

Racial and Ethnic Disparities in Perceptions of Physician Style and Trust

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Context: While pervasive racial and ethnic inequalities in access to care and health status have been documented, potential underlying causes, such as patients' perceptions of their physicians, have not been explored as thoroughly.

Objective: To assess whether a person's race or ethnicity is associated with low trust in the physician.

Design, Setting, and Participants: Data were obtained from the 1996 through 1997 Community Tracking Survey, a nationally representative sample. Adults who identified a physician as their regular provider and had at least 1 physician visit in the preceding 12 months were included (N=32 929).

Main Outcome Measure: Patients' ratings of their satisfaction with the style of their physician and their trust in physicians. The Satisfaction With Physician Style Scale measured respondents' perceptions of their physicians' listening skills, explanations, and thoroughness. The Trust

in Physician Scale measured respondents' perceptions that their physicians placed the patients' needs above other considerations, referred the patient when needed, performed unnecessary tests or procedures, and were influenced by insurance rules.

Results: After adjustment for socioeconomic and other factors, minority group members reported less positive perceptions of physicians than whites on these 2 conceptually distinct scales. Minority group members who lacked physician continuity on repeat clinic visits reported even less positive perceptions of their physicians on these 2 scales than whites.

Conclusions: Patients from racial and ethnic minority groups have less positive perceptions of their physicians on at least 2 important dimensions. The reasons for these differences should be explored and addressed.

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WHILE pervasive racial and ethnic inequalities in health care¹⁻²¹ and health status²²⁻²⁵ have been widely documented, the causes are not sufficiently understood. Financial barriers can affect the delivery of health care, but less is known about the influence of individual factors, such as patient perceptions and preferences. Do members of racial or ethnic minority groups feel that physicians listen to them? Do they feel physicians provide adequate explanations? Do they trust their physicians? Because there is a critical need to reduce racial and ethnic disparities in health care and health, assessment of the influence

of individual factors merits no less rigor and attention than has been given to other public health problems of similar magnitude.^{26,27}

Health care that is closely congruent with and responsive to patients' wants, needs, and preferences^{28,29} may lead to high levels of satisfaction with the physician. When patients are satisfied with their physicians' style, effective communication, leading to improved adherence and health outcomes, becomes more likely.^{30,31} For effective communication to occur, physicians must listen to and understand patients and then communicate their understanding back to patients. Physicians must also explain to patients, in clear language, the nature of their illness, their di-

MATERIALS AND METHODS

DATA SOURCE

Data are from the Community Tracking Study (CTS) Household Survey conducted in 1996 through 1997,³² a telephone survey of 60 446 individuals representing the US non-institutionalized population. Sixty communities were randomly selected using stratified sampling with probability in proportion to population size to ensure representation of the US population. While random-digit dialing was used to select most households, a small sample was also included to represent households without telephones; these individuals were provided with cellular telephones for the interviews. The survey recorded information, including attitudes toward and satisfaction with health care, sociodemographics, health insurance, utilization of health services, health status, and preventive interventions. For this study, adults 18 years and older who identified a regular care physician and had at least 1 physician visit in the 12 months preceding the survey were included (N=32 929).

DEPENDENT VARIABLES

We assessed summary scores for scales measuring satisfaction with physician style and trust in the physician.

Satisfaction With Physician Style

The Satisfaction With Physician Style items in the CTS included 3 questions measuring satisfaction with the

thoroughness and completeness of the examination and treatment received, how well the physician listened, and how well the physician explained things in a way the respondent could understand. Each subject's average score (range, 1-5) was calculated, with higher scores indicating greater satisfaction with the style of their physician.

Trust in the Physician

Subjects were asked the following series of 4 questions: "I think my doctor may not refer me to a specialist when needed"; "I sometimes think that my doctor might perform unnecessary tests or procedures"; "I think my doctor is strongly influenced by health insurance company rules when making decisions about my medical care"; and "I trust my doctor to put my medical needs above all other considerations when treating my medical problems." We reverse coded the final item, so that higher scores indicated greater trust for all questions. Each subject's average score (range, 1-5) was calculated.

INDEPENDENT VARIABLES

The Andersen-Newman model^{53,54} categorizes the numerous characteristics that influence access to health care into predisposing factors, need factors, and enabling factors. This framework includes characteristics of the population at risk, consideration of health policy, utilization of health services, and consumer satisfaction. Race or ethnicity is a predisposing factor. In the CTS, self-reported race and ethnicity were coded as African American, Hispanic

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agnostic and treatment options, and how alternatives might relate to their values.³²

However, little empiric work assessing race or ethnicity and satisfaction with physician style currently exists. In one study, Cooper-Patrick et al³³ found that African American patients rated their visits with physicians as less participatory than whites. In 2 studies of health maintenance organization (HMO) enrollees,^{34,35} African Americans reported relatively high levels of satisfaction compared with whites. However, other studies have found African Americans to be less satisfied than whites with various aspects of care.³⁵⁻³⁷ Latinos have been observed to have levels of satisfaction similar to whites,³⁶⁻³⁸ although in a recent study at northern California's Kaiser-Permanente,³⁸ Latinos rated physicians' accessibility less favorably than did whites. Recent data suggest that Asian Americans have the lowest satisfaction of any ethnic or racial group.^{36,38,39}

Trust is a fundamental component of the patient-physician relationship.⁴⁰⁻⁴⁴ Because quantitative measurement of trust may provide an important means of

assessing the quality of the patient-physician relationship, researchers have developed scales measuring trust in the physician.⁴⁵⁻⁴⁷ Trust in the physician is significantly related to continuity and adherence.^{48,49} Patients in fee-for-service, indemnity coverage settings in 3 metropolitan insurance markets reported greater trust than those in salaried, capitated, or fee-for-service managed care settings.⁵⁰ In one study, nonwhite patients reported lower levels of trust in their physicians than white patients.⁵¹ However, the relationship between race or ethnicity and trust in the physician has not been explored using a nationally representative sample.

We analyzed a large, recent, nationally representative survey to determine how members of racial and ethnic minority groups fared compared with whites on ratings of satisfaction with physician style and trust in their physician. We hypothesized that members of racial and ethnic minority groups would report lower levels of satisfaction with physician style and trust than whites, even after adjustment for potentially confounding factors.

(Latino), other, and white. Several sociodemographic variables were examined to adjust for potential confounding, including additional predisposing factors: (1) level of education in years (<12, 12, 12-15, or ≥ 16 years); age in years (18-44, 45-64, or ≥ 65 years); sex; family structure (lives alone, single adult with children present, married with no children present, married with children present, or other); residence (urban or rural); and provider continuity (usually sees the same provider or usually sees a different provider); (2) enabling factors: household income as a percentage of poverty level for 1996 (<100%, 100%-199%, 200%-299%, 300%-399%, and $\geq 400\%$); health insurance (none, Medicaid or other public coverage, military coverage, any Medicare coverage, private coverage and enrolled in an HMO, or private coverage and not enrolled in an HMO); usual care location (physician's office, HMO, other community clinic, hospital outpatient clinic, or emergency department or other place); (3) need factors: tobacco use (current, former, or never); and (4) health status (subjective health status was measured using the physical and mental component summary scales of the Medical Outcomes Study General Short-Form Health Survey for perceived health status, a measure of the health effects of chronic disease, with demonstrated reliability and validity).⁵⁵ Because utilization rates are related to patients' race or ethnicity and because utilization may influence patients' perceptions of their physicians, adjustment for utilization over 12 months preceding the administration of the CTS includes number of physician visits (none, 1-2, 3-4, or ≥ 5); emergency department visits (none, 1-2, or ≥ 3); and hospitalizations (none or ≥ 1).

ANALYSIS

To assess whether to report the scores for satisfaction with physician style and trust in the physician separately, we ran confirmatory factor analyses with items constituting the scales. Also, because the decision to report scales separately is supported when internal consistency is greater than the correlation between scales,⁴⁷ we calculated Cronbach α coefficients⁵⁶ for the Satisfaction With Physician Style and Trust in Physician scales to assess internal consistency, and also calculated the Pearson correlation coefficient to assess the degree of correlation between the 2 scales. We explored the relationships between the independent measures, including race or ethnicity and the other factors, and the dependent measures of perceptions of physicians with multivariate models. Weights provided on the public-use CTS files were used to adjust for survey oversampling and nonresponse to produce estimates representative of the US population. Because of the complex survey design of CTS, multivariate analyses were conducted with SUDAAN⁵⁷ software, which uses the method of Taylor series linearization to produce appropriate SEs and 95% confidence intervals. Interaction between race or ethnicity and each covariate was assessed. Similarly, assessment of interaction between education and each covariate and also income and each covariate was performed.

To assess whether adjustment for satisfaction with physician style mediates the relationship between race or ethnicity and trust, we evaluated multivariate models with the Satisfaction With Physician Style Scale included as an independent variable.

RESULTS

Factor analysis revealed that the summary scales for satisfaction with physician style and trust in the physician formed distinct domains. The Cronbach α for the 2 summary scales (satisfaction with physician style, $\alpha = .91$, and trust in the physician, $\alpha = 0.62$) were greater than the correlation between these 2 scales ($r = 0.42$). The removal of items from scales did not improve the value of the α coefficient.

Baseline characteristics of the sample are presented in **Table 1**. Unadjusted mean scores for the Satisfaction With Physician Style Scale and the Trust in Physician Scale were lower for subjects who were members of racial or ethnic minority groups. Lower scores on 1 or more of these measures were significantly associated with a number of factors, including being younger, male, less educated, poorer, in poorer health, uninsured, enrolled in Medicaid or other public health insurance coverage or an HMO, a current smoker, receiving regular care in a setting outside of a physician's office, lacking physician continuity for repeat visits, making fewer visits to physicians, mak-

ing more visits to emergency departments, and not having been hospitalized in the previous year.

Sequential models using the Andersen-Newman classification are presented for the scales measuring satisfaction with physician style (**Table 2**) and trust in the physician (**Table 3**). These tables present unadjusted coefficients for race or ethnicity in the far left data columns and progress to fully saturated models in the far right columns. After adjustment for all covariates, members of each minority group identifiable in the CTS reported significantly lower summary scores for satisfaction with physician style and trust in the physician than did whites. For satisfaction with physician style, roughly one third of the difference between African Americans and whites and roughly half of the difference between Latinos and whites was explained by adjustment for all other factors. For trust in the physician, approximately half of the difference between African Americans and whites and between Latinos and whites was explained by adjustment for all other factors.

For the Satisfaction With Physician Style Scale, associations of similar magnitude and direction to those

Table 1. Relationships Between Summary Scores for Satisfaction With Physician Style and Trust in the Physician and Selected Characteristics

Characteristic, No. of Subjects	Satisfaction With Physician Style Score, Mean (SE)†	Trust in Physician Score, Mean (SE)†
Predisposing Factors		
Race/ethnicity		
African American (3450)	3.89 (0.02)	3.98 (0.02)
Latino (1873)	3.80 (0.03)	3.92 (0.03)
Other (2187)	3.91 (0.02)	4.06 (0.02)
White (27 824)	4.11 (0.01)	4.24 (0.01)
Years of education (highest grade completed)		
<12 (3700)	3.89 (0.02)	3.96 (0.02)
12 (11 598)	4.03 (0.01)	4.17 (0.01)
13-15 (8020)	4.09 (0.02)	4.23 (0.01)
16 (9611)	4.02 (0.01)	4.23 (0.01)
Age, y		
18-44 (16 457)	3.96 (0.01)	4.08 (0.01)
45-64 (10 693)	4.11 (0.01)	4.22 (0.01)
≥65+ (5779)	4.13 (0.02)	4.31 (0.02)
Sex		
Male (13 476)	3.98 (0.01)	4.10 (0.01)
Female (19 453)	4.09 (0.01)	4.22 (0.01)
Family structure		
Lives alone (8746)	4.00 (0.01)	4.16 (0.01)
Single adult, children present (2281)	3.96 (0.03)	4.09 (0.03)
Married, no children present (10 540)	4.14 (0.01)	4.26 (0.01)
Married, children present (10 910)	4.00 (0.01)	4.10 (0.01)
Other (452)	3.94 (0.05)	4.07 (0.05)
Residence		
Urban (29 130)	4.03 (0.01)	4.16 (0.01)
Rural (3799)	4.08 (0.03)	4.21 (0.03)
Provider continuity for repeat visits		
Usually sees the same provider (28 835)	4.09 (0.01)	4.22 (0.01)
Usually sees a different provider (3946)	3.74 (0.02)	3.80 (0.02)
Enabling Factors		
Income		
<100% Poverty line (3114)	3.90 (0.02)	3.96 (0.03)
100%-199% Poverty line (5186)	3.94 (0.02)	4.09 (0.02)
200%-299% Poverty line (5623)	4.04 (0.02)	4.18 (0.01)
300%-399% Poverty line (5635)	4.04 (0.02)	4.21 (0.01)
≥400% Poverty line (13 371)	4.14 (0.01)	4.25 (0.01)
Health insurance		
None (2262)	3.78 (0.02)	3.98 (0.03)
Medicaid or other public Coverage (1378)	3.92 (0.03)	3.97 (0.02)
Military (398)	3.98 (0.05)	4.23 (0.05)
Medicare (6103)	4.12 (0.02)	4.28 (0.01)
Private, HMO (11 413)	3.98 (0.01)	4.06 (0.01)
Private, non-HMO (10 812)	4.13 (0.01)	4.27 (0.01)
Usual care location		
Hospital outpatient (1955)	3.88 (0.03)	4.00 (0.03)
Other community clinic (3921)	3.90 (0.02)	4.05 (0.02)
Hospital emergency department, or other place (924)	3.88 (0.03)	3.87 (0.04)
HMO (1916)	3.90 (0.03)	3.96 (0.03)
Physician's office (24 213)	4.10 (0.01)	4.23 (0.01)

found for the race or ethnicity were observed with male sex, not having completed high school, lacking health insurance, and receiving care in HMOs (data not shown). Relationships of similar magnitude and direction as the race or ethnicity coefficients were observed for trust in the physician for being male, not having completed high

school, having income below the federal poverty line, being enrolled in an HMO, and receiving care at an HMO clinic (data not shown). For both measures, the relationships with lacking physician continuity on repeat visits and with reporting poorer health status were of greater magnitude than the relationships for race or ethnicity (data

Table 1. Relationships Between Summary Scores for Satisfaction With Physician Style and Trust in the Physician and Selected Characteristics (cont)

Characteristic, No. of Subjects	Satisfaction With Physician Style Score, Mean (SE)†	Trust in Physician Score, Mean (SE)†
Need Factors		
Smoking status		
Current (7201)	3.99 (0.01)	4.11 (0.01)
Former (8740)	4.11 (0.01)	4.23 (0.01)
Never (16 888)	4.03 (0.01)	4.16 (0.01)
Health status		
Excellent (7047)	4.25 (0.01)	4.26 (0.02)
Very good (12 233)	4.12 (0.02)	4.21 (0.01)
Good (8699)	3.91 (0.02)	4.13 (0.01)
Fair (3562)	3.85 (0.03)	4.03 (0.02)
Poor (1388)	3.86 (0.04)	4.06 (0.03)
Utilization		
Physician visits in past year		
1-2 (6089)	3.98 (0.02)	4.13 (0.02)
3-4 (15 463)	4.04 (0.01)	4.17 (0.01)
≥5 (11 377)	4.08 (0.01)	4.19 (0.01)
Emergency department visits in past year		
0 (26 754)	4.07 (0.01)	4.19 (0.01)
1 to 2 (4149)	3.97 (0.02)	4.13 (0.02)
≥3 (2026)	3.91 (0.02)	4.03 (0.03)
Hospitalizations in past year		
None (28 974)	4.03 (0.01)	4.16 (0.01)
≥1 (3955)	4.10 (0.02)	4.21 (0.02)
Total (32 929)	4.04 (0.01)	4.17 (0.01)

*HMO indicates health maintenance organization.

†Range from 1 (low) to 5 (high).

not shown). Evaluation for interaction in the Satisfaction With Physician Style Scale revealed a significant interaction between race or ethnicity and health insurance (data not shown). The meaning of interaction is that satisfaction scores were particularly low for Latinos who lacked insurance and those who reported HMO insurance coverage. Assessment for interaction in the Trust in Physician Scale revealed significant interaction between race or ethnicity and sex (data not shown), indicating that trust scores were especially low for Latino and African American men. Also, for the trust scale, significant interaction between race or ethnicity and a lack of continuity on repeat visits was apparent (data not shown), indicating that the relationship between lacking of continuity and low trust scores was particularly pronounced for African Americans.

We evaluated whether the scale measuring satisfaction with physician style mediated relationships between subjects' race or ethnicity and their trust in their physician by adding the measure of satisfaction with physician style as an independent covariate in models examining trust in the physician. In these models, the association with minority group membership was attenuated by roughly one third for African Americans and Latinos and by about one tenth for other minority group members, but remained significant independent of the Satis-

faction With Physician Style Scale and the other factors (data not shown).

COMMENT

In this nationally representative sample, racial or ethnic minority group members reported less positive perceptions of physicians than whites on 2 conceptually distinct scales. A number of physician and patient factors could account for our observations. Many physicians may misunderstand racial or ethnic minority group members' views of symptoms and illness and some physicians may hold unconscious racial or ethnic biases that influence their interactions with minority patients.⁵⁸ Also, physicians' expectations about patient visits may differ from the expectations of the minority group members they serve. Differences in minority group members' socioeconomic status partially explains worse perceptions of physicians, as models with income and education removed had more negative scores, but highly significant differences remained after adjusting for income and education. It is also possible that unmeasured patient factors, such as low self-efficacy regarding management of health or low health literacy, may be more prevalent among racial or ethnic minority groups and may account for some of the observed differences.

Table 2. Multivariate Relationships Between Race or Ethnicity and Summary Score for Satisfaction With Physician Style

Race or Ethnicity	Unadjusted, β (SE)*	Adjusted for Predisposing Factors, β (SE)*	Adjusted for Predisposing and Enabling Factors, β (SE)*	Adjusted for Predisposing, Enabling and Need Factors, β (SE)*	Adjusted for Predisposing, Enabling, Need, and Utilization Factors, β (SE)*
African American	-0.26 (0.02)	-0.19 (0.02)	-0.17 (0.02)	-0.17 (0.02)	-0.17 (0.02)
Latino	-0.31 (0.03)	-0.22 (0.03)	-0.18 (0.02)	-0.17 (0.02)	-0.17 (0.02)
Other	-0.20 (0.03)	-0.19 (0.03)	-0.17 (0.03)	-0.16 (0.03)	-0.16 (0.03)
White†	...	...	...	...	...

*P<.001 in all models.

†Baseline condition.

Table 3. Multivariate Relationships Between Race or Ethnicity and Summary Score for Trust in the Physician

Race or Ethnicity	Unadjusted, β (SE)*	Adjusted for Predisposing Factors, β (SE)*	Adjusted for Predisposing and Enabling Factors, β (SE)*	Adjusted for Predisposing, Enabling and Need Factors, β (SE)*	Adjusted for Predisposing, Enabling, Need, and Utilization Factors, β (SE)*
African American	-0.28 (0.02)	-0.21 (0.02)	-0.18 (0.02)	-0.18 (0.02)	-0.18 (0.02)
Latino	-0.31 (0.03)	-0.21 (0.02)	-0.16 (0.02)	-0.15 (0.02)	-0.15 (0.02)
Other	-0.17 (0.03)	-0.16 (0.03)	-0.14 (0.03)	-0.13 (0.02)	-0.13 (0.03)
White†	...	...	...	...	...

*P<.001 in all models.

†Baseline condition.

The small differences in summary scores for the perceptual scales evaluated in this study are likely to be meaningful, as previous research has demonstrated that small numeric differences on perceptual measures can have important effects on health care and health. In our study of medical skepticism, a 1-point change in the medical skepticism score (range, 1-5) was associated with an 11% increase in total mortality.⁵⁹ In the Medical Outcomes Study, small changes in scores measuring physicians' participatory decision-making styles were associated with patients' reporting they planned to leave their physicians' practices within 12 months.⁶⁰

This study is subject to several limitations. First, the CTS was not designed to assess racial and ethnic subgroups. The broad racial and ethnic groupings used in the CTS are heterogeneous and would not reveal any important differences for racial and ethnic subgroups within these broad categories. Second, we were not able to assess the race or ethnicity of subjects' physicians, or other potentially relevant physician characteristics. It is plausible that racial or ethnic congruence between patients and physicians would diminish disparities in minority group members' perceptions. For example, one study found that African American patients who visit African American physicians rated their physicians' decision-making styles as more participatory.³³ Third, African Americans and Latinos have been observed to select extremes of Likert response scales more frequently than whites.⁶¹ How such a bias, if it occurred, would influence our findings is unclear. Fourth, while the items mea-

suring satisfaction with physician style exhibited excellent internal reliability, supporting the grouping of perceptions of communication skills (listening and explaining) with perceptions of technical skills (thoroughness and completeness), the items measuring trust provided lower reliability than has been reported elsewhere,³⁸⁻⁴⁰ indicating that further refinement of items measuring trust in the physician is warranted. The reasons for this lower than expected reliability of the trust scale are not clear; while the overall composition of the scale that is available in the CTS is not identical to published, validated trust scales,⁴⁵⁻⁴⁷ the individual questionnaire items found in the CTS trust scale are virtually identical to questionnaire items used in these other trust scales.

The CTS is a cross sectional survey; the associations observed here do not allow inferences about root causes. While a strength of the CTS is that future iterations will allow researchers to track minority group members' perceptions of physicians over time, longitudinal or interventional studies are needed to allow causal inferences.

While it is possible that the observed relationships could be the result of confounding by unmeasured or incompletely measured factors only incidentally associated with racial or ethnic background, the richness of our data source allowed us to control for a large number of potential confounding factors. The inferences that can be drawn from these results are further strengthened by the survey design and the recency of these data.

An overwhelming body of literature indicates that minority group members face disparities in health care¹⁻²¹

and health status.²²⁻²⁵ Given these inequities, our findings, consistent with previous reports documenting minority group members' negative views about disparities in the health care system,^{33,61,62} have implications for clinical practice, research, and health policy.⁶³

Increasing the numbers of minority physicians might lead to improvements in perceptions of physicians,³³ which might lead to better health outcomes. There is clearly a need for additional work examining racial and ethnic congruence between patients and providers and patients' perceptions of physicians. Also, interventions aimed at improving racial or ethnic minority group members' skills as effective consumers of health care could be developed and evaluated.

At the very least, physicians should be aware that, compared with whites, racial and ethnic minority group members report less positive perceptions of physicians. In a 1994 survey of medical schools, only 13 of 78 responding institutions offered cultural-sensitivity courses, and all but one of those courses were elective.⁶⁴ Interventions aimed at teaching physicians to become more patient-centered need to be developed and assessed, especially because existing data suggest that physicians can be taught relevant skills.⁶⁵⁻⁷¹ It seems reasonable to consider whether selection of medical students should be based, in part, on assessment of applicants' interpersonal skills and communication styles.

Effective patient-physician interactions require time to develop. Initially, the physician's attentiveness, responsiveness, and demeanor give the patient a first impression of what to expect,^{41,66} but these early cues provide only rough indicators of how the relationship might evolve as the patient and the physician become more acquainted. The strong associations of trust and satisfaction with physician style with continuity likely are bidirectional: patients are more likely to continue to see physicians whose interactions are patient-centered and who inspire trust, and more positive perceptions of a physician are likely to develop over multiple encounters. While the effect of recent, large-scale changes in health care delivery, especially managed care, on continuity is not clear,⁴¹ strategies aimed at improving or at least preserving continuity of care should be evaluated.

Research is needed to determine how best to make providers, health plans, and health care delivery systems accountable for meeting the needs of their patients. The work reported herein suggests that measures of satisfaction with physician style and trust in the physician could become important indicators of health care quality, particularly if interventions can be developed to improve satisfaction with physician style and trust in the physician. Systematic monitoring of valid, easily administered measures of patients' perceptions of physicians might help us achieve the goal of Healthy People 2010⁷²

to eliminate racial and ethnic disparities in health in the United States.

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