Self-Reported Discrimination and Mental Health Status Among African Descendants, Mexican Americans, and Other Latinos in the New Hampshire REACH 2010 Initiative: The Added Dimension of Immigration

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Objectives. We examined whether self-reported racial discrimination was associated with mental health status and whether this association varied with race/ethnicity or immigration status.

Methods. We performed secondary analysis of a community intervention conducted in 2002 and 2003 for the New Hampshire Racial and Ethnic Approaches to Community Health 2010 Initiative, surveying African descendants, Mexican Americans, and other Latinos. We assessed mental health status with the Mental Component Summary (MCS12) of the Medical Outcomes Study Short Form 12, and measured discrimination with questions related to respondents' ability to achieve goals, discomfort/anger at treatment by others, and access to quality health care.

Results. Self-reported discrimination was associated with a lower MCS12 score. Additionally, the strength of the association between self-reported health care discrimination and lower MCS12 score was strongest for African descendants, then Mexican Americans, then other Latinos. These patterns may be explained by differences in how long a respondent has lived in the United States. Furthermore, the association of health care discrimination with lower MCS12 was weaker for recent immigrants.

Conclusions. Discrimination may be an important predictor of poor mental health status among Black and Latino immigrants. Previous findings of decreasing mental health status as immigrants acculturate might partly be related to experiences with racial discrimination. (*Am J Public Health.* 2006;96:1821–1828. doi:10.2105/AJPH.2005.080085)

Recent reports argue that racial discrimination is not only a critical civil rights issue, but also an important topic of scientific inquiry.[1–3] Self-reported discrimination, the recounting of one's experiences with being unfairly treated because of one's race/ethnicity, is associated with poor mental health status for Blacks,[4–8] Latinos,[9–11] Asian/Pacific Islanders,[12–14] American Indians,[15] and even for the general population.[16] The mechanisms underlying this relation include stress, trauma, internalized oppression, health care barriers, and other socioeconomic and structural disadvantages.[6,17–20]

Although nearly all minority groups in the United States share the experience of facing racial/ethnic discrimination, there are clear historical and contextual differences between groups.[21,22] One difference is the proportion of immigrants within each group. For example, few Blacks (6.1%) are immigrants compared with Latinos (40.2%).[23] Although certainly not the only factor, being an immigrant may influence health and discrimination in important ways.

Immigrants of any race/ethnicity in the United States are often healthier than nonimmigrants.[24] Generally, foreign-born Americans have lower rates of mental disorders than those born in the United States, and increasing time in the United States is associated with increasing rates of mental health problems among immigrants.[25–33] Recent Mexican immigrants have psychiatric disorder rates lower than those of the general US population. However, US-born Mexican Americans have rates similar to those of the US population.[34,35]

Minority immigrants may experience discrimination differently than do their US-born counterparts. Immigrants report more discrimination with increasing time in the United States,[11,36] perhaps because of the "acquisition of involuntary minority status as [immigrants] come to understand their relative position in the larger sociocultural environment of the US."[37(p454)] That is, increasing length of residency may lead to more experiences with and recognition of discrimination.[38] New Black immigrants may be treated better than their US-born peers, although these advantages may erode over time.[39,40] Further, acculturation may moderate the association between discrimination and mental health for immigrants.[11,12] In effect, new immigrants may be able to protect against the mental health effects of discrimination by perceiving their negative experiences as stemming from unfamiliarity with US culture, rather than their race/ethnicity.

Our study focused on Latinos, emphasizing Mexican Americans, and Blacks. Latinos are the fastest-growing segment of the US population, and Mexican Americans make up 59% of all US Latinos.[41] Despite a growing literature on the effects of discrimination on health, only a few studies have examined immigrant Latinos and Blacks.[42]

On the basis of previous work, our first hypothesis was that self-reported discrimination would be negatively associated with mental health status. Our second hypothesis was that this association would be stronger for Blacks than for Latinos. We posed this hypothesis for 2 reasons. First, discrimination may be qualitatively different for Blacks than for other groups. For example, whereas Blacks tend to live segregated from Whites regardless of their socioeconomic status, as

Latinos and Asians move up in socioeconomic status they are less likely to live segregated from Whites.[43,44] Second, immigrants of any race/ethnicity may have a shorter "exposure period" to discrimination than their US-born counterparts simply by virtue of having spent less time in the United States. Hence, the association between discrimination and health might be weaker for Latinos than for Blacks because Latinos are more likely to be immigrants and have less opportunity to experience and accumulate experiences of discrimination.

This leads to our third hypothesis. If time in the United States reflects a longer period of exposure to discrimination, then the association between discrimination and mental health should be weaker for newer immigrants than for immigrants with a longer period of US residency, regardless of ethnicity.

To address health disparities, it is important to have full knowledge about the experience of racial/ethnic groups across the nation.[45] However, most studies have focused either on national samples or on areas of high minority concentration;[42] few have examined areas where minorities are less well represented. To address this gap, we examined a sample from New Hampshire, where 95.1% of the population in 2000 was non-Hispanic White, compared with 69.1% of the US population.[46]

METHODS

Sample

Data were from the New Hampshire Racial and Ethnic Approaches to Community Health (NH REACH) 2010 Initiative. Sponsored by the Centers for Disease Control and Prevention, NH REACH 2010 was designed to implement culturally effective programs for addressing health disparities in diabetes and hypertension within the Black and Latino populations. We analyzed the 2002–2003 baseline survey data from this larger initiative.

New Hampshire is a challenging place to research racial/ethnic groups. In 2000, the state's racial composition was 95.1% White, 0.7% Black, 1.1% multiple-race, and 3.1% Asian American, Pacific Islander, or American Indian.[46] Latinos of any race constituted 1.7%.[46] Over half of all Blacks and Latinos in the state lived in Hillsborough County, and over a quarter of those were concentrated in the cities of Manchester and Nashua. Despite this concentration, Blacks and Latinos constituted only 1.2% and 3.2%, respectively, of the 398 574 residents of Hillsborough County. In Hillsborough, 26% of Blacks and 33% of Latinos were foreign-born.[47]

Respondents were recruited through snowball sampling (the recruitment of participants from the networks of extant participants) for 2 reasons: (1) a random sample would not efficiently find racial/ethnic minority respondents in this area, and (2) trust from word-of-mouth referrals helped us recruit some participants who may have otherwise hesitated to participate. Trained peer educators administered the face-to-face surveys in English or Spanish. Additional details can be found at http://www.nhhealthequity.org.

Measures

Because discrimination is a stressor that may have multiple effects on health, focusing on specific disorders may underestimate the influence of discrimination on well-being.[13,19,42] We examined a measure of overall psychological well-being, the Mental Component Summary (MCS12) subscale from the Medical Outcomes Study Short Form 12, a shortened version of the Medical Outcomes Study Short Form 36. The Medical Outcomes Study Short Form 12 is designed to be a valid, reliable, cost-effective measure of health-related quality of life in both clinical and population-based studies.[48,49] Questions focus on vitality, social functioning, role functioning, mental health, general health, physical functioning, and bodily pain. Higher scores indicate better mental health. Low MCS12 scores have been associated with clinical depression and more general measures of diminished mental health status.[50,51] The scale has been used among disadvantaged and culturally diverse populations.[52,53]

We employed 3 indicators of discrimination. The term "discrimination" signifies the 3 measures collectively, and individual measures are referenced by their respective names.

For the first measure, goals discrimination, we asked, "Do you feel that racial discrimination diminishes your ability to achieve your goals fully?" Responses were "yes" or "no."

For the second item, discomfort/anger, we asked, "How often do you feel discomfort or anger by the way others treat you in your everyday life because of your race?" The Spanish version added the concept of ethnicity as a source of discrimination: "¿Cuántas veces se ha sentido incómodo o enojado por la forma en que es tratado en su vida diaría por su raza o etnicidad?" ("How often do you feel discomfort or anger by the way others treat you in your everyday life because of your race or ethnicity?"). Response categories ranged from "constantly" to "never" on a 6-point scale, but were collapsed to "never" versus all others to more parsimoniously test the interaction analyses. For the third measure, health care discrimination, we asked, "Do you feel that you have been receiving less than the best health care because of your race?" Responses were "none of the time," "some of the time," or "often." We combined the latter 2 because few participants (n=27) answered "often."

Supplemental analyses (not shown) found that an index of all 3 measures predicted lower MCS12 scores. The association between global measures of discrimination and mental health has been documented, and interest exists in understanding specific types of discrimination.[16,19,42] Accordingly, we report on the individual items rather than the summary scale, recognizing the limits of single-item indicators.[54]

"Immigrant" denotes whether the person was foreign-born. "Years of residency" indicates the length of time immigrants have lived in the United States. The NH REACH 2010 staff adopted the phrase "African descendant" to be inclusive of persons with ancestral roots in Africa, including African Americans and immigrants from Africa and the Caribbean.

Respondents were first asked whether they were Hispanic/Latino, then asked their race. One participant of both African and Latino descent chose to be classified as "African Descendant" by opting into that arm of the intervention part of the study. There were 202 Mexican Americans. Other Hispanics/Latinos (56 Puerto Ricans, 98 Dominicans, 120 South Americans) were collapsed into a category called "Other Latino" to achieve a more stable sample size.

US-born Mexican Americans and other Latinos were dropped from the analyses because of small numbers (n=14). African descendants were not disaggregated because of small subgroups (78 US-born, 26 Haitians, 20 Sudanese, 11 Jamaicans, 93 other).

Our focus was on African descendants and Mexican Americans. Other Latinos were too heterogeneous to make precise inferences, but were included to see if Mexican Americans were meaningfully distinct from the more general category of "Latino." Other covariates included gender, income, education, medical insurance (present or not), current employment, and age.

Analysis

After data preparation, analyses began with simple bivariates between study measures. We then used multiple linear regression to adjust for covariates. Predictor variables were mean centered. We tested the main effects of each measure of discrimination independently to examine the first hypothesis—that self-reported discrimination would be negatively associated with mental health status. To evaluate the second hypothesis—that discrimination would be stronger for African descendants than for the other groups—we tested the interaction between ethnicity and discrimination. Simple slopes and graphs were used to clarify significant interactions.[55]

For the test of the third hypothesis—that length of residency would moderate the association between discrimination and MCS12 score—we omitted US-born African descendants (n=78) because length of residency is collinear with age (r=0.92) for nonimmigrants. We examined whether length of residency explained the main effects of discrimination and accounted for any significant interactions. We then tested interactions between each measure of discrimination and length of residency.

Because of the snowball sampling method, several respondents (41% of African descendants, 65% of Mexican Americans, and 58% of other Latinos) lived in the same household as another respondent. To correct for nonindependence of observations within households, we used robust cluster variance estimators to produce standard errors using Stata version 9.0 (Stata Corp, College Station, Tex).

TABLE 1—Descriptive Characteristics of NH REACH 2010 Sample, by Ethnicity

	African Descendant (n=190), %	Mexican American (n=202), %	Other Latino (n=274), %	Total Sample (N=666), %
MCS12 score, mean ±SD	48.99 ±9.92	48.61 ±8.78	47.73 ±10.70	48.36 ±9.93
Years residency in United States, mean ±SD***	20.67 ±18.16	6.05 ±6.13	9.88 ±9.87	11.80 ±13.38
Years of age, mean ±SD***	36.68 ±12.55	31.73 ±10.56	44.10 ±14.26	38.23 ±13.77
Male*	38.95	30.20	28.47	31.98
Insured***	63.68	24.75	44.53	43.99
Immigrant***	58.90	100.00	100.00	88.20
Educational level				
<9th grade***	1.58	50.99	34.31	30.03
Some high school	14.21	28.22	18.25	20.12
High school graduate/general equivalency diploma	28.95	13.37	19.71	20.42
Any college	55.26	7.43	27.74	29.43
Employed*	63.16	51.98	51.82	55.11
Income, $				
<10 000***	22.63	23.76	23.36	23.27
10 000–24 999	27.89	40.10	38.32	35.89
25 000–49 999	25.26	13.86	14.23	17.27
≥50 000	14.74	4.46	7.30	8.56
Data missing	9.47	17.82	16.79	15.02
Reported discrimination				
Goals***	32.43	63.27	54.31	50.77
Discomfort/anger***	63.19	49.25	40.59	49.54
Health care***	28.38	28.81	15.47	22.88

Note. NH REACH=New Hampshire Racial and Ethnic Approaches to Community Health; MCS12=Mental Component Summary subscale from the Medical Outcomes Study Short Form 12.
*P<.05; **P<.01; ***P<.001, for tests of significance between ethnic groups.

RESULTS

Table 1 displays characteristics of the study sample, stratified by ethnicity. There were no differences in mental health according to ethnicity. Compared with the other groups, African descendants were more likely to be male and had higher levels of education, rates of employment, income, and rates of being insured. Mexican Americans reported the shortest period of residency in the United States, and the lowest rates of insurance and levels of education. Compared to the other 2 groups, other Latinos were more likely to be female and older, and generally scored in-between the other groups in socioeconomic characteristics. All of the Mexican Americans and other Latinos and 58.9% of all African descendants were immigrants. Compared with the population of Black and Latino residents in Hillsborough County, NH REACH respondents were younger, more likely to be immigrants, and of lower socioeconomic position (county data not shown).

Reports of health care discrimination were similar between African descendants and Mexican Americans, but lower among other Latinos. Reports of goals discrimination were highest among Mexican Americans, then other Latinos. Reports of discomfort/anger discrimination were highest for African descendants, followed by Mexican Americans.

Table 2 shows mean MCS12 scores according to ethnicity and reports of discrimination. All 3 measures of discrimination were associated with lower MCS12 scores, but the differences were strongest for African descendants, then Mexican Americans and weakest among other Latinos. For example, the difference in MCS12 scores between those reporting goals discrimination and those not reporting was −4.25, −2.77, and −1.56 for African

TABLE 2—Mean MCS12 Score (±SD) and Self-Reported Discrimination, by Ethnicity (Unadjusted)

	African Descendant	Mexican American	Other Latino	Total Sample
Goals discrimination				
Not reported	50.20 ±8.88	50.32 ±7.97	48.89 ±10.53	49.72 ±9.36
Reported	45.95 ±11.35	47.55 ±8.98	47.33 ±10.44	47.16 ±10.08
(Reported) – (Not reported)	–4.25*** ±1.53	–2.77* ±1.30	–1.56 ±1.29	–2.56 ±0.78
Discomfort/anger discrimination				
Not reported	52.21 ±7.83	50.24 ±8.40	48.35 ±10.99	49.72 ±9.75
Reported	46.86 ±10.63	6.88 ±8.89	46.85 ±9.99	46.86 ±9.88
(Reported) – (Not reported)	–5.35*** ±1.50	–3.36** ±1.23	–1.50 ±1.31	–2.86 ±0.77
Health care discrimination				
Not reported	50.04 ±9.09	49.75 ±7.88	48.03 ±10.42	49.23 ±9.52
Reported	43.53 ±10.96	46.60 ±10.58	45.69 ±12.27	45.35 ±11.21
(Reported) – (Not reported)	–6.51*** ±1.76	–3.15* ±1.46	–2.34 ±1.87	–3.88 ±0.99

Note. MCS12 = Mental Component Summary subscale from the Medical Outcomes Study Short Form 12.
*P < .05; **P < .01; ***P < .001, for the difference in mean MSC12 score between those reporting and not reporting discrimination.

descendants, Mexican Americans, and other Latinos, respectively.

Table 3 shows the results of multivariate analyses that included discrimination, ethnicity, age, income, insurance, employment, education, gender, and nativity. Ethnicity and immigration were not significant predictors of MCS12 score (Model 1). Consistent with the first hypothesis, the main effects of all 3 measures of discrimination were associated with lower MCS12 scores (Models 2–4).

Our second hypothesis, that the slope of discrimination would be steeper for African descendants than for Mexican Americans and other Latinos, was partially supported. The interaction between discomfort/anger discrimination and other Latinos was significant. The slope of discrimination for Mexican Americans and African descendants (b = −5.29) was steeper than that for other Latinos (b = −2.01) (Figure 1a). There was also a significant interaction between health care discrimination and ethnicity (Figure 1b). The slope of discrimination was steepest for African descendants (b = −7.94), followed by Mexican Americans (b = −4.85), then other Latinos (b = −2.98). The interaction between goals discrimination and ethnicity was not statistically significant, but was in a similar direction as the other models. Nativity neither predicted MCS12 score nor changed the significance of the interaction.

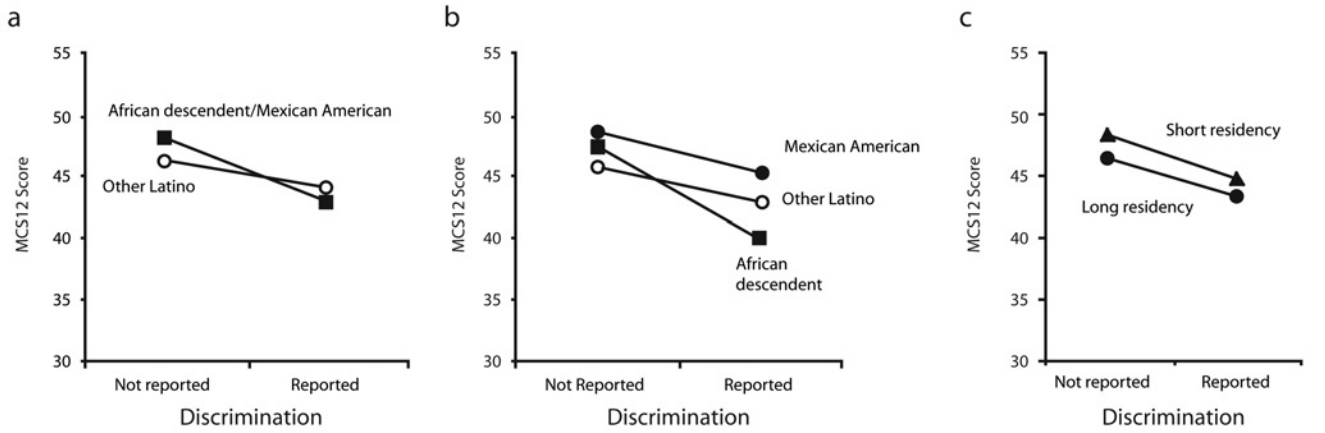
We replicated these analyses with the immigrant subset and included length of residency. The main effects of ethnicity and length of residency were not associated with MCS12 score (Table 3, Model 5). However, the main effects of goals, discomfort/anger, and health care discrimination were still negatively associated with MCS12 score (Models 6–8).

When length of residency was excluded from the model, the interaction between health care discrimination and ethnicity remained significant (not shown). However, the interactions became nonsignificant when

TABLE 3—Relationship Between Self-Reported Discrimination and MCS12 Score

	Full Sample (N = 666), b (SE)				Immigrant Sample (N = 579), b (SE)			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
African Descendant	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
Mexican American	2.370	3.169	2.452	2.551	1.438	1.858	0.987	2.020
	(1.369)	(1.153)	(1.302)	(1.604)	(1.524)	(1.498)	(1.499)	(1.670)
Other Latino	0.225	1.261	0.447	–0.237	–0.426	0.205	–0.777	–0.503
	(0.926)	(0.834)	(0.909)	(1.138)	(1.172)	(1.117)	(1.111)	(1.295)
Immigrant	0.635	0.952	1.218	0.285	–0.062	–0.080	–0.075	–0.050
	(1.053)	(1.229)	(1.030)	(1.267)	(0.051)	(0.056)	(0.052)	(0.057)
Goals discrimination	. . .	–2.189***	. . .	. . .	. . .	–1.869*	. . .	. . .
		(0.665)				(0.743)		
Discomfort/anger discrimination	. . .	. . .	–3.575***	. . .	. . .	. . .	–3.224***	. . .
			(0.725)				(0.765)	
Health care discrimination	. . .	. . .	. . .	–4.379**	. . .	. . .	. . .	–3.865*
				(1.599)				(1.557)
Constant	44.922***	45.329***	46.371***	46.328***	45.751***	46.206***	47.523***	47.037***
	(1.425)	(1.406)	(1.358)	(1.523)	(1.665	(1.708)	(1.576)	(1.835)

Note. Models were adjusted for age, gender, insurance, income, and employment.
*P < .05; **P < .01; ***P < .001.



Note. MCS12 = Mental Component Summary subscale from the Medical Outcomes Study Short Form 12. Age, gender, nativity, income, education, insurance, and employment were controlled. "Short residency" and "long residency" refer to 1 standard deviation below and above the mean, respectively, in terms of years in the United States. Figures 1a and 1b include both immigrants and US-born respondents; Figure 1c includes only immigrants.

FIGURE 1—Associations between self-reported discrimination and MCS12 score for discomfort/anger discrimination, by ethnicity (a); health care discrimination, by ethnicity (b); and health care discrimination, by length of residency in the United States (c).

length of residency was included. Thus, length of residency appeared to explain the differences by ethnicity in the association between discrimination and health.

We found partial support for the hypothesis that length of residency moderated discrimination. There was a significant interaction between health care discrimination and length of residency (Figure 1c). Those who had immigrated less recently had lower MCS12 scores than more recent immigrants regardless of the level of discrimination. However, the association between health care discrimination and MCS12 score was steeper for less recent than more recent immigrants (b=−2.83 vs. b=−2.31). That is, the relation between health care discrimination and mental health was stronger for immigrants with longer period of residency than for more recent arrivals. Length of residency did not significantly moderate the association between goals or discomfort/anger discrimination and MCS12 score, but the coefficients were of the same direction (not shown). There were no significant 3-way interactions between ethnicity, length of residency, and discrimination.

DISCUSSION

The data suggest 3 main findings. First, reports of discrimination were associated with lower ratings of mental health after controlling for age, gender, education, employment, income, insurance, nativity, and ethnicity. Second, the association between discrimination and mental health appeared stronger for African descendants than for Mexican Americans and other Latinos, but this may be explained by immigration factors. Third, the association between discrimination and mental health may be stronger for immigrants who have lived in the United States longer than for more recent arrivals.

Our study joins others in demonstrating a negative association between reports of discrimination and mental health status.[4,12,14,16,18,56–59] We differentiated between discrimination associated with goals, discomfort/anger, and health care. As expected, all 3 measures were associated with poor mental health status. Racial discrimination may impede people's ability to achieve their goals. The incongruity between one's goals and one's ability to actualize them has been associated with increased psychological distress[60–63] and might explain the association found here. Discomfort/anger discrimination was also associated with poor mental health status. This is not surprising, given that many studies report strong associations between discrimination and measures of distress and anxiety.[6,11,16] Discrimination in health care was also associated with poor mental health. A growing number of studies document disparities in health services by minorities.[1,64–67] Alegria[25,28] suggested that racism and mistrust contribute to reduced use of mental health services among Latinos. Klassen and colleagues[68] reported that distrust with medical services accumulated over a lifetime led Black clients to be less willing to try new services. Further, many ethnic groups use traditional healing practices.[3,24,69] Immigrants may be more likely to use traditional healing in lieu of formal medical practices when confronted with racial discrimination.[70] Thus, the mere perception that the health care system is unjust may make some individuals decline to seek formal treatment and may lead to widening disparities.[19,71,72]

Further, our study found partial support for moderation by race/ethnicity. In adjusted models, race/ethnicity did not moderate goals discrimination. However, it did moderate discomfort/anger and health care discrimination. The association between discomfort/anger discrimination and MCS12 scores was similar between African descendants and Mexican Americans, but weaker for other Latinos. This might be partially explained by unmeasured heterogeneity within the other Latinos. Given limitations of sample size, we did not disaggregate the other Latinos, but future research

should do so. Taken together, the results suggest that despite different patterns of reporting, the strength of the association for goals and discomfort/anger discrimination is similar between Mexican Americans and African descendants.

Race/ethnicity also moderated health care discrimination. Health care discrimination was associated with poor mental health status for all groups, but the association was strongest for African descendants, then Mexican Americans, and then other Latinos. There are several possible explanations for this finding. First, the moderation could occur because discrimination might be especially pernicious for Blacks. This is consistent with observations that, whereas all groups experience discrimination, Blacks may face a type of discrimination that is qualitatively different from that of other groups. A second interpretation might be qualitative differences in the types of discrimination reported. For example, the African descendants in our study may have been apt to report only the more hazardous types of health care discrimination, which would be more likely to affect mental health status. Future research should examine such potential qualitative differences.

However, our analyses suggest a third interpretation. Discrimination may be more strongly associated with the mental health status of African descendants than with that of Mexican Americans and other Latinos because the latter 2 groups are more likely to be immigrants. Immigrants might experience less initial exposure to discrimination and may have some resources that can temporarily buffer the effects of discrimination.[12,73–76] These group differences may erode as immigrants encounter more discrimination and the deleterious effects of discrimination accumulate over time. This would be the immigrant variant of Geronimus's "weathering hypothesis."[31,77,78] That is, increasing length of residency might "weather away" protective buffers and simultaneously allow disadvantage to accrue.

Consistent with these arguments, interactions between discrimination and race/ethnicity were no longer significant when we included length of residency in the models. Additionally, the negative association between health care and mental health status was stronger for immigrants with a longer period of residency than for more recent arrivals.

Period of residency in the United States is used more commonly as a proxy for acculturation than as a proxy for exposure to discrimination. The unidimensional view of acculturation suggests that "immigrants" adopt the cultures of the host country.[79–82] Although we cannot rule out this interpretation because we did not directly measure culture, one might expect the sign of the interaction to be reversed. That is, as immigrants become more like host members, they may encounter less discrimination and the impact of discrimination may be attenuated. However, we did not find this to be the case, suggesting that length of residency may better represent the embodiment of discrimination than cultural adoption.

One other explanation cannot be ruled out. We found an interaction between length of residency in the United States and health care discrimination, but not between discomfort/anger or goals discrimination. It might be that our finding was because of chance. However, the other interactions were in a similar direction, suggesting that the null findings might have been because of low power. Additional studies are needed to confirm or disprove these explanations.

Other caveats should be mentioned. First, we cannot establish causal relationships because this study was cross-sectional. The few longitudinal studies that have been conducted do suggest that the causal direction is from discrimination to illness.[57,83] However, we need more longitudinal studies to better understand these issues.

Second, participants were nonrandomly selected, leaving open questions as to generalizability and potential selection biases. By its very nature, snowball sampling draws respondents who are interrelated. Our sample overrepresented immigrants, and respondents were of lower socioeconomic status and age than Latinos and Blacks in Hillsborough County. We were unable, because of sample constraints, to examine US-born Latinos. These limitations were weighed against the desire to recruit participants into an intervention in a county where Latinos and Blacks represented 3.2% and 1.3% of the population, respectively. Within this community, the snowball technique allowed for more efficient identification of members of the target population. Additionally, because respondents were referred to the study by a known source, this method may have allowed for the inclusion of some participants who may not have otherwise participated in the study. Nonetheless, our findings must be interpreted with these limitations in mind.

Third, we were limited in the measures available in our secondary analysis. Discrimination was self-reported, leaving open potential response biases.[54,84] Our measures consisted of reports that may not have represented objective experiences. However, perceptions have importance in their own right as they may represent how people see their position in society and may indicate the stressors present in their lives.[19,42] Each domain of discrimination consisted of a single item, and future work should examine these domains with full scales.[54] Single-item measures of discrimination tend to underestimate the prevalence of discrimination and are less reliable than full scales.[13,54] We measured only 3 domains, leaving unexplored other types of discrimination, including interpersonal discrimination and implicit forms of discrimination (e.g., stereotype threat). There are no gold standard measures of discrimination, although several promising scales do exist and should be used in future research.[19,54,57,64,85,86]

With these caveats in mind, our findings show that racial/ethnic discrimination is associated with poor mental health status. At first glance, the association between health care discrimination and mental health may be stronger for African descendants than for Mexican Americans and other Latinos, but this relation might be explained by differences in immigration factors. The finding that the relation between health care discrimination and mental health is stronger for immigrants who have lived in the United States longer is troubling, as it implies that discrimination may erode not only mental health, but also the resources available to racial/ethnic minorities to buffer against discrimination. These findings suggest that policies designed

to reduce discrimination are not only a moral imperative, but also a key tool in protecting public health. ■

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Contributors

G. C. Gee led the writing and conceptualization of this analysis. A. Ryan participated in the analysis and writing. D. J. Laflamme participated in the writing and data preparation. J. Holt directed the NH REACH 2010 project and contributed to the preparation of this study.

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Human Participant Protection

This protocol was reviewed and approved by the institutional review board of the Dartmouth–Hitchcock Medical Center.

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