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Association Between Perceived Discrimination and Emergency Department Use among Safety-Net Patients in the Southwestern United States

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Abstract

Objectives—Patients' perceptions of how they are treated in their interactions with the healthcare system represent important and valid measures of healthcare quality that may influence health utilization, outcomes, and costs. Perceived discrimination or the sense of being treated unfairly is an important patient perception known to adversely affect health, but the relation of such perceptions to health-seeking behaviors related to low-acuity emergency department (ED) use is unclear. The objectives of this exploratory study were to describe the prevalence and nature of perceived discrimination or perceived unfair treatment (PD/PUT), and to examine the association of PD/PUT with healthcare utilization among adult safety-net patients in the southwestern United States who sought ED treatment for low-acuity conditions.

Methods—Cross-sectional survey data were collected via self-administered questionnaires completed by adult safety-net patients who were uninsured or covered by Medicaid and who sought ED treatment for low-acuity conditions ($N = 310$). We used descriptive statistics to describe PD/PUT in the healthcare experiences reported by study participants. We used logistic regression to examine the association between PD/PUT and participants' likelihood to seek health care from ED and non-ED settings.

Results—Thirty-eight percent of study participants reported PD/PUT, most frequently attributed to insurance status (being uninsured or covered by Medicaid). Participants who reported PD/PUT in their ability to access medical care or to obtain health insurance were significantly more likely to be frequent (vs nonfrequent) ED users (odds ratio [OR] 3.80, $P < 0.001$) and to use multiple (vs 1) EDs (OR 3.79, $P < 0.001$) during a 12-month period. Participants who reported PD/PUT while receiving medical care were more likely to have received care in ED and non-ED settings, as compared with EDs only (OR 2.02, $P = 0.012$).

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Conclusions—A substantial proportion of this sample of adult safety-net patients in the Southwest reported experiencing PD/PUT in their healthcare interactions and most frequently attributed such perceptions to their insurance status. Although this study does not establish a causal link between PD/PUT and utilization of care in specific settings, it highlights the need to better understand the underlying causes of PD/PUT across multiple delivery settings and to clarify the extent to which such experiences may influence patients' healthcare-seeking behaviors. Federal and state policies that aim to maintain or expand health insurance coverage for safety-net populations should consider the role of health insurance status in driving perceptions of being discriminated against or treated unfairly.

Keywords

emergency department use; health insurance; health-seeking behaviors; perceived discrimination; safety-net populations

In the United States, safety-net populations experience disproportionate burdens of disease morbidity and mortality and face multiple disadvantages that limit their access to appropriate and timely health care.^{1,2} People who are poor, uninsured, or covered by Medicaid; certain racial/ethnic minorities and immigrants; and individuals with limited education, literacy, or English-language skills are less likely to have a usual source of care (USOC) provider, are more likely to receive care that is uncoordinated and fragmented across multiple provider settings, and are more likely to rely on hospital emergency departments (EDs) to address unmet healthcare needs.^{1,3} The confluence of these factors also may make it more likely that such patients will perceive their healthcare interactions negatively, that is, to report experiences that include long wait times (before appointments are scheduled or during visits), rushed or disrupted encounters, poor patient–provider communication, or other problems.^{1,2}

An important patient perception known to adversely affect health outcomes is the sense of being discriminated against or treated unfairly.^{4–9} An extensive body of literature on discrimination and health focuses on interpersonal racial/ethnic discrimination (eg, one person acting to harm another) as a class of stressors that may negatively affect physical and mental health outcomes.^{6,8,10,11} In addition, perceived racial/ethnic discrimination has been linked directly to delays in seeking medical care, underutilization of services, substitution of alternative for conventional treatments, nonadherence to providers' recommendations, and mistrust of healthcare providers/systems; an inverse association exists between perceived racial/ethnic discrimination and patients' ratings of health care quality.^{5–7,12–15} Other social factors (eg, age, sex, socioeconomic status, limited English proficiency, nativity, disability status) also have been linked with perceived discrimination or perceived unfair treatment (PD/PUT) in healthcare settings.^{4,7,8,16} Although such perceptions may be shaped by blatant forms of discrimination (eg, denying care to someone because of his or her disability), PD/PUT is associated more frequently with subtle actions (intentional or unintentional) that are harder to identify and occur at multiple points along the health continuum.¹⁷ For example, PD/PUT may be related to patients' experiences attempting to obtain health insurance or to access care using some types of health insurance; to specific interactions with members of the healthcare team in various care delivery settings; or to the cumulative

impact of intersectoral policies or practices that are not intended to be harmful but that in effect further disadvantage historically marginalized patient populations.^{8,12} Insofar as patients' perceptions about their interactions with the healthcare system influence their healthcare-seeking behaviors and downstream health outcomes, a more comprehensive understanding of factors related to the pervasiveness of PD/PUT among safety-net populations is needed.^{4,16} Such an examination is particularly important as policymakers continue to debate the roles that federal and state governments should play in maintaining and/or expanding health insurance as a way to facilitate access to high-value health care for more Americans in support of the Triple Aim of better care, better health, and reduced costs in the US health system.^{18–21}

In this cross-sectional study we explore the association between PD/PUT and healthcare-seeking behaviors related to ED and non-ED use in a sample of uninsured and Medicaid patients in the southwestern US who sought ED treatment for low-acuity conditions. Our specific aims were to describe the prevalence and nature of PD/PUT in healthcare experiences reported by adult safety-net patients who use EDs for low acuity conditions, and to examine the association between PD/PUT and patients' likelihood to seek care from ED and non-ED settings.

Methods

Study Setting and Participants

From February 2012 to August 2012, we recruited participants from the EDs of Memorial Hermann Greater Heights Hospital, Memorial Hermann Southwest Hospital, and Memorial Hermann Texas Medical Center, three safety-net providers located in Houston/Harris County, Texas. Eligible participants were 18 to 64 years old, uninsured or covered by Medicaid, and fluent in English or Spanish. They also must have participated in a patient navigation (PN) program sponsored by the Memorial Hermann Community Benefit Corporation for safety-net patients who were users of EDs for low-acuity conditions. Patients were considered to have low-acuity conditions if they were assigned an Emergency Severity Index (ESI) triage level of 4 or 5.²² In cases deemed appropriate by clinicians, patients with an ESI level of 3 were included. In certain situations patients were excluded based on the judgment of the navigators (eg, patients appeared to be unapproachable or unstable). All of the patients meeting the eligibility criteria were recruited for participation consecutively. Details of the program have been published elsewhere.²³ Briefly, the PN program is facilitated by bilingual, state-certified community health workers (CHWs) who are trained in peer-to-peer counseling. The CHWs tailor the intervention to the needs of the patient. Most commonly, CHWs provide education about the importance of primary care, refer patients to primary care medical homes and related social services, assist with appointment scheduling, and follow up with patients to monitor and address additional barriers to continued use of primary care services. The Memorial Hermann Community Benefit Corporation also operates neighborhood and school-based health clinics and leverages partnerships with local safety-net clinics, government agencies, and other community stakeholders to fulfill its primary goal of ensuring access to care for the uninsured and underserved populations in the area.

Data Collection

All of the data were collected via self-administered questionnaires. Following delivery of all care deemed necessary by ED clinicians and completion of the PN process, individuals were informed about the study and invited to participate; those who consented were immediately provided with surveys to complete in a private area located within each hospital's business office. Participants returned surveys to the patient navigators in a sealed envelope upon completion and received a \$25 gift card for their participation. Completed surveys were viewed only by the principal investigator and research staff. The institutional review boards of the University of Texas Houston Health Sciences Center, Memorial Hermann Clinical Innovation and Research Institute, and Saint Louis University approved this study.

Measures

The dependent variables of interest were frequent ED utilization, utilization of multiple EDs, and utilization of health care outside of hospital ED-based settings. We assessed these outcomes with the following questions: "In the last 12 months, not including today, how many times have you: 1) come to this ER (emergency room) for medical care; 2) gone to another ER (not this one) for medical care; 3) gone to another place (not an ER or hospital) for medical care?" Responses for each item ranged from 0 to 5; participants were asked to estimate the number of visits if there were >5. We coded frequent ED use "yes" if participants reported ≥ 3 ED visits in the last 12 months, multiple ED use "yes" if they reported ≥ 1 visits to a different ED in the last 12 months, and non-ED/hospital use "yes" if participants reported ≥ 1 healthcare visits to a location other than a hospital ED in the last 12 months; otherwise, we coded each of these dichotomous measures "no."

The primary independent variable of interest was an aggregate measure of PD/PUT in healthcare interactions, which we constructed using participants' answers to three questions: "During the last 12 months, how often did you experience discrimination or unfair treatment: 1) in your ability to access medical care, 2) in your ability to obtain health insurance coverage, and 3) while receiving medical care?" For each of these questions, dichotomous measures were constructed in which we coded PD/PUT as "yes" if participants answered "always," "almost always," "sometimes," or "almost never," and "no" if they answered "never." The aggregate measure of PD/PUT was coded "yes" if they reported experiencing PD/PUT for any one of these three questions about their healthcare interactions, which we also examine as secondary independent variables of interest.

In advance of initiating collection of the data included in our analysis, we conducted cognitive interviews (n = 19) and pretesting (n = 50) in English and Spanish to evaluate participants' comprehension and ability to answer the questions as worded. We made minor changes based on initial feedback and after further testing determined that the questions and format were suitable for the target population.

Statistical Analysis

Descriptive statistics (frequencies, percentages, medians, and interquartile ranges, as appropriate) were calculated to summarize sociodemographic, health status, and utilization characteristics of the sample. These included sex, age (18–34, 35–54, or 55–64 years), race/

ethnicity (non-Hispanic white/other, non-Hispanic black, or Hispanic), primary language spoken at home (English or Spanish/other), level of education (high school diploma, General Education Development certificate, or less education or more than a high school diploma/General Education Development certificate), annual household income (<\$25,000 or \$25,000), insurance status (uninsured or Medicaid recipient), access to a nonhospital USOC provider, and a continuous count of chronic conditions. Variables that were significantly associated with the outcomes of interest in bivariate analyses at the $P < 0.15$ level were included in adjusted models. Although race/ethnicity did not meet this threshold for any of the outcomes, it also was included in the adjusted models. We used logistic regression to estimate unadjusted odds ratios (ORs) and adjusted odds ratios (aORs) for each model. Missing data were not imputed; cases with missing data were excluded. Final analytic sample sizes for each model were reported. We also conducted sensitivity analyses in which we modified our definition of frequent ED utilization to 4 ED visits and 5 ED visits in the last 12 months. All of the results were considered statistically significant at $P < 0.05$. Analyses were conducted using STATA version 13.1 software (StataCorp, College Station, TX).

Results

A total of 329 eligible participants completed questionnaires in English ($n = 260$) or Spanish ($n = 69$) based on their experiences accessing health care for themselves during the previous 12 months. For this analysis, we excluded observations with missing data for the primary independent variable of interest ($n = 19$). These exclusions resulted in a final analytic sample of 310 respondents. A majority of respondents were women (67.3%), 18 to 34 years of age (52.8%), Hispanic (50.7%) or non-Hispanic black (38.4%), primarily English speaking (66.8%), and uninsured (75.8%; Table 1). Most respondents reported earning household incomes of <\$25,000 annually (85.3%). The median number of chronic conditions among participants was 1 (interquartile range 2); 66.1% of respondents did not have access to a USOC provider other than a hospital ED.

Frequent ED use (41.3%), use of multiple EDs (44.5%) and use of health care accessed in non-ED settings (40.3%) were prevalent among respondents. Overall, 38.1% of respondents reported PD/PUT in 1 healthcare experiences within the last 12 months. More specifically, participants reported PD/PUT in their ability to access medical care (29.7%), in their ability to obtain health insurance coverage (24.8%), and while receiving medical care (21.9%). Participants who reported PD/PUT during these healthcare experiences most frequently attributed it to their type of insurance or being uninsured (43.2%), race/ethnicity (17.8%), age (15.3%), and education and/or income (14.4%; Table 2). Twenty-six percent of participants did not specify or were not sure of the main reason for the PD/PUT that they experienced.

The results of the logistic regression models for the dependent variables are presented in Table 3. Compared with nonfrequent ED users, participants with frequent ED use in the last 12 months were more likely to report PD/PUT (OR 3.80, 95% confidence interval [CI] 2.34–6.16, $P < 0.001$; aOR 3.89, 95% CI 2.34–6.44, $P < 0.001$). In the sensitivity analyses we found that PD/PUT remained significantly associated with frequent ED use when the

threshold for frequency was increased (eg, 4 ED visits and 5 ED visits in the last 12 months). Participants who reported using multiple EDs (OR 3.79, 95% CI 2.34–6.15, $P < 0.001$; aOR 3.67, 95% CI 2.24–6.01, $P < 0.001$) also were more likely than participants who used only one ED to report PD/PUT. Participants who accessed health care in non-ED settings, compared with those who used EDs only, were more likely to report PD/PUT as well, but the OR and aOR for this outcome were not statistically significant.

In addition, we found that PD/PUT in each of the three healthcare interactions was positively associated with frequent ED use and multiple ED use in unadjusted and adjusted models. PD/PUT was significantly associated with accessing health care in non-ED settings only when examining participants' interactions while receiving medical care, however.

Discussion

Patients' perceptions of how they are treated in their interactions with the healthcare system represent important and valid measures of healthcare quality that also may influence under- or overutilization of care, physical and mental health outcomes, and costs.^{4–7,9,10} Our results indicate that PD/PUT was prevalent in this sample of uninsured and Medicaid patients and most frequently attributed to insurance status. Those who reported PD/PUT were significantly more likely to be frequent (vs nonfrequent) ED users and to use multiple (vs only 1) EDs during the year. Participants who reported PD/PUT while receiving medical care were more likely to have received care in both ED and non-ED settings during the year (vs receiving ED-based care alone).

Although this study is among the first to examine directly the relation between PD/PUT and healthcare-seeking behaviors related to low-acuity ED use by uninsured and Medicaid populations in the US Southwest, our findings related to the prevalence of PD/PUT among safety-net populations are consistent with the literature on discrimination and health.^{4,6–8,12,15,16,24–26} Racial/ethnic minorities, immigrants, individuals with limited English proficiency, and those who are uninsured or covered by Medicaid are more likely than others to report PD/PUT in their healthcare interactions. In some studies conducted in office- or clinic-based settings, PD/PUT have been linked to patients' interactions with physicians and other members of the healthcare team (eg, the sense of being rushed, interrupted, disregarded) or suboptimal communication (eg, lack of cultural sensitivity, verbal/nonverbal cues from physicians/staff).^{5,16,27} Our study did not attempt to link PD/PUT to specific healthcare settings. Taken in context with research that demonstrates high users of ED services also are high users of other healthcare resources,^{28,29} the finding that PD/PUT while receiving medical care was significantly associated with frequent ED use, multi-ED use, and non-ED use suggests that efforts to address PD/PUT among safety-net populations should target multiple care-delivery settings.

Our finding that many participants who reported PD/PUT attributed such perceptions to their insurance status warrants further study in the current policy environment, particularly given the uncertain future of the Patient Protection and Affordable Care Act (PPACA, PL 111-148) and burgeoning research that links PD/PUT with insurance status.^{4,16,24,25} Under the PPACA, the overall rate of Americans covered by health insurance increased substantially,

but many low-income, nonelderly adults who reside in Medicaid nonexpansion states remain uninsured; these individuals are disproportionately racial/ethnic minorities living in southern states, including Texas.³⁰ In addition, Texas is home to a large and growing foreign-born population, including both documented and undocumented immigrants, who may be subject to delayed eligibility or be ineligible for PPACA- and other government-sponsored insurance options.^{31,32} Moreover, even previously uninsured patients who became eligible for coverage under the PPACA's Medicaid expansion face many barriers to care associated with PD/PUT, including difficulties finding primary care providers who accept Medicaid reimbursement or lack of appointment availability.^{4,24,25,33} Patients also have reported feeling demeaned or stigmatized because of their income or insurance status.^{4,16,24,25,33} Federal and state policies that aim to maintain or expand health insurance coverage for safety-net populations should be evaluated in context with such problems and perceptions; otherwise, efforts to facilitate access to high-value health care in appropriate settings may be undermined.

The findings of our cross-sectional, exploratory study should be considered in light of several limitations. Like most studies of discriminatory or unfair practices, this study does not differentiate between perceived versus actual discrimination. In addition, participants were not asked where PD/PUT occurred; they may have used EDs because of PD/PUT experienced in other settings or in spite of PD/PUT experienced in EDs. Frequent users of EDs also are known to be relatively frequent users of other healthcare resources,^{28,29} which may make them more likely to report PD/PUT because of greater overall exposure to the health system. Study data were collected via self-report from a nonrandom sample of uninsured and Medicaid patients. It is possible that individuals who chose to participate in our study have a greater disposition than others in the target population to report PD/PUT. It also is possible that participants' recall of their ED and non-ED use was under- or overestimated. This limitation is particularly relevant to our placement of patients in categories of frequent ED use, multiple ED use, and non-ED use. The use of data from a health information exchange would have addressed this limitation by accurately identifying patients who make frequent ED visits and visit multiple EDs within a region. Finally, our relatively small sample of safety-net patients was limited to one region of the United States and therefore the perceptions of participants in this study may not be generalizable to other populations or other regions of the country. Future studies using more robust research designs, precise measures of insurance-related PD/PUT, and the specific contexts in which PD/PUT occurs would help to address the limitations of this study.

Conclusions

This study offers some important insights regarding the way in which historically marginalized adult safety-net populations in the United States perceive their interactions with the healthcare system and the association of these perceptions with their healthcare-seeking behaviors. Although this study does not establish a causal link between PD/PUT and utilization of care in specific settings, a substantial proportion of participants reported experiencing PD/PUT in their healthcare interactions and most frequently attributed such perceptions to their health insurance status. These findings highlight the need to understand better the underlying causes of PD/PUT across multiple delivery settings and to clarify the

extent to which such experiences may influence patients' healthcare-seeking behaviors. Future research should attempt to illuminate any systemic issues that may contribute to PD/PUT across settings, to examine whether a causal relation exists between PD/PUT and ED versus non-ED use for low-acuity conditions, and to inform the design of policies and interventions that facilitate appropriate utilization of health care among safety-net populations.

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Key Points

- Nearly 40% of adult safety-net patients perceived discrimination or unfair treatment in their healthcare interactions, most frequently attributed to insurance status or type.
- Individuals who perceived discrimination or perceived unfair treatment were more likely to be frequent users of emergency departments and receive care in multiple settings.
- The underlying causes of perceived discrimination or perceived unfair treatment across multiple delivery settings warrant further study.

Table 1

Selected sample characteristics (N = 310)

	N (%) or median (IQR)
Sex ^a	
Female	204 (67.3)
Male	99 (32.7)
Age group, y ^b	
18–34	158 (52.8)
35–54	106 (35.5)
55–64	35 (11.7)
Race/ethnicity ^c	
White, non-Hispanic or other	33 (10.9)
Black, non-Hispanic	116 (38.4)
Hispanic	153 (50.7)
Primary language spoken	
English	207 (66.8)
Spanish or other	103 (33.2)
Education ^b	
HS diploma or GED certificate	174 (58.2)
Education beyond HS/GED	125 (41.8)
Household income ^b	
<\$25,000	255 (85.3)
\$25,000	44 (14.7)
Insurance status	
Uninsured	235 (75.8)
Medicaid/other public	75 (24.2)
USOC (other than hospital ED)	
Yes	105 (33.9)
No	205 (66.1)
Chronic conditions	1 (2)
Reported 3 ED visits, last 12 mo	128 (41.3)
Reported using multiple ED locations, last 12 mo	138 (44.5)
Reported using non-ED locations, last 12 mo	125 (40.3)
Reported PD/PUT in 1 of the following healthcare experiences, last 12 mo	118 (38.1)
In the ability to access medical care	92 (29.7)
In the ability to obtain health insurance coverage	77 (24.8)
While receiving medical care	68 (21.9)

ED, emergency department; GED, General Education Development test; HS, high school diploma; IQR, interquartile range; PD/PUT, perceived discrimination/perceived unfair treatment; USOC, usual source of care.

^a303 responses.

^b299 responses.

^c302 responses.

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Table 2

Main reasons for perceived discrimination/perceived unfair treatment reported by participants (n =118)

Characteristic	N	%
Insurance	51	43.2
Other, "don't know," not specified	31	26.3
Race, ethnicity	21	17.8
Age	18	15.3
Education, income	17	14.4
Ancestry, national origin	11	9.3
Sex	10	8.5
Physical disability	9	7.6
Height, weight	8	6.8
Religion	6	5.1
Skin color	7	5.9
Sexual orientation	4	3.4

Table 3

ORs (95% CIs) for logistic regression models predicting association between PD/PUT and utilization of ED and non-ED medical care

Characteristics	Frequent ED use ^a (3 visits)	Multiple ED use ^a (2 ED locations)	Non-ED use ^b (1 visits outside hospital EDs)
PD/PUT in any 1 of the 3 healthcare interactions described below, last 12 mo			
Unadjusted model (n = 310):	3.80 (2.34–6.16)	3.79 (2.34–6.15)	1.46 (0.92–2.33)
Adjusted model (n = 302):	3.89 (2.34–6.44)	3.67 (2.24–6.01)	1.34 (0.82–2.21)
Race/ethnicity			
Non-Hispanic black	1.20 (0.52–2.78)	1.23 (0.54–2.80)	1.22 (0.53–2.86)
Hispanic	0.78 (0.34–1.79)	1.02 (0.46–2.30)	1.14 (0.49–2.63)
Uninsured	0.53 (0.29–0.94)	0.72 (0.41–1.27)	—
Chronic conditions	1.26 (1.0–1.51)	1.15 (0.96–1.38)	1.41 (1.16–1.71)
USOC	—	—	2.54 (1.51–4.28)
Goodness of fit ^c	0.65	0.40	0.60
PD/PUT in the ability to access medical care, last 12 mo			
Unadjusted model (n = 305)	3.39 (2.04–5.64)	3.01 (1.81–5.00)	1.40 (0.85–2.29)
Adjusted model (n = 298)	3.43 (2.02–5.81)	2.88 (1.72–4.84)	1.25 (0.74–2.11)
PD/PUT in the ability to obtain health insurance coverage, last 12 mo			
Unadjusted model (n = 297)	3.60 (2.09–6.19)	3.24 (1.89–5.58)	1.45 (0.86–2.45)
Adjusted model (n = 291)	3.56 (2.04–6.23)	3.17 (1.83–5.49)	1.35 (0.78–2.37)
PD/PUT while receiving medical care, last 12 mo			
Unadjusted model (n = 297)	4.69 (2.61–8.41)	3.54 (1.99–6.29)	2.02 (1.17–3.49)
Adjusted model (n = 292)	4.42 (2.42–8.07)	3.33 (1.85–5.97)	1.86 (1.03–3.35)

Bold values are statistically significant. — indicates that the control variable was not significantly associated with the dependent variable at the $P < 0.15$ level in the bivariate analysis. CI, confidence interval; ED, emergency department; OR, odds ratio; PD/PUT, perceived discrimination/perceived unfair treatment; USOC, usual source of care.

^aRace/ethnicity, insurance status, and chronic conditions were included in adjusted models.

^bRace/ethnicity, chronic conditions, and USOC status were included in adjusted models.

^cP values for Hosmer-Lemeshow goodness of fit statistics for each adjusted model are in an acceptable range.

CI, confidence interval; OR, odds ratio; ED, emergency department; PD/PUT, perceived discrimination/perceived unfair treatment; USOC, usual source of care