Health Information Sources and Health Literacy Levels of Latinos in a Midwestern Tri-state Area

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AAHPERD, Indianapolis
March 18, 2010

Introduction

A major role of health promotion and education specialists is improving health, health care quality, and quality of life of individuals and society by addressing health disparities.

"The social determinants of health are the conditions in which people are born, grow, live, work and age, including the health system...The social determinants of health are mostly responsible for health inequities - the unfair and avoidable differences in health status seen within and between countries." Source: WHO, 2010

Knowing where people turn for health information (sources) and their ability to understand and apply it (health literacy) would be instrumental to developing successful health education/promotion programs and messages

The Issue at Hand

As the local Latino community continues to grow at a rapid pace, health educators and other health professionals find themselves without sufficient information to serve the community.

"The Hispanic population in Ohio grew 36 % between 1990 and 2000, and accounted for 2.3 % of the state's total population ." (Health Policy Institute of Ohio, 2004; U.S. Bureau of the Census, 2000).

There is an information gap regarding the sources of health information and health literacy levels for Latinos in the local area.

Purpose of my research

- To determine the following variables for Latino adults in a Midwestern tri-state area
  - sources of health information
  - health literacy levels (a.k.a. reading grade level in English with medical terms, or Spanish functional health literacy)
  - acculturation levels

- To determine any possible relationships for the above with these social determinants of health :
  - country/region of familial origin,
  - length of residence in the United States
  - education level
  - age
  - gender

Methods

Original IRB proposal

- Focus groups
  - Recruitment
  - Data collection
  - Data analysis
  - Improved interview instrument
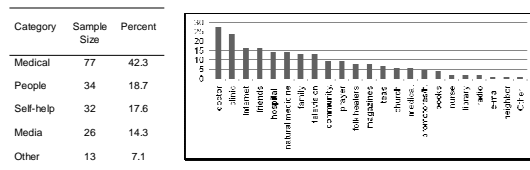
Amended IRB proposal

- Test-retest of the instrument
  - Recruitment
  - Data collection
  - Data analysis
- Semi-structured interviews/ face to face surveys
  - Recruitment
  - Data collection
  - Data analysis
  - Report results

Demographics of survey participants

- 214 participants
- 11 locations, 7 interviewers
- majority: Spanish
- 2:1, females to males
- 2/3 married or living together
- Almost half had more than high school education; ¼ <8th, ¼ had 9th-12th grade

- Less than 4 people in the household
- 1/3 in each age: <30, 31-40, 40+
- 55 Zip codes
- Almost half Mexico (43%), 28% C.A., 17% S.A., 11% U.S./P.R.(14 countries)
- Residence in U.S.: (1/3 each) 0-5 yrs, 6-10 yrs, 11+ years
- Half <$16,000
- 65% in good health

Data Analysis

- Descriptive analyses: (frequencies, skewness, kurtosis, mean, median, mode, etc.)
- The investigator determined themes according to (1) the level of consensus of a concept, (2) strength and depth of a concept, and (3) frequency of a concept throughout the open-ended question responses
- Nonparametric Chi-square tests, and Kruskal-Wallis Chi-square tests were used to analyze and compare the demographic data with the levels of functional health literacy, and the sources of health information from the respondents.

Category	Sample Size	Percent
Medical	77	42.3
People	34	18.7
Self-help	32	17.6
Media	26	14.3
Other	13	7.1

The main source of health information for all of the interviewed participants was a medical source. Both of the categories of People and Self-help were tied as a close second, and media followed as the third- ranked choice.

The rank order of the subcategories was the doctor, clinics, the Internet or friends (tied) and the hospital or natural medicine (tied) family members or television (tied).

Short Test of Functional Health Literacy in Adults
TOFHLA-S

Spanish language (N=187)			English language (N=24)	
Sample size	Percent		Sample size	Percent
41	21.9	Inadequate FHL	1	4.2
23	12.3	Marginal FHL	1	4.2
123	65.8	Adequate FHL	22	91.7

Two-thirds of the participants that took the test in Spanish had adequate functional health literacy *in Spanish,* almost a quarter had low functional health literacy *in Spanish*, and that the remaining few had marginal functional health literacy *in Spanish*.

Research question #1

What are the sources of health information for Latino adults in the Midwestern tri-state area?

Research question #2

What is the level of health literacy for Latino adults in the Midwestern tri-state area for Spanish language health information?

Research question #3

What is the level of health literacy for Latino adults in the Midwestern tri-state area for English language health information?

Reading grade level in English (REALM-SF)

Reading grade level	REALM-SF score (points)	Number of participants	Percent
<= 3rd	0	47	22.4
4th-6th	1-3	35	16.7
7th-8th	4-6	79	37.6
>=9th	7	49	23.3

A little more than three quarters of the participants read at or below the 7th -8th grade level in English, and that less than a quarter at the >=9th grade level in English. For those participants that took the S-TOFHLA in English, the majority had adequate functional health literacy *in English* and the remaining two participants each had marginal or low level functional health literacy respectively.

•Almost all of the participants had high adherence to the Hispanic domain, slightly more than half had low adherence to the Non-Hispanic domain, and that almost half of the research study participants were bicultural.

•A person's health literacy in English varied with their health literacy in Spanish, their acculturation to the U.S. cultural domain, their acculturation to the Hispanic domain, their country/region of origin, their length of residence in the U.S., their age, or their gender.

• In addition, the local adult members of the Latino community researched in this study that had inadequate FHL levels in Spanish had lived in the U.S. a shorter length of time than those with adequate FHL levels in Spanish.

•There is a wide variety of health information sources used by this population sample with the primary one being medical. The top four health information source choices (subcategories) for *convenience* for all participants ranked as follows: clinics, hospitals/Internet (tied), followed by doctor

•The selection of health information source was indeed impacted by country/region of origin, as well as the length of residence in the U.S., education level, age, and finally gender.

•"practical, current, and brief" health information is preferred
• health information from trusted sources; easy to understand
• Spanish was the preferred language
• Half preferred to look for information at the time of need (when ill), rather than in any preventive way; others looked on a semi-regular basis

Research question #4

Is there a relationship between health literacy levels and acculturation or other demographic variables such as country/region of familial origin, length of residence in the U.S., education level, age, or gender?

Research question #5

What are the preferences of Latino adults in the Midwestern tri-state area regarding health information sources?

Summary

A person's health literacy in English (i.e., their ability to read medical terms in English) varied with:
- their health literacy in Spanish
- their acculturation to the U.S. cultural domain
- their acculturation to the Hispanic domain
- their country / region of origin
- their length of residence in the U.S.
- their age
- their gender

- Participants that had inadequate FHL levels in Spanish had lived in the U.S. a shorter length of time than those with adequate FHL levels in Spanish.
- Spanish was the preferred language for health information
- Three-quarters of the participants have looked for health information due to an illness in the past,
- Half sought preventive health information and half preferred to look for information only when ill.

Conclusions

- Barriers existed for 1/3 of participants when seeking health information : language, cost of health care, lack of health insurance, lack of child care, fear of legal status, and other.

- This research study identified some variables (certain demographic characteristics, acculturation levels, and literacy levels) that were linked to the sources of health information choices for a sample of local Latino adults. This was considered to be a vulnerable minority population.

- Therefore, it is important to the profession that health educators continue to explore health literacy and investigate how its social determinants impact our messages for our intended audiences.

- As result of this study, tailored health promotion programs might lead to better health communication, higher rates of patient satisfaction, improved adherence, and in the long term better health outcomes.

Future research

Health literacy is a multifaceted issue that requires a multi-sectorial approach for our society.

Three general approaches are recommended to improve the ways in which health education and health promotion programs connect with racial/ethnic minority populations:

1. Evaluation and assessment of literacy, reading grade level and numeracy skills (for example, using numeracy props techniques) of the target audience for health education programs in the Latino community must be conducted.
2. The selection of the tools to measure these abilities must be practical and reliable to support their use in the field.
3. We must meet health education program participants at the appropriate language and reading level needs of the individuals.

Resource List

- Baker et al.,1997, 2002
- Betancourt, Carrillo, Green, & Maina, 2004
- Britigan, Murnan, Rojas-Guyler, 2009
- Burroughs, 2000
- Campbell & Quintiliani, 2006
- Cottrell & McKenzie, 2005
- Gazmararian, Williams, Peel, & Baker, 2003;
- Greater Cincinnati Hispanic/Latino Health Survey, 2005
- Health Policy Institute of Ohio, 2004
- Institute of Medicine, 2002
- Kickbusch, 2001
- Luquis & Pérez, 2006, p. 236
- Morales, et al., 2004
- National Institute of Child Health and Human Development, NIH, DHHS, 2001
- Nutbeam, 2000
- Ratzen & Parker, 2000
- Sarkar, Fisher, & Schillinger, 2006)
- Speros, 2005
- Schwartzberg, VanGeest, & Wang, 2005
- U.S. Bureau of the Census, 2000 & 2006
- World Health Organization, 2010, http://www.who.int/social_determinants/en/

Britigan, D., Murnan, J. & Rojas-Guyler, L. (2009). A Qualitative Study Examining Latino Functional Health Literacy Levels and Sources of Health Information. *Journal of Community Health, 34,* 222-230.

Thank you!

Questions?