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A Qualitative Study Examining Latino Functional Health Literacy Levels and Sources of Health Information

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Abstract The purpose of this study was to determine the health information sources used by Latinos in southwest Ohio, identify individual Latino residents' functional health literacy levels, and identify any access barriers to those sources of health information. Results show almost two-thirds had low acculturation levels to US culture. Overall, the major source of health information is a medical setting, followed by media technology (which included the Internet). However, when it comes to being ill, the primary source becomes a media choice, then medical. The barriers to accessing health information included language and lack of confidence/knowledge. Participants reported moderate satisfaction with the sources of health information available, and had an 'adequate' health literacy level in Spanish. This study was important because it filled an existing information gap for the Latino community, a racial ethnic minority population in the southwest Ohio area. With the results of this study, health educators and other health care practitioners might be better able to understand the health care needs of the Latino community and could essentially create improved and culturally competent health communications.

Keywords Acculturation · Health communication · Health literacy · Latinos · Information sources

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Introduction

A major role of health promotion and education professionals is the improvement of health status by addressing health disparities. The *Healthy People 2010* initiative aimed to eliminate health disparities by year 2010. This included a health communication focus area with a goal to use communication to strategically improve health [1]. Health educators must have a baseline understanding of the health behavior and communication channels utilized by the community with which they work. This can be done by identifying the sources of health information used and by measuring the individual's functional health literacy levels. Armed with this knowledge as part of the assessment process of a subgroup to which programs are directed, health educators can then channel health promotion resources optimally for successful outreach. Understanding these fundamental concepts of health literacy levels and health information sources, provide health education and promotion programs a firm foundation increasing their effectiveness in meeting the needs of the community being served. Once a working knowledge of the sources of health information resources and the functional health literacy levels of the target subgroup members are known, health educators could better develop health promotion programs which are increasingly culturally appropriate and successful in changing health behaviors. This is particularly important when working with racial/ethnic minority and underserved communities, which experience higher rates of health disparities.

Racial/ethnic disparities in health have been documented and clearly confirm that members of minority groups suffer disproportionately from chronic illnesses such as cardiovascular disease, diabetes, asthma, cancer, and other morbid conditions. In many cases, it is the racial

and ethnic minority and underserved communities that experience higher rates of morbidity and mortality. Differences in healthcare access also play a role in health disparities [2, 3]. Health communication levels and functional health literacy levels are found to be marginal or low for minority and ethnic communities. Baker et al. [4] found that patients with inadequate functional health literacy were more likely to report poor health status than those with adequate reading skills.

Discussion of health disparities in minority populations is important to frame the over arching problem that racial and ethnic minorities tend to receive lower quality of care than non-minorities. This occurs even when access-related factors are controlled (e.g., health insurance status, income, etc.). Racial and ethnic disparities in healthcare are consistent across a range of illnesses and services. Because much of American social and economic life is ordered by race and ethnicity, and minorities remain disadvantaged relative to whites, the minorities' paradigm also affects perceptions and responses in health care settings. Poorly managed chronic conditions or missed diagnoses often lead to a lack of trust in health professions by Hispanic/Latino individuals and may affect their willingness to seek care and adhere to treatment regimens [5].

The root causes of racial/ethnic health disparities include variations in health beliefs, values, preferences, and behaviors. Skelly et al. [6] understood the importance of developing methods to assess how people in a community learn about disease, particularly those of different cultures and ethnicities. Factors examined in their study included knowledge from leaders in the community (e.g., ministers), from community workers (e.g., bartenders, barbers and beauticians), and specific community resources (e.g., health care centers) through geographical analysis.

Hudson and Watts [7] examined Hispanic preferences for health care providers and health care information in Lubbock County, Texas. A little over half of the respondents (51%) received most of their information regarding health care services from family and friends. College graduates (33%) were more likely than non-college graduates to depend on media for information about health care services. Hispanics relied more on self-efficacy and internal communication than media. The study found that 58% of the respondents depended on family and friends for information about physicians and 13% relied on media; however, 23% of the college graduates used media for seeking information about physicians. Regarding health beliefs, Latinos, with demographic variations, tended to be family centered and had defined gender roles. Often the mother of the family made the health care decisions. To effectively disseminate information regarding health care services and physicians, health care marketers may consider a combination of self-efficacy and media target to the mother.

Marin and Gamba [8] described acculturation as a long-term fluid process in which individuals simultaneously move along at least two cultural continua and whereby individuals learn and/or modify certain aspects of the new culture and of their culture or origin. Martinez-Schallmoser et al. [9] reported acculturation as an adjustment process whereby a person acquires or fails to acquire the customs, values, ethnic identity, language, cognitive perceptions, and semantic (cognitive/affective) descriptions of an adopted culture as a result of socio-cultural interactions while retaining or failing to retain the norms of his or her culture. Well-adjusted Latinos have better paying jobs, a better education, and more years in the United States, and higher levels of acculturation [10]. Recently arrived Hispanics seem intent on maintaining their language, cultural values, and other group-specific characteristics such that any community interventions would need to be designed to be culturally competent [8, 11]. Hispanic/Latino populations sampled in the Midwest demonstrated that the majority (80%) have a preference for Hispanic/Latino social environments and the Spanish language over English. This indicates a low level of acculturation to the American culture [12, 13]. Health communication contributes to all aspects of disease prevention and health promotion and is relevant in a number of contexts, including (1) health professional-patient relations, (2) individuals' exposure to, search for, and use of health information, (3) individuals' adherence to clinical recommendations and regimens, (4) the construction of public health messages and campaigns, (5) the dissemination of individual and population health risk information, that is, risk communication, (6) images of health in the mass media and the culture at large, (7) the education of consumers about how to gain access to the public health and health care systems, and (8) the development of telehealth applications [14]. In addition, the set of ten Leading Health Indicators, which focused on key health improvement activities and were described in *Healthy People 2010: Understanding and Improving Health*, all depended to some extent on effective health communication [14]. The literature well documents that language is a barrier to effective health communication and leads to patient dissatisfaction, noncompliance, and fewer physician visits [13, 15–19]. Regarding health beliefs, Latinos (with demographic variations) tend to be family centered and have defined gender roles. Often the mother of the family makes the health care decisions. Based on earlier research, Latino residents in the designated counties of southwest Ohio had a low level of acculturation [20]. Everyday interactions with family and with others in the community usually depend on the ability to communicate with language. However, in a setting where the native language is not the predominant language spoken, sometimes the

services of an interpreter is needed. In a crisis situation when health care is needed immediately, and communication is of utmost importance, it could mean the difference between life and death [21]. A lack of proficiency in English is thought to contribute to disparities in health outcomes among some minority groups. The Census Bureau released new 2000 Supplemental Survey Tables with updated estimates showing that Spanish speakers account for 60% of the 45 million individuals who reported speaking a language other than English at home. Among the elderly aged 65 and over who did not speak English well or at all in 2,000, about 50% spoke Spanish [22]. Health information for health promotion and education programs should be accessible, written at appropriate health literacy levels, and tailored to the target population in order to eliminate health disparities among this racial/ethnic minority. Even with access to information and services, however, disparities still exist because many people lack health literacy [23]. Sarkar and colleagues [24] stated that "a growing body of research demonstrated that limited health literacy, a prevalent problem in vulnerable populations, is independently associated with poor self-rated health, higher utilization of services, fewer preventive services, worse glycemic control and more diabetes complications". A study by Shi and Stevens [25] presented a profile of risk factors for vulnerable populations with unmet health care needs. The study found that lower health literacy, which included where to go to obtain health services when needed, also often contributed to lower reported rates of unmet needs. Overall, the study determined that vulnerability may be operationalized to account for multiple risk factors; that risk factors are interactive; and that strategies to reduce disparities should address co-occurring risks through integrative approaches and greater partnerships between medical and social sectors when designing interventions for vulnerable populations.

The goal of the *Healthy People 2010* health communication objective is to focus on using communication strategically to improve health. Barriers to health communication for ethnic minorities include language, low health literacy, and literacy level, which also prevent full understanding of consent forms. These barriers to effective health communication impact provider–patient communication and are directly linked to patient satisfaction, adherence, and health outcomes. Barriers such as these prevent shared decision-making regarding health care choices [14].

The literature on health information sources for the Latino population in the Midwest is sparse. Two studies have asked Latinos in the southwest Ohio area "where do you go for help when you are ill." The first study with over 200 Latino women found that 4% sought help from relatives, friends or neighbors, 2.5% from traditional/folk healers and 1.5% turned to TV, books, magazines or the Internet [13]. In a second study with over 500 Latinos, men and women, when asked the same question, 18.7% reported going to relatives, friends or neighbors, 11.2% turned to relatives, friends, or neighbors and 16.6% turned to TV, books, magazines or Internet [12]. However, no studies address sources of health information or health literacy specifically for the Latino population.

Studies conducted on the east coast and west coast or Texas Latino populations are more plentiful. A study that was of national scope was conducted by the National Cancer Institute which tracked changes in the health information environment biennially. The Health Information National Trends Survey (HINTS), conducted from October 2002 to April 2003, was a telephone survey of 6,369 adults. Telephone exchanges with high concentrations of Hispanic and African American residents were oversampled to ensure adequate representation. The survey covered the use of different health information channels such as physician, Internet, television, family or friends, magazines, newspapers, and radio. The results of the study showed that 63.7% of adults looked for some type of health or medical information either for themselves or for someone else through the Internet. When asked about the level of trust on a specific disease, such as cancer, respondents had a high level of trust for information provided by physicians in contrast to the other sources [26].

A person in need of health information would find it necessary to have the skills to seek out the information, to communicate with the health professional in order to have their needs be understood, and in turn, have adequate functional health literacy to understand the information retrieved. All three tasks have numerous potential barriers which need to be eliminated in order for the participant to navigate the healthcare system. Elimination of these barriers can be particularly challenging to immigrant minorities, such as Latinos living in the United States, especially if there is a language barrier. By understanding these barriers, and by designing health promotion programs that acknowledge the multi-factorial risk factors involved for the participants, health educators might have the opportunity to meet the participant with optimal, linguistically culturally competent resources to guide them to successful health behavior change and improved health outcomes.

This study was designed to investigate three areas which are fundamental to successful health promotion and education programs for Latino residents in two southwest counties of Ohio. The three areas include: identifying the sources of health information for a subgroup of the population, measuring an individual's functional health literacy (FHL) level, and identifying the perceived barriers to accessing sources of health information. The interaction of

participant demographics and health literacy levels with health sources utilized is examined. This study aims to fill an existing information gap for the Latino community, a racial ethnic minority population in the southwest Ohio area.

Methods

During the fall of 2007, Latino community members aged 18 years or older residing in two southwest Ohio counties were part of the study. Latinos were recruited to participate in semi-structured interviews by a team of two trained interviewers, one a bilingual native Spanish speaker. Participants were given the option of completing the interview in Spanish or English. Audio-taped and written responses of the interviews were used to gather the data. Semi-structured interviews were used rather than traditional self-administer surveys in order to determine functional health literacy levels and to engage participation by people with low literacy skills. Participants in this research study were recruited using intercept interviews at a variety of public settings such as social service agencies and cultural events. Following a scripted introduction in the language of their choice, they were given the adult participation information sheet, and if they verbally consented to voluntarily and anonymously participate, the interview was conducted. All procedures had been previously reviewed and approved by the University Institutional Review Board for the Protection of Human Subjects. Upon completion, respondents were provided a $5 monetary gift card for local grocers to demonstrate gratitude for their participation.

Instrumentation

Open ended questions were developed to measure demographic characteristics (12 items) and health information (11 items). Demographical characteristics included gender, age, zip code or neighborhood, marital status, race, ethnicity, country of origin, number of years in the US and in Cincinnati, years of school completed, estimated income, general health status, and the number of people in the household. The health information questions measured (a) the recipients of the health information sought, (b) the sources of that health information, and (c) the barriers, if any, to the health information sought.

Acculturation was measured using the Bidimensional Acculturation Scale for Hispanics (BAS), a Likert-type 12 item scale with previously established validity and reliability [8]. Individual functional health literacy levels were measured using the Short Test of Functional Health Literacy in Adults (S-TOFHLA) [27]. The S-TOFHLA was designed to capture numeracy and reading comprehension skills in the middle to low levels of literacy ability. The test of 36 items used multiple choice responses. The reading comprehension portion assessed understanding of health care texts, such as preparation for a diagnostic procedure (i.e., upper GI series) and Medicare Rights & Responsibilities. Readability levels on the Gunning Fog index were grades 4.3 for the numeracy section and 10.4 for the reading comprehension section. The administration of the reading comprehension test used a scripted introduction and was timed at 7 min and was followed by the 36 items for the reading comprehension section only. The average time of completion of the entire instrument was 17 min.

Face and content validity were established following review by a panel of experts, which consisted of a subject matter expert, an educator at a local language immersion school, and a measurement design expert. They were asked to assess the content, translation to Spanish, and back-translation to English. The test-retest technique was utilized to test reliability in a pilot test with 12 Latino community members. Using a 1-week interval between administrations, a percent agreement of 94% between the test and the retest was established.

Data Analysis

Descriptive frequencies were conducted on the demographic data using SPSS (v.14.0). Transcripts were typed from the interview audiotapes. The bilingual native Spanish speaking interpreter translated the transcript into English and checked for accuracy against the audiotapes. A codebook was developed after a preliminary review of the transcripts. Developing a consistent coding system reduced data errors and increased data entry efficiency. The codes included core concepts (e.g., sources of health information, barriers, FHL levels, demographics such as country of origin, gender, etc.). The written transcription was first coded and then checked for accuracy. Themes were then determined 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 discussions. Data was analyzed by comparing and contrasting themes within and between health information sources, barriers to access, functional health literacy level, and demographics such as gender and country of origin.

Results

Permission was obtained from three community locations to conduct intercept interviews. Fifty-eight people were asked to participate in the study, and the rate of refusal to participate was very low (7%). Participant totals were as follows: the annual community Hispanic festival ($n = 42$),

a woman's learning center ($n = 8$), and a Hispanic ministries center ($n = 4$). Each participant was given a $5 gift card for one of two local grocery stores. A total of 54 participants completed interviews; however, two were deemed to be invalid because of either living outside of the designated study area or not perceiving themselves to be Latino (a). Fifty-two valid participant interviews were used in the research study ($n = 52$), of which 33% ($n = 17$) chose to use the English version of the demographics and health sources survey instrument, 37% ($n = 19$) chose to use the English version of the bi-dimensional acculturation subscale (BAS), and 15% ($n = 8$) chose to use the English version of the Short version of the Test of Functional Health Literacy (S-TOFHLA). Sixty-seven percent ($n = 35$) chose to use the Spanish version of the demographics and 65% ($n = 34$) for the Spanish health sources survey instrument, 62% ($n = 32$) chose to use the Spanish version of the bi-dimensional acculturation subscale (BAS), and 81% ($n = 42$) chose to use the Spanish version of the Short version of the Test of Functional Health Literacy (S-TOFHLA). One respondent left the BAS blank and one filled out both the English and Spanish options. Two respondents did not fill out the S-TOFHLA at all. Regarding the language of choice for the audiotaped interviews, 29% ($n = 15$) chose to have the language be English and 60% ($n = 31$) chose to have the interview conducted in Spanish.

The demographic information for the target population is reported in a table entitled Participant Demographic Characteristics (Table 1). Participants demonstrated a wide diversity of countries of origin by including a total of 13 countries (Table 2). The distribution of the number of years in the United States was highest for the 5 years or less category ($n = 22$, 43.1%), followed by the 6–10 years category ($n = 13$, 25.0%), then the 11–20 years category ($n = 10$, 19.2%), and the fewest were in the >20 years category ($n = 6$, 11.5%).

Table 1 Participant demographic characteristics

	n	%*
Gender		
Male	20	38.5
Female	31	59.6
Age		
<30 years	21	40.4
30–39 years	14	26.9
40 or older	11	21.2
Annual income		
<$15,000	11	33.3
$15,000–$29,999	12	36.4
$30,000–$44,999	4	12.1
$45,000–$100,000	6	18.2
Don't know	17	33
Stated income on a monthly basis	20	38
Education, highest level		
Twelfth grade or less	24	48
More than high school	26	52
Marital status		
Single	12	24.0
Married	23	46.0
Living together	11	22.0
Separated	1	2.0
Divorced	2	4.0
Widowed	1	2.0

* Totals may not equal 100% due to missing responses

Table 2 Country of origin

	n	%
Columbia	1	1.9
Cuba	1	1.9
Dominican Republic	5	9.6
Ecuador	3	5.8
El Salvador	1	1.9
Guatemala	9	17.3
Martinique	1	1.9
Mexico	19	36.5
Nicaragua	3	5.8
Peru	5	9.6
Puerto Rico	2	3.8
USA	1	1.9
Venezuela	1	1.9

Acculturation

Participants reported acculturation through administration of the Bi-dimensional Acculturation Scale (BAS). The acculturation scale had a Cronbach's alpha coefficient of .881 ($p = .05$). Each respondent was assigned two scores: one for the average of the items making up the Hispanic domain, and another score for the average of the items making up the non-Hispanic domain. The possible total score range is from 1 to 4 for each cultural domain. According to Marin and Gamba [8], in order to assign acculturation categories to the respondents, a score of 2.5 can be used as a cutoff score to indicate low or high level of adherence to each cultural domain. Therefore, scores above 2.5 in both cultural domains can be interpreted as indicating biculturalism on the part of the respondent. The Bi-dimensional Acculturation Scale (BAS) data showed that 63.5% ($n = 33$) of the participants had an average score less than the required 2.5 on the 4 point scale to determine a sufficient level of acculturation in English. The portion of the participants that had a score over the 2.5

point cut-off to determine sufficient acculturation in English was 36.5% ($n = 19$). Conversely, the number of participants with a score >2.5 points for sufficient acculturation in Spanish was 94.2% ($n = 49$), and 5.8% had an average score of <2.5 points ($n = 3$).

Functional Health Literacy

The level of functional health literacy in Spanish or English was determined to be either adequate or not adequate based on the score determined by the Short version of the Test of Functional Health Literacy in Adults (S-TOFHLA). The range of reading comprehension scores was 0–36. The scoring for the S-TOFHLA is as follows: 0–16 = Inadequate Functional Health Literacy, 17–22 = Marginal Functional Health Literacy and 23–36 = Adequate Functional Health Literacy.

A total of 50 respondents filled out the S-TOFHLA, and two did not. For the eight people that chose to take the S-TOFHLA in English, 100% of the scores were in the range which was considered to have adequate health literacy in English. For the 42 participants that chose to take the Spanish version of the S-TOFHLA, the following data was collected: 14% ($n = 7$) had low to marginal functional health literacy in the Spanish language (considered to be not adequate), and 82% ($n = 43$) had adequate functional health literacy in the Spanish language.

Sources of Health Information

Participants were asked to share their sources of health information over three specific periods of time: (a) when reflecting on the past, whether it was due to illness or not, (b) during an illness, and (c) when seeking information about health before they were ill (preventive) (Table 3). The categories included: medical setting, family/friends, media and other. The "medical" category setting is the most often used source of health information for all three instances of time frame. This included doctors, clinics, and hospitals, medical professionals such as nurses and nurse practitioner, and community health centers. The family/friends category is self evident. The "media" category included the following components: Internet, radio, television, newspapers, magazines, books, journals, brochures, pamphlets, bulletins, and information from the library. The "other" category included the workplace, health fairs, home remedies, and other persons (Table 3). When asked if the participants used health information sources before they were ill, the distribution of the answers were more evenly distributed with 52% ($n = 26$) answering with a "No" and 48% ($n = 24$) answered with a "Yes".

Table 3 Sources of health information categories and frequency tables

Source	Medical[a] (%)	Family/friends (%)	Media[b] (%)	Other[c] (%)
Past	61.2	6.1	20.4	12.2
When ill	32.2	17.6	41.2	8.8
Preventive	37.5	6.3	46.8	9.4

[a] "Medical" denotes doctors, nurses, hospitals, clinics, community health centers, medical professionals

[b] "Media" denotes Internet/computer, radio, newspapers, television, library, books, magazines, fliers, pamphlets, brochures, bulletins, journals

[c] "Other" denotes workplace, other people, health fairs/screenings, home remedies

Perceived Health Status

Of the 48 responses for perceived health status, 6.3% ($n = 3$) of the participants perceived their health as being poor, 72.9% ($n = 35$) of the respondents perceived their health as being good, 20.8% ($n = 10$) of the respondents perceived their health as being very good.

Health Information-seeking Behavior

When asked if the last time the respondents sought health information was for themselves, for someone else, or for both themselves and someone else, 65.1% ($n = 35$) responded that it was for themselves, 7.7% ($n = 4$) responded that it was for someone else, and 13.5% ($n = 7$) responded that is was for both themselves and someone else. When asked, "If when you are sick do you ever try to obtain health information", the majority (90.2%) responded "yes".

When participants were asked how satisfied they were with the information found, no one responded that they were "Not Satisfied". In fact, the majority was satisfied with the health information that they found: 14.3% ($n = 6$) somewhat satisfied; 54.8% ($n = 23$) satisfied; and 31% ($n = 13$) very satisfied. Of those participants that had problems obtaining health information (21.6%, $n = 11$), four specified that language was a barrier, two specified the lack of knowledge or confidence to proceed to seek health information, one specified that the lag time for an appointment was a barrier, and one did not specify the barrier.

Discussion

This exploratory study is not intended to be generalizable to a larger population, but rather serves to examine the relationships between demographics (which included an acculturation level subscale) and sources of health

information for a subgroup of a target population (Latinos in two counties in southwest Ohio) and the level of functional health literacy for that purposive sample. This study had a very diverse list for country of origin which corroborated the 533 Hispanic/Latino respondents for the 2005 Greater Cincinnati Hispanic/Latino Health Survey [12]. Similarly, the 2005 Greater Cincinnati Hispanic/Latino Health Survey respondents self-reported good–very good health status (96.1%), and this study also had the majority (93.7%) of respondents self-report their health status as good–very good. The aforementioned study reported Hispanic/Latinos going to health centers or clinics or private doctor's offices the most when they are ill. The present study found a high frequency use of medical settings for health information (61.2%).

Acculturation is a complex process as described by the literature. The study on health information-seeking behavior by Rojas-Guyler et al. [13] had a study sample size of 204 Latinas in the Midwest and found that 80% of their respondents had a low level of acculturation. The present study of 52 respondents had a similar finding of a low acculturation rate in English (36.5%) compared to the high rate of acculturation in Spanish (94.2%). This may be related to the distribution of the numbers of years in the United States since the highest distribution was for the 5 years or less category.

Measuring functional health literacy is also a complex process. As literacy levels and health literacy levels blur, Shi and Stevens highlight that a profile of risk factors for vulnerable populations is needed to account for multiple interactive risk factors. As Safeer and Keenan acknowledge, the question of highest education level does not accurately reflect the level of literacy, especially when self-report is not always reliable. As mentioned in the literature review, Baker and colleagues reported that reading levels average four grades below the number of years of schooling [25, 28, 29].

The Health Foundation of Greater Cincinnati assessed the functional health literacy among patients served in primary care providers to the poor practice settings (PCPPs) [20]. The prevalence study was conducted at 13 primary care providers to the poor settings, within six counties and three states of the twenty-county region served by the Health Foundation of Greater Cincinnati. The report found that of the 746 completed surveys, 16% had deficient functional health literacy using the S-TOFHLA. The results of the study showed 10.6% of the sample had inadequate FHL, 5.0% had marginal FHL, and 84.5% had adequate FHL scores. Of these, only 31 (4%) of the completed surveys were from Hispanics. Hispanics had the lowest mean S-TOFHLA scores [20]. In the present study, the majority chose to use the Spanish version of the bi-dimensional acculturation subscale (BAS), and also chose to use the Spanish version of the Short version of the Test of Functional Health Literacy (S-TOFHLA). Therefore, it is interesting to note that given the S-TOFHLA in Spanish, a high percentage of Latino participants had adequate FHL. This is in contrast to the findings of the Institute for Health Policy and Health Services Research findings in the Greater Cincinnati area which had Inadequate FHL [20]. This may speak to the need for healthcare information to be provided in many languages as a matter of necessity for persons of a different country of origin to have a chance at comprehending the health information provided in the United States.

There were ten participants that had answered that they had experienced problems with accessing health care information. The verbatim transcripts listed the problem to most often be due to language. Regarding barriers to obtaining health information, the questions posed to participants were: "Did you have any problems when trying to obtain health information? If yes, what problems?" The following examples are some of the responses that were offered by participants.

In regards to insurance or lack of it, one 34 year-old woman from Mexico, who has been in the United States for 11 years, discussed that her experience affected her satisfaction with her care. She shared, "…sometimes the doctors are so busy, yes, if you don't have a medical card, so I pay myself and sometimes they prefer the persons with the medical card because the insurance they pay them and they can take more time with me." She went on to state that making an appointment is difficult, "and they are so busy".

The participants shared that language was a problem when making an appointment (which included making the severity of the illness and the urgency of the timeframe known), during the appointment, and with the follow-up instructions after the appointment. One participant from Guatemala stated, in Spanish: "I have trouble because I don't speak or understand English very well. I went to hospital but I just returned home because I could not understand their instructions—the interpreters were busy at the time and could not help me out". Another participant, from Mexico, shared in Spanish, "Yes, e.g., when there is no interpreter available at the doctors, you're always left doubtful of the information they give you and then you feel bad about asking more—they talk so fast and I cannot understand". A participant from Ecuador checked that she did not have any problems and then went on to include that it was because she had access to the Internet. Another participant had a similar response in that he checked "no", but explained that "it is difficult, yes, but generally not, because I go to many sites" He went on to provide the URL addresses to Internet several sites which included www.allaboutlatinohealth.com.

Respondents from this study are turning to computers and the use of the Internet to access health information. On the Internet, the language problem can be eliminated when the information is made available in a person's native language. This raises a point about the high use of computers in the "media" category as a health information resource by the participants. Perhaps the availability of the Internet sites in Spanish kept the number of participants that checked "yes" to having problems deceptively low because they no longer felt that attempting a discussion (language), or consulting with a healthcare professional (in person) was necessary anymore.

The delimitations of this study include that the sample was limited to adult (aged 18 or older) Latino residents living in one of two counties in Southwest Ohio during the summer and fall of 2007. The limited sample size and convenience sample used for this study would preclude any generalizations to the greater Hispanic/Latino population. It is assumed that participants in this study were able to read and understand all items on the structured interview script, and that they responded in an open and honest manner. To the extent that reading ability, memory recall, and truthfulness are impaired, these are potential threats to the internal validity of the study. The use of a third party interpreter is a limitation of the study, as respondents may not respond candidly and the interpreter could have interposed personal judgments and points of view in either framing the question or translating the response. In the event that this occurred, it would be another threat to the internal validity of the study.

This study may help provide some insight as to the sources of health information for some Latino community members. Future studies and further data analyses will contribute to our increased understanding of the Latino community and its interaction with the US health systems. Health educators and other health care practitioners may be better able to understand and eventually meet the health care needs of the Latino community. Improved culturally competent health communications and placement of health promotion and education materials may result.

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