

Social Distance and Patients' Rating Of Healthcare Providers*

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Journal of Health and Social Behavior 2001, Vol 42 (December): 360-372

Racial inequity in the provision of healthcare is widely recognized. In this paper, I assess the role of social distance from healthcare providers in accounting for whites' higher rating of healthcare providers. Using data from the Detroit Area Study, I test whether having higher socioeconomic status, like most healthcare providers, and racial concordance with healthcare provider account for the gap in satisfaction between whites and African Americans. I find that socioeconomic status and racial concordance variables account for a portion of whites' higher rating of the respect shown by their healthcare provider. Racial differences in evaluation of time spent with healthcare provider are accounted for by socioeconomic status, but not racial concordance. As researchers explore the causes of and remedies for the racial disparity in use and evaluation of healthcare, the subtle and indirect effects of race on the patient-healthcare provider relationship must be considered.

Racial inequity in the provision of healthcare is widely recognized (Council on Ethical and Judicial Affairs 1990; Mayberry et al. 1999). One aspect of the racial divide in healthcare is that African Americans are less satisfied than whites with healthcare and rate treatment by healthcare providers lower than whites (Blendon et al. 1989; Blendon et al. 1995; Saha 1999; Shi 1999). Despite decades of well-documented racial differences in care (Egbert and Rothman 1977), researchers have only recently turned attention to the source of the differences. Some researchers have examined whether differences in care are due to racial differences in access to care (Ayanian et al. 1993; Goldberg et al. 1992), while others have tested specifically for racial bias among physicians (McKinlay et al. 1997; Schulman et al. 1999). Yet the full effect of race on the process of medical care has not been revealed. This paper focuses on a more subtle explanation for racial differences in care by assessing

the role of social distance in accounting for whites' better average rating of healthcare providers.

Evidence of racial inequities in the provision of care demonstrates the need for theoretically informed empirical research on how race affects the patient-healthcare provider relationship. Patient evaluation of care provides a vehicle for this work which may help expand understanding of how social distance affects the medical encounter. In this paper, I analyze data from a large metropolitan area to identify the extent to which African Americans are less likely than whites to rate healthcare providers high on two aspects of care. I then evaluate the role of social distance, specifically socioeconomic status and race, to account for racial differences in rating healthcare providers. Assessing these relationships will contribute to knowledge of how race influences the patient-healthcare provider relationship and may aid in developing appropriate healthcare policy.

*This research was supported by a grant from the Agency for Healthcare Policy and Research (R03 HS09894) and a pre-doctoral training grant awarded to the Population Studies Center at the University of Michigan by the National Institute of Child Health and Human Development (2 T32 HD07339). Angela Klotz helped prepare the manuscript. I am grateful for helpful comments from Deborah Carr, David R. Williams, and three anonymous reviewers.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

Race, Socioeconomic Status, and Social Distance

Race is a social category that influences

many aspects of American life. For minority race groups, the system of racial inequality translates into experiences of discrimination and unequal access to resources like educational and employment opportunities (Kim and Lewis 1994; Feagin and Sikes 1994). One result is that African Americans have lower average educational attainment and income than whites (U.S. Bureau of the Census 1999). The racial gap in socioeconomic status means that African Americans are more likely than whites to suffer worse treatment in their daily lives not only due to racial bias, but also due to socioeconomic status.

Socioeconomic status and race are two important markers of social distance and inequality in the United States. There are prevalent prejudices and stereotypes about the values and morals of both poor people and African Americans (Gans 1995; Schuman et al. 1997). Both poor and non-poor people distance themselves from the perceived shortcomings of low socioeconomic status people by blaming individuals and viewing the poor as a group of others. In addition, interpersonal relationships are shaped by race as many whites attempt to maintain social distance from members of other race groups (Schuman et al. 1997). In addition to biases against these disadvantaged groups, the tendency for people to apply more extreme judgments to members of an outgroup is likely to more strongly affect lower socioeconomic status people and African Americans seeking medical care, since doctors are generally not members of either of these social categories (Linville and Jones 1980).

Physicians have high educational attainment, usually have higher incomes, tend to come from upper-class families (Magnus and Mick 2000), and are infrequently African American.¹ Patients, of course, have the complete range of sociodemographic characteristics. For African Americans, this means that they are unlikely to be the same-race as their healthcare provider and are less likely than whites to have a high socioeconomic status like healthcare providers. A similar sociodemographic profile, which reduces the social distance between healthcare provider and patient, may translate to both a better quality interaction and a more favorable evaluation by the patient. As a result, social distance may account for a portion of African Americans' lower average rating of healthcare providers.

Socioeconomic status concordance and

experience with care. The notion that the poor and less educated receive worse objective treatment in medical settings receives support from studies that examine patterns of care. For over three decades, researchers have documented the process by which people with less education and income receive a lower standard of care (e.g., Duff and Hollingshead 1968; Korsch, Gozzi, and Negrete 1968). These findings persist. Studies find, for instance, that patients who have less education and who are poor tend to have difficulty communicating their concerns and eliciting respect for those concerns because many healthcare providers do not value their opinions (Anspach 1993) and lower socioeconomic status patients having shorter average duration medical encounters (Wiggers and Sanson-Fisher 1997).

Despite relatively consistent findings of a socioeconomic status gap in healthcare quality from researchers who observe medical encounters, ratings of care by patients do not show a similarly clear distinction between the experience of high and low socioeconomic status patients. Hall and Dornan's (1990) meta-analysis of sociodemographic predictors of satisfaction with medical care² clearly describes the seemingly conflicting results. Although the association is weak, researchers tend to find that people with higher incomes report higher satisfaction, as predicted by the observational studies described above. However, less educated patients are slightly more likely than people with more education to give their medical care a positive rating.

At least two methodological inconsistencies in the satisfaction literature may account for the weak association between satisfaction and indicators of socioeconomic status, and the divergence in the effects of education and income. First, the literature on satisfaction has traditionally used a range of items to measure satisfaction—from evaluation of healthcare providers to satisfaction with office hours of clinic. By combining this wide variety of measures, Hall and Dornan's (1990) meta-analysis accurately reflects findings in the literature, but may obscure the nature of specific relationships. Second, this body of research often fails to adequately control for theoretically related concepts and frequently presents only bivariate statistics (Sitzia and Wood 1997), which makes it difficult to determine the meaning of associations. These methodological problems help to account for the unclear

relationship between socioeconomic status and evaluation of medical care. The analyses presented in this paper overcome these problems by using two distinct survey items for rating healthcare providers and multivariate models that control for other concepts.

In addition to methodological complications, there is a tension between the effect that socioeconomic status may have on the quality of the medical encounter and how patients evaluate their care. At the same time that people with lower socioeconomic status may be treated poorly by healthcare providers, they may evaluate their care more favorably than higher socioeconomic status people. Theories about the association between expectations and evaluation of an experience predict, for example, that lower socioeconomic status people are less likely to be treated with respect in their daily lives and in the healthcare system, and consequently, have lower expectations for the level of respect that a doctor should show (Campbell, Converse, and Rodgers 1977; Sitzia et al. 1997). Resolving the tension between the competing effects of the quality of care and the expectations for care is difficult. While both effects may operate, I expect that bias against low socioeconomic status individuals is stronger than the competing effect of low expectations.

The relationship between socioeconomic status and evaluation of care may be integral to understanding the racial disparity in rating healthcare. Since socioeconomic status varies by race, the association between socioeconomic status and quality of care may account for a portion of the racial gap in evaluation of healthcare providers. At the same time, stereotypes about African Americans may also affect how African Americans are treated. The stereotype that all African Americans are poor may result in a socioeconomic status bias operating against all African Americans, which would predict an interaction between race and socioeconomic status.

Racial concordance and experience with care. Just as higher socioeconomic status seems to improve the quality of the patient-healthcare provider interaction, racial concordance decreases social distance and may improve communication, rapport, and the overall quality of the medical encounter. Indeed, the limited research done in this area supports this notion. Patients who have a

same-race doctor rate their provider as allowing a more participatory style of decision making (Cooper-Patrick et al. 1999), and doctors are more likely to rate their same-race patients as someone with whom they would be friends (van Ryn and Burke 2000). In the field of psychology, where more of this work has been done, research generally finds that racial pairing of patients and therapist results in improved care on some measures (e.g., longer duration of treatment, more trust from patient) (Rosenheck, Fontana, and Cottrol 1995; Sue et al. 1991; Watkins and Terrell 1988). The social distance that exists between African Americans and whites may impinge on patient experience of care in general medical care by affecting not only the quality of the interaction, but also the patient's process of evaluating the care.

There are many ways that racial concordance between healthcare providers and patients may affect how patients rate their care. For instance, negative feelings about Asian American or foreign-born healthcare providers may affect evaluation of care. Both whites and African Americans have prejudices about Asian Americans and those who speak with a different accent (Cummings and Lambert 1997). Consequently, African Americans and whites may give a lower rating to an Asian American or foreign-born healthcare provider, regardless of actual treatment. In addition, patients may be uncomfortable with different race or nationality healthcare providers and respond by not communicating well or withdrawing, which would negatively impact the quality of the interaction.

The scarcity of African American healthcare providers may also impact ratings. African Americans who report having a healthcare provider of their race may have made an effort to receive care from an African American healthcare provider. Thus, when asked about the quality of the encounter, patients may avoid cognitive dissonance about these efforts by favorably evaluating their care. At the same time, however, poor care from an African American healthcare provider may more seriously violate expectations and be more likely to produce a poor assessment of the healthcare provider. Thus, as with many aspects of evaluation of care, there are competing effects.

Compared to whites, African Americans may face more difficulty with a different race

healthcare provider. Non-Hispanic whites, who are the focus of the present analysis, bring to the interaction racial privilege, which may both improve treatment by healthcare providers and diminish the barriers raised by the patient. Whether realized or not, the potential for racial bias on the part of healthcare providers may result in African Americans maintaining additional distance from non-black healthcare providers. Whites have an advantage in the option of viewing themselves as the average of American society. This may allow a white patient to dismiss the possibility that the healthcare provider views them negatively, which may result in their leaving the medical encounter with a more favorable feeling about the interaction.

These factors predict that whites and African Americans will provide more positive evaluations of their healthcare providers when they are same-race dyads. Because of the small number of African American healthcare providers and the large number of white providers, African Americans are more likely than whites to have a provider of a different race. Therefore, African Americans' lower average rating of care may be a product of the relatively small proportion of African American healthcare providers. This effect will be magnified if the negative impact of having a different-race healthcare provider is stronger for African Americans.

Hypotheses

The conceptual framework outlined above leads me to the following four hypotheses:

- H1: Socioeconomic status mediates the relationship between rating of healthcare providers and race;*
- H2: Socioeconomic status moderates the relationship between rating of healthcare providers and race;*
- H3: Racial concordance with healthcare providers mediates the relationship between rating of healthcare providers and race;*
- H4: Racial concordance with healthcare providers moderates the relationship between rating of healthcare providers and race.*

DATA AND METHODS

Sample

I test hypotheses using data from the 1995 Detroit Area Study, a survey conducted by The Institute for Social Research and The Department of Sociology at The University of Michigan. The Detroit Area Study provides a multistage area probability sample representative of the population 18 years old and older residing in the tri-county (Oakland, Wayne, and Macomb) Detroit metropolitan area of Michigan. The 1995 project, "Social Influences on Health," had a response rate of 70 percent and included 1,140 face-to-face interviews. African Americans were oversampled; the final sample includes 586 African Americans.

Dependent Variables

Respect. Respondents rated their doctor on a four point scale ranging from excellent to poor on treating them with dignity and respect during their last office visit. Only respondents who had a office visit in the last 12 months are included in the analysis. As with most measures of satisfaction, most responses are on the positive end of the scale (Diener and Diener 1996; Sitzia et al. 1997). The majority of respondents rated their care as excellent (59%), and less than 1 percent rated their care as poor. I eliminated the category poor because it includes only five cases.

Time. In addition, respondents rated their doctor during their last visit on spending enough time with them. Overall, people are less satisfied with the amount of time that healthcare providers spend with them than with the respect shown by healthcare providers. *Time* is also skewed toward positive responses, but not as strongly as *respect*. Forty-three percent rated their healthcare provider as excellent and 43 percent rated their healthcare provider as good on time spent in examination. For the multivariate analyses, *time* is recoded into three categories: excellent, good, and fair. Poor, which only included 13 cases, is excluded from the analysis.

Independent Variables

Race. Respondents were asked to select one of six categories to best describe their race: white, black or African American, Asian, American Indian, Hispanic, and other. Less than 5 percent of the sample report being a race other than white or African American, which census data show reflects the population of the tri-county area surveyed. The present analysis does not include this small group of respondents. I code race as a binary variable and use African American as a reference category in the multivariate models.

Education. Education is measured as three binary variables: less than high school (21% of the sample), high school degree only (34%), and more than a high school degree (45%). High school is the reference category in the multivariate analysis.

Per capita household income. Respondents were asked their household income from all sources as well as how many people rely on this income. Household income is divided by the number of people who rely on the income to calculate a per capita household income. The variable is collapsed into three categories based on natural breaking points: high, more than \$18,000 per person (42%); medium, \$6,001 to \$18,000 (38%); and low, less than \$6,000 (20%). More categories were initially used, but did not improve insight into the relationship among the variables. In order to minimize statistical degrees of freedom, particularly in the interactions, I present analysis based on three categories. Low is the reference category in the regression analysis.

Racial concordance. Respondents were asked the race of their doctor at their last visit, which is also the visit to which *respect* and *time* refer. The response categories were white (60%), black (9%), and other (31%). Other probably includes mainly Asian American and foreign born doctors, who compose over 11 percent of the doctors in the United States.³ Using data from that variable and the one measuring respondent's race, I computed a third variable indicating whether the respondent was the same-race as their doctor. Having a doctor of another race is the reference category.

Control Variables

Age. Healthcare research finds that older

people are more likely to have a recent doctor visit (U.S. Department of Health and Human Services 1999), which is reflected in the Detroit Area Study sample. As a result, older people are more likely to be included in the analysis. Further, one of the most consistent findings in the satisfaction literature is that older people more favorably evaluate their medical care (Sitzia et al. 1997). Therefore, the effect of age is controlled in the multivariate analysis.

Self-reported health. Health status has a positive association with satisfaction with and evaluation of medical care (Cleary and McNeil 1988; Rosenbach, Adamache, and Khandker 1995; Sisk et al. 1996) and a negative association with race (U.S. Department of Health and Human Services 1999). This study uses the self-reported rating of physical health, which has been shown to be a good predictor of mortality and health status (Idler and Benyamini 1997). Respondents rated their overall health on a five point scale from excellent to poor. The modal category is very good with 35 percent of the cases, followed by good, with almost 30 percent of the cases. The first category, "excellent," is the reference category in the multivariate analysis.

Source of Care. Source of medical care is associated with quality of care and race (Shi 1999). In order to avoid capturing this structural-level effect of the provision of healthcare, it is controlled in this analysis.

The item is a combination of two questions. Respondents were asked if there is a doctor or clinic to which they usually go when sick or in need of advice about their health. Those that responded affirmatively were asked what kind of place it was (e.g., doctor's office, hospital, community clinic). The items are combined so that the single source of care measure will include categories for those without regular care (20.7%), those who use a doctor's office (65.1%), those who use hospital outpatient care (5.9%), those who use a community or walk-in clinic (6.3%), or those with another source of care (2.0%). Receiving care in a doctor's office is the reference category in the multivariate analysis.

Analytic Methods

A weight computed by The Institute for Social Research at The University of Michigan

adjusts for the oversample of African Americans and a weight provided by the software package Stata adjusts standard errors to reflect sampling techniques (StataCorp 1999). I employ these weights in the analysis.

Because both of the dependent variables have three ordered response categories, ordered logistic regression models are used to estimate equations predicting ratings on respect and time. The regression models use the proportional odds method for modeling ordered logistic regression equations, which assumes that the effect of the independent variables does not vary between categories of the dependent variable. That is, for each independent variable a single effect is estimated for the dependent variable (Fox 1997). The assumption of proportional odds was tested by using binomial logistic regression models to compare the effects of the independent variables of interest on the adjacent categories of the dependent variable.

A series of nested logistic regression models assess the extent to which the hypothesized variables account for differences between African Americans and whites. The baseline model includes race as well as the control variables. The social distance hypotheses are tested by introducing to the baseline model education and per capita household income, and then adding the variable indicating racial concordance with doctor. Lower educational attainment and per capita household income among respondents indicates greater social distance since healthcare providers are likely to have high scores on these variables. In order to test whether the social distance factors have different effects for African Americans and whites, interaction terms are included after the main effects of the independent variables.

RESULTS

Bivariate Statistical Findings

Table 1 presents the bivariate relationships between race and the independent variables. Reflecting the population of the United States, African Americans tend to have less education and lower income. As expected, whites are more likely than African Americans to have a physician of their own race.

The distributions of *respect* and *time* by race for those who had a medical encounter in the last 12 months are presented in Table 2. Overall, race has the expected relationship to both dependent variables. African Americans are less likely to give healthcare providers a high rating on *respect* and *time*. The larger gap between African Americans and whites is seen on *respect*. While more than 64 percent of whites rated their doctor as excellent, only 47 percent of African Americans gave their doctor an excellent rating. Similarly, a larger proportion of whites (46%) than African Americans (35%) rated their doctor as excellent on *time*.

The relationships between the independent variables and *respect* are also shown in Table 2. While per capita household income has the expected relationship with this dependent variable, education does not. The relationship between education and treatment with respect is not linear. Persons with the least education are most likely to report excellent treatment with respect, followed by those with more than high school education. Those with a high school degree are the least likely to give a high rating on *respect*.

In contrast, increasing per capita household income is associated with increasing likelihood of reporting better treatment. The rela-

TABLE 1. Percent Distribution of Independent Variables by Race

	African American	White
Total	24.4	75.6
Education (years)**		
0-11	29.0	17.8
12	32.5	34.3
13+	38.5	47.9
Per Capita Household Income**		
Low	35.8	15.1
Medium	43.2	35.9
High	21.0	49.0
Racial Concordance**		
Doctor same race	28.0	64.2
unweighted (n)	(586)	(520)

* $p < .05$ ** $p < .01$ for chi-square test of association

TABLE 2. Percent Distribution of Dependent Variables by Independent Variables

	Treatment with Dignity and Respect			unweighted (n)
	Excellent	Good	Fair	
Total	59.4	35.3	5.3	(789)
Race**				
African American	46.9	43.9	9.2	(456)
White	64.0	32.2	3.8	(333)
Education (years)*				
0-11	56.9	38.0	5.1	(114)
12	53.0	40.6	6.4	(249)
13+	64.6	30.9	4.5	(422)
Per Capita Household Income**				
Low	46.3	43.4	10.3	(175)
Medium	54.8	41.9	3.2	(301)
High	68.6	26.1	5.2	(310)
Racial Concordance*				
Doctor different race	52.6	40.2	7.2	(402)
Doctor same race	65.2	31.1	3.8	(363)
	Spent Enough Time			
Total	43.4	43.2	13.4	(775)
Race**				
African American	34.9	45.3	19.8	(447)
White	46.4	42.6	11.0	(328)
Education (years)				
0-11	43.3	41.0	15.7	(112)
12	39.3	49.2	11.5	(243)
13+	46.2	40.1	13.8	(416)
Per Capita Household Income**				
Low	29.2	50.8	20.0	(168)
Medium	42.9	43.6	13.5	(297)
High	49.2	40.1	10.6	(307)
Racial Concordance				
Doctor different race	39.8	46.8	13.4	(393)
Doctor same race	45.8	41.5	12.7	(360)

* $p < .05$ ** $p < .01$ for chi-square test of association

Note: Includes only respondents who had a medical encounter in the last year.

tionship between these variables and *time* is in the same direction, but the relationship between education and *time* is not significant. These bivariate relationships are similar to the results in Hall and Dornan's (1990) meta-analysis. The multivariate analysis, which controls for possible correlates like source of medical care and health status, may provide insight into this relationship.

In the bivariate results, the race dimension of the social distance hypothesis finds more support than the socioeconomic status hypotheses in the bivariate results. Those who had a doctor of their race at the medical consultation rate their healthcare provider higher on both *respect* and *time*; however, the relationship is significant only for *respect*. The bivariate relationship generally supports the premise of the racial concordance hypothesis and will be examined further in the multivariate analysis.

Multivariate Statistical Findings

Tables 3 and 4 present the estimated odds ratios, which indicate the multiplicative change in odds of moving from one category of the independent variable to another. The tables also show the model chi-square statistics, which indicate the significance of the newly introduced variables. Significance of the coefficients based on the z test statistic are included in order to aid in interpretation of results. However, for small and medium sample sizes the model chi-square statistic is more powerful (Agesti and Finlay 1997) and consequently receives more attention in this paper.

The baseline model shows that the effect of race persists when other control variables are included in a model. The odds of whites reporting better treatment with dignity and respect are almost two times higher than for African Americans, controlling for the other

TABLE 3. Model Predicting Rating of Treatment with Dignity and Respect

	Model 1	Model 2	Model 3
	Odds Ratio	Odds Ratio	Odds Ratio
<i>Race</i>			
White race	1.95***	1.66***	1.52***
<i>Socioeconomic status</i>			
Education (high school = excluded)			
Less than high school		1.46	1.44
More than high school		1.36*	1.42*
Per Capital Household Income (low = excluded)			
Medium		1.50*	1.50*
High		2.27**	2.23***
<i>Racial concordance with doctor</i>			
Same Race Doctor			1.40*
<i>Controls</i>			
Age (18-34 = excluded)			
35-54	.92	.78	.79
55-64	1.49	1.32	1.32
65+	1.07	1.03	1.07
Self-Reported Health (excellent = excluded)			
Very good	.67	.70	.62*
Good	.58**	.65*	.60*
Fair	.59*	.66	.66
Poor	.63	.76	.64
Regular Source of Care (Dr. office = excluded)			
No regular source of care	.45***	.46***	.47**
Hospital outpatient	1.20	1.00	.92
Walk-in/Community clinic	1.56	1.80	1.77
Other	.23	.22	.14
Cut Point 1	-.36	.24	.29
Cut Point 2	-3.00	-2.45	-2.41
Model χ^2/df	—	22.79 / 4	50.92 / 1
n	782	778	756

*** $p < .01$ ** $p < .05$ * $p < .1$ for one-tailed z test of parameter estimate

Note: Models 2 and 3 were significant improvements over previous models ($p < .01$) using -2LL ratio test of significance of new variables in model.

variables in the equation. The race effect for *time* is lower, but still significant. This means that age, health status, and source of care do not account for the racial difference in reporting better treatment.

Hypotheses 1 and 2: socioeconomic status. Model 2 introduces education and income to the baseline models for *respect* and *time*. The model chi-square shows that these variables improve the models over the baseline models ($p < .01$). This set of variables generally has the relationship to the dependent variable predicted by the bivariate analysis. The model predicting rating on *time* shows that increased income results in higher rating of healthcare provider and that education has little additional effect on the rating. Income has the expected positive relationship to *respect*, while education appears to have a curvilinear relationship to the dependent variable, as it did in the bivariate table. Thus, the notion that failure to control for possible confounding factors produced contradictory results in earlier studies,

as found in the Hall and Dornan (1990) meta-analysis, is not supported since these models control for health status and regular source of medical care.

One potential reason for the finding that education and income have unique relationships with rating *respect* is that each variable may represent a different aspect of the rating of care. More specifically, education may be more closely correlated with expectations for treatment, and income may be more strongly related to actual quality of care. Those with the least education may have very low expectations for how much respect doctors should show them, which would push up rating of care. For those with more education, their education provides cultural capital, which would place the patient on a more equal status with the healthcare provider, who is an educated authority. This relationship does not fully support the hypothesized relationship between rating and education. In contrast to education, income may be more completely aligned with

TABLE 4. Model Predicting Rating of Time Spent with Doctor

	Model 1	Model 2	Model 3
	Odds Ratio	Odds Ratio	Odds Ratio
<i>Race</i>			
White race	1.66***	1.44**	1.43*
<i>Socioeconomic status</i>			
Education (high school = excluded)			
Less than high school		1.27	1.19
More than high school		1.03	1.05
Per Capital Household Income (low = excluded)			
Medium		1.70**	1.76**
High		2.06***	2.07***
<i>Racial concordance with doctor</i>			
Same Race Doctor			1.02
<i>Controls</i>			
Age (18-34 = excluded)			
35-54	1.29	1.13	1.13
55-64	2.03**	1.83**	1.84**
65+	1.71	1.58	1.74
Self-Reported Health (excellent = excluded)			
Very good	.69*	.68*	.63*
Good	.55***	.56***	.52***
Fair	.57*	.58*	.62
Poor	.49	.60	.51
Regular Source of Care (Dr. office = excluded)			
No regular source of care	.62**	.60**	.61**
Hospital outpatient	2.14***	1.79*	1.60
Walk-in/Community clinic	2.46***	2.75***	2.58***
Other	.33	.31	.19**
Cut Point 1	.54	.95	.93
Cut Point 2	-1.72	-1.33	1.40
Model χ^2/df	—	16.41 / 4	51.54 / 1
n	768	764	744

*** $p < .01$ ** $p < .05$ * $p < .1$ for one-tailed z test of parameter estimate

Note: Models 2 and 3 were significant improvements over previous models ($p < .01$) using -2LL ratio test of significance of new variables in model.

quality of treatment, supporting the social distance hypothesis and implying that healthcare providers provide better treatment to higher income patients regardless of education.

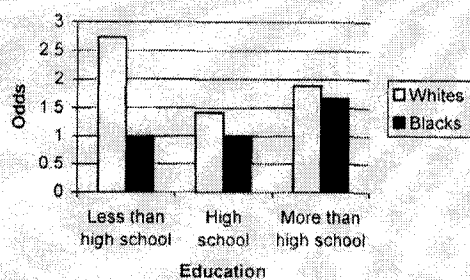
The hypothesis that income and education explain the African American-white gap in evaluation of healthcare providers is partly supported by these data. The socioeconomic status variables reduce the coefficient for race by 24 percent in the model predicting *respect* and by 28 percent in the model predicting *time*. These results, which are similar for both measures of healthcare experience, suggest that the lower average socioeconomic status of African Americans explains a portion of whites' better experience with healthcare providers.

The hypothesis that there is an interaction between race and socioeconomic status does not receive decisive support. The interactions between race and income, and race and education are not significant in the model predicting *time*, and the race and income interaction is not significant for *respect*. The one significant

interaction is between race and education in the model predicting *respect*. Figure 1 graphically represents the relationship among education, race, and reporting excellent *respect* predicted by the regression model. While the figure supports the idea that at similar levels of education African Americans report worse treatment, the more interesting point is that the least educated whites are the most likely to rate their doctors excellent on treatment with dignity and respect. This difference may be due to a relationship between lower education and reduced expectations for treatment that exists among whites but not African Americans. That is, the least educated whites may have unique expectations or methods for evaluating respect from healthcare providers.

Hypotheses 3 and 4: racial concordance. Model 4 tests the hypothesis that racial concordance improves rating of healthcare providers by introducing the indicator for a same-race doctor. Overall, the model chi-square values, preferable to the z test for these

FIGURE 1. Odds of Reporting Excellent Respect by Race and Education



models, indicate that racial concordance is significant in both models ($p < .01$). The likelihood of someone with a doctor of their race reporting excellent *respect* is 1.4 times greater than for someone with a doctor of another race. In contrast, the effect of racial concordance is negligible for *time*. Including the odds of having a doctor of one's own race reduces the coefficient for race by nearly 17.5 percent on *respect*, but leaves the race coefficient for *time* virtually unchanged. These findings indicate that racial concordance not only increases the probability of reporting better treatment with respect, but also explains part of the reason that whites tend to be more satisfied than African Americans with their care.

The interaction hypothesis posits that the negative effect of having a different race doctor is greater for African Americans than whites. The models that introduce the interaction between the variables finds that the effect is not significant ($p > .1$) for *respect* or *time*. African Americans' and whites' rating of their care is similarly influenced by having a doctor of their race.

DISCUSSION

In this paper, I assess the extent to which social distance accounts for the gap between African Americans and whites in evaluation of healthcare providers. Overall, I find that social distance from doctors does impact African Americans' and whites' evaluations of their medical care. While higher socioeconomic status predicts higher rating of both respect shown by healthcare provider and time spent with healthcare provider, racial concordance plays a meaningful role only in predicting evaluation of respect.

The results also indicate that average group differences in socioeconomic status between African Americans and whites explain a portion of the difference in evaluation of care. The effect may be due to both unequal treatment by healthcare providers and race and education differences in the evaluation of care. These findings deserve further attention since they have the potential to affect patient behavior. The social distance hypothesis would lead to more analysis of the patient-healthcare provider relationship. Researchers should also consider factors that cannot be held constant in this model and are related to income, like type of health insurance coverage, which may also influence the interpersonal relationship between healthcare providers and patients.

Support is also presented for the hypothesis that racial concordance affects rating of healthcare providers. Having a doctor of one's race accounts for a portion of the statistical variation between African Americans and whites on rating the respect shown by their healthcare provider. This finding points out one of the subtle ways that race can function in the patient-healthcare provider relationship, which will be essential for moving forward in research on race and the provision of medical care. In particular, racial differences in the level of respect shown by healthcare providers and racial differences in ways of showing respect may contribute to the relationship between racial concordance and rating of respect. Conceptions of racism and discrimination that exclude this aspect of inter-racial interactions may miss an important dimension of the patient-healthcare provider relationship.

There are clear practical implications for these findings. The central role that having a socially similar healthcare provider plays in explaining the racial gap in healthcare experience has implications for medical education. Examination of medical school enrollment suggests that change is not imminent. The proportion of African Americans in medical school is well below the proportion of African Americans in the population (Petersdorf et al. 1990; Barzansky, Jonas, and Etzel 1999). As race-based affirmative action policies are removed, the proportion of African American healthcare providers may decline. In fact, the number of underrepresented minority applicants to medical schools is declining, both at schools facing challenges to affirmative action and other schools as well (Carlisle and Gardner

1998). Potential class-based affirmative action strategies have yet to gain favor, but have received recent attention as race-based policies are increasingly challenged (Magnus and Mick 2000).

The results also emphasize the effect of social distance in healthcare interactions. The class- and race-related social distance that affects patient experience are potentially shaped by the healthcare context as well as expectations based on interactions and prejudices from daily life. Better training of healthcare providers could reduce this tension, but more broad changes in the nature of racial beliefs and organization of life are probably required for real improvement in the healthcare experience of African Americans. Until that time, future research should continue to pursue how social distance might affect other factors like trust and quality of the communication between patients and healthcare providers.

As with most research, there are limitations to the data and analyses. These data come from a single metropolitan area, the Detroit area, which limits the study's generalizability. Experiences of rural Americans or people in different geographic regions may vary where race relations and the provision of healthcare differ. More research on how social distance affects healthcare interactions is needed to explicate the findings presented here and to ultimately improve the delivery of healthcare.

NOTES

1. Distribution of physicians by race based on analysis of 5 percent 1990 Public Use Micro-Sample of the U.S. Census.
2. While the focus here is on the evaluation of healthcare providers, the satisfaction literature is broad and generally includes evaluation or rating of care as well as items that ask only about "satisfaction."
3. Distribution of physicians by race based on analysis of 5 percent 1990 Public Use Micro-Sample of the U.S. Census.

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