

11-4-2017

Borders and Blood Pressure: Understanding the Role of Acculturation in a Hypertension Diagnosis Among Hispanic Americans: 2014 California Health Interview Survey

Lia Scalzo, MPH

Jefferson College of Population Health, Thomas Jefferson University, lia.scalzo@jefferson.edu

Hee-Soon Juon, PhD, MSN

College of Population Health, Thomas Jefferson University

Russell K. McIntire, PhD, MPH

*Jefferson School of Population Health, Russell.McIntire@jefferson.edu*Follow this and additional works at: <https://jdc.jefferson.edu/jcphposters> Part of the [Public Health Commons](#)[Let us know how access to this document benefits you](#)

Recommended Citation

Scalzo, MPH, Lia; Juon, PhD, MSN, Hee-Soon; and McIntire, PhD, MPH, Russell K., "Borders and Blood Pressure: Understanding the Role of Acculturation in a Hypertension Diagnosis Among Hispanic Americans: 2014 California Health Interview Survey" (2017). *College of Population Health Posters*. 14.

<https://jdc.jefferson.edu/jcphposters/14>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in College of Population Health Posters by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

Objective/Background

Objective

To identify the association between acculturation and hypertension diagnosis among Hispanic-American immigrants in California in 2014

Background

- The Hispanic population is the second fastest growing ethnic group in the United States, with a total population of about **55 million people**.
- Heart disease and cancer** are the two leading causes of death, which accounts for **about 2 in every 5 deaths**.
- The CDC states that Hispanics had **24% more poorly controlled high blood pressure** than Non-Hispanic Whites
- Lack of hypertension control among Hispanics through medication use or lifestyle changes can be attributed to **social, cultural and economic concerns**.

Study Design

Data Source

Data from the **2014 California Health Interview Survey (CHIS)**, conducted by University of California Los Angeles (UCLA) Center for Health Policy Research, Public Health Institute, and California Department of Public Health.

A **random-digit dial telephone survey** of selected adults (aged 18 years or older) was interviewed in each household.

Representative of California's non-institutionalized population.

Interviews were conducted in **English or Spanish**.

Hispanic Americans (n=3,793): Mexican Americans (n=3,088); Other Hispanic (n=705)

Measures

Outcome: Self-reported hypertension (0=No vs 1= Yes)

Independent Variables: (proxy measures of acculturation)

- Years in the US (US-born, 15 years or more, less than 15 years)
- Citizenship status (US-born, Naturalization, Non-citizen)
- Spoken English level (Only English, Very well, Not well)

Control Variables: Gender, Poverty level, BMI, Smoking status, Having health insurance, Residence

Statistical Analysis

Descriptive statistics (proportion, mean)

Bivariate analysis: Chi-square test

Multivariate analysis: Logistic regression

Weighted analysis using svy from STATA version 13

Results

Table 1: Hypertension Prevalence by Race / Ethnicity

	White (n=14,694)	African Americans (n=917)	Hispanics (n=3,793)	Asian (n=2,146)	AI/AN (n=7,455)	Total (n=19,516)
Prevalence (%)	31.8	40.3	24.0	23.4	38.2	28.5
95% CI	29.7, 34.0	34.2, 46.7	21.5, 26.7	19.4, 27.9	21.7, 58.2	27.2, 29.8

Graph 1: Prevalence of hypertension by age among Hispanics, 2014 CHIS

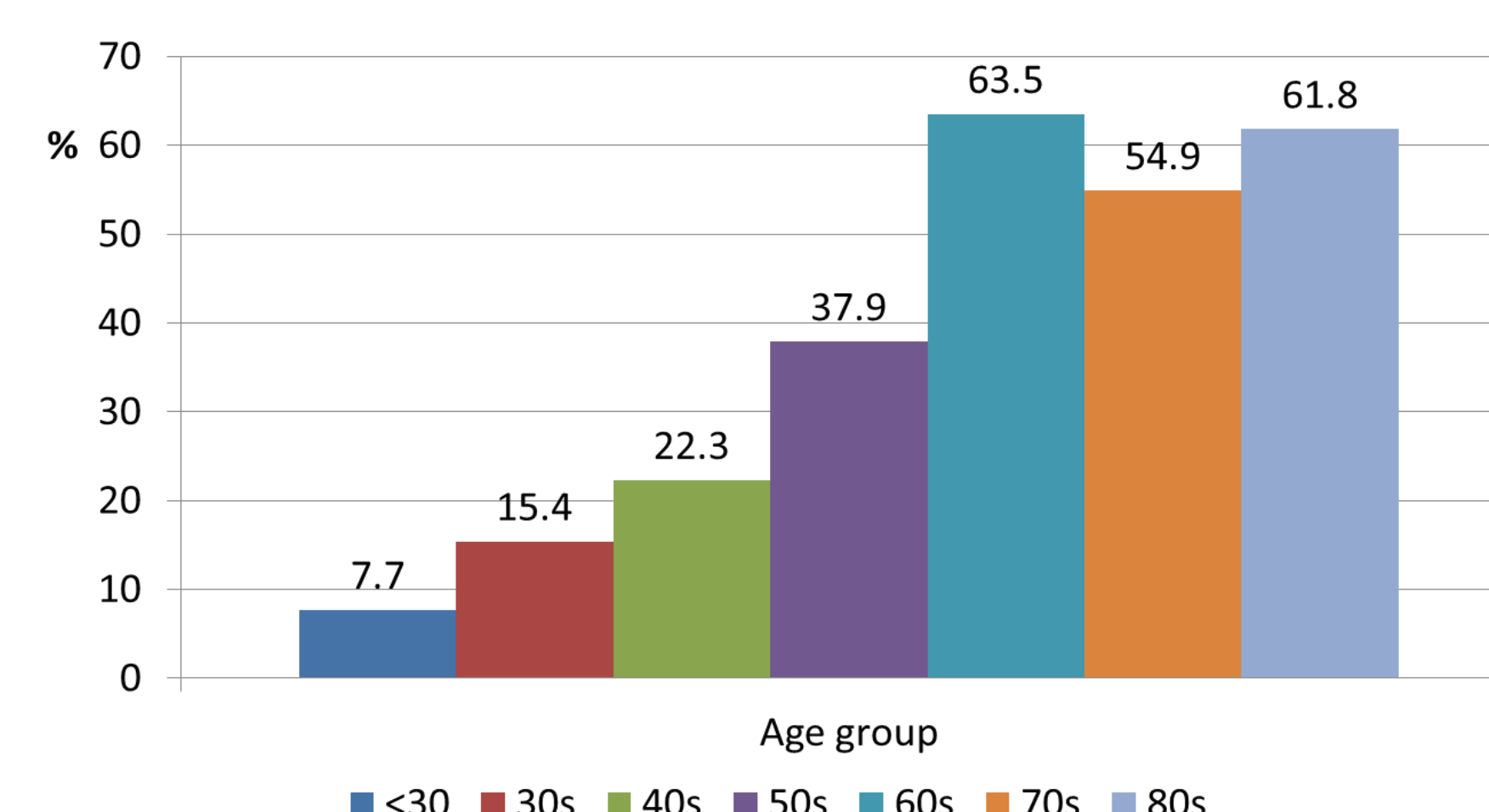


Table 2: Bivariate relationship between acculturation measures and hypertension prevalence by Hispanic Subgroup

Variables	Mexican Americans (n=3,088)		Other Hispanics (n=705)	
	% of having Hypertension (SE ^a)	p-value	% of having Hypertension (SE ^a)	p-value
Citizenship status		<0.0001		0.03
US-born	.189% (.018)		.187% (.032)	
Naturalization	.325% (.028)		.394% (.060)	
Non-citizen	.242% (.026)		.235% (.058)	
Spoken English Level		0.004		.300
Only English	.191% (.024)		.211% (.050)	
Very well	.208% (.020)		.230% (.035)	
Not well	.289% (.024)		.311% (.055)	
Years in the US		<0.0001		0.006
US born	.189% (.018)		.187% (.032)	
≥15 years	.308% (.023)		.376% (.050)	
<15 years	.173% (.035)		.176% (.057)	

Limitations

- **Self-reported data**, which introduces recall bias
- **Data is cross-sectional**, lacking the ability to make assumptions related to causation

Results

Table 3: Multivariate logistic regression analysis of hypertension by Hispanic Subgroup

	Mexican Americans OR (95% CI ^a)	Other Hispanics OR (95% CI ^a)
Gender		
Male	1.00	1.00
Female	1.01 (0.75, 1.37)	0.83 (0.41, 1.69)
Poverty level		
0-99% FPL	1.00	1.00
100-299% FPL	1.23 (0.85, 1.42)	0.45 (0.21, 0.96)*
300% FPL	0.93 (0.61, 1.94)	0.58 (0.27, 1.26)
BMI level		
Normal	1.00	1.00
Overweight	1.45 (0.94, 2.24)	1.04 (0.49, 2.20)
Obese	2.78 (1.76, 4.39)**	2.50 (1.15, 5.40)
Smoking status		
No smoker	1.00	1.00
Former	1.29 (0.71, 2.35)	0.68 (0.18, 2.64)
Current smoker	1.88 (1.38, 2.56)**	0.68 (0.33, 1.42)
Having health insurance		
No	1.00	1.00
Yes	0.60 (0.39, 0.94)*	0.53 (0.18, 1.59)
Residence		
Urban	1.00	1.00
Rural	1.01 (0.74, 1.60)	1.34 (0.57, 3.16)
Acculturation		
US-born	1.00	1.00
≥15 years	1.69 (1.22, 2.74)**	3.22 (1.51, 6.91)**
<15 years	0.99 (0.57, 1.74)	1.05 (0.38, 2.91)

Discussion & Conclusion

Discussion

- Acculturation is an important predictor of hypertension diagnoses among Hispanic-American immigrants.
- Those Hispanics who stayed **longer than 15 years** had higher likelihood of being diagnosed with hypertension than those who stayed less than 15 years and those that were US born.

Conclusion

- This study can help medical providers better understand specific health care needs of Hispanic Americans and the effects of acculturation within immigrants.
- This study suggests medical practitioners to develop culturally sensitive education programs to increase awareness of hypertension in underserved Hispanic American populations.