

Evaluating the Validity of Health Literacy Items in English and Spanish Speakers

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Prevalence^{1,2}

- 90 million adults have low health literacy
- Hispanic population overly affected

Associated with^{3,4}

- Less adherence to medications and treatment plans
- More likely to be hospitalized and re-admitted
- Less likely to use preventive services, (cancer screening)
- Poorer health (self-report)
- Higher mortality

Screening for Low Health Literacy Facilitates Patient-Centered Care

Screening is necessary to:

- Raise provider awareness about its high prevalence
- Encourage providers to improve their communication capacity
- Identify patients who would benefit from provider- and system-level strategies that facilitate clear communication and improve the health literacy of the population



Do single-item health literacy measure work in Spanish speakers?

1. How often do you have someone help you read hospital materials?
2. How confident are you filling out medical forms by yourself?
3. How would you rate your ability to read?

Research Goal:

Evaluate the validity of single-item questions to screen for low health literacy in Spanish- and English-speakers

Dallas County



- 9th largest county in the US
- 23% immigrants
- 30% uninsured rate

Ethnically diverse county

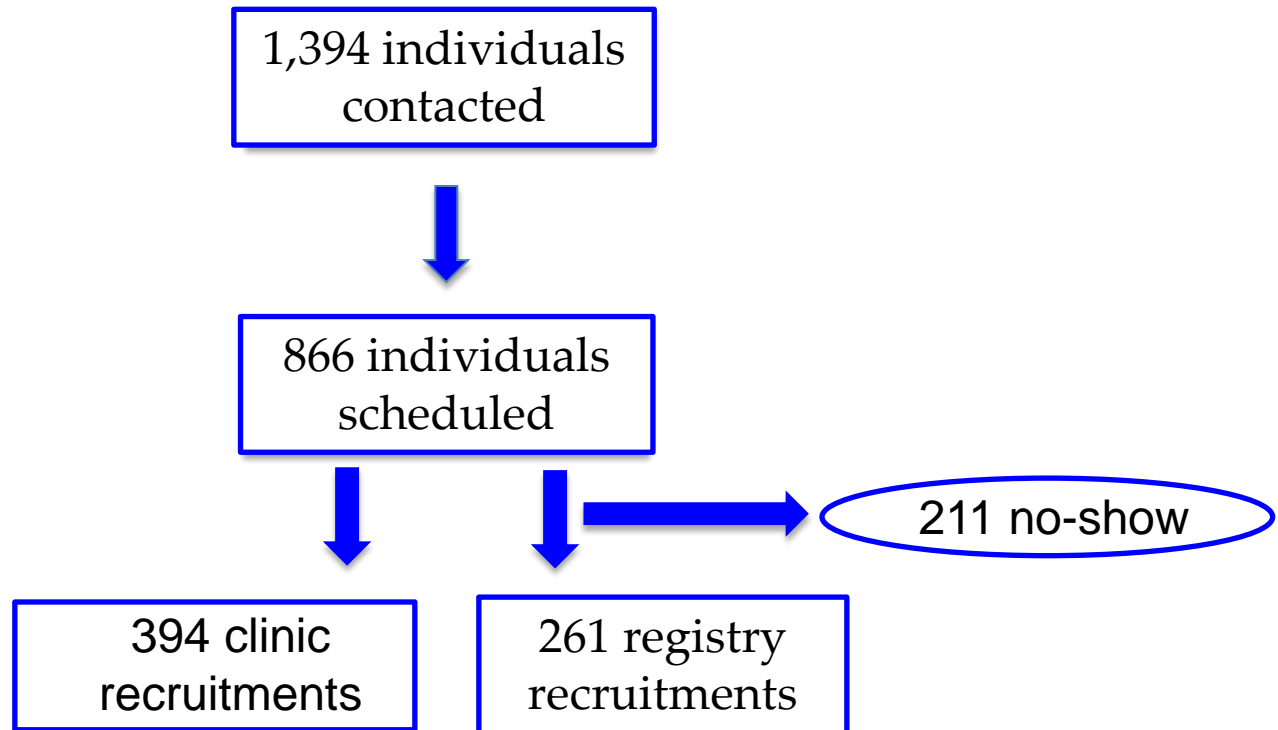
39.5% Hispanic

20.8% African American

34.4% Non-Hispanic White



Recruitment Method



Analysis

- Compared English- and Spanish-speakers on:
 - Socio-demographic characteristics
 - Responses to the single-item measures
- Within language strata, we calculated area under the receiver operating characteristic curves (ROC) and 95% confidence intervals to compare each single-item measure with the S-TOFHLA

Demographics		English (n=324)	Spanish (n=314)
Age	18-34 years old	110 (33.0%)	78 (24.8%)
	35-49 years old	110 (33.0%)	170 (54.1%)
	50-70 years old	104 (32.0%)	66 (21.0%)
Gender	Female	208 (64.0%)	221 (70.4%)
Marital Status	Married/Living w/ partner	128 (39.0%)	214 (68.2%)
	Single/Divorced/Widowed/Separated/Other	196 (60.0%)	100 (31.9%)
Race	African American	165 (50.0%)	2 (0.6%)
	White	153 (47.0%)	310 (98.7%) **
	American Indian/Alaskan Native	2 (0.6%)	2 (0.6%)
Education	Grade School	4 (1.2%)	72 (23.0%)
	Some High School	31 (9.6%)	95 (30.4%)
	H.S.Diploma/GED/Tech/Voc School	102 (31.5%)	101 (32.3%)
	Some College / Graduated College	187 (57.7%)	45 (14.4%)
	Born in the US*	No	44 (14.4)%
Health Care Coverage*	No	84 (27.5%)	108 (37.6%)

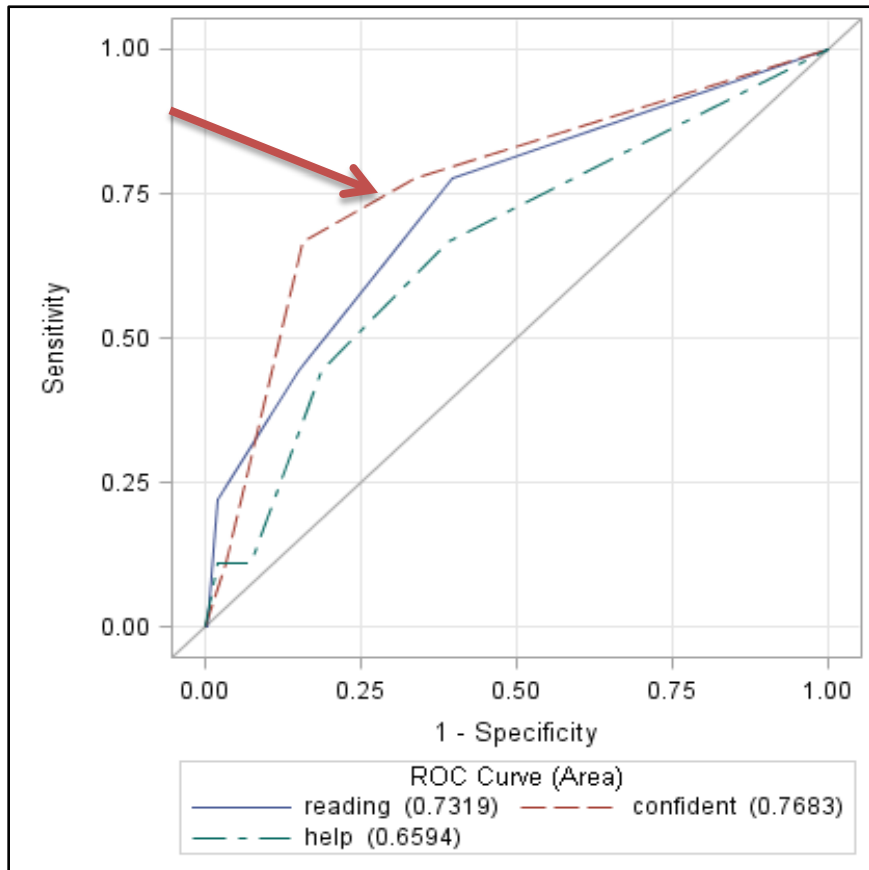
Results: Measures

S-TOFHLA	All participants (N=638)	English Speakers (n=324)	Spanish Speakers (n=314)
Inadequate (score 0-16)	67 (10.5%)	9 (2.8%)	58 (18.5%)
Marginal (score 17-22)	55 (8.6%)	22 (6.8%)	33 (10.5%)
Adequate (score 23-36)	516 (80.9%)	293 (90.4%)	223 (71.0%)

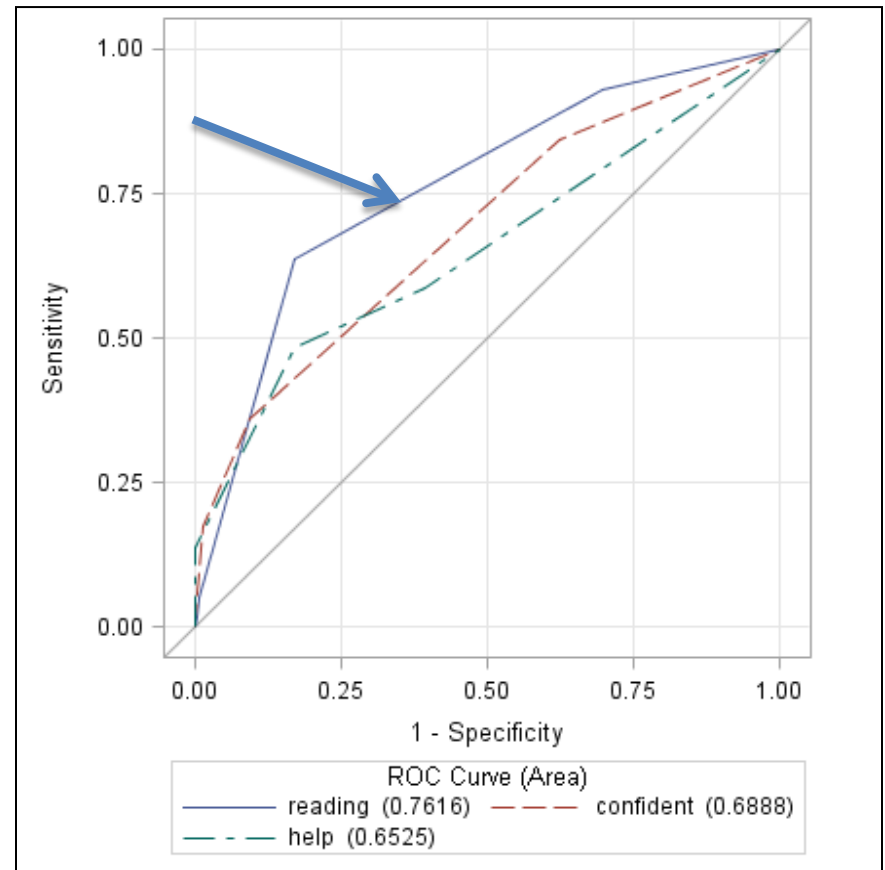
How would you rate your ability to read?	English (n=324)	Spanish (n=314)
Very Poor	1 (0.3%)	2 (0.6%)
Poor	8 (2.5%)	3 (1.0%)
OK	42 (13.0%)	76 (24.2%)
Good	81 (25.0%)	151 (48.1%)
Very Good	192 (59.3%)	82 (26.1%)
How confident are you filling out medical forms by yourself?		
Not At All	--	1 (0.3%)
A Little Bit	12 (3.7%)	13 (4.1%)
Somewhat	44 (13.6%)	31 (9.9%)
Quite A Bit	57 (17.6%)	164 (52.2%)
Very	211 (65.1%)	105 (33.4%)
How often do you have someone help you read hospital materials?		
Always	8 (2.5%)	6 (1.9%)
Often	16 (4.9%)	2 (0.6%)
Sometimes	39 (12.0%)	64 (20.4%)
Occasionally	66 (20.4%)	63 (20.1%)
Never	195 (60.2%)	179 (57.0%)

ROC curves for single-item questions by S-TOFHLA *(modeled Inadequate vs. Marginal/Adequate)*

English speakers (N=324)



Spanish speakers, N=314

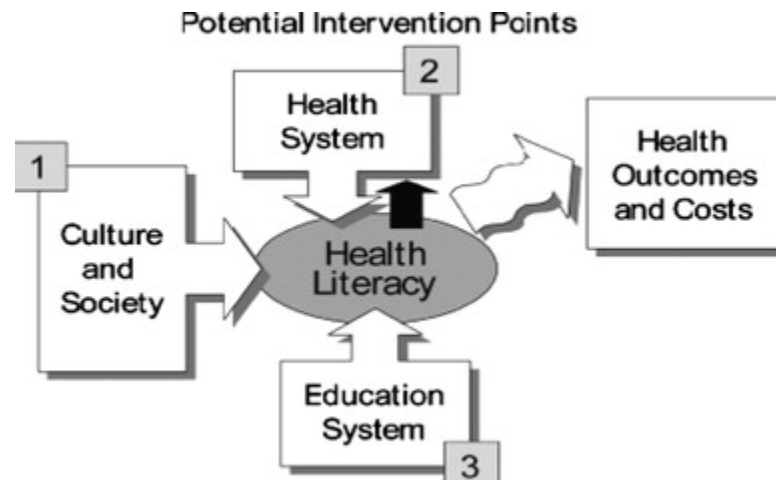


Conclusions

- “Confidence with forms” question performed the best among **English speakers**.
- “How do you rate your reading” question performed the best among **Spanish speakers**.

Limitations

- Limited sample size (n=638)
- Health literacy measures do not completely capture the domain of health literacy



Institute of Medicine (IOM) model of health literacy

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