Perceived Discrimination and Adherence to Medical Care in a Racially Integrated Community

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BACKGROUND: Past research indicates that access to health care and utilization of services varies by sociodemographic characteristics, but little is known about racial differences in health care utilization within racially integrated communities.

OBJECTIVE: To determine whether perceived discrimination was associated with delays in seeking medical care and adherence to medical care recommendations among African Americans and whites living in a socioeconomically homogenous and racially integrated community.

DESIGN: A cross-sectional analysis from the Exploring Health Disparities in Integrated Communities Study.

PARTICIPANTS: Study participants include 1,408 African-American (59.3%) and white (40.7%) adults (≥18 years) in Baltimore, Md.

MEASUREMENTS: An interviewer-administered questionnaire was used to assess the associations of perceived discrimination with help-seeking behavior for and adherence to medical care.

RESULTS: For both African Americans and whites, a report of 1–2 and >2 discrimination experiences in one's lifetime were associated with more medical care delays and nonadherence compared to those with no experiences after adjustment for need, enabling, and predisposing factors (odds ratio [OR]=1.8, 2.6; OR=2.2, 3.3, respectively; all $P<.05$). Results were similar for perceived discrimination occurring in the past year.

CONCLUSIONS: Experiences with discrimination were associated with delays in seeking medical care and poor adherence to medical care recommendations INDEPENDENT OF NEED, ENABLING, AND PREDISPOSING FACTORS, INCLUDING MEDICAL MISTRUST; however, a prospective study is needed. Further research in this area should include exploration of other potential mechanisms for the association between perceived discrimination and health service utilization.

KEY WORDS: discrimination; health care utilization; health disparities; adherence.

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Access to health care and utilization of services vary by sociodemographic characteristics, including income, insurance plan, and race.[1,2] Although financial and structural barriers influence race differences in access and health service utilization, these factors do not necessarily account for all racial disparities.[3,4] Attitudinal barriers, such as past experiences in health care, mistrust of health professionals and institutions, and perceptions of discrimination or unfair treatment, have received increasing attention in the literature as potential contributors to underutilization of health care services and nonadherence to recommendations from health professionals.[5–8]

Because of its high prevalence among ethnic minorities and persons from socially disadvantaged backgrounds, perceived discrimination in medical care or other sectors is an important attitudinal factor, and its association with health care utilization is worthy of further exploration. However, only a few studies have explored this association. In a national study of household-based adults, perceptions of unfair treatment were associated with less optimal chronic disease screening and failure to follow medical advice.[9] In another study of ethnic minority public housing residents in Los Angeles, perceived discrimination was found to be the strongest correlate for alternative health care utilization.[10] A third study of community residents in the South showed that persons reporting unfair treatment and local racism in health care were more likely to delay filling prescriptions and getting medical tests.[11]

Perceived discrimination can act as a direct or internalized stressor that either increases or decreases health care utilization via its negative effect on physical[12] and mental health.[13,14] Indeed, the associations of perceived discrimination with mental health are comparable in magnitude to those of other more commonly studied stressors.[15] Internalization of unfair treatment may indirectly impact health care use and health outcomes by increasing other psychosocial, financial, or attitudinal stressors.[16] Psychosocial stressors, such as depression, have been associated with a lack of regular medical care over time.[17] Financial stress,[18,19] lack of social support,[20] and other life stressors[21] have also been found to be associated with less health care utilization. Mistrust or fear of the health care system is yet another factor that might lead to underuse of health services.[7]

Our study adds to the literature by assessing the association between racial discrimination and the utilization of health services accounting for many common stressors such as depression, financial and social stress, and mistrust of health care systems. In addition, the current study is unique in that the population is socioeconomically homogeneous and racially integrated, social risk exposures are similar for African Americans and whites, and individuals are receiving care in a similar health care market.

Specifically, we sought to determine the independent association of perceived discrimination in various sectors with delays in seeking care and adherence to medical care recommendations. A behavioral model developed by Andersen and Aday[22] was used to assess the association between perceived discrimination and health care utilization in the context of predisposing, need, and enabling factors.

METHODS

Study Design and Population

The Exploring Health Disparities in Integrated Communities (EHDIC) Study was a cross-sectional face to face survey of the adult population ($\geq$18 years) of 2 contiguous census tracts in Baltimore City, Md. The area is socioeconomically homogenous and well-integrated with almost equal proportions of African-American and white residents living within the neighborhood census tracts. Of the 7 census block groups represented in the study, 6 had an African-American/white ratio <2.0 and of those, 4 had a ratio close to 1, indicating that similar numbers of African Americans and whites were living in the same block groups. The racial distribution in the two census tracts was 51% African-American and 44% white with a median income of $24,002. Of the estimated 3,555 eligible adults, 42% were successfully interviewed, which met the intended 40% enrollment goal. Comparisons to the 2000 Census Data for the study area indicated that the EHDIC sample included a higher proportion of African Americans but was otherwise similar with respect to demographic and socioeconomic indicators. For example, our sample was 59.3% African-American and 44.4% male, whereas the 2000 Census data showed the population was 49.7% African-American and 49.7% male. Age distributions in our sample and the 2000 Census were similar with the highest percentage of individuals 35–44 years. The median household income in our sample was $24,000 compared to $23,800 in the 2000 Census. Furthermore, our survey had similar coverage across each census block group in the study area, indicating that bias to geographic locale and its relationship with socioeconomic status should be relatively low. Details of the EHDIC study are presented elsewhere.[23]

Three methods were used to enroll participants: (1) visitation at a central study site office within the community; (2) door-to-door screening by interviewers, or (3) a series of community-based health fairs conducted as part of the overall study. Very few individuals completed the survey via health fair (n=32, 2%); nonetheless, we compared this group to the larger group. More African Americans were surveyed via health fairs compared to whites; otherwise, there were no differences in recruitment method by age, sex, education, or income. The survey was administered by trained interviewers and included demographic and economic information, health behaviors, and self-reported diagnosis of chronic conditions.

Of the 1,489 eligible adults in the study, we report on 95% (n=1,408). Participants with missing data for race (n=6, 0.4%) and participants who did not know or refused to identify their race (n=6, 0.4%) were excluded. Only those who self-identified as Black/African-American or White were included in the study population. Individuals who were biracial/multiracial were excluded (n=69 excluded, 4.6%).

Measures

Perceived Discrimination. Experiences of unfair treatment and racial discrimination were assessed by a previously published instrument.[12] The first set of questions asked if the participant had ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in one of several situations (i.e., at work or getting housing) because of their race or color. A racial discrimination score was computed as a sum of the positive responses to the seven items. Follow-up questions to each of the discrimination situations asked participants if the discrimination had occurred in the past year. The next set of questions targeted internalization of unfair treatment. Response choices included (1) “talk to other people about it (talk)” versus “keep it to yourself (quiet)” and (2) “accept as a fact of life (accept)” versus “try to do something about it (act).”

Delay in Seeking Medical Care and Adherence to Medical Care Recommendations. Delay in seeking medical care and adherence to medical care recommendations in the past 12 months were assessed using 5 items adapted from the Commonwealth Fund 2001 Quality of Care Survey.[24] The items captured delays in seeking needed medical care, never seeking attention about a medical problem, not filling a prescription, not coming back for a follow up appointment, and not following the doctor’s advice or treatment plan. With roughly half of participants reporting $\leq$1 problem and the other half reporting $\geq$2 problems, these items were dichotomized to capture “few” ($\leq$1) and “several” ($\geq$2) problems.

Need Factors. Need factors included perceived health and comorbidities. Major depressive syndrome was also assessed with the Patient Health Questionnaire (PHQ)-9.[25] The PHQ-9 was adapted to eight questions, with the removal of the question pertaining to suicidal thoughts.

Enabling Factors. Enabling factors included income, medical insurance, having a regular doctor, and transportation barriers in getting medical care.

Predisposing Factors. Predisposing factors were age, education, and race. The 7-item Medical Mistrust Index (MMI)[26] was included as a predisposing factor because trust in the medical system is an attitudinal indicator that may affect whether individuals would be more or less likely to seek and/or adhere to care. The scale included questions pertaining to participants’ perceptions of health care organizations.

Statistical Analysis

All analyses were stratified by race to determine whether the association between perceived discrimination and delay in care-seeking and adherence to medical care recommendations differed among whites and African Americans. Formal tests for interaction between race and discrimination were performed. To compare differences in characteristics for the two racial groups, chi-squared analyses were used to summarize categorical variables. Univariate and multivariate analyses were based on the behavioral model developed by Andersen and Aday,[22,27] which conceptualizes a sequence of need, enabling, and predisposing variables that influence utilization of health services. Three separate logistic regression models were included for each outcome: (1) the univariate association between perceived discrimination and delay in seeking and adherence to medical care; (2) the association between perceived discrimination and the outcomes adjusted for need and enabling variables, and (3) the association between perceived discrimination and the outcomes adjusted for need, enabling, and predisposing variables. The crude model (model 1) included all 1,408 individuals. The second model included 1,210 individuals, which was reduced primarily from missing values for income (n=184, 13%). Because of missing values from the MMI (n=59), the final model included 1,162 individuals. All analyses used STATA 9.0 statistical software (StataCorp. 2005, *Stata Statistical Software: Release 9*, College Station, Tex: StataCorp LP). A two-sided P value of <0.05 was considered to be statistically significant.

Table 1. Frequency (%) of Selected Sociodemographic Characteristics of 1,408 Adults by Race

	Total, n=1,408	Race		P value
		White, n=573 (40.7)	African-American, n=835 (59.3)	
Sociodemographics				
Age (y)				
18–29	374 (26.6)	124 (21.7)	250 (30.0)	<0.001
30–49	684 (48.7)	259 (45.3)	425 (51.0)	
50–69	277 (19.7)	136 (23.8)	141 (16.9)	
>69	70 (5.0)	53 (9.3)	17 (2.0)	
Sex				
Male	628 (44.6)	247 (43.1)	381 (45.6)	0.350
Female	780 (55.4)	326 (56.9)	454 (54.4)	
Education				
Less than HS	567 (40.3)	272 (47.5)	295 (35.4)	<0.001
HS completion	572 (40.7)	196 (34.2)	376 (45.1)	
Some college/assoc. degree	160 (11.4)	49 (8.6)	111 (13.3)	
College/Graduate school completion	107 (7.6)	56 (9.8)	51 (6.1)	
Annual income[*]				
<$10,000	389 (31.8)	143 (28.5)	246 (34.1)	0.215
$10,000–$24,999	393 (32.1)	167 (33.3)	226 (31.3)	
$25,000–$50,000	272 (22.2)	120 (23.9)	152 (21.1)	
>$50,000	170 (13.9)	72 (14.3)	98 (13.6)	
Self-report health status				
Excellent	200 (14.2)	58 (10.1)	142 (17.1)	<0.001
Very good	297 (21.1)	101 (17.6)	196 (23.5)	
Good	460 (32.7)	200 (34.9)	260 (31.2)	
Fair	362 (25.8)	165 (28.8)	197 (23.7)	
Poor	87 (6.2)	49 (8.6)	38 (4.6)	
Comorbidities[†]				
None	520 (36.9)	164 (28.6)	356 (42.6)	<0.001
One	357 (25.4)	131 (22.9)	226 (27.1)	
Two or three	372 (26.4)	188 (32.8)	184 (22.0)	
Four or more	159 (11.3)	90 (15.7)	69 (8.3)	
Health insurance				
Yes	885 (62.9)	342 (59.8)	543 (65.1)	0.043
Regular doctor				
Yes	860 (61.3)	352 (61.5)	508 (61.1)	0.856
Transportation barriers in getting medical care				
Yes	235 (16.8)	99 (17.4)	136 (16.4)	0.615
Mistrust of health care organizations[‡]				
1 (lowest)	374 (27.7)	184 (34.0)	190 (23.5)	<0.001
2	487 (36.1)	192 (35.4)	295 (36.6)	
3	240 (17.8)	80 (14.8)	160 (19.8)	
4 (highest)	248 (18.4)	86 (15.9)	162 (20.1)	
PHQ–9				
Major depressive syndrome (score ≥5)	563 (40.0)	265 (46.3)	298 (35.7)	<0.001

[*] *One hundred and eighty-four (13%) values missing for income; no difference in income by race when individuals with missing income data were excluded.*

[†] *Comorbidities include high blood pressure, chronic heart disease, cancer, stroke, diabetes, depression, obesity, breathing problems, and others.*

[‡] *Medical Mistrust Index quartiles. Evaluated on a continuous scale, range 7–28. Seven-item, four-response Likert-type questionnaire to assess mistrust in health care organizations; individuals with more than 2 missing responses excluded (n=59, 4.2%).*

RESULTS

Population Characteristics

The study population included 1,408 white and African-American adults with a mean age of 42.7; African Americans were slightly younger than whites (*P*<.001) (Table 1). The majority of the population had either completed high school (40.7%) or had less than a high school education (40.3%), with a lower percentage of whites having completed high school (34.2%) than African Americans (45.1%) (*P*<.001). Annual income did not differ by race with the majority of participants (63.9%) reporting an annual income of less than $25,000. There were 184 (13%) missing values for income with no difference in income by race when individuals with missing income data were excluded. African Americans were somewhat more likely to have some form of health insurance (65.1%) than whites (59.8%) (*P*=.043). The majority of participants had ≤1 comorbidity (62.3%); African Americans reported fewer comorbidities than whites (*P*<.001) and were more likely to report being in very good or excellent health (*P*<.001). Whites were more likely to have major depressive syndrome by PHQ-9 score (46.3%) than African Americans (35.7%) (*P*<.001). African Americans reported greater medical mistrust with roughly 20% of African Americans in the highest quartile compared to 15.9% of whites (*P*<.001). There was no statistical difference in the association between discrimination and delays in seeking and adherence to medical care recommendations when individuals with only complete MMI information were analyzed (*n*=338 missing).

Self-Reported Responses to Racial Discrimination and Unfair Treatment

Overall, 48.4% of the participants reported no racial discrimination experiences, 34.3% reported 1–2 experiences, and 17.3% reported >2 experiences (Table 2). Reported racial discrimination differed by race with 61.1% of whites reporting never experiencing racial discrimination compared to 39.8% of African Americans (*P*<.001). Discrimination in the health care system over one's lifetime was infrequently reported (7.3%) and did not differ by race (*P*=.120). Of participants ever experiencing racial discrimination, 34.0% reported the discrimination occurred in the past year.

With respect to typical responses to unfair treatment, about half of the participants reported trying to do something about it and talking to others; 18% reported keeping quiet and accepting unfair treatment (Table 2). African Americans more frequently reported doing something about it and talking to others (56.5%) than did whites (40.0%) (*P*<.001).

Table 2. Frequency (%) of Discrimination and Delay in Care for 1,408 Adults by Race

	Total, *n*=1,408	Race		*P* value
		White, *n*=573 (40.7)	African-American, *n*=835 (59.3)	
Internalization of discrimination				
Talk, act	677 (49.9)	218 (40.0)	459 (56.5)	<0.001
Talk, accept	333 (24.5)	154 (28.3)	179 (22.0)	
Quiet, act	107 (7.9)	40 (7.3)	67 (8.2)	
Quiet, accept	241 (17.8)	133 (24.4)	108 (13.3)	
Lifetime racial discrimination, freq (%) yes				
At school	228 (16.3)	80 (14.0)	148 (17.9)	0.055
Getting a job	245 (17.5)	50 (8.7)	195 (23.6)	<0.001
At work	276 (19.7)	58 (10.2)	218 (26.3)	<0.001
Getting housing	114 (8.2)	28 (4.9)	86 (10.4)	<0.001
Getting medical care	102 (7.3)	34 (6.0)	68 (8.2)	0.120
From the police or courts	357 (25.6)	90 (15.9)	267 (32.2)	<0.001
At a store or other place	278 (19.9)	56 (9.8)	222 (26.8)	<0.001
Lifetime racial discrimination score*				
No discrimination experiences	682 (48.4)	350 (61.1)	332 (39.8)	<0.001
1–2 experiences	483 (34.3)	177 (30.9)	306 (36.7)	
>2 experiences	243 (17.3)	46 (8.0)	197 (23.6)	
Lifetime medical discrimination				
Yes	102 (7.3)	34 (6.0)	68 (8.2)	0.120
Racial discrimination in the past year				
Yes	479 (34.0)	128 (22.3)	351 (42.0)	<0.001
Medical discrimination in the past year				
Yes	70 (5.0)	24 (4.3)	-46 (5.6)	0.266
Delay in seeking and adherence to medical care items[24]				
Delays in seeking care				
Delayed seeking needed medical care	538 (38.3)	237 (41.5)	301 (36.1)	0.040
Never sought medical attention?	427 (30.4)	196 (34.4)	231 (27.7)	0.007
Adherence issues				
Did not fill a prescription	436 (31.2)	181 (31.8)	255 (30.6)	0.639
Did not come for a follow-up visit	533 (37.9)	210 (36.8)	323 (38.7)	0.459
Did not follow doctor's advice	407 (29.1)	183 (32.1)	224 (27.0)	0.037
Delay in seeking and adherence to medical advice score†				
Few	746 (53.0)	291 (50.8)	455 (54.5)	0.171
Several	662 (47.0)	282 (49.2)	380 (45.5)	

*Based on the 7 racial discrimination questions in the "Population Methods" section.

†Delayed care score based on the 5 questions in the "Population Methods" section; few indicates ≤1 issue and several indicates ≥2 issues.

Table 3. Odds Ratios (95% Confidence Interval) for Delay in Seeking Medical Care and Adherence to Medical Care Recommendations (Several vs Few Issues) for Whites and African Americans for Lifetime Racial Discrimination and Discrimination in Getting Medical Care

	Model 1[*]		Model 2[†]		Model 3[‡]	
	White	African-American	White	African-American	White	African-American
	Several vs few		Several vs few		Several vs few	
Racial discrimination score						
No discrimination experiences	Ref	Ref	Ref	Ref	Ref	Ref
1–2 experiences	2.3[§] (1.6, 3.3)	1.5[§] (1.1, 2.1)	2.6[§] (1.7, 4.0)	1.7[§] (1.2, 2.5)	2.2[§] (1.4, 3.5)	1.8[§] (1.2, 2.6)
>2 experiences	4.2[§] (2.1, 8.4)	3.1[§] (2.1, 4.4)	3.8[§] (1.7, 8.5)	2.5[§] (1.6, 3.9)	3.3[§] (1.4, 7.6)	2.6[§] (1.7, 4.1)
Discrimination in getting medical care						
Yes versus no	4.2[§] (1.8, 9.9)	2.5[§] (1.5, 4.3)	2.9 (1.0, 8.3)	1.6 (0.8, 3.0)	2.5 (0.8, 7.4)	1.6 (0.8, 3.1)

Delay in seeking and adherence to medical care score based on five questions; few indicates none or 1 issue; several indicates 2 to 5 issues.

[*] *Model 1. Health care use = discrimination variable of interest (n=1,408).*

[†] *Model 2. Health care use = discrimination variable, need and enabling (n=1,210).*

[‡] *Model 3. Health care use = discrimination variable, need and enabling, and predisposing (n=1,162).*

[§] *P<.05.*

Health care use: delay in seeking and adherence to medical advice; discrimination variables: discrimination score, discrimination in getting medical care; need and enabling: income, insurance, regular doctor, medical transportation barriers, perceived health, comorbidities, and depression; and predisposing: age, race, education, and mistrust.

Delay in Seeking Medical Care and Adherence to Medical Care Recommendations

There were no differences between African Americans and whites with respect to overall score for delay in seeking medical care/nonadherence to medical care recommendations ($P=.171$) (Table 2). Just more than half of respondents (53.0%) reported one or fewer delays and poor adherence. Whites reported more frequently having a medical problem but never seeking medical care (34.4%) than did African Americans (27.7%) ($P=.007$).

Racial Discrimination and Delay in Seeking and Adherence to Medical Care

For both African Americans and whites, more racial discrimination experiences were associated with higher odds of delays in seeking medical care and nonadherence to medical care recommendations. There was no interaction between race and racial discrimination on the outcomes of medical care delays and nonadherence ($P>.05$).

After adjustment for need, enabling, and predisposing factors, African Americans who reported 1–2 lifetime discrimination experiences and >2 experiences had 1.8 (95% confidence interval [CI]=1.2,2.6) and 2.6 (95% CI=1.7,4.1) times the odds of delays and nonadherence compared to those with no discrimination experiences, respectively (Table 3). Likewise, whites reporting 1–2 lifetime discrimination experiences and >2 experiences had 2.2 (95% CI=1.4,3.5) and 3.3 (95% CI=1.4,7.6) times the odds of delays and nonadherence. Similar associations were demonstrated between discrimination occurring in the past year and delay in seeking and nonadherence to medical care (Table 4). However, there was no association between discrimination in getting medical care and delays in seeking or nonadherence to medical care after adjustment. There was no association between response to

Table 4. Odds Ratios (95% Confidence Interval) for Delay in Seeking Medical Care and Adherence to Medical Care Recommendations (Several vs Few Issues) for Whites and African Americans for Experiencing Racial Discrimination and Discrimination in Getting Medical Care in the Past Year

	Model 1[*]		Model 2[†]		Model 3[‡]	
	White	African-American	White	African-American	White	African-American
	Several vs few		Several vs few		Several vs few	
Racial discrimination in the past year						
No discrimination experiences	Ref	Ref	Ref	Ref	Ref	Ref
≥1 experiences	2.7[§] (1.8, 4.1)	2.2[§] (1.7, 2.9)	2.3[§] (1.4, 3.8)	2.1[§] (1.5, 2.9)	2.0[§] (1.2, 3.4)	2.2[§] (1.4, 2.9)
Discrimination in getting medical care in the past year						
Yes versus no	3.2[§] (1.2, 8.2)	2.9[§] (1.5, 5.5)	1.5 (0.5, 4.7)	1.8 (0.8, 3.8)	1.3 (0.4, 4.1)	1.8 (0.9, 3.9)

Delay in seeking and adherence to medical advice score based on 5 questions; few indicates none or 1 issue; several indicates 2 to 5 issues.

[*] *Model 1. Health care use = discrimination variable of interest (n=1,408).*

[†] *Model 2. Health care use = discrimination variable, need and enabling (n=1,210).*

[‡] *Model 3. Health care use = discrimination variable, need and enabling, and predisposing (n=1,162).*

[§] *P<.05.*

Health care use: delay in seeking and adherence to medical advice; discrimination variables: discrimination score, discrimination in getting medical care; need and enabling: income, insurance, regular doctor, medical transportation barriers, perceived health, comorbidities, and depression; predisposing: age, race, education, and mistrust.

unfair treatment and delays in seeking and nonadherence to medical care (data not shown).

DISCUSSION

In this integrated study population, we surmise that perceived discrimination may act as a dominant stressor that inhibits an individuals' ability to adhere to medical recommendations. Among African Americans and whites, individuals who reported more lifetime discrimination experiences reported lower levels of health care utilization; specifically, more delays in seeking medical care and nonadherence to medical care recommendations even after adjustment for mistrust of health care organizations, medical comorbidities, and depression.

Participants who reported experiencing discrimination occurring during the past year were also more likely to report delays in seeking care and nonadherence to medical care after adjustment. Therefore, discrimination experiences, whether recent or not, were associated with health utilization. It is instructive to note that the relationship between discrimination and delay in seeking and medical nonadherence was similar among African Americans and whites, and in most models the odds ratio was greater for whites. While this may seem counterintuitive, it may be that because experiences of discrimination are less normative among whites, when they do experience discrimination, the association with behaviors is stronger. In addition, if discrimination acts as a dominant stressor, it is reasonable to believe that its impact on the behaviors of whites would be similar to its impact on the behaviors of African Americans.[15]

After final adjustment, discrimination specifically related to the medical care setting was not significantly associated with outcomes. This may be explained by the fact that reports of discrimination in getting medical care are infrequent. In the current study population, only 102 (7.3%) individuals reported ever experiencing discrimination in getting medical care with 70 (5.0%) reporting that discrimination occurred in the past year. Therefore, the statistical power to assess this association may be limited.

We studied the association between response to unfair treatment and health service use because previous work has shown that acceptance of unfair treatment is associated with poor health status (e.g., elevated blood pressure) particularly among African Americans who have experienced discrimination.[12] Although previous work has not shown racial differences in internalization of unfair treatment,[12] in this study, we found that African Americans were more likely to respond actively and whites were more likely to respond with acceptance to unfair treatment. In addition, in the current study, no association was seen between internalization of unfair treatment and delay in seeking and nonadherence to medical care. It is unclear why we did not observe an association; however, we could speculate that individuals who internalize unfair treatment (e.g., respond with acceptance) utilize health care services differently depending on individual behavior traits. For example, some may have higher rates of health care utilization solely because of poor health status while others have lower rates of health service use because they lack self-efficacy.

This study has several strengths. First, because the administered questionnaire contained various measures of physical and mental health, we were able to adjust for a variety of need, enabling, and predisposing factors including depression, comorbidities, medical mistrust, and transportation barriers in getting health care. Second, the study included a socioeconomically homogenous and racially integrated study population with almost equal proportions of African American and white residents. The African-American and white residents live in the same community and have the same geographic availability of health care providers. Third, we employed detailed and well-validated measures of perceived discrimination.

There are some limitations in the study methodology that should be mentioned. First, with a response rate of 42%, even though we have no reason to expect poor external validity, generalizability may be limited as the study was conducted in only two census tracts in Maryland. Because the study population is set within a highly integrated community, levels of perceived discrimination and other covariates may differ from samples in which there is less integration. Nonetheless, at least for disparities in chronic conditions, our study group found that results from the EHDIC sample yielded generally similar outcomes when compared with results from the National Health Interview Survey.[28] A second limitation is that discrimination and delay/nonadherence measures were all self-reported and, thus, are subject to response and recall bias. Third, the study was cross-sectional, which prevents us from making causal inferences. A longitudinal study would provide stronger evidence for a causal association between lifetime discrimination experiences and delays in seeking and nonadherence to medical care.

Our study adds to the complex literature of perceived discrimination and health service utilization. Similar to previous research, we found that perceived discrimination has a negative association with health service utilization. However, this study makes a unique contribution to the literature in that we describe at least two new findings regarding the association between discrimination and health utilization. First, the association is independent of several factors related to health service utilization, including the report of medical mistrust. Second, in populations with similar socioeconomic and environmental exposures, the relationship is similar for whites and African Americans. There are also several implications of this study for further investigation. Future studies should quantify the association in similar and dissimilar populations in a longitudinal fashion. In addition, qualitative studies of individuals who perceive discrimination and do not seek medical care or adhere to recommendations made by health professionals may help elucidate the specific mechanisms. Finally, studies that include more detailed measures of interpersonal relationships in health care, other sociobehavioral factors such as locus of control, self-efficacy, and biological responses to stress, may help to elucidate the mechanism for observed links between perceived discrimination, health service utilization, and health outcomes.

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