

Investigating Linguistic and Cultural Differences in Responses to CAHPS[®] Hospital Survey Items

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Patient Characteristics and Quality

- Differences in experiences of care have been observed by gender, race/ethnicity, health status, educational level, insurance, etc.
- Causes are unclear
 - Survey-related
 - Actual differences in care provided
 - Differences in experiences related to culture

CAHPS Surveys

- Have observed differences by race/ethnicity, language of survey, respondent's primary language
- Actual results vary by CAHPS survey, type of item (ratings versus reports), aspect of care measured and across studies
- CAHPS defined specific translation and cognitive testing procedures to reduce any effects due to language of the survey

CAHPS Surveys and Language

- Health Plan- e.g., higher ratings, lower reports
- Hospital- higher ratings and for some items, higher reports in sample used for this study
- Is something other than language also related to ratings/reports operating here?
 - Mode: Spanish respondents to Hospital CAHPS more likely to have answered by phone than mail
 - Education: Spanish respondents also had less formal education
 - But, after controlling for both, language effect remains

Why are there differences?

- Possible reasons
 - Hispanics/Latinos who answer the survey in Spanish receive better care
 - Hispanics/Latinos who answer the survey in Spanish tend to report “equivalent” experiences more frequently and rate care higher
- Purpose of this study is to test the second explanation by “standardizing” the experience of hospital care

How can we know?

- Develop and present the same hospital care scenarios (vignettes) to Hispanic/Latino Spanish speakers, Hispanic/Latino English speakers, and non-Hispanic English speakers
- Have participants rate these scenarios by responding to selected Hospital CAHPS survey items as if the experiences described were their own
- Collect information on other factors known to affect responses regarding quality (e.g., mode, age, gender, level of education)
- Assess the influence of language and race/ethnicity on responses taking into account competing factors

Phase 1: Develop Scenarios

- Selection of survey items
 - Items showing largest statistically significant differences by language
 - Items addressing various aspects of hospital care
- Cognitive interviewing
 - Based on the selected items to gain insight into the factors considered by participants in making judgments about their own hospital experiences
 - Using the results to develop scenarios in respondents' own words

Phase 2: Administer Scenarios

- Three study (treatment) groups
 - Hispanic/Latinos who mainly or only speak Spanish
 - Hispanic/Latinos who mainly or only speak English
 - Non-Hispanics who mainly or only speak English
- Administer scenarios in group settings in English and Spanish
 - Play pre-recorded scenarios and provided written versions
 - Ask participants to evaluate scenarios using the selected Hospital CAHPS items
 - Collect additional information from participants on factors that may affect ratings and reports

Phase 3: Analysis

- Tabulate responses for each of the 3 groups
- Examine any differences controlling for other personal characteristics known to affect health care experiences
- Examine specific factors related to preferred language and race/ethnicity that may help explain any differences found
 - English ability, years in the US

Phase 1. Items showing differences

During this hospital stay, how often did nurses listen carefully to you?

During this hospital stay, after you pressed the call button, how often did you get help as soon as you wanted it?

During this hospital stay, how often did doctors listen carefully to you?

During this hospital stay, how often was the area around your room quiet at night?

Items showing differences—Continued

During this hospital stay, did you need medicine for pain?

(If Yes) During this hospital stay, how often was your pain well controlled?

During this hospital stay, were you given any medicine that you had not taken before?

(If Yes) Before giving you any new medicine, how often did hospital staff describe possible side effects in a way you could understand?

Items showing differences—Continued

Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital during your stay?

Would you recommend this hospital to your friends and family?

Phase 2. Scenario Development

- 6 Latino Spanish speakers
 - Hospitalized in the last six months
- Cognitive interviewing using 10 selected items
 - Think-alouds
 - Probes

Creating Scenarios

- 4 participants' stories chosen as basis for scenarios
- Scenarios based on actual patient experiences
- Scenarios included the factors that people thought about when they answered the hospital survey questions
- Four sets of scenarios
 - One scenario for each item, for each patient
 - Global rating item based on think-aloud for this item AND for all other items by this person

- Scenarios were
 - Written in Spanish, edited, proofread
 - Translated into English by a certified translator
 - Proofread in both languages by a bilingual native Spanish speaker
 - Audio recorded in both English and Spanish for next phase of study (*4 different voices – one for each patient*)
 - Scenarios were presented in both forms (written and audio) to ensure the inclusion of lower literacy participants

Subjects

- Goal:
 - 100 Latino Spanish speakers
 - 100 Latino English speakers
 - 100 Non-Latino English speakers
- To date:
 - 97 Latino Spanish speakers
 - 63 Latino English speakers
 - 86 Non-Latino English speakers

Survey Administration

- Group sessions, up to 22 people at a time
- Survey questions presented with scenarios
- Scenario group order counterbalanced
- Subjects were asked to listen to each scenario and answer the survey questions as if what they just listened to had happened to them personally

During this hospital stay, how often was the area around your room quiet at night?

The patient that was in my room with me made a lot of noise all night, every night; she was very old. And I couldn't sleep. Maybe they couldn't put me in my own room alone, but they could have put me with someone else. She was there the whole time that I was in the hospital – she was there when I arrived, and she stayed after I left. She couldn't go to the bathroom or anything. She would call out all night for the nurses to come, and they would come in and out all night to help her go to the bathroom. She didn't sleep and she didn't let me sleep! And it was the same in the daytime. And they talked pretty loud. The old lady talked loud – very very, very loud. I did not like that experience in my room.

During this hospital stay, how often was the area around your room quiet at night?

1 ☐ Never

2 ☐ Sometimes

3 ☐ Usually

4 ☐ Always

Pretend that what you just listened to happened to you personally.

How would you answer the above question?

- Participants' responses were based on the same scenarios
 - We can rule out actual differences in care as a factor in any differences we might find
- Demographic questions at end of survey

Phase 3. Analysis

- Comparison of means (t-tests)
- Multiple regression – model
 - Gender
 - Age
 - Education
 - Health
 - Ethnicity (*Latino/non-Latino*)
 - English language proficiency
 - Language of survey (*Spanish/English*)
 - Scenario order

During this hospital stay, how often was the area around your room quiet at night?

The patient that was in my room with me made a lot of noise all night, every night; she was very old. And I couldn't sleep. Maybe they couldn't put me in my own room alone, but they could have put me with someone else. She was there the whole time that I was in the hospital – she was there when I arrived, and she stayed after I left. She couldn't go to the bathroom or anything. She would call out all night for the nurses to come, and they would come in and out all night to help her go to the bathroom. She didn't sleep and she didn't let me sleep! And it was the same in the daytime. And they talked pretty loud. The old lady talked loud – very very, very loud. I did not like that experience in my room.

	English	Spanish	Difference
Mean	1.36	1.74	.38**

NOTE: Positive differences indicate more positive reports by people who took the survey in Spanish.

** $P < .01$

- People who take the survey in Spanish report more positively for this item than people who take the survey in English
- Because both language groups responded based on the same scenarios, this difference is *not* due to actual differences in care
- What *is* going on?

Regression Analysis Results

How often was the area around
your room quiet at night?

Language of survey

Education

Ethnicity

Age $P < .05$

Gender

Health

English proficiency $P < .001$

Scenario order

R^2 .20

- Language of survey is not the driving factor
- Holding the other variables constant, the driving factors behind differences are **age** and **English proficiency**
 - Older people reported more positively than younger people
 - People who speak English poorly reported more positively than people who speak English well

During this hospital stay, how often was the area around your room quiet at night?

Hospitals are almost always quiet in the area where the beds are. And since I was alone in my room, I didn't hear any noise. And it was even quieter at night when everyone was sleeping. Only the nurses are walking around the hospital and they do it carefully; they're quiet. They woke me up to take my blood pressure, because when you're in the hospital they take your blood pressure and your temperature every 2 hours. They came about 4 times during the night.

	English	Spanish	Difference
Mean	3.42	3.14	-.28*

NOTE: Positive differences indicate more positive reports by people who took the survey in Spanish.

* $P < .05$

- For this particular scenario, people who take the survey in *English* report more positively than people who take the survey in Spanish
- What is going on?

Regression Analysis Results

How often was the area around
your room quiet at night?

Language of survey

Education $P < .05$

Ethnicity

Age $P < .05$

Gender $P < .05$

Health

English proficiency

Scenario order

R^2 .19

- Language of survey is not the driving factor
- Holding the other variables constant, the driving factors behind differences are **education**, **age**, and **gender**
 - People with a high school diploma or more reported more positively than people who did not graduate from high school
 - Females reported more positively than males
 - Older people reported more positively than younger people

Global Rating Item

How would you rate this hospital?		
	Difference	P
Scenario group A	0.36	
Scenario group B	1.39***	
Scenario group C	0.95**	
Scenario group D	0.54*	
All scenarios	0.83***	

NOTE: Positive differences indicate higher ratings by people who took the survey in Spanish.

* $P < .05$, ** $P < .01$, *** $P < .001$

- We have strong evidence that people taking the survey in Spanish rate their hospital experiences more positively than people taking the survey in English

	How would you rate this hospital?				
	A	B	C	D	ALL
Language of survey	P < .05				
Education		P < .05			
Latino					
Age		P < .05	P < .05	P < .05	P < .01
Gender					
Health			P < .01		P < .05
English proficiency		P < .05	P < .01		P < .05
Scenario order				P < .05	
R ²	.07	.25	.23	.15	.22

- Holding all other factors constant, the general driving factors behind differences in global hospital ratings are:
 - Age (older people report higher ratings than younger people)
 - Health (healthier people report higher ratings than less healthy people)
 - English proficiency (people who speak English poorly report higher ratings than people who speak English well)

- Role of English language proficiency
 - Greater English proficiency → Greater exposure to agents of mainstream American culture (English language TV, radio, magazines, books, English-speaking Americans, etc.)
 - Greater exposure → Greater adoption of norms, values, and expectations of dominant culture
 - Adoption of norms and expectations → Hospital ratings more like dominant culture (English proficient)

Conclusions

- We found some support for the hypothesis that some differences in English and Spanish language CAHPS Hospital Survey results may reflect cultural differences
- Data indicate that differences in global ratings of hospital care and some reports of care are related to English language proficiency
- As people become more exposed to US health care system and related norms and values, expectations about hospital care appear to change

Questions?

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