Interaction between Question Context Effects and Respondent Cultural Backgrounds

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Outline

- Background
- Observational Study
  - Relevant theories
- Experimental Study
- Summary
Self-rated health (SRH)

“In general, how would you rate your health?”

- Methodologically, so-so.
  - Large room for measurement error
  - First used a interview conversation starter

- Empirically, great!
  - Asked in numerous surveys around the world
  - Strong predictor of mortality and morbidity
  - Population health and health disparities monitoring tool
SRH question contexts

- Rule of thumb: General before specific
  - McColl, et al. (2001); Bowling (2005); Keller and Ware (1996); SF instruments
  - Health survey practice and survey methodology alike

- No clear evidence
  - Believed to be immune to context effects (e.g., Bowling and Windsor, 2008; Crossley and Kennedy, 2002)
  - Caveat: Research mainly on English-speaking populations and some Scandinavian populations
OBSERVATIONAL STUDY
## Positive* SRH rates – Ages 18+

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<thead>
<tr>
<th></th>
<th>SRH asked without health context</th>
<th>SRH asked within health context</th>
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<tr>
<td></td>
<td>BRFSS 2010</td>
<td>CHIS 2009</td>
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<td>NYCCHS 2010</td>
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<td>NHIS 2010</td>
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<td>CPS 2011</td>
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<td>Non-Hispanic Whites (NHW)</td>
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<td>Hispanics (HIS)</td>
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<td>(HIS – NHW) (Health Disparity)</td>
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<tr>
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<th>HIS interviewed in English (HIS_EN)</th>
<th>HIS interviewed in Spanish (HIS_SP)</th>
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<td>82.5</td>
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* Combined “excellent,” “very good,” and “good” categories; Weighted.
Positive* SRH rates – Ages 50+

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<th>SRH asked without health context</th>
<th>SRH asked within health context</th>
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<tbody>
<tr>
<td>Non-Hispanic Whites (NHW)</td>
<td>80.4</td>
<td>84.5</td>
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<tr>
<td>Hispanics (HIS)</td>
<td>58.2</td>
<td>56.8</td>
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<tr>
<td><strong>HIS – NHW (Hlth Disparity)</strong></td>
<td>-22.3</td>
<td>-27.7</td>
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<td>HIS Interviewed in English (HIS_EN)</td>
<td>71.3</td>
<td>70.3</td>
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<tr>
<td>HIS interviewed in Spanish (HIS_SP)</td>
<td>43.6</td>
<td>43.7</td>
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<tr>
<td><strong>HIS_SP – HIS_EN</strong></td>
<td>-27.7</td>
<td>-26.7</td>
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* Combined “excellent,” “very good,” and “good” categories; Weighted.
Relevant theories

- Conceptualization of health
  - The belief-sampling model
- Social cognition and communication theories
- Usage of contexts in communication
Conceptualization of health

- Different models with different emphasis
  - E.g., medical model; WHO model
- The belief-sampling model
- Cultural differences
  - Hispanics’ health conceptualization
    - Consider medical conditions similarly as non-Hispanic Whites, but also incorporate domains such as spirituality, folk medicine and other aspects of well-being
    - Fatalistic view about their health
Social cognition and communication theories – 1

- Conversation as a cooperative activity
  - Surveys as a form of communication with respondents’ and researchers’ cognitive engagement

- Question contexts becomes relevant as respondents attempt to understand intended meaning of a given question rather than its mere wording
Social cognition and communication theories – 2

- Influence of culture (language) on cognition
  - The Sapir-Whorf hypothesis
  - Vygotsky
  - Language accentuates cultural differences
Usage of contexts in communication by low and high context cultures

Source: Hall (1976)
EXPERIMENTAL STUDY
Hypotheses

1) For SRH, interactions among
   - textual (e.g., question wording),
   - cultural (e.g., race, language), and
   - external (e.g., socio-demographics) contexts

2) Larger context effects for Spanish speakers (mostly Hispanics) than English speakers (mostly non-Hispanics)
Data and methods

- **2007/2009 California Health Interview Survey**
  - Random digit dial telephone survey
  - Conducted in English, Spanish, Chinese (Mandarin, Cantonese), Korean, Vietnamese

- **Experiments 2007/2009**

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<tr>
<th>SRH Location</th>
<th>English (n)</th>
<th>Spanish (n)</th>
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<tbody>
<tr>
<td>Loc 1 No Context (First health q)</td>
<td>1,100/420</td>
<td>859/314</td>
</tr>
<tr>
<td>Loc 2 After Chronic Health</td>
<td>576/418</td>
<td>457/315</td>
</tr>
<tr>
<td>Loc 3 After Mental Health</td>
<td>406</td>
<td>317</td>
</tr>
</tbody>
</table>
Results – 1

% Positive (excellent, very good, good) health^, #

^ Significantly different from no health context at $p<0.05$ (*), $p<0.01$ (**);
# Significant after controlling for age, gender, education and chronic health condition.
Results – 2

English – 5 pt response

Spanish – 5 pt response
Results – 3

* Significant at $p<0.05$, ** Significant at $p<0.01$, *** Significant at $p<0.001$
Results – 4

* Significant at $p<0.05$, ** Significant at $p<0.01$, *** Significant at $p<0.001$
SUMMARY
Summary – 1

- Two-way interaction between SRH question context effects and culture (i.e., textual and cultural contexts) emerged observationally and experimentally
  - Spanish sensitive to context; English not
  - Sampled considerations for health differ by question contexts for Spanish; English not
  - Directional, not correlational context effects
Summary – 2

- Three-way interaction between textual, cultural and external contexts
  - Gender, age, comorbidity
  - Partially conditional context effects
    - Present only for Spanish interviews
Summary – 3

SRH asked in specific health contexts makes

- Hispanic (especially, Spanish speaking) health status better
- Hispanic health disparity smaller
Thank you!

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