Immigrant Perceptions of Discrimination in Healthcare: the California Health Interview Survey 2003

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ABSTRACT (Word count: 248)

Background: US healthcare disparities may be due in part to differential experiences of discrimination in healthcare. Previous research about discrimination has focused on race/ethnicity. Because immigrants are clustered in certain racial and ethnic groups, failure to consider immigration status could distort race/ethnicity effects.

Objectives: We examined whether foreign-born persons are more likely to report discrimination in healthcare than US-born persons in the same race/ethnic group, whether the immigration effect varies by race/ethnicity, and whether the immigration effect is "explained" by sociodemographic factors.

Research Design: Cross-sectional analysis of the 2003 California Health Interview Survey. Logistic regression models use replicate weights to adjust for non-response and complex survey design.

Subjects: 42,044 adult respondents.

Outcome Measure: Respondent reports that there was a time when they would have gotten better medical care if they had belonged to a different race or ethnic group.

Results: 7% of Blacks and Latinos and 4% of Asians reported healthcare discrimination within the past 5 years. Immigrants were more likely to report discrimination than US-born persons, adjusting for race/ethnicity. For Asians, only the foreign-born were more likely than Whites to report discrimination. For Latinos, increased perceptions of discrimination were attributable to sociodemographic factors for the US-born, but not for the foreign-born. Speaking a language other than English at home increased discrimination reports regardless of birthplace; private insurance was protective for the US-born only.

Conclusions: Immigration status should be included in studies of healthcare disparities because nativity is a key determinant of discrimination experiences for Asians and Latinos.

Keywords: Immigrants. Discrimination. Health disparities.

Introduction

The 2002 Institute of Medicine (IOM) report *Unequal Treatment* summarized research on racial and ethnic disparities in healthcare, defined as "racial or ethnic differences in the quality of healthcare that are not due to access-related factors or clinical needs, preferences, and appropriateness of intervention." [1] The report documented extensive disparities in healthcare, however the mechanisms underlying these disparities are less well understood and are likely multi-factorial. One possible mechanism may be systematic bias or discrimination within the healthcare context, which would decrease quality of care, or patient perceptions of discrimination, which would influence care-seeking behavior and adherence. Studies have documented an association between perceptions of racial/ethnic discrimination and a delay in seeking treatment [2-4], lower adherence to treatment regimens [4,5] and lower rates of follow up [4]. The great majority of research on perceptions and experiences of discrimination in healthcare has focused on African Americans [3,6-21], and there is a "relative paucity" of research on other groups [22].

Research about discrimination in healthcare has largely been organized around race/ethnicity, and there is less information about whether immigrants to the US are more likely to perceive or experience discrimination than the US-born. Clearly, immigrants face numerous structural and linguistic barriers to accessing healthcare in the US [23]. Because immigrants are clustered in certain racial and ethnic groups, failure to account for immigration status could distort the measurement of race/ethnicity effects on discrimination. Immigration status could also be an effect modifier, with different impact for different racial or ethnic groups. In this study, we use data from a large, population-based sample of California residents to investigate whether foreign-born persons are more likely to report racial/ethnic discrimination in healthcare than US-

born persons of the same race/ethnicity, whether foreign birth has the same impact on discrimination perceptions for persons in different racial and ethnic groups, and whether the immigration effect is "explained" by language use, insurance, source of care, or socioeconomic factors.

Methods

Data

We used cross-sectional data from the 2003 California Health Interview Survey (CHIS). CHIS is a population-based telephone survey of 42,000 civilian households, selected through random digit dialing, with oversampling of Vietnamese and Koreans (by surname) and African Americans and Latinos (from Alameda County). CHIS is designed to provide population-based estimates for California's overall population and its major racial/ethnic groups.

One adult per household was randomly selected and asked to give verbal consent. Respondents were interviewed in English, Spanish, Mandarin, Cantonese, Vietnamese, or Korean. Major content areas for the 2003 survey include health-related behaviors, health status and conditions, health insurance, access to healthcare, social support, and neighborhood environment. Data were collected between August 2003 and February 2004. For the CHIS adult sample, the adult interview response rate was 60 percent [24], comparable to telephone surveys carried out by the National Center for Health Statistics.

CHIS 2003 data are weighted to account for the complex sample design and adjust for non-response and households without telephones. The final CHIS 2003 estimates are consistent with

the 2003 California Department of Finance Population Projections of the state population [25]. The sample for this analysis was restricted to adults, 18 years and older.

Dependent variable

The main dependent variable was self-reported perception of discrimination in a healthcare setting within the past 5 years. Adult respondents were first asked “Was there ever a time when you would have gotten better medical care if you had belonged to a different race or ethnic group?" and if the answer was yes, they were then asked when that last happened. The “lifetime” question is very similar to a question asked in the Commonwealth Fund 2001 Health Care Quality Survey [6]. We present the percentages reporting lifetime and recent 5-year discrimination, but focus on five-year discrimination in the analysis because recent experiences reflect the contemporary health care environment and because the foreign-born have had fewer years of contact with US healthcare relative to their age than have the US-born.

Independent variables

The main independent variables were self-reported race/ethnicity and immigration status. Individuals were classified as non-Hispanic White, Latino, Black/African American, Asian, Native American, or Other. The Other category includes Native Hawaiians, Pacific Islanders, those who identified as “other race” or multiple races. Although the tables include the “Other” race group, they will not be discussed in the text because of heterogeneity. US-born individuals were those born in the US, Puerto Rico, or other US territories. All others were classified as foreign-born. There are very few foreign-born Native Americans, and the unstable estimates for this group will also not be discussed.

Demographic variables included marital status, sex, and age, categorized as 18-29 years, 30-39 years, 40-49 years, 50-64 years, 65+ years.

Socioeconomic status (SES) was measured by education and poverty income ratio (PIR). Education was categorized as: “less than high school,” “high school graduate,” “some college,” and “college graduate.” PIR is a ratio where the numerator is a family’s household income and the denominator is the appropriate poverty threshold (federal poverty level -- FPL) given the family’s size and composition. Poverty thresholds are revised each year by the Census Bureau. Thus a FPL of less than 100% indicates that the household is living below the poverty threshold. PIR was categorized as: “0-99% of FPL,” “100-199% FPL,” “200-299% FPL” and “300% FPL and above.” Education and PIR were each entered as single ordinal variables in the regression models.

Access to care was represented by health insurance and usual source of care. Insurance status was categorized as “Currently being insured by employer or private insurance,” “Currently being insured by Medicaid and/or Medicare”, or “Currently uninsured.” Usual source of care was categorized into seven levels: “Doctor’s office/HMO/Kaiser,” “Community clinic, government clinic, community hospital clinic,” “Emergency room,” “Urgent care”, “Some other place”, “No one particular place,” “No usual source of care.” Insurance and source of care are entered into models as sets of indicator variables.

Language use at home was categorized as, “Speaks only English at home,” “Speaks English and another language at home,” “Does not speak English at home.”

For the foreign-born, years in the US are reported in categories, which we group into three levels: in the US less than 5 years, 5 to 14 years and 15 years or longer.

We did not adjust for self-reported health because of concerns that the question does not elicit comparable information from non-Hispanic Whites, Latinos, and Asians [26-28]. Instead, we accounted for differences in illness burden by including self-report of a history of a serious chronic disease (asthma, diabetes, high blood pressure, heart disease, heart failure, epilepsy, or cancer).

Statistical methods

All estimates and analyses (except Table 1, which shows actual numbers of respondents) were weighted using replicate weights, provided by CHIS, to adjust for non-response and the complex survey design. The primary analyses are a sequential series of logistic regression models, where the outcome is reported discrimination in healthcare. All of the models are adjusted for sex, age and marital status. The first model includes the race/ethnicity groups, with Whites as the referent. The next model adds a single term for foreign birth. The third model adds a set of interaction terms between race and foreign birth. The fourth model adds controls for education and PIR. (Although few "American Indian/Alaskan Native" are foreign-born, the set of interaction terms must include all race categories.) Because persons residing in the US for less than five years have not been at risk for experiencing discrimination for the full five-year time window, we carried out a sensitivity analysis omitting them from each of these four models. We do not present the full sensitivity analysis, but describe the results in the text.

Because of collinearity between language use, race and nativity, home language use cannot be entered into the models including the interaction terms between race and nativity. We construct models stratified by nativity to explore the role of home language. These models include education, PIR, home language use, chronic disease, usual source of care and insurance. Indicator variables for duration of residence in the US are also included in the model for the foreign-born. All analyses were conducted using the svr suite of commands in STATA, which use replicate weights to account for the complex survey design (Stata Corporation, College Station, TX: 2005). This secondary data analysis was approved by the University of Chicago Institutional Review Board.

Results

The sample included 42,044 adult respondents. Table 1 presents the actual number of respondents in CHIS 2003 by race/ethnicity and nativity. Overall, 24.8% of respondents were foreign-born, but the percentage foreign-born ranged by race/ethnicity from 5.8% of African American/Blacks to 79.2% of Asians.

Table 2 presents the characteristics of the sample by race/ethnicity group. For socioeconomic variables and home language use, variation across race/ethnicity groups is substantial. The modal education category is "less than high school" for Latinos, "high school graduate" for Native Americans, "some college" for Blacks and Other race, and "college graduate" for Whites and Asians. The percentages uninsured range from 9% for whites to 34% for Latinos. Only 20% of Asians and 11% of Latinos speak English exclusively at home.

The percentage of respondents reporting that they would have gotten better medical care if they had belonged to a different race or ethnic group varied by race/ethnicity (Table 3). For all of the

race/ethnicity groups, the percentages reporting lifetime discrimination were about double the percentages reporting recent discrimination. For 5-year discrimination reports, Blacks, Latinos and Native Americans all had relatively higher rates (6-7%) that were similar to each other. Asians had somewhat lower percent reporting discrimination (3.9%) that was nonetheless much higher than Whites (1.5%).

Table 4 presents the results of four sequential logistic regression models, all adjusted for age, sex and marital status. Odds ratios are presented, and are here a good approximation of the relative proportions in these models since the positive outcome is infrequent. Model 1 shows that all of the race/ethnicity groups have significantly greater odds of reporting discrimination than Whites. Model 2 adds foreign birth to the model, and the term is highly significant. All of the race/ethnicity groups remain significantly more likely to report discrimination than Whites, but the magnitude of the effects (compared to Whites) is reduced for Latinos and Asians when foreign birth is in the model.

Model 3 adds interaction terms between race/ethnicity and foreign birth. In the interaction models (Models 3-4), the foreign birth coefficient represents the effect of being born outside the US for Whites and the race/ethnicity coefficients represent the race/ethnicity effect for the US-born. For example, the coefficient for Blacks in these models represents the odds of reporting discrimination by US born Blacks compared to US born Whites The significance of the interaction terms tests whether the foreign-birth effect is different for each race/ethnicity group from the foreign-birth effect for Whites. Among the US-born, Blacks, Latinos and Native Americans have significantly higher odds of reporting discrimination than Whites, but US-born Asians do not. The foreign-birth effect is not significant for the referent category (Whites), and

the foreign-birth effects for Blacks and Native Americans are not significantly different from the foreign-birth effect for Whites. For Asians and Latinos, however, the foreign birth effect is significantly different than it is for Whites; foreign birth greatly increases the odds of experiencing discrimination for these two groups.

Adding controls for education and PIR (Model 4) modestly reduces the magnitude of all race/ethnicity and nativity effects except for Asians.

In the sensitivity analyses, where those in the US for less than five years are omitted, all of the coefficients in Models 1 through 4 are similar to those including the full sample. For example, the odds ratio for foreign birth in Model 2 is 2.19 ($p< 0.001$) in Table 4 and 2.23 ($p<0.001$) in the sensitivity analysis (data not shown).

Table 5 presents models stratified by nativity, so that home language may be added as a covariate. Both models for the US-born and foreign-born are adjusted for access to care, home language and socioeconomic status. For both the US-born and foreign-born, speaking a language other than English at home similarly and significantly increases the odds of reporting discrimination. With language use and the other covariates in the model, duration of residence in the US is not associated with discrimination experiences for the foreign-born. With these controls in the model, US-born Latinos have similar odds of reporting discrimination to US-born whites. US-born Asians are *less* likely than Whites to report discrimination ($p=0.06$). This is not the case for the foreign-born: foreign-born Blacks, Latinos and Asians are all significantly more likely to report discrimination than foreign-born Whites after adjustment for access to care, home language and socioeconomic status. Greater education is not protective for either the US- or

foreign-born; income is strongly protective for the US-born ($p<0.001$) and also protective for the foreign-born ($p=0.03$). For the US-born, type of insurance is associated with discrimination perceptions: both publicly insured and uninsured are significantly more likely to report discrimination than the privately insured. Private insurance is not similarly protective for the foreign-born. For the foreign-born, source of usual care is associated with discrimination reports. Specifically, foreign-born persons who use the emergency room as a usual source of care are significantly more likely to report discrimination in healthcare.

Discussion

We have found that African Americans, Asians, Latinos and Native Americans in California are all more likely than Whites to report that they would have gotten better medical care if they had belonged to a different race/ethnicity group. However, it is a small minority of persons in each of these race/ethnicity groups (4% to 7%) that report such experiences in the past five years. Immigration status is a significant additional predictor of perceived discrimination and modifies the effects of race/ethnicity. The race effects are different for the US-born and the foreign-born. Among the US-born, Asian Americans are actually less likely than Whites to report discrimination. US-born African Americans and Native Americans are more likely than US-born whites to report discrimination, even after controlling for access to care and socioeconomic status. For US-born Latinos, however, the increased odds of reporting discrimination, compared to US-born Whites, are attributable to lower average socioeconomic status, worse access to care and language. For the US-born in general, socioeconomic factors, specifically higher income and private health insurance, are strongly protective against perceived discrimination.

Among Asians and Latinos, foreign birth significantly increases reports of discrimination. Among Blacks, foreign birth did not significantly increase the odds of reporting discrimination. Foreign-born Asians and Latinos have significantly greater perceptions of discrimination than foreign-born whites, and the increased odds persist after adjustment for language, socioeconomic status and access to care. Better socioeconomic status is only weakly protective for the foreign-born. These findings suggest that being foreign-born alone is a risk factor for experiencing or perceiving discrimination in healthcare. This may result, for example, from cultural differences in health beliefs that lead to conflicting expectations in the medical encounter or from structural barriers that immigrants face accessing U.S. healthcare.

The Commonwealth Fund 2001 Health Care Quality Survey, a national cross-sectional telephone survey, is the largest prior study of reported discrimination in healthcare to include sizable samples of both Latinos and Asians. Respondents were asked whether there was ever a time when they thought they would have received better medical care had they belonged to a different race/ethnic group. [6] Sixteen percent of African Americans, 15% of Latinos, 13% of Asians and 1% of Whites reported this perception. The greater probability for African Americans, Latinos and Asians relative to Whites persisted after adjustment for socioeconomic status, self-rated health and source of care. The authors reported that controlling for primary language and nativity did not affect findings, and so they were not included in the final models. The percentages reporting lifetime discrimination in CHIS 2003 are similar for African Americans and Latinos (13-14%), but the percentage of Asians reporting lifetime discrimination is lower in CHIS (7.4%, 95% CI 6.3-8.4). The other point of difference is our finding in CHIS of significant effects for language and nativity. There are several possible explanations for these differences between the surveys. First, the lower reported discrimination for Asians in California may reflect a true geographic effect. The substantial Asian presence in California may reduce

discrimination experiences there relative to the rest of the country. Another possibility is that the Asians in the Commonwealth study were on average in the US longer than the Asians in CHIS, and thus had more opportunities to interact with the healthcare system over the course of their lifetimes. Ngo-Metzer and others reported that 90% of the Asian Americans in the Commonwealth survey spoke English as their primary home language [29], which would be consistent with longer average duration in the US. Finally, there may not be a difference between the studies concerning the effects of nativity and language because the Commonwealth study focused on whether these were confounders of the race effects. We also found that including foreign birth as a confounder did not greatly alter the evidence of race/ethnicity effects (Table 4, Model 2), but nativity was an effect modifier of race/ethnicity. It is only when we stratified by nativity that we found that adjustments for socioeconomic status and source of care "explained" the race/ethnicity effect, but just for US-born Latinos.

There are several important limitations to this study. First, these are California data. While California is the best state for this study in terms of ethnic heterogeneity and representation of the foreign-born, that very heterogeneity may make the experience of being an immigrant or non-White different in California than the rest of the country. The healthcare environment in California is also different than most states because of the large HMO presence. Second, we use the aggregate Asian race category rather than more specific Asian subgroup classification (for example, Korean). Although CHIS 2003 data allow the partial disaggregation of the Asian population by subgroup, there are too few reports of discrimination within ethnicity-nativity groups to create models with interaction terms for each ethnic group. Third, this study relies on self-reports of discrimination, and the accuracy of self-reports may vary by race/ethnicity, immigration, and language. However, CHIS did conduct interviews in six languages. We are unaware of validity or reliability studies of the discrimination question, and

the question itself may be ambiguous because respondents must infer the referent group, which is not explicitly stated. For non-Whites, Whites may be the obvious comparison group, but for Whites, particularly ones without a strong ethnic identity, the referent may be unclear. In addition, there may be a selection bias because CHIS (like the Commonwealth Fund 2001 Health Care Quality Survey) is a telephone survey. Finally, a richer measure of discrimination would also include outcomes, such as receipt of recommended screening or procedures, follow-up care, or mortality following an event or diagnosis. However, perceptions have been shown to affect behavior [2-5], and perceptions may exert a stronger effect than outcomes on utilization.

This study underscores the complexity of experiencing discrimination in healthcare. Prior studies have focused on race/ethnicity. Race is a key factor for African Americans and Native Americans: these groups are significantly more likely to report discrimination than Whites, even after taking into account their worse access to care and socioeconomic status. Higher socioeconomic status is, however, highly protective for the US-born. For all persons, speaking a language other than English at home increases reports of discrimination, even if some English is spoken at home. For Asians and Latinos, though, race/ethnicity in itself is less likely to be the reason for discrimination: our analysis suggests that factors unique to be being foreign-born influence the manner in which US healthcare is experienced. For the foreign-born, higher socioeconomic status is only weakly protective. These data cannot identify what the key cultural, structural or psychological factors are that increase perceptions of discrimination among the foreign-born, nor the extent to which the reports are accurate or reflect differences in expectations or sensitivities. Omitting immigration status in describing the problem of discrimination in healthcare could be misleading because nativity is a key predictor of perceived discrimination among Asians and Latinos.

Table 1. Actual numbers of respondents aged 18 and older by race/ethnicity and nativity (not weighted). 2003 California Health Interview Survey.

	Total	*US-born*	*Foreign-born*	*% Foreign-born*
ALL RACES	42,044	31,624	10,420	24.8%
White	26,506	24,269	2,237	8.4%
Black/African American	2,691	2,536	155	5.8%
Latino	7,135	2,531	4,604	64.5%
Asian	3,875	807	3,068	79.2%
American Indian /Alaskan native	580	543	37	6.4%
Other /Multiple /Pacific Islander	1,257	938	319	25.4%

Table 2. Estimates of sample characteristics by race/ethnicity, weighted to adjust for non-response and the complex survey design*. 2003 California Health Interview Survey.

	White	*Black*	*Latino*	*Asian*	*Native American*	*Other/Multiple/ Pacific Islander*
Mean Age	48	44	38	43	43	41
Male (%)	49	46	51	47	49	51
Married (%)	58	37	51	62	40	49
Chronic condition (%)	41	48	29	32	47	40
Education (%)						
Less than high school	7	12	48	11	23	17
High school graduate	23	29	24	19	32	29
Some college	29	34	16	21	30	30
College graduate	40	24	11	50	14	24
Poverty Income Ratio %						
0-99%	6	18	33	15	23	13
100-199%	12	20	32	17	22	23
200-299%	14	16	14	13	16	16
300% +	68	46	22	55	39	48
Insurance (%)						
Private	66	56	42	65	49	59
Medicare/Medicaid	25	31	24	22	29	22
Uninsured	9	13	34	13	22	20
Home Language (%)						
English	85	87	11	20	69	50
English + Other	11	10	56	50	21	36
Other	3	2	34	30	10	14
In US < 5 years	1	1	8	10	3	3
Usual source of care (%)						
Doctor's office/HMO	79	69	47	77	57	63
Community/govt clinic	9	18	8	10	24	19
Emergency room	1	3	2	<1	1	2
Urgent care	<1	<1	<1	<1	1	1
Some other place	<1	<1	<1	<1	1	1
No one particular place	<1	<1	<1	<1	2	1
No usual source of care	1	1	23	1	15	15

* There are significant ($p<0.05$) differences by race for all of the variables in the table.

Table 3: Percentages of adult respondents in CHIS 2003 reporting (1) lifetime experience of racial or ethnic discrimination in health care and (2) experience within the past five years of racial or ethnic discrimination in health care. Estimates are weighted to adjust for non-response and the complex survey design. 2003 California Health Interview Survey.

Race Group	*All*	*95% CI*	*US-Born*	*95% CI*	*Foreign-born*	*95% CI*
	LIFETIME EXPERIENCE OF DISCRIMINATION (%)					
White	2.8	2.5-3.1	2.8	2.5-3.1	3.3	2.4-4.1
Black/African American	13.2	11.5-14.8	13.1	11.4-14.9	13.8	5.6-22.1
Latino	13.4	12.3-14.4	6.9	5.7-8.1	16.3	15.0-17.7
Asian	7.4	6.3-8.4	3.6	1.8-5.3	8.4	6.1-9.6
American Indian/ Alaskan native	11.3	6.5-16.0	8.5	5.0-11.8	33.1	5.8-60.5
Other /Multiple/ Pacific Islander	8.6	6.3-10.8	7.8	5.4-10.1	10.6	5.6-15.6
	5-YEAR EXPERIENCE OF DISCRIMINATION (%)					
White	1.5	1.3-1.7	1.5	1.2-1.7	1.9	1.2-2.6
Black/African American	6.5	5.3-7.8	6.4	5.1-7.6	9.3	1.6-17.0
Latino	7.0	6.3-7.7	3.5	2.7-4.3	8.6	7.6-9.5
Asian	3.9	3.1-4.6	1.2	0.4-1.9	4.6	3.7-5.5
American Indian/ Alaskan native	6.0	2.8-9.2	5.4	2.9-7.8	10.8	0-31.2
Other /Multiple/ Pacific Islander	4.3	2.8-7.7	3.9	2.4-5.4	5.3	2.1-8.5

Table 4. Logistic regression models predicting perceived racial or ethnic discrimination in healthcare during the previous 5 years, 2003 California Health Interview Survey. All models are also adjusted for age, sex and marital status.

	Model 1 OR	*Model 2 OR*	*Model 3 OR*	*Model 4 OR*
White (ref)	Ref	Ref	Ref	Ref
Black	4.12***	4.22***	4.06***	3.39***
Latino	4.25***	2.51***	2.07***	1.56**
Asian	2.48***	1.44*	0.69	0.69
Native American	3.75***	3.63***	3.43***	2.57***
Other	2.59***	2.25***	2.43***	2.19**
Foreign-born		2.19***	134	1.28
White*Foreign-born			Ref	Ref
Black*Foreign-born			1.13	1.19
Latino *Foreign-born			1.98**	1.55
Asian*Foreign-born			3.36**	3.00*
Native Amer*Foreign-born			1.48	1.31
Other*Foreign-born			1.09	0.93
Education				0.98
Income				0.73***

*<0.05 **<0.01 ***<0.001

Table 5. Separate logistic regression models for the US-born and the foreign-born predicting perceived racial or ethnic discrimination in healthcare during the previous 5 years, 2003 California Health Interview Survey. Models are also adjusted for age, sex and marital status.

	US-born OR	*Foreign-born OR*
White (ref)	Ref	Ref
Black	2.90***	4.45**
Asian	.51	1.86**
Latino	0.97	2.56***
Native Amer	2.09**	3.28
Other	1.73*	1.92
Education	0.97	1.03
Income	0.78***	.86*
In US 15+ years		Ref
In US 5-14 years		1.15
In US < 5 years		1.02
Home language		
English	Ref	Ref
English+Other	1.81***	2.33*
Other	3.31**	2.31*
Chronic Disease	1.08	1.52**
Usual Source of care		
MD office/HMO	Ref	Ref
Commun/Gov clinic	1.26	1.31
ER	1.07	2.35*
Urgent care	.66	0.60
Other	1.82	2.38
No one particular	1.32	4.39
None	1.03	1.47*
Insurance		
Private	Ref	Ref
Public	2.08***	1.02
No Insurance	1.69**	1.04

*<0.05 **<0.01 ***<0.001

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