

Assessing Health Literacy in Spanish Speaking Hispanic Adults Accessing Healthcare Services in Rural and Urban Community Health Centers in Nebraska

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INTRODUCTION

More than half of the growth in the total population of the United States between 2000 and 2010 was due to the increase in the Hispanic population. While this growth happened in every region of the U.S., the Census Bureau 2010 indicated that this trend was most significant in the Midwest and South. Non-native speakers of English face issues related to informed consent and shared decision making as well as to their ability to follow a medical regimen, keep appointments, or obtain important information about illness and medicines. Results from the 2003 National Assessment of Adult Literacy (NAAL) report that Hispanic adults had the lowest average health literacy of all racial/ethnic groups. However, very little is known about the health literacy of Hispanic populations in the Midwest.

To address the gap in the literature, we conducted a pilot study titled “Assessing Health Literacy among Spanish Speaking Mexican Citizens Accessing Services at the Consulate of Mexico”. In this study we found that one third of the participants had a low level of health literacy. This finding is consistent with the national data that indicate that Hispanics have high rates of low health literacy. In addition, we found that participants were most likely to seek health information through clinics and family, and that these categories represented the most trustworthy sources of health information.

Based on these results we conducted a study of 402 adult Spanish speaking Hispanics; 202 seeking care at an urban community health center and 200 seeking care at a rural community health center. The primary aim of the project was to assess health literacy in speaking Hispanic adults accessing healthcare services in rural and urban Community Health Centers (CHC) in Nebraska. A secondary aim was to explore the means by which these populations access health information for disease prevention.

REPORT

DEMOGRAPHICS

- 402 total participants
 - 200 **Rural setting**: 57% females; 43% males.
 - 202 **Urban setting**: 80% females; 20% males.

Table 1. Demographic information.

	<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>Std Dev.</i>	<i>Median</i>	<i>Minimum</i>	<i>Maximum</i>
Rural	Age	200	40.00	12.89	38.00	19.00	75.00
	Height (Meters)	196	1.60	0.15	1.62	1.00	1.87
	Weight (Pounds)	196	172.16	34.30	167.00	103.00	316.00
	BMI	196	31.40	10.17	29.11	17.20	86.36
	Literacy score	199	13.59	5.11	16.00	0.00	18.00
Urban	Age	202	39.02	12.26	35.00	19.00	75.00
	Height (Meters)	196	1.57	0.08	1.57	1.36	1.78
	Weight (Pounds)	196	166.45	35.12	164.50	80.00	288.00
	BMI	196	30.50	5.96	30.33	13.36	48.24
	Literacy score	202	13.75	5.26	16.00	0.00	18.00

Variable	p-value
Age	0.44
BMI	0.28
Literacy score	0.76

There was no statistically significant difference in the mean age, body mass index (BMI) and health literacy of rural respondents and urban respondents.

Table 2. Nationality of the participants by rural and urban settings.

HISPANIC/LATINO ORIGIN	Rural		Urban	
Mexican, Mexican American	110	55.0%	158	78.2%
Puerto Rican	.	.	1	0.4%
Cuban	11	5.5%	.	.
Central American	75	37.5%	40	19.8%
South American	4	2.0%	.	.
Preferred not to answer	.	.	1	0.4%

There was a statistically significant association between level of education and setting ($p=0.008$). A similar proportion of patients in both settings responded to have a level of education no higher than elementary school (40.5% of the rural patients and 44% of the urban patients). On the other hand, a larger percentage of rural participants had at least one year of college compared to urban participants (13.5% vs. 6.3%).

Table 5. Health insurance coverage. Rural vs urban.

HAVE CURRENTLY ANY KIND OF HEALTH CARE COVERAGE	Rural		Urban	
	Yes	63	31.5%	30
No	136	68.0%	172	85.1%

In this study, 68% of the participants from the rural setting (136 patients) and 85% of the urban (172 patients) responded they did not have any kind of health care coverage ($p<0.0001$). In addition, 37% of the rural sample and 52.4% of the urban sample reported they had never had health insurance from the time of their arrival to the U.S.

HEALTH LITERACY

A total of 199 patients from the rural CHC and 202 patients from the urban CHC completed the health literacy portion of the survey (see Table 6). A score of ≤ 14 was considered a low health literacy level. The scores ranged from 0 to 18. The mean score in the rural CHC was 13.59 (SD = 5.11) and 13.75 (SD= 5.26) for the urban CHC. We observed no association between health literacy and rural/urban status ($p=0.41$).

Table 6. Health literacy. Rural vs urban.

Table of Urban/Rural by Score			
Urban/Rural Indicator	≤ 14	> 14	Total
Rural	75 37.69%	124 62.31%	199
Urban	68 33.66%	134 66.34%	202
Total	143	258	401
p-value	0.4065		

America have low health literacy (63 out of 119 or 53%) compared to respondents of Mexican origin (78 out of 267 or 29%) (see Table 7).

ACCESS TO HEALTH INFORMATION AND MEDICATION

Of the total sample, 103 rural patients and 87 urban patients responded that doctor offices represent the most trusted source for *medication information*, followed by pharmacies where nearly 30% of the patients in each setting responded this was their most trusted source.

When asked if they had heard about the Food and Drug Administration (FDA), 161 rural participants (80.5%) and 159 urban patients (78.7%) responded that they had NOT heard about the FDA. Of those who responded they had heard about the FDA (35 rural patients and 43 urban patients), 43% of the participants in the rural setting and 60% of the urban setting could NOT recognize any product regulated by the FDA.

We asked individuals to indicate the different settings or means that they use to access health information and/or address a medical question about their health. Participants received a list of different options where they could also check “all that apply.” Options for this question included settings (hospital, clinic, private doctor, drugstore, health fair, family, health educators/*promotoras*, church and folk healers), media (television, radio, social media, websites, newspaper and magazines), books and the option of “other” in the case the participant wanted to respond an additional source (see Table 8).

Table 8. Access to health information.

RURAL			URBAN		
1. <i>Community Health Center</i>	167	83.5%	1. <i>Community Health Center</i>	184	91.0%
2. <i>Family</i>	158	79.0%	2. <i>Pharmacy</i>	141	69.8%
3. <i>Friends</i>	117	58.5%	3. <i>Family</i>	130	64.3%
4. <i>Latino store</i>	110	55.0%	4. <i>Television/TV Shows</i>	102	50.4%
5. <i>Television/TV Shows</i>	104	52.0%	5. <i>Friends</i>	98	49.0%

Participants did not indicate media resources like websites (rural: 40%, urban: 33.6%), social media such as *Facebook*® and *Twitter*® (rural: 9%, urban: 21.7%), and e-mail (rural: 7%, urban: 11.3%) as frequent sources of health information.

When asked “From your previous answers, which is the source that you use the MOST?” participants could only check one answer. 126 rural patients and 125 urban patients responded that Community Health Centers represented their most frequent source to access health information. Of the patients who indicated that CHC was their most frequent source, 94% deemed the information received in this setting as trustworthy.

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