

# A comparative analysis of Spanish health literacy tools: S-TOFHLA & NVS



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## HISPANICS & HEALTH LITERACY

- The health, financial, and social outcomes caused by low levels of health literacy pose a significant threat to the well being of our nation.
- The Hispanic population in the United States is uniquely exposed to a larger proportion of the risks associated with low health literacy.
- In 2006, the National Center for Education Statistics (NCES) prepared a report of the first large-scale assessment of adult health literacy in the United States, the 2003 National Assessment of Adult Literacy (NAAL).
- Results of the NAAL show 88% of adults do not have proficient health literacy, with 14% below basic health literacy.

### Hispanics are particularly affected by low health literacy

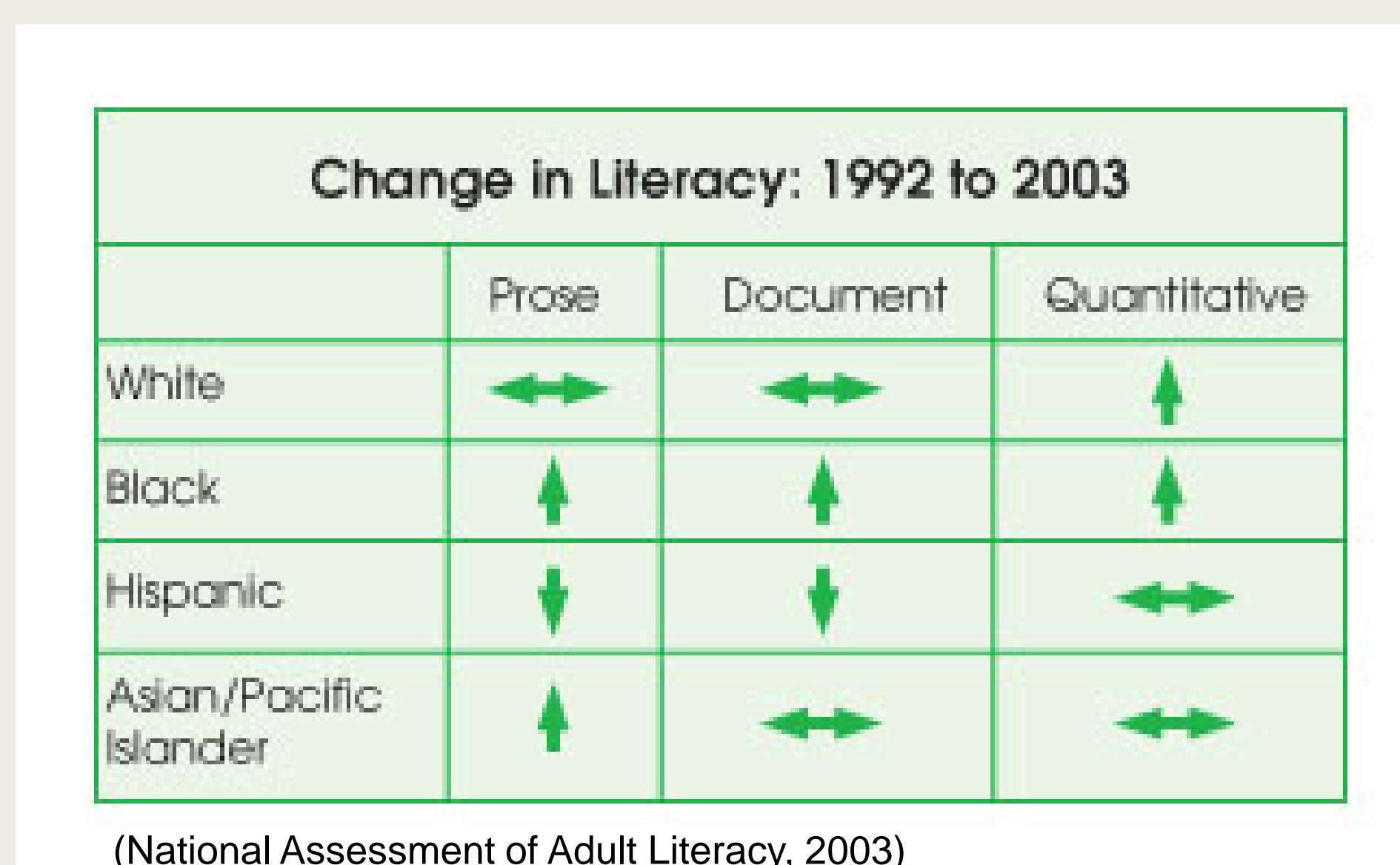
Hispanic adults have lower health literacy scores than any other race or ethnic group:

- 96% do not possess proficient health literacy skills
- a staggering 41% are below basic health literacy

**Prose:** Whites had the highest scores followed by Asians/Pacific Islanders, Blacks, and Hispanics

**Document:** Whites and Asians/Pacific Islanders had the highest scores followed by Blacks and Hispanics

**Quantitative:** Whites had the highest scores followed by Asians/Pacific Islanders, and both Blacks and Hispanics



## MEASURING HEALTH LITERACY

Two of the most popular health literacy tools are the Test of Functional Health Literacy in Adults (TOFHLA) and the Newest Vital Signs (NVS), both have a Spanish version.

The TOFHLA, the "gold standard" for health literacy testing, has shown strong reliability and validity in the English version. A disadvantage is the limited validity of the Spanish version.

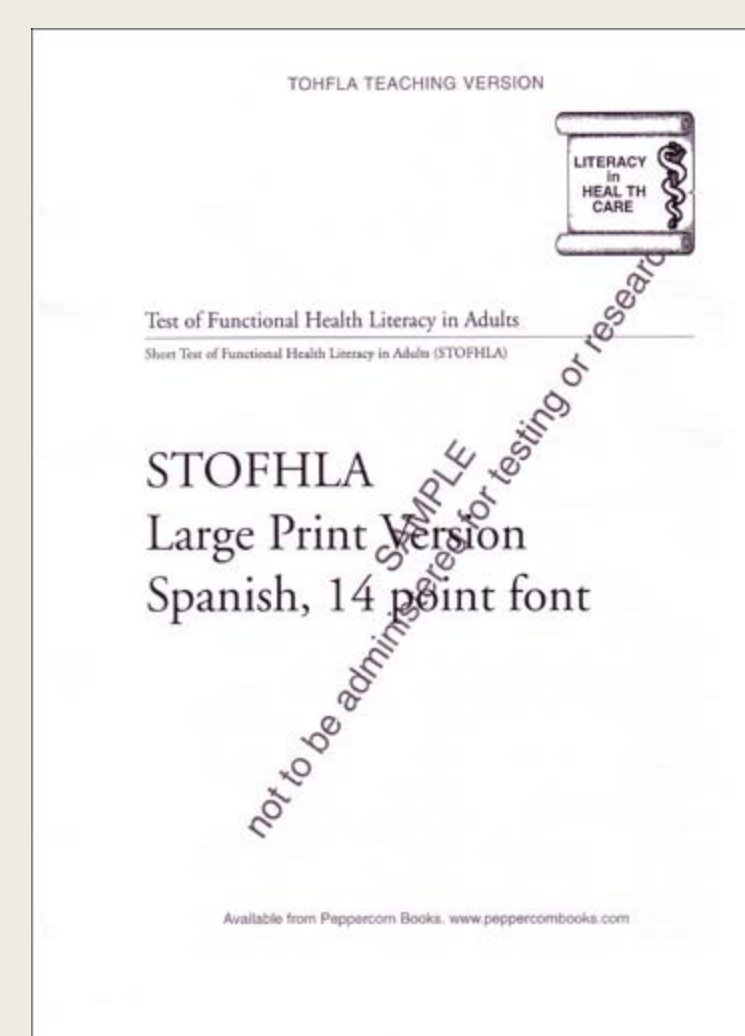
The Spanish version of the NVS has also shown inconclusive validity.

Therefore, there is a need for additional validity studies on the Spanish versions of the TOFHLA and NVS.

Since both instruments are arbitrarily used for measuring health literacy among Hispanics there is a need for comparative results studies.

## PURPOSE

The purpose of this cross-sectional exploratory study was to assess how the short version of the TOFHLA (S-TOFHLA) and the NVS compare in terms of assessing health literacy levels among Spanish-speaking adults. Participants were recruited from a Migrant High School Equivalency program.



## METHODS

The study obtained IRB approval and all participants signed an informed consent.

### Design

Cross-sectional, survey study.

### Setting

The study was conducted in a large metropolitan US-Mexico border city.

### Sampling

Convenience sample.

### Participants

Included male and female adults attending an adult education program in Spanish.

Several classrooms throughout the city were selected for inclusion.

Participants were recruited voluntarily through self-selection.

Data were collected in early February 2009.

### Data collection

Short Test of Functional Health Literacy in Adults (S-TOFHLA) in Spanish

Newest Vital Sign (NVS) in Spanish.

Trained survey administrators, including graduate research assistants and researchers, administered and collected the surveys.

Surveys were self-reported and administered to classrooms, rather than facilitated one-on-one.

### Data management & analysis

Completed surveys were coded and responses entered for analysis (SPSS)

Analyses included descriptive statistics and linear correlation

Total score and health literacy level were computed for all completed surveys

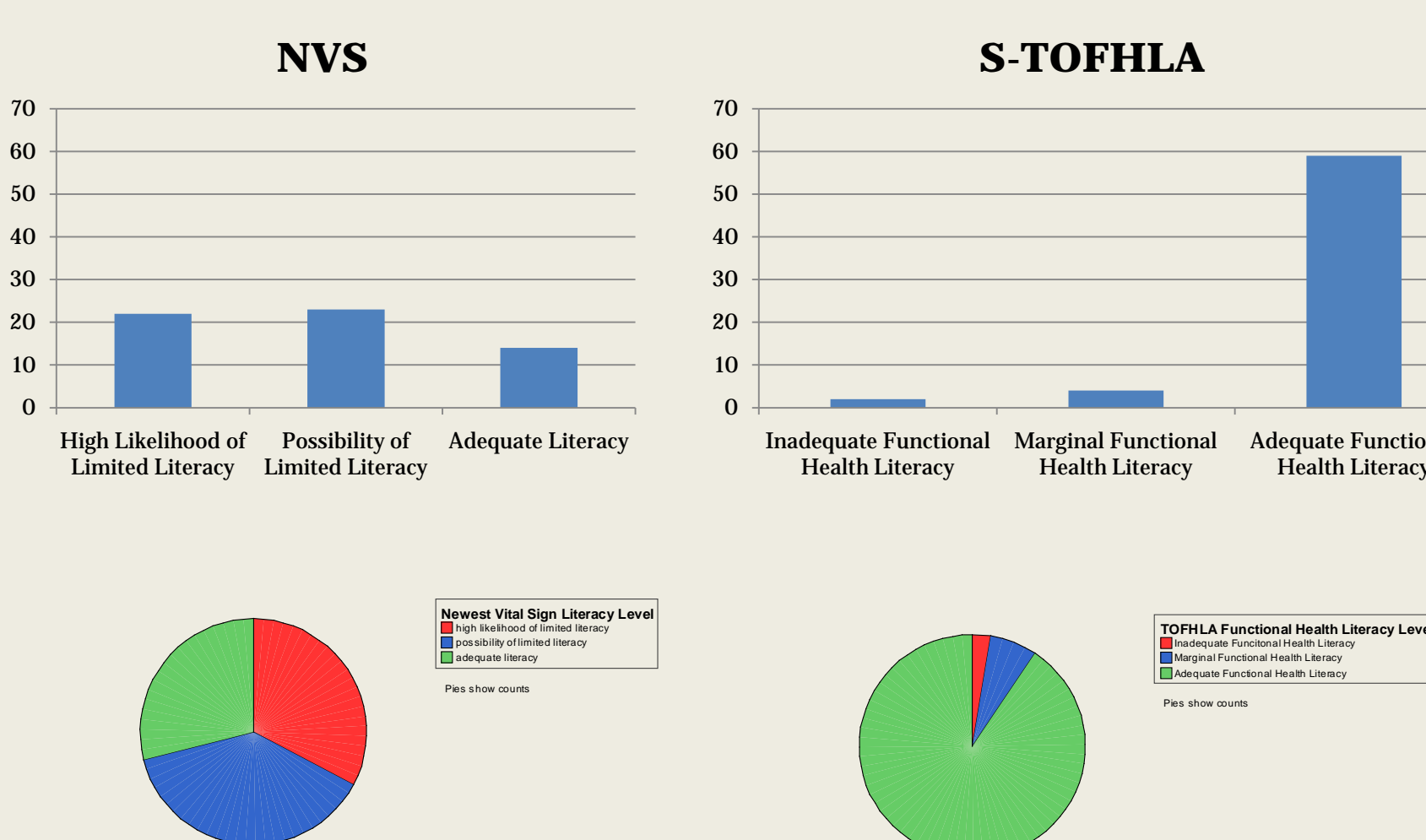
## RESULTS

- Nine-six participants completed both the S-TOFHLA and the NVS.
- Survey scores were entered into SPSS for analysis.
- While S-TOFHLA scores placed more than 90% of participants at the "adequate functional health literacy" level, only 30% reached the "adequate literacy" level according to the NVS.
- Intercorrelations between S-TOFHLA subscales and NVS total scores yielded low to moderate coefficients (S-TOFHLA-A vs. NVS scores = .15; S-TOFHLA-B vs. NVS = .45; Total S-TOFHLA vs. NVS = .41)

Demographic Category	Frequency (%)	Participants (n)
<b>Age Group (yrs)</b>		
21-25	4.8	3
26-29	33.9	21
30-39	56.5	35
40-59	4.8	3
60 or more		
<b>Birth Country</b>		
United States	3.2	2
Mexico	96.8	60
<b>Gender</b>		
Male	8.1	5
Female	91.9	57
<b>Ethnicity</b>		
Hispanic/Latino	100.0	62
<b>Marital Status</b>		
Single	6.5	4
Married	79.0	49
Divorced	8.1	5
Separated	4.8	3
Widowed	1.6	1
<b>Children (n)</b>		
Zero	3.2	2
One	3.2	2
Two	35.5	22
Three	35.5	22
Four	11.3	7
Five	3.2	2
Six	6.5	4
Seven	1.5	1
<b>Employment Status</b>		
Unemployed	83.9	52
Employed	16.1	10
<b>Formal Education (yrs)</b>		
Four	1.6	1
Five	1.6	1
Six	50.0	31
Seven	4.8	3
Eight	9.7	6
Nine	24.2	15
Ten	1.6	1
Eleven	1.6	1
Twelve	3.2	2
Thirteen	1.6	1
<b>High School Completion</b>		
Yes	3	3
No	21	21

	Mean	Percent Correct	N	SD
NVS	2.45	40.83%	107	1.689
S-TOFHLA	31.30	86.94%	117	5.878

	NVS	Total	S-TOFHLA	Total
High Likelihood of Limited Literacy	22		Inadequate Functional Health Literacy	2
Possibility of Limited Literacy	23		Marginal Functional Health Literacy	4
Adequate Literacy	14		Adequate Functional Health Literacy	59



## Correlations

		NVS	S-TOFHLA
NVS	Pearson Correlation	1	.408**
	Sig. (2-tailed)		.000
	N	96	96
S-TOFHLA	Pearson Correlation	.408**	1
	Sig. (2-tailed)	.000	
	N	96	106

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## DISCUSSION

Results indicate that the Spanish version of the S-TOFHLA and the NVS may not be used arbitrarily for assessing health literacy among Spanish-speaking adults.

The analysis indicate a low correlation between both instruments.

The S-TOFHLA and the NVS measure different dimensions of health literacy, and are not comparable.

Further research in this area is recommended.