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

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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

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>White (n=14,864)</th>
<th>African Americans (n=3,997)</th>
<th>Hispanics (n=2,939)</th>
<th>Asian (n=2,446)</th>
<th>AI/AN (n=7,453)</th>
<th>Total (n=37,989)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95% CI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31.8</td>
<td>40.3</td>
<td>24.0</td>
<td>23.4</td>
<td>38.2</td>
<td>28.5</td>
<td>27.2</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Mexican Americans (n=3,088)</th>
<th>Other Hispanics (n=705)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of having Hypertension (SE)</td>
<td>% of having Hypertension (SE)</td>
</tr>
<tr>
<td>Citizenship status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US-born</td>
<td>.189 (.018)</td>
<td>.187 (.032)</td>
</tr>
<tr>
<td>Naturalization</td>
<td>.323 (.028)</td>
<td>.394 (.060)</td>
</tr>
<tr>
<td>Non-citizen</td>
<td>.242 (.026)</td>
<td>.211 (.050)</td>
</tr>
<tr>
<td>Spoken English Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only English</td>
<td>.191 (.024)</td>
<td>.211 (.050)</td>
</tr>
<tr>
<td>Very well</td>
<td>.208 (.020)</td>
<td>.211 (.050)</td>
</tr>
<tr>
<td>Not well</td>
<td>.289 (.062)</td>
<td>.211 (.050)</td>
</tr>
<tr>
<td>Years in the US</td>
<td></td>
<td></td>
</tr>
<tr>
<td>US born</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≥15 years</td>
<td>.189 (.018)</td>
<td>.187 (.032)</td>
</tr>
<tr>
<td>&lt;15 years</td>
<td>.308 (.023)</td>
<td>.376 (.050)</td>
</tr>
</tbody>
</table>

Discussion & Conclusion

Discussion
- Acculturation is an important predictor of hypertension diagnoses among Hispanic-American immigrants.
- These 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.

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

This study is supported by Thomas Jefferson University, College of Population Health.
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