PERCEPTION OF RACISM EXPLAINS THE DIFFERENCE BETWEEN BLACKS' AND WHITES' LEVEL OF HEALTHCARE TRUST

Objective: To test the hypothesis that the level of healthcare trust does not differ between Blacks and Whites.

Design: Cross-sectional telephone-based survey.

Methods: This study recruited low-income residents of Miami-Dade and Duval counties in Florida by using random-digit dialing (RDD). One thousand and five residents participated; however, analyses were limited to Black (n=550) or White (n=374) respondents. Trained interviewers used a structured questionnaire to obtain information about respondent demographics, trust in health care, perception of racism, and access to care.

Results: Black respondents included fewer males (P=.0146) and younger subjects $(P \le .05)$; otherwise, they were similar to White respondents. Compared to Duval County respondents, Miami-Dade respondents were younger (\leq .05), richer (\leq .05), and mostly males (P=.0355). Blacks perceived more racism than did Whites (P<.0001). Healthcare trust differed by race and respondents' county (P < .0001). The proportion of variance in healthcare trust explained (R^2) by race was 2%. Introducing perception of racism into the model eliminated differences in trust between White and Black respondents. Overall, the model explaining healthcare trust accounted for 21.2% of the variance in trust; the model adjusted for respondents' county, demographics, access to care, and liking treatment during routine appointment.

Conclusion: This study observed that perception of racism accounted for the residual differences in healthcare trust between Whites and Blacks; therefore, healthcare distrust may not be an attribute of Blacks. Respondents' experience with the healthcare system accounted for most of the difference in trust. (*Ethn Dis.* 2006;16:792–798)

Key Words: African Americans, Ethnicity, Prejudice, Professional-Patient, Race Relations, Social Psychology, Trust

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INTRODUCTION

Trust in the healthcare setting encompasses both interpersonal and system trust.¹⁻³ Many of the studies on trust have focused on interpersonal trust; trust in physicians. Findings from those studies are ambivalent on whether Whites were more trusting than racial minorities were, including Blacks. 1,4-12 In one review, apart from age, race and other patient characteristics did not influence trust.6 Other studies have reported similar findings; Blacks trusted physicians and hospitals as equally as Whites did.^{1,5} However, some studies,^{4,7,10,11} including those based on nationally representative samples, 8,9,12 report opposite findings; namely, that Blacks trust physicians, hospitals, and the medical establishment less than Whites do. Nevertheless, quantitative analysis of those factors that account for differences between Blacks' and Whites' level of healthcare trust is lacking.

Trust may not be a racial attribute. Patients build their trust in physicians, and presumably other components of the healthcare setting, iteratively from experience. However, those who have had a limited experience with a regular physician may depend on their trust in other components of the healthcare setting to make trust calculations. As a group, fewer African Americans than Whites depend on a personal

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physician for their regular care. ¹⁴ In general, patients' trust in their own physicians is higher than it is in other physicians or the hospital. ^{4–6}

Personal experiences and other situational factors contribute to trust. 6,15 African Americans reportedly often still see or experience some type of discrimination whenever they encounter Whites, who are more likely to think of overt acts of racism as rare occurrences.16 Until the second half of the 20th century, African Americans received their health care from racially segregated facilities. 14,17 That African Americans often distrust the healthcare system is widely reported; 16-19 however, no study has examined how access to a personal physician, experience of the treatment encounter, or perception of racism influence the difference between Blacks' and Whites' level of trust.

This study explores the proposition that all patients enter the treatment encounter with the ability to trust.⁶ Therefore, we propose that Blacks' healthcare distrust arises from their receiving care from sources that do not enhance their ability to build trust in the healthcare system, their experience during routine treatment encounters, or

their perception of racism. This study tests the null hypothesis that the level of trust did not differ between Blacks and Whites.

MATERIALS AND METHODS

Data Source

The University of Florida Health Sciences Center's institutional review board approved this study. This cross-sectional survey, which is part of an ongoing study to reduce racial disparities in oral cancers in Florida, assessed the knowledge and attitudes about preventive health care in two of Florida's metropolitan counties, Duval and Miami-Dade.

This study recruited respondents by using a random-digit dialing, or RDD, telephone-sampling database (GENE-SYS, Marketing Systems Group, Fort Washington, Pa.). The telephone banks we targeted represented low-to-moderate income households according to US Census tract data. The telephone banks, which are geo-coded to census tracts, permit links to corresponding census and Current Population Survey data for those census tracts. Therefore, we were able to isolate telephone banks in a particular county where we expected to find a minimum proportion of Black households. The primary goal of the sample design was to enable us to make a comparison between White and Black respondents. Therefore, this study targeted those census tracts that maximized the probability of contacting Black households.

The University of Florida Bureau of Economic and Business Research conducted the telephone-based survey; phone numbers for RDD were generated with Win-CATI (Version 4.1, Sawtooth Technologies, North Brook, Ill.). Each interview lasted ≈20 minutes, and the mean yield was .7 completed surveys per hour. A total of 9,154 telephone numbers were generated, but 5,494 had technical problems, no signal, or con-

sistently busy signal. In addition, 1,106 telephone numbers belonged to businesses, institutions, or group quarters. Three hundred fifty-three telephone numbers reached households without potentially eligible respondents; 349 telephone numbers reached households in which physical, mental, or language barriers made the potential respondents ineligible to participate; and 847 people refused to participate or complete the survey. Interviewers finalized a number as unproductive after calling the number a maximum of 10 times. In all, this study randomly recruited 1,005 subjects aged ≥18 years (403 men and 602 women, 518 of them from Miami-Dade County and the other 487 from Duval County).

Interviewers used a 70-item instrument to inquire about trust in the healthcare system, concerns about AIDS, attitudes about willingness to participate in cancer screenings, perceived racial discrimination in the healthcare system, medical and dental care attendance patterns, and respondents' demographics. This study compiled questionnaire items from multiple sources: prior surveys, previously published studies, and items created for this survey. Approximately 20% of the interviewers were Black, and 60% were female.

Respondents were asked, "Are you Hispanic or Latino?" and then asked, "What is your race? Would you say: White; Black or African American; Asian or Pacific Islander; American Indian or Native American; or other?" We excluded data obtained from respondents who reported they were Hispanic or Latino and included only those who identified their race as Black/African American (n=550) or White (n=374). Additional details about the survey are published elsewhere.²⁰

Study Variables

Dependent Outcome - Trust

This study assesses the interpersonal dimension of trust in the healthcare

setting by using a composite index derived from six scales. For three of the scales, respondents' used a five-point Likert response scale to rank how much they trust that all patients receive the best care from: 1) physicians and dentists; 2) people who provide medical and dental care; and 3) their own physicians and dentists. For the remaining three, participants used a two-point ordinal scale to respond to items inquiring about respondents' trust in other people. This study developed the composite indicator of healthcare trust by adding respondents' scores across the five items.

Independent Factors

Race. Respondents stated the racial group they belonged to during the telephone interview. In this study, race describes the grouping of peoples based on their own subjective perception of the racial group to which they belong.²¹ For the purposes of this paper, the term Black refers to those who self-identified as non-Hispanic Black/African American and White for those who self-identified as non-Hispanic White.

Perception of Racism. Six Likertscaled items inquired about how likely African Americans and Whites were to receive the same type of treatment during cancer screening. Respondents stated the extent they strongly agreed, agreed, disagreed, or strongly disagreed with four statements read to them: "When going for a cancer screening, African Americans are as likely as Whites are to have a thorough and careful examination"; "Physicians and dentists are as likely to practice good cleanliness when treating African American patients as White patients"; "African Americans in the United States wait the same amount of time as Whites do to see a doctor or dentist"; and "Physicians or dentists consider symptoms reported by African Americans as important as those reported by Whites."

For the remaining two items, respondents stated whether they believed the statements read to them to be true all of the time, most of the time, some of the time, rarely, or never. The statements were "How often do you believe that physicians and dentists provide the same information about their cancer treatment to African Americans as to Whites?" and "How often do you believe that African Americans in the United States have as good a result from cancer treatment as Whites?" To create the composite index, we first dichotomized the responses as strongly agreed (or stated "all of the time") scored as 1 and all other response ranks scored as 0 by using an approach similar to that of Saha et al.²² Then, we summed each individual's scores across all six items. Higher scores indicate greater perceived racial equality in providing care.

Demographic Covariates. This study includes data on some other covariates of trust⁶: 1) sex (male=1 and female=2); 2) age in years; 3) employment status (employed=1 and unemployed=2); 4) level of education (less than high school graduation=1, high school graduation=2, and more than high school=3); and 5) household income in dollars. (We used median household income for the respondent's census tract, based on the 2000 US Census as a proxy for each respondent's household income.) We included respondents' county of recruitment as an additional covariate since we recruited respondents from two different counties.

Access to Care. Respondents stated whether they had a usual source of health care or advice; next, they stated where they usually obtain their health care. For this study, we identified respondents as having an office-based practitioner as their usual source of care (scored as 1) if they reported usually receiving care from a health center, doctors' office, or health maintenance

organization. We scored all others, including those who did not have access to a regular source of care, as 0.

Experience During Treatment Encounter. Interviewers asked respondents how frequently they liked the way doctors and dentists treat them during their routine appointments. We dichotomized respondents' responses as either liking treatment all of the time (scored as 1) or not (scored as 0).

Statistical Analysis

We entered and analyzed all data by using SAS version 9.1 for Windows (SAS Institute Inc., Cary, NC). We used the PROC MEANS, PROC FREQ, and PROC UNIVARIATE SAS procedures to conduct descriptive analyses and Cronbach alpha to examine the internal reliability of the composite indexes; ie, perception of racism and healthcare trust. For bivariate analyses, we used the Kruskal-Wallis test, the unbalanced analysis of variance (ANOVA) test, the Spearman correlation (for ranked variables), and the χ^2 test (for categorical variables). We explored the unadjusted effect of race on healthcare trust and other covariates in a correlation matrix. The analysis of covariance (ANCOVA) tested the adjusted influence of race on healthcare trust in a series of models. We considered a correlation significant if it had a two-tail P value of $\leq .05$. We considered a covariate, including race, to have contributed to the model explaining trust if it significantly $(P \le .05)$ improved the fit of the model, ie, if it increased the model's R^2 .

RESULTS

Characteristics of Respondents

In general, 95% or more of the 924 respondents answered each of the items; therefore, we imputed missing items by using the value of the most frequently occurring class interval.²³ Black respon-

dents made up 59.5% of the respondents. Income, education, employment status, and source of usual care were similar for Black and White respondents (P≥.10); their average annual household income was \$30,241, 51.6% had graduated from high school, those employed made up 64.6% of the respondents, and 67.9% usually received their health care/advice from an office-based practitioner. However, the two groups were dissimilar in some aspects. Men made up 43.1% of White respondents, 8.0% higher than the proportion for Black respondents (P=.0146). The mean age for Black respondents was 4.5 years lower than that for Whites (43.2 years vs 47.7 years; P value of Tukey honestly significantly different [HSD] test \leq .05).

Few differences existed between respondents recruited from the two counties. The average household income for respondents recruited from Miami-Dade County and Duval County was \$31,047 and \$29,449 (*P* value of Tukey HSD test ≤.05), respectively. Miami-Dade County respondents were on average 5.3 years younger than Duval County respondents were (42.4 years vs 47.7 years; *P* value of Tukey HSD test ≤.05). Men made up 41.7% and 35.0% of respondents recruited from Miami-Dade County and Duval County, respectively

Perception of Racism

Spearman correlation between each of the six items used to create the composite index of racism ranged from .28 to .50 (P<.0001). The composite index had a standardized Cronbach's alpha of .77. The median number of statements that respondents strongly agreed with (or stated "all of the time") was five; \geq 75% of the respondents strongly agreed with (or stated "all of the time") all six statements while \geq 25% strongly agreed with (or stated "all of the time") three or fewer statements.

Table 1. Effect of race on healthcare trust: unadjusted and adjusted for respondents' perception of racism and county of recruitment

Model Characteristics *Sums of squares (R ²)	Effect of Race on Healthcare Trust									
	Unadjusted 77.93/(.020) Step I			Adjusted for Perception of Racism 314.94/(.080) Step II			Adjusted for Perception of Racism, and County of Recruitment			
							367.23/(.094) Step III			
1=Race	.59	4.34	<.0001	.09	.64	.5253	.13	.90	.3672	
2=Perception of racism				.32	7.81	<.0001	.31	7.56	<.0001	
3=County							48	-3.69	.0002	
Adjusted mean trust score										
Blacks	18.10		<.0001	18.30		.5253	18.28		.3672	
Whites	18.69			18.39			18.41			

^{*} Total sums of squares=3,896.65.

Blacks significantly ($\rho = -.4646$; P<.0001) reported a higher level of racism than did Whites (Table 1); ie, they strongly agreed (or stated "all of the time") with fewer of the six statements than did Whites. The median number of statements Blacks and Whites strongly agreed with (or stated "all of the time") was 4 and 6, respectively. Respondents' perception of racism was unrelated to their county, having or not having access to an officebased practitioner, sex, and level of education (P≥.1679). In addition, respondents' perception of racism was unrelated to their household income (P=.0669). However, older respondents perceived less racism than younger respondents did (P=.0002), and employed respondents perceived less racism than the unemployed did (P=.0022).

Healthcare Trust

All the six items used to create the composite health trust scale demonstrated significant correlations with each other: rho ranged from .10 to .57 ($P \le .0024$), and the standardized Cronbach's alpha for the index was .667; dropping any one of the six items resulted in only a minor change from .685 to .620. Respondents' level of healthcare trust differed according to

their race and county of recruitment; Whites had higher trust scores than did Blacks, and those recruited from Duval County had a higher trust score than did those recruited from Miami-Dade County (P<.0001). In addition, trust increased with respondents' age (P < .0001) and education (P = .0002). Respondents who had an office-based practitioner as their source of regular health care were more trusting than those who did not (P<.0001). However, perceiving racism in health care and not liking treatment during routine medical/dental appointments reduced respondents' level of trust (P<.0001).

Perception of Racism Eliminated Racial Disparity in Healthcare Trust

Tables 1 and 2 summarize the unadjusted and adjusted effects of race on healthcare trust. Unadjusted for confounding (step I), race explained 2.0% of the variance in healthcare trust. Blacks significantly had lower healthcare trust scores than did Whites ($P \le .0001$); the mean score was 18.1 (standard deviation [SD]=2.0) for Blacks and 18.7 (SD=2.1) for Whites (Table 1). However, after including perception of racism in the model, the racial difference in trust score disappeared (P = .5253). In addition, the proportion of variance explained by the model

including race and perception of racism increased by four times to 8.0%; in this step, perception of racism accounted for all the variance in trust explained by the model.

Other Covariates Increased Respondents' Level of Healthcare Trust

To assess the effects of other covariates on respondents' level of healthcare trust and the racial difference in healthcare trust, we included other covariates into the model in a stepwise fashion. First, we adjusted for the effect of respondents' county of recruitment, and we observed that the similarity between White and Black respondents' levels of trust remained (P=.3672). However, the percentage of the variance in healthcare trust explained increased by 1.4%, from 8.0% to 9.4% (step III -Table 1). Including respondents' demographics in the model had similar effects; ie, it increased the R^2 by 2.8% to 12.2%, and difference between White and Black respondents' level of trust remained insignificant (step IV -Table 2). Only age and education influenced the percentage of variance explained; healthcare trust scores increased as respondents' age or level of education increased. Similarly, including access to care in the model increased the model's R^2 by an additional 1.6%

^{1 (}Race [White=1; Black=2]); 2 (Perception of racism [number of statements about unequal treatment strongly agreed with: 1 to 6]); 3 (County [Miami-Dade=1; Duval = 2]).

Table 2. Effect of race on healthcare trust: unadjusted and adjusted for respondents' county of recruitment, demographic characteristics, usual source of care, treatment during routine appointment, and perception of racism

		Adjusted Effect of Race on Healthcare Trust									
Model Characteristics *Sums of squares/(R ²) Source/coefficients		Adjusted for Respondents' Perception of Racism, County of Recruitment and Demographics			Demographics, and Usual Source of Care			Demographics, Usual Source of Care, and Treatment During Routine Appointments			
		·	476.16/(.122	2)	536.89/(.138)			825.46/(.212)			
		Step IV					Step VI				
		β	t value	P value	β	t value	P value	β	t value	P value	
1=Race		.05	.37	.7095	.06	.41	.6843	.14	.99	.3218	
2=Perception of racism		.32	7.90	<.0001	.32	7.94	<.0001	.28	7.40	<.0001	
3=County of recruitment		39	-3.01	.0027	39	-3.00	.0028	31	-2.51	.0121	
4=Sex		04	29	.7693	.06	.44	.6589	.12	.98	.3290	
5=Age		.25	3.17	.0016	.20	2.47	.0138	.18	2.31	.0210	
6=Education		.35	3.96	<.0001	.29	3.22	.0013	.26	3.09	.0020	
7=Employment status		26	-1.81	.0707	24	-1.67	.0944	20	-1.50	.1349	
8=Income		.00	.02	.9849	00	37	.7125	00	58	.5611	
9=Usual source of care					.58	4.06	<.0001	.44	3.19	.0015	
10=Treatment								-1.56	-9.26	<.0001	
Adjusted mean	Blacks	18.31		.7095	18.32		.6843	18.30		.3218	
	Whites	18.36			18.38			18.43			

^{*} Total sums of squares=3,896.65.

(step V – Table 2). The effect of including treatment during regular appointments in the model had a more dramatic effect; R^2 increased by 7.4% to 21.2% (step VI – Table 2). Racial disparity in the level of healthcare trust remained insignificant.

DISCUSSION

This study compared healthcare trust in Black and White respondents recruited from low-to-medium income households in Miami-Dade County and Duval County. We tested the hypothesis that Blacks were equally as trusting as Whites were. This study assessed healthcare trust by using a composite index derived from six items that inquired about interpersonal trust. We failed to reject the null hypothesis that Blacks and Whites had the same level of healthcare trust. Consistent with some previous findings, 4,8-12 we observed that Blacks scored lower than Whites did on

the composite healthcare trust scale. However, we found that perception of racism explained the apparent difference between the two groups. Some research shows that African Americans' distrust arises from racial prejudice and their experience during medical encounters 16–19; and our results support this proposition. In this study, we did not find trust to have been a racial attribute of respondents but a result of their experience. In the absence of racism in health care, Black and White respondents in this study would have had the same level of healthcare trust.

In general, factors related to respondents' experience accounted for most of the variance in their level of healthcare trust. Of the respondents' personal attributes included in the model, only their age and level of education influenced healthcare trust in this study, albeit minimally so. In this study, including perception of racism and experience during routine appointments accounted for the most increment in the

proportion of variance in healthcare trust explained. Our study shows that interpersonal interactions significantly influenced healthcare trust in this study. Other studies^{1,2,6,13,17–19} have also observed that situational factors related to the delivery of care were more important in explaining healthcare trust than patients' personal characteristics.

The level of trust in a community was dependent on the community's social capital, measured as social trust, community engagement, and self-esteem. This study observed that the levels of healthcare trust differed between respondents recruited from Miami-Dade County and Duval County. The difference remained, even after adjusting for other factors, ie, respondents' experience, access to care, perception of racism, and demographics.

Trust

This study had some limitations, including measurement issues that may influence our findings. Unlike other

^{1 (}race [White=1; Black=2]); 2 (perception of racism [number of statements about unequal treatment strongly agreed with: 1 to 6]); 3 (county [Miami-Dade=1; Duval=2]); 4 (sex [male=1; female=2]); 5 (age in yrs [1=18–24; 2=25–39; 3=40–64; and 4=65+]); 6 (education [<high school=1; high school=2; >high school=3]); 7 (employment [currently employed=2; unemployed=1]); 8 (income [\$]); 9 (usual source of care [office-based practitioner=1; non-office-based practitioner=0]); 10 (treatment [liked treatment during routine appointments "all of the time"=1; not "all of the time"=0]).

studies, 1-3,8,11,20 the composite of healthcare trust used in this study consists of items exploring the interpersonal dimension of healthcare trust. The composite index did not inquire about system trust. However, because trust is transferable between objects,² a general measure of healthcare trust is appropriate for our study population, some of whom lack continuous access to care. The finding in this study that respondents' experience accounted for most of the variance in trust may be due in part to the way we have conceptualized trust. Healthcare setting trust may be directed at many objects, 1,4-6,24-26 and difference in trust between Blacks and Whites may not necessarily follow the same pattern. For example, compared to Whites, Blacks are more distrusting of physicians and hospitals but more trusting of health insurance plans.4

The measurement of racism in this study, as in many other studies,²⁷ is somewhat limited. Although the measure was multidimensional, it was situational in that it only inquired about perception of racism during the receipt of cancer screening. It did not distinguish the nature of racism.^{27,28} In addition, the level of discrimination experienced is not necessarily uniform for all Blacks; sex, social class, and skin tone may influence the extent of discrimination. 29-31 Therefore, the heterogeneity of the Blacks sampled will determine the magnitude of reported racism. This study targeted households in low-to-moderate income census tracts in two metropolitan counties in Florida; therefore, the extent to which our findings are generalizable to other regions or socioeconomic strata is uncertain.

Finally, this study included all Blacks, African Americans, and those who freely emigrated or those whose ancestors freely emigrated from Africa or the Caribbean. Data from the 2003 American Community Survey showed that Black/African American persons who had African or West Indian ancestry made up 7.6% and 1.8% of

Overall, the absolute difference between Blacks' and Whites' level of healthcare trust was small... However, ... small differences in medical skepticism significantly influenced medical outcomes.⁸

Miami-Dade County and Duval County population, respectively. However, during the 2000 Census, the proportion of the respective counties who were Black or African American persons was 20.3% and 27.8%, respectively. We made no distinction between these groups of people. Therefore, findings should be interpreted cautiously.

As in other studies, our respondents had a high level of trust. 5,6,8,9,12,25 Overall, the absolute difference between Blacks' and Whites' level of healthcare trust was small, less than one unit on our composite scale. However, the difference may be clinically relevant because small differences in medical skepticism significantly influenced medical outcomes.8 Our findings suggest that elimination of racism from health care can remove the difference in trust between Blacks and Whites. This finding supports the proposition that all patients enter the treatment encounter with the ability to trust.⁶ Therefore, patients' experience within the healthcare system may continue to determine how they make trust calculations. In addition, trust may vary between communities. Our study suggests that personal experience and communitylevel factors explain trust levels.

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