†	84.8%‡	65.5%	80.2%	74.2%
Different treatment from police	79.1%	85.9%‡	93.2%	93.3%	87.1%	87.9%
Prevented from getting housing	31.8%	36.9%	46.7%	30.8%	49.4%	53.7%

* Questions not asked.

† P<.001.

‡ P<.05.

Table 4. Responses to discrimination experiences by race and different types of discrimination

Discriminated because of . . .	Drug use		Race		Jail Time	
	Black (N=500)	Latino (N=419)	Black (N=60)	Latino (N=30)	Black (N=88)	Latino (N=101)
Talk about it to friends and family	48.2%	42.9%	55.0%	33.3%	60.5%	55.6%
Talk about it to clergy	10.6%	9.8%	13.3%	6.7%	5.8%	6.0%
Talk about it to person mistreating you	21.2%†	12.7%	33.3%‡	10.0%	15.1%	15.2%
Try to avoid that situation	46.2%†	33.4%	51.7%	50.0%	47.7%	43.4%
Try to educate other people about it	36.4%†	25.1%	53.3%‡	23.3%	63.1%	29.3%
Become angry	49.0%†	36.5%	68.3%‡	36.7%	50.0%	41.4%
Do nothing	8.6%	11.9%	1.7%	13.3%‡	8.1%	10.1%
Avoid people	70.1%	77.4%‡	41.7%	53.3%	51.1%	71.3%‡
Feel the need to prove yourself	55.7%	59.0%	69.5%	70.0%	51.1%	59.0%
Feel ashamed	60.8%	76.4%†	6.9%	3.5%	57.5%	73.0%‡

† $P < .001$.‡ $P < .05$.

crimination due to drug use in more domains. These findings are different from another study in which Blacks were observed to experience more discrimination (of any type) in the workplace, in getting housing, and with police, than all other non-White non-Blacks.¹⁴ This explanation could be because discrimination experiences, and the domains in which they occur, may vary by race for different types of discrimination. For example, in our data, more Latino participants experienced discrimination than Blacks in getting a job because of their drug use, but an opposite relation was observed for discrimination due to race or jail time. How these differences may affect health remains to be seen. Several studies among Blacks linking racial discrimination in the workplace with hypertension have been conducted,¹⁸⁻¹⁹ yet whether the same effect would be seen

Interestingly, although more Black participants reported discrimination due to drug use, Latinos experienced discrimination due to drug use in more domains.

for Latinos is unclear. Interestingly, Latinos consistently experienced more discrimination in healthcare settings, a finding that may be due to more difficulties with language barriers in this setting, or due to differences in ways the Latino population may access or interact with the healthcare system. These complex relationships deserve further study.

In addition, marked differences in how Blacks and Latinos responded to discrimination were evident in our findings. Blacks tended to respond to discrimination more actively, whereas Latinos internalized their experiences more. This phenomenon was consistent across different types of discrimination. Though we are unaware of any studies of Black-Latino differences in discrimination responses, there is evidence that certain populations may be more likely to internalize discrimination responses than others. These include women, those of lower socioeconomic status, and the elderly.^{1,35,36} The Latino community may plausibly face a higher proportion of acculturation or language barriers that impair its ability to respond in a more extroverted manner. Conversely, a long history of discrimination toward a group, such as African Americans, may have led to externalizing coping mechanisms.³⁶

Some methodologic limitations of the study are important and should be

pointed out. First, multiple comparisons were made with data, and though many of the effects observed were substantial, some of the observed statistically significant results may be due to chance. Second, some of the differences documented here may perhaps relate specifically to racial/ethnic differences in question interpretation or to language differences. Although the questionnaire was administered in both English and Spanish, and we found no meaningful differences between responses to questions administered in the different languages, the role of question interpretation and cultural differences in responses remains to be addressed in future research. Third, while our population was very similar to populations of active substance users in most urban areas, local patterns in behavior among active substance users may play an important role and our results may not be generalizable to other active substance users.

Substance use is an important identifying characteristic that is a source of significant discrimination among illicit drug users. Characteristics of discrimination experiences, such as the type of discrimination, the domain in which it occurs, and individual response patterns to discrimination, differ by race. Many of these differences, and their implications for health remain unexplored. As further studies examine the link be-

tween discrimination experiences, responses to discrimination, and health, a more thorough understanding of racial differences in discrimination may help us understand the racial and ethnic disparities in health.

ACKNOWLEDGMENTS

This work was partly funded by NIH grant DA12801 S1. The authors would like to thank Dr. David Vlahov, principal investigator on this study, Dr. Bruce Link for help in developing the instruments that were used in this research and Dr. Stephanie Factor for help with study design.

REFERENCES

- Kreiger N. Racial and gender discrimination: risk factors for high blood pressure? *Soc Sci Med*. 1990;30(12):1273-1281.
- Karlsen S, Nazroo J. Relation between racial discrimination, social class, and health among ethnic minority groups. *Am J Public Health*. 2002;92(4):624-630.
- Kreiger N, Sidney S. Racial discrimination and blood pressure: the CARDIA study of young Black and White adults. *Am J Public Health*. 1996;86(10):1370-1378.
- Guyll M, Matthews K, Bromberger J. Discrimination and unfair treatment: relationship to cardiovascular reactivity among African-American and European-American women. *Health Psychol*. 2001;20(5):315-325.
- Collins J, David R, Symons R, Handler A, Wall S, Dwyer L. Low-income African-American mothers' perception of exposure to racial discrimination and infant birth weight. *Epidemiology*. 2000;11(3):337-339.
- Gee G. A multilevel analysis of the relationship between institutional and individual racial discrimination and health status. *Am J Public Health*. 2002;92(4):615-623.
- Williams D, Yu Y, Jackson J. Racial differences in physical and mental health: socioeconomic status, stress, and discrimination. *J Health Psychol*. 1997;2(3):335-351.
- Salgado de Snyder VN. Factors associated with acculturative stress and depressive symptomatology among Mexican immigrant women. *Psychol Women Q*. 1987;11:475-488.
- Amaro H, Russo N, Johnson J. Family and work predictors of psychological well-being among Hispanic women professionals. *Psychol Women Q*. 1987;11:505-521.
- Landrine H, Klonoff E. The Schedule of Racist Events: a measure of racial discrimination and a study of its negative health consequences. *J Black Psychol*. 1996;22(2):144-168.
- Landrine H, Klonoff E, Gibbs J, Manning V, Lund M. Physical and psychiatric correlates of gender discrimination. *Psychol Women Q*. 1995;19:473-492.
- Mays V, Cochran S. Mental health correlates of perceived discrimination among lesbian, gay, and bisexual adults in the United States. *Am J Public Health*. 2001;91(11):1869-1876.
- Kreiger N. Discrimination and health. In: Berkman L, Kawachi I, eds. *Social Epidemiology*. New York, NY: Oxford University Press; 2000.
- Kessler R, Mickelson K, Williams D. The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *J Health Soc Behav*. 1999;40:208-230.
- Meyer IH. Minority stress and mental health in gay men. *J Health Soc Behav*. 1995;36:38-56.
- Kreiger N, Sydney S. Prevalence and health implications of anti-gay discrimination: a study of the CARDIA cohort. *Int J Health Serv*. 1997;27(1):157-176.
- Smyser M, Ciske S. Racial and ethnic discrimination in healthcare settings. *Public Health Special*. January 2001. Seattle and King County.
- Dressler W. Lifestyle, stress, and blood pressure in a southern Black community. *Psychosom Med*. 1990;52:182-198.
- James S, LaCroix A, Kleinbaum D, Strogatz D. John Henryism and blood pressure differences among Black men: the role of occupational stressors. *J Behav Med*. 1984;7(3):259-275.
- Link B, Mirotznik J, Cullen F. The effectiveness of stigma coping orientations: can negative consequences of mental illness labeling be avoided? *J Health Soc Behav*. 1991;32:302-320.
- Whitbeck L, Hoyt D, McMorris B, Chen X, Stubben J. Perceived discrimination and early substance abuse among American Indian children. *J Health Soc Behav*. 2001;42:405-424.
- Harburg E, Gleibermann L, Roeper P, Schork M, Schull W. Socio-ecologic stress, suppressed hostility, skin-color, and Black-White male blood pressure: Detroit. *Psychosom Med*. 1973;35:276-296.
- James S, Hartnett SA, Kalsbeek W. John Henryism and blood pressure differences among Black men. *J Behav Med*. 1983;6:259-278.
- Blendon R, Young J. The public and the war on illicit drugs. *JAMA*. 1998;279:827-832.
- Link B, Struening E, Rahav M, Phelan J, Nuttbrock L. On stigma and its consequences: evidence from a longitudinal study of men with dual diagnoses of mental illness and substance abuse. *J Health Soc Behav*. 1997;38:177-190.
- Cunningham J, Sobell L, Chow V. What's in a label? The effects of substance types and labels on treatment considerations and stigma. *J Stud Alcohol*. 1993;54:693-699.
- Latkin C, Mandell W, Vlahov D. The relationship between risk networks' patterns of crack cocaine and alcohol consumption and HIV-related behaviors among adult injection drug users: a prospective study. *Drug Alcohol Depend*. 1996;42:175-181.
- Diaz T, Des Jarlais DC, Vlahov D, et al. Factors associated with prevalent hepatitis C: differences among young adult injection drug users in lower and upper Manhattan, New York City. *Am J Public Health*. 2001;91:23-30.
- Galea S, Factor S, Palermo AG, et al. Access to resources for substance users in Harlem, New York City: service provider and client perspectives. *Health Educ Behav*. 2002;29:296-311.
- Diaz R, Ayala G, Bein E, Henne J, Marin B. The impact of homophobia, poverty, and racism on the mental health of gay and bisexual Latino men: findings from 3 US cities. *Am J Public Health*. 2001;91(6):927-932.
- Murphy S, Irwin J. Living with the dirty secret: problems of disclosure for methadone maintenance clients. *J Psychoactive Drugs*. 1992;24:257-264.
- Link B, Phelan J. Labeling and stigma. In: Aneshensel, Phelan, eds. *Handbook of the Sociology of Mental Health*. New York, NY: Kluwer Academic/Plenum Publishers; 1999.
- Capitanio J, Herek G. AIDS-Related stigma and attitudes toward injecting drug users among Black and White Americans. *Am Behav Scientist*. 1999;42:1148-1161.
- King G, Williams D. Race and health: a multi-dimensional approach to African-American health. In: Amick B, Levine S, Tarlov A, Walsh D, eds. *Society and Health*. New York, NY: Oxford University Press; 1995.
- Armstead C, Lawler K, Gorden G, Cross J, Gibbons J. Relationship of racial stressors to blood pressure responses and anger expression in Black college students. *Health Psychol*. 1989;8:541-556.
- Ruggiero K, Taylor D. Coping with discrimination: how disadvantaged group members perceive the discrimination that confronts them. *J Pers Soc Psychol*. 1995;68:826-838.

AUTHOR CONTRIBUTIONS

Design and concept of study: Galea, Ahern
Acquisition of data: Galea, Ahern
Data analysis and interpretation: Minior, Galea, Stuber, Ahern, Ompad
Manuscript draft: Minior, Galea, Stuber, Ompad
Statistical expertise: Galea, Ahern
Acquisition of funding: Galea
Administrative, technical, or material assistance: Galea, Ahern
Supervision: Galea, Stuber