SELF-REPORTED HYPERTENSION AND RACE AMONG HISPANIC AND NON-HISPANIC ADULTS: THE NEW YORK CITY COMMUNITY HEALTH SURVEY

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Objectives: To examine the association between race/ethnicity and prevalence of self-reported hypertension in adults who participated in the 2005 Community Health Survey.

Methods: This was a cross-sectional study of self-reported hypertension in New York City. Logistic regression was fitted to estimate the strength of the association between race/ethnicity and hypertension before and after adjusting for selected covariates.

Results: Hispanics reported lower prevalence of hypertension than did non-Hispanics (25.6% vs 28.8%, $P<.01$). Regardless of ethnicity, Blacks reported higher prevalence of hypertension than did Whites. In the fully adjusted model, both Hispanic and non-Hispanic Blacks had 1.90 (95% confidence interval [CI] 1.04–4.85) and 1.68 (95% CI 1.39–2.03) greater odds of reporting hypertension than did non-Hispanic Whites, respectively; Hispanic Whites had odds comparable to non-Hispanic Whites.

Conclusions: This study suggests that Black race may lead to greater odds of reporting hypertension not only among non-Hispanics but also among Hispanics. Given the effect of race on health and the racial heterogeneity among Hispanics, race should be investigated among Hispanics whenever the data allow it. (*Ethn Dis*. 2008;18:299–305)

Key Words: Self-Reported Hypertension, Race/Ethnicity, Survey, New York City

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INTRODUCTION

Racial disparities in the United States are pervasive and have been documented for decades.[1,2] Also documented is the rapid and persistent growth of the Hispanic population during the last 30 years. Hispanics, the largest minority population subgroup in the United States,[3] comprise people from ≥25 countries in Latin America with the Spanish language as the common social glue. Although Hispanics can be of any race (White, Black, or some other race),[4] race has seldom been investigated among Hispanics. Consistent with the historical pattern of disadvantage among non-Hispanic Blacks,[1,2,5,6] people with darker skin, regardless of their ethnic background, may face racism and discrimination in US society. These experiences may lead to disadvantaged life chances which then translate into poorer health. If race as a social construct matters among non-Hispanics, Hispanic Blacks might confront the same exposures as non-Hispanic Blacks.

The few studies assessing race and health among Hispanics are consistent—Hispanic Blacks have worse health outcomes than do Hispanic Whites.[7–10] For example, according to data from the National Health Interview Survey 2000–2002, Hispanic Blacks had a higher prevalence of self-reported hypertension than did Hispanic Whites.[10] This finding is consistent with recent US data from non-Hispanic adults in which African Americans exhibited higher prevalence of hypertension than did non-Hispanic Whites.[11,12] Thus, the investigation of this association in other settings is imperative.

According to the 2000 US Census, 7.7% of Hispanics identified as Black in New York City compared to 2.0% nationally.[13] Thus, data from a community survey in New York City afford the opportunity to examine the independent effect of race on hypertension among Hispanics and non-Hispanics and whether the strength of the associations between race and hypertension differ in Hispanics and in non-Hispanics. On the basis of previous studies,[9,14,15] we also test interaction terms between race and country of birth and race and the neighborhood racial/ethnic composition among Hispanics.

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METHODS

The New York City Community Health Survey (CHS), modeled after the Behavioral Risk Factor Surveillance Survey, is an annual random-digit dialed telephone survey conducted by the New York Department of Health and Mental Hygiene, which provides neighborhood-specific and citywide estimates on a broad range of chronic diseases and behavioral risk factors of New York residents.[16] Briefly, interviews were administered to a stratified random sample of noninstitutionalized adults, ≥18 years of age, from all five boroughs of New York—Manhattan,

Brooklyn, Queens, the Bronx, and Staten Island—who lived in a household with a landline telephone in New York during 2005. The strata were based on the 42 United Hospital Fund's (UHF) neighborhood designations, defined by several adjoining zip codes. To increase statistical power, several UHF neighborhoods were combined, which yielded 34 neighborhoods. Poststratified sampling weights were constructed to account for the probability of selection and sampling variability.

Computer-assisted telephone interview technology was used to collect the survey data: interviews were pretranslated in English, Spanish, Russian, and Mandarin Chinese and conducted in >20 languages with translation services. Data collection occurred between March and November 2005, yielding a sample of 9916 individuals, with a response rate of 18% and a cooperation rate of 71%. However, 632 individuals did not report information on race or ethnicity and were excluded from the analyses for a sample of 9284 adults. Although individuals self-identified as Asians (n=622), Native Americans (n=80), non-Hispanic multiracial (n=12), Hispanic some other race (n=2064), and Hispanic multiracial (n=6), the main analysis was limited to Hispanics and non-Hispanics who self-identified as White or Black/African American for a final sample of 6500.

The outcome for this study was self-reported hypertension. Hypertension was collected through the question "Have you ever been told by a doctor, nurse or other health professional that you had high blood pressure?" The main independent variable was race/ethnicity. The question for ethnicity was asked before the question for race. Ethnicity was established from the question "Are you Hispanic or Latino?" For those who answered yes to the ethnicity question, the following question with regard to race also was asked: "Some people, aside from being Hispanic, also consider themselves to be a member of a racial group. Which one or more of the following, if any, would you say is your race?" The choices were White, Black/African American, Asian, American Indian and Alaska Native, Native Hawaiian and Pacific Islander, and other. For non-Hispanics, race was determined from two questions: "Which one or more of the following would you say is your race" and "Which one of these groups would you say best represents your race?" For these analyses, race/ethnicity was defined as Hispanic Black, Hispanic White, non-Hispanic White, and non-Hispanic Black.

Characteristics considered to be risk factors or potential confounders in studies of hypertension[17] and other relevant variables were included in these analyses. These variables included demographic characteristics (age, sex, marital status, and place of birth); access to care (health insurance) and socioeconomic position (education and income); and selected risk factors: body mass index, physical activity, smoking, and alcohol consumption.

In addition, because neighborhood racial/ethnic composition is associated with racial identity among Hispanics,[14,15] the proportion of Hispanics and the proportion of Blacks residing in each UHF were calculated by using US 2000 Census[18] data and included in the analyses. Tertiles, based on the distribution of this variable in New York, were used to group UHF neighborhoods according to their concentration of Hispanics (range 6.5%–70.6%) and Blacks (1%–79%). These categories were low (<13.9% Hispanic and <6.2% Black), medium (14%–28.3% Hispanic; 6.2%–32.5% Black), and higher (Hispanics >28.3% Hispanic; >32.5% Black).

Statistical Analysis

Descriptive statistics for population characteristics and self-reported hypertension prevalence were calculated by race for Hispanics and non-Hispanics. To determine significant differences, χ^2 statistics (categorical variables) and t tests (continuous variables) were used. Logistic regression was used to estimate the strength of the association between race/ethnicity and self-reported hypertension among US adults (Hispanic Blacks, Hispanic Whites, and non-Hispanic Blacks vs non-Hispanic Whites) before and after adjusting for selected covariates. These analyses were repeated separately for Hispanics and non-Hispanics, examining differences between Blacks and Whites within each ethnic group. Similarly, analyses were conducted for Blacks to compare Hispanic Blacks to non-Hispanic Blacks. To test whether the strength of the association between race and the prevalence of hypertension differed between Hispanics and non-Hispanics, an interaction between race (Black and White) and Hispanic ethnicity (yes/no) was tested. Interaction terms between education and race/ethnicity and income and race/ethnicity also were tested. Finally, for Hispanics, interaction terms between race and place of birth, race and proportion of Hispanics in the UHF neighborhood, and race and proportion of Blacks in the UHF neighborhood were tested.

Data management procedures were carried out with SAS (SAS Institute, Inc, Cary, NC) and statistical analyses were conducted with SUDAAN,[19] which takes into account the complex sampling design yielding unbiased standard error estimates. In addition, SUDAAN can account for the intra-neighborhood correlation of outcomes of study participants selected from the same UHF neighborhood.[20,21]

RESULTS

Compared with non-Hispanics, Hispanics had less education and were more likely to live below the poverty level, less likely to be insured, less likely to be physically active, more likely to

Table 1. Distribution of selected characteristics for Hispanic and non-Hispanic adults ≥18 years of age by race, New York City Community Health Survey 2005

Characteristic	Hispanic, % (SE)*			Non-Hispanic, % (SE)*		
	Black (*n*=92)	White† (*n*=285)	Total‡ (*n*=2447)	Black (*n*=2466)	White† (*n*=3657)	Total§ (*n*=6837)
Sociodemographics						
Age (years)	37.7 (1.74)	41.9 (1.22)	40.0 (0.41)	42.8 (.45)	48.3 (.38)	45.4 (.28)
Male	52.7 (6.19)	45.6 (3.95)	46.5 (1.35)	41.6 (1.32)	46.9 (1.03)	46.0 (.78)
Marital status						
Married	48.6 (6.35)	55.8 (3.93)	48.8 (1.33)	33.5 (1.23)	55.7 (1.02)	49.5 (.77)
Foreign born (yes)	65.7 (6.28)	64.5 (3.90)	70.1 (1.26)	33.7 (1.24)	21.1 (.85)	34.6 (.75)
Socioeconomic position and access to care						
Education						
<12	22.7 (4.78)	26.6 (3.39)	34.6 (1.25)	18.8 (1.05)	6.4 (.52)	11.9 (.51)
12	31.1 (5.82)	33.8 (3.87)	28.5 (1.24)	29.6 (1.18)	18.9 (.77)	22.9 (.63)
>12	46.1 (6.30)	39.6 (3.81)	36.9 (1.31)	51.6 (1.31)	74.7 (.87)	65.2 (.72)
Poverty						
<200%	58.2 (6.93)	56.9 (4.10)	68.0 (1.30)	45.1 (1.45)	21.6 (.90)	33.5 (.80)
Health insurance (yes)	75.4 (5.52)	70.2 (4.21)	71.2 (1.26)	83.0 (1.16)	90.5 (.64)	86.3 (.59)
Risk Factors						
BMI, kg/m^2	27.9 (.85)	27.0 (.44)	27.1 (.14)	28.0 (.18)	25.6 (.12)	26.1 (.09)
Smoking status						
Current	19.4 (4.96)	24.7 (3.89)	21.3 (1.13)	20.4 (1.07)	18.5 (.81)	19.3 (.53)
Former	11.0 (3.81)	14.0 (2.34)	13.9 (.92)	14.1 (.87)	31.7 (.96)	20.8 (.53)
Never	69.5 (5.73)	61.3 (3.95)	64.8 (1.29)	65.5 (1.23)	49.8 (1.04)	59.9 (.65)
Binge drinking (yes)	8.2 (3.63)	18.6 (3.72)	17.6 (1.09)	11.2 (.97)	16.9 (.82)	14.1 (.57)
Physical activities (yes)	54.1 (6.19)	58.9 (3.77)	62.5 (1.27)	68.6 (1.16)	79.3 (.80)	73.9 (.66)
Neighborhood Racial/Ethnic Concentration¶						
Proportion of Blacks						
Low	14.5 (4.02)	29.4 (3.52)	18.5 (.94)	17.8 (.83)	55.5 (.81)	42.1 (.53)
Medium	51.6 (6.19)	45.0 (3.88)	48.5 (1.17)	32.5 (1.12)	27.1 (.81)	30.0 (.56)
High	33.8 (5.62)	25.5 (3.12)	33.0 (.98)	49.7 (1.11)	17.4 (.57)	27.8 (.45)
Proportion of Hispanics						
Low	21.5 (4.61)	17.5 (2.52)	15.5 (.75)	33.6 (1.01)	37.2 (.74)	34.1 (.49)
Medium	22.7 (4.89)	31.7 (3.90)	22.6 (1.13)	39.5 (1.06)	35.2 (.77)	37.3 (.52)
High	55.8 (6.05)	50.8 (3.87)	61.9 (1.13)	26.8 (1.11)	27.6 (.76)	28.5 (.54)

* All values are given as percentages and standard errors (SE), with the exception of age and body mass index (BMI), which is given as mean and SE.

† All *P* values for χ^2 and *t* tests for comparisons within ethnic groups were <.01, with the exception of sex, marital status, country of birth, health insurance, BMI, smoking status, physical activity, and proportion of Hispanics in the neighborhood.

‡ The total for Hispanics includes all Hispanics, regardless of race.

§ All *P* values for Hispanic and non-Hispanic comparisons were <.01, with the exception of sex and marital status.

¶ These tertiles were low <6.2%, medium 6.2%–32.5%, and high >32.5% for Blacks and low <13.9%, medium 14%–28.3%, and high >28.3% for Hispanics.

smoke, and more likely to live in UHF neighborhoods with higher proportions of Blacks and Hispanics (all $P<.01$, Table 1). Among Hispanics, those who identified as Black were younger, more educated, and more likely to share a neighborhood with Blacks than were Hispanics who identifed as White ($P<.01$). Among non-Hispanics, Blacks were younger, less likely to be married, less educated, more likely to live at <200% of the poverty level, less likely to be insured, and more likely to live in a neighborhood with a high proportion of Blacks than were Whites. Non-Hispanic Blacks also had higher average body mass index and were less likely to smoke and drink heavily than were non-Hispanic Whites. However, non-Hispanic Blacks were less physically active than their White counterparts (all $P<.01$).

Hispanics reported lower prevalence of hypertension than did non-Hispanics. However, the prevalence of self-reported hypertension was significantly higher for Hispanic Blacks than Hispanic Whites. Among non-Hispanics, Blacks also had a significantly higher prevalence of self-reported hypertension than did Whites, regardless of their sociodemographic and health behavior profile. Among foreign-born Hispanics,

Table 2. Prevalence of hypertension for selected covariates among Hispanic and non-Hispanic adults ≥18 years of age by race, New York City Community Health Survey 2005

Characteristic	Hispanic			Non-Hispanic		
	Black	White*	Total†	Black	White*	Total†
Overall	36.9 (6.06)	26.9 (3.20)	25.6 (1.10)	37.1 (1.21)	25.7 (.84)	28.8 (.66)
Sociodemographics						
Age (years)						
18–45	24.0 (6.99)	16.7 (3.81)	16.2 (1.26)	20.5 (1.43)	11.6 (.96)	14.7 (.76)
≥46	68.1 (10.36)	45.2 (5.00)	45.3 (2.01)	62.2 (1.69)	39.2 (1.25)	46.2 (1.00)
Sex						
Male	32.9 (8.93)	22.4 (4.47)	23.0 (1.71)	33.2 (1.97)	26.0 (1.25)	27.6 (1.01)
Female	41.5 (7.97)	30.6 (4.38)	27.8 (1.43)	39.8 (1.51)	25.4 (1.15)	29.8 (.87)
Marital status						
Married	38.7 (9.75)	25.4 (4.11)	24.0 (1.59)	40.6 (2.19)	24.0 (1.18)	27.5 (.97)
Unmarried	33.6 (7.35)	29.3 (5.12)	27.2 (1.56)	35.2 (1.46)	27.8 (1.22)	30.0 (.90)
Country of birth						
United States	35.7 (11.53)	28.3 (6.22)	19.3 (1.96)	39.6 (1.55)	25.1 (.95)	29.4 (.80)
Elsewhere	36.7 (7.15)	26.9 (3.74)	28.5 (1.34)	32.5 (2.06)	28.5 (1.95)	27.9 (1.19)
Socioeconomic position and access to care						
Education						
<12	52.0 (11.48)	42.0 (7.21)	32.4 (1.95)	49.5 (3.12)	39.3 (4.15)	43.1 (2.23)
12	15.8 (6.53)	19.9 (4.58)	24.9 (2.23)	38.1 (2.19)	32.2 (2.01)	33.2 (1.41)
>12	43.8 (9.87)	21.7 (4.58)	19.4 (1.60)	31.4 (1.65)	22.8 (.94)	24.4 (.77)
Poverty						
<200%	34.2 (8.02)	28.0 (4.78)	27.5 (1.55)	40.4 (2.13)	36.0 (2.17)	35.1 (1.37)
>200%	35.5 (11.32)	25.7 (5.10)	21.2 (1.85)	32.5 (1.69)	22.8 (1.03)	25.0 (.85)
Health insurance						
Yes	43.0 (7.15)	31.8 (3.80)	29.1 (1.35)	39.8 (1.32)	26.8 (.91)	30.3 (.72)
No	17.5 (9.01)	15.7 (5.27)	17.6 (1.92)	23.9 (2.81)	16.4 (2.38)	19.9 (1.73)
Risk factors						
BMI (kg/m^2)						
<25.0	21.0 (8.74)	15.0 (4.18)	17.5 (1.59)	19.8 (1.73)	16.3 (1.03)	17.8 (.86)
≥25.0	46.5 (8.29)	35.9 (4.82)	30.9 (1.56)	44.9 (1.60)	35.4 (1.37)	38.0 (1.00)
Smoking status						
Current	52.7 (14.20)	24.7 (7.64)	25.1 (2.55)	36.7 (2.76)	23.2 (1.97)	26.9 (1.50)
Former	48.2 (18.17)	46.2 (8.74)	31.9 (3.09)	57.1 (3.25)	30.3 (1.58)	36.2 (1.46)
Never	30.8 (7.06)	23.4 (3.53)	24.5 (1.34)	32.6 (1.44)	23.5 (1.16)	26.1 (.80)
Binge drinking						
Yes	25.0 (21.1)	25.0 (8.26)	19.4 (2.51)	33.0 (4.02)	17.3 (1.91)	21.3 (1.68)
No	35.5 (6.06)	26.9 (3.43)	26.8 (1.23)	37.6 (1.27)	27.3 (.94)	29.9 (.72)
Physical activities						
Yes	33.3 (8.51)	23.0 (3.96)	22.4 (1.39)	34.3 (1.46)	23.4 (.94)	27.0 (.77)
No	41.2 (8.57)	32.5 (5.15)	30.8 (1.81)	43.1 (2.13)	31.9 (1.97)	32.8 (1.32)

* All *P* values for χ^2 tests for comparisons within ethnic groups were <.05, with the exception of sex, marital status, country of birth, poverty, binge drinking, and physical activity among Hispanics and sex, marital status, and country of birth among non-Hispanics.

† All *P* values for Hispanic and non-Hispanic comparisons were <.01, with the exception of country of birth.

regardless of race, those who had lived in the United States more than four years had a similar prevalence of self-reported hypertension as their US-born counterparts (data not shown). Finally, we observed no difference in hypertension according to neighborhood concentration of Blacks or Hispanics either for Hispanics or non-Hispanics (data not shown).

In the unadjusted analysis, Blacks (regardless of ethnicity) had 70% greater odds of reporting hypertension than did Whites (Table 3). After adjustment for selected covariates (models 1–3), this association held for Hispanic and non-Hispanic Blacks. However, in the fully adjusted model, the association was stronger for Hispanic Blacks than for non-Hispanic Blacks. We observed no differences between Hispanic and non-Hispanic Whites.

Table 3. Crude and adjusted odds ratios for hypertension by race/ethnicity among adults ≥18 years of age, New York City Community Health Survey 2005

	OR (95% CI)*			
Race/Ethnicity	**Crude**	**Model 1**	**Model 2**	**Model 3**
Non-Hispanic White	1.00	1.00	1.00	1.00
Non-Hispanic Black	1.71 (1.49–1.95)	2.37 (2.03–2.76)	1.92 (1.61–2.28)	1.68 (1.39–2.03)
Hispanic White	1.07 (.77–1.48)	1.53 (1.05–2.23)	1.37 (.91–2.08)	1.17 (.75–1.82)
Hispanic Black	1.70 (1.01–2.85)	2.79 (1.55–5.02)	2.14 (1.17–3.90)	1.90 (1.04–4.85)

OR = odds ratio, CI = confidence interval.

* Crude association between race/ethnicity and self-reported hypertension; ORs adjusted for age, sex, marital status, and place of birth/length of stay in the United States (model 1); additionally adjusted for body mass index, physical activity, smoking, and binge drinking (model 2); and adjusted for all covariates as in model 2 plus health insurance, education, and poverty (model 3).

We repeated the analyses for model 3 among Hispanics and non-Hispanics separately (data not shown), and the findings remained nearly identical to those in Table 3, model 3. Furthermore, when an interaction term between race and ethnicity was tested to determine whether the magnitude of the association between race and self-reported hypertension varied with ethnicity, we observed no difference in the strength of these associations between Hispanics and non-Hispanics (P=.92). Finally, we observed no difference in the odds of having hypertension between Hispanic Blacks and non-Hispanic Blacks (OR 1.26, 95% CI .67–2.38).

No interaction was observed between education and race/ethnicity or income and race/ethnicity. Similarly, we observed no interaction between race and country of birth or between race and neighborhood racial/ethnic composition for Hispanics.

DISCUSSION

This study found that in adjusted analyses, the odds of reporting hypertension were greater for Blacks (both non-Hispanic and Hispanic) than for non-Hispanic Whites, with the strongest odds observed for Hispanic Blacks. When examined within Hispanics and non-Hispanics separately, we found no difference in the magnitude of the association between race and self-reported hypertension in both ethnic groups. The latter finding underscores the salience of race to drive health differences in the population regardless of ethnicity.

Previous studies have consistently reported a lower prevalence of self-reported hypertension for Hispanics and a higher prevalence for non-Hispanic Blacks than for non-Hispanic Whites.[11,12,22,23] However, these studies have mostly focused on Mexican Americans and ignored the heterogeneity of the Hispanic population. For example, and consistent with our findings, a recent study found that Hispanic Blacks had a higher prevalence of self-reported hypertension than did Hispanic Whites.[10] However, after adjustment for selected covariates, the odds of self-reported hypertension was lower for Hispanics Whites only when compared with non-Hispanic Whites. This study used National Health Interview Survey data, and the proportion of Hispanics who identified as Blacks was lower (2%) than in our study (4%). Our results suggest that Blacks, regardless of their ethnicity, reported greater odds of having hypertension than did their White counterparts.

Acculturation has been associated with racial identification in the US Census.[14,15,24,25] Length of stay in the United States, country of birth, and language spoken at home may influence racial identity through assimilation into the mainstream Black/White dichotomy.[14,24] Although acculturation is associated with hypertension,[26–28] in our study the association between race and the prevalence of self-reported hypertension did not vary with nativity status or length of stay in the United States. Our findings suggest that 85% of foreign-born individuals resided in the United States for more than four years, and their prevalence of self-reported hypertension was similar to that of their US-born counterparts. Thus, our null acculturation findings may be the result of the homogeneity of our population in terms of acculturation and self-reported hypertension.

Research suggests that racial discrimination, as a trigger of psychosocial stress, plays a role in the everyday life of non-Hispanic Blacks.[29–36] Because race is a social construct developed before contemporary genomics research and does not capture any biological commonality within groups,[6] race represents the unequal distribution of power, prestige, and resources and may promote or deteriorate health status. Hypertension has been associated with psychosocial stress.[17] Further, psychosocial stress has different effects across racial/ethnic groups. Hispanic Blacks could be exposed to the same deleterious experiences of racial discrimination as non-Hispanic Blacks because of the salience and social visibility associated with their skin color.

Among the strengths of this study were the use of a representative sample and the large sample size. Limitations were the cross-sectional nature of the data, which precludes making inferences

regarding cause and effect, and the use of self-report to describe the prevalence of hypertension. Although self-reported data for this condition are highly correlated with physician's records,[37,38] our results may have been underestimated for all racial/ethnic groups. This underestimation could be higher for Hispanics, as they are less likely to be insured and have less access to care.[39,40] Thus, our results may have underestimated the true prevalence of hypertension among Hispanics. Moreover, the prevalence reported in this study (28%) was similar to the self-reported prevalence of hypertension found in the National Health Nutrition and Examination Survey 2003–2004 (29.3%).[12] Thus, if our findings were underestimated, the magnitude of the underestimation may have been minimal. Another limitation was the small sample size of Hispanic Black people (n=92) and the possibility of sampling weight inflation. However, we repeated the analyses without the weights as a sensitivity analysis, and the results remained nearly identical to the ones presented in Table 3.

Finally, the proportion of Hispanics who identified as Black in CHS (4%) is within the range of national (4%) and state (7%) level estimates.[15,41] The difference between CHS and the New York State estimates for Hispanics who identified as Black is likely due to the way the race questions were asked in CHS as compared to the US Census. Specifically, in addition to the two questions asked by the US Census (''Which one or more of the following would you say is your race?'' and ''Which one of these groups, would you say BEST represents yourself?''), CHS asked Hispanic participants whether, aside from being Hispanic, they also considered themselves to be a member of a racial group.

This study suggests that race may be a proxy for an array of unmeasured exposures that may lead to higher prevalence of hypertension not only among non-Hispanics but also among Hispanics. Specifically, Hispanic Blacks exhibited hypertension profiles similar to their non-Hispanic counterparts and distinct from Hispanic Whites. Given the importance of race on health and the racial heterogeneity among Hispanics, race should be investigated for Hispanics whenever the data allow it. As the Hispanic population continues to grow, it will be interesting to observe how the embeddings in the US Census racial categories, together with their assimilation into western culture, influence Hispanics' life chances and health status.

This study suggests that race may be a proxy for an array of unmeasured exposures that may lead to higher prevalence of hypertension not only among non-Hispanics but also among Hispanics.

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