



Pensando en mi salud (Thinking about my health): Health literacy and patient-reported outcomes in a community-based participatory research project

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Background and Research Question

Much is still unknown about the links between health literacy and health outcomes in Spanish-speaking adults.

Community-academic partnerships to advance research:

- Both interpersonal and operational collaborative processes are important in community-academic partnerships (Drahota et al., 2016):
 - Trust and respect among partners
 - Communication
 - Shared vision, goals and/or mission
 - Time commitment
- Northwestern University Center for Community Health Principles of Engagement:
 - Collaboration, Respect, Equity, Transparency, Impact

This first phase of our community-academic research partnership (Universidad Popular - Northwestern University):

- evaluated the feasibility and acceptability of multimedia administration of health literacy and patient-reported outcome (PRO) questionnaires in a community setting
- examined relationships between participant characteristics, health literacy and PROs

Methods

Community and academic investigators jointly designed, implemented and analyzed the project, with input from a Community Advisory Board.

Adult clients of Universidad Popular used a touchscreen tablet to self-administer multimedia (text, audio, images) questionnaires in Spanish:

- Health Literacy: Health LiTT (Health Literacy Assessment Using Talking Touchscreen Technology)
 - Health Status (PROMIS Global Health)
 - Medical decision-making preference
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- A semi-structured interview assessed the user experience in terms of understandability, usability, acceptability and burden.
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- Health LiTT scores were dichotomized as low (inadequate health literacy, <55) vs. high (adequate, ≥55). Participant characteristics and outcomes were compared across Health LiTT groups using chi-square or Fisher's exact tests, and t-tests.



En general, diría que su salud es:

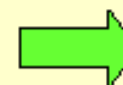
Excelente

Muy buena

Buena

Pasable

Mala



Medicamentos para el Sr. Beta

Medicamento	Fecha de comienzo	Fecha final	Instrucciones
Hanebrex: pastillas de 200 mg	27 de ago.	26 de sept.	1 pastilla diaria
Yostatin: pastillas de 250 mg	8 de mar.	Ninguna	1 pastilla dos veces al día
Nandozol: 90 mcg por inhalación	8 de mar.	Ninguna	1 a 2 inhalaciones por la boca cada 4 a 6 horas, según sea necesario
Cellacillin: pastillas de 250 mg	22 de abr.	29 de abr.	2 pastillas el primer día y luego 1 pastilla diaria de ahí en adelante



Observe los Medicamentos para el Sr. Beta. ¿Cuántas pastillas de Cellacillin debe tomar el tercer día?

1

2

3

4

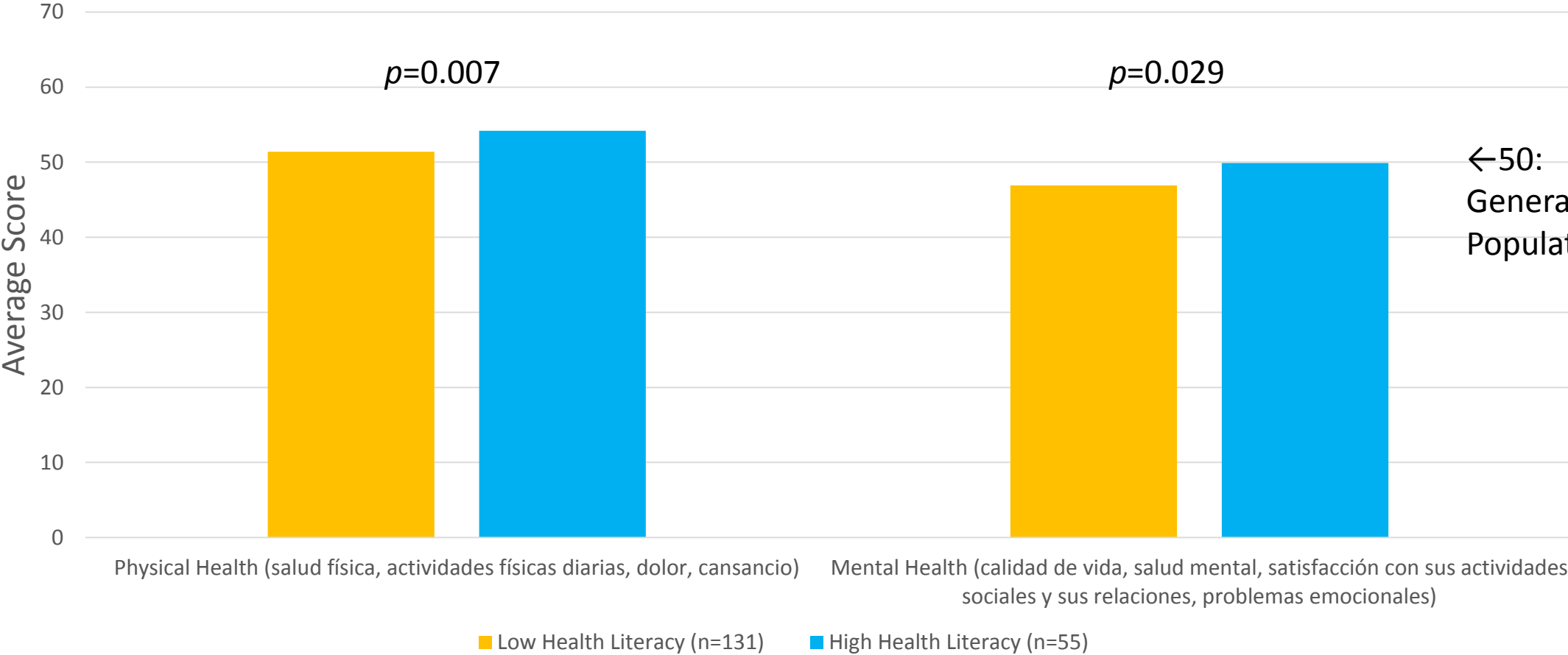
Sociodemographic Characteristics

	Low Health LiTT (<i>n</i> =131)	High Health LiTT (<i>n</i> =55)	<i>p</i> -value
Age in years, mean (SD)	42.4 (13.5)	40.6 (12.7)	0.414
Female	69 (53%)	18 (33%)	0.013
Highest Education			
Less than HS	78 (61%)	30 (57%)	0.792
HS/GED	35 (27%)	15 (28%)	
More than HS	15 (12%)	8 (15%)	
Ever used a computer before? (desktop, laptop, tablet, mobile device)			
Never	10 (8%)	0	0.175
Not in past 12 months	3 (2%)	0	
1 to 3 times per month	23 (18%)	8 (15%)	
1 to 4 days per week	31 (24%)	15 (29%)	
5 to 7 days per week	60 (47%)	29 (56%)	

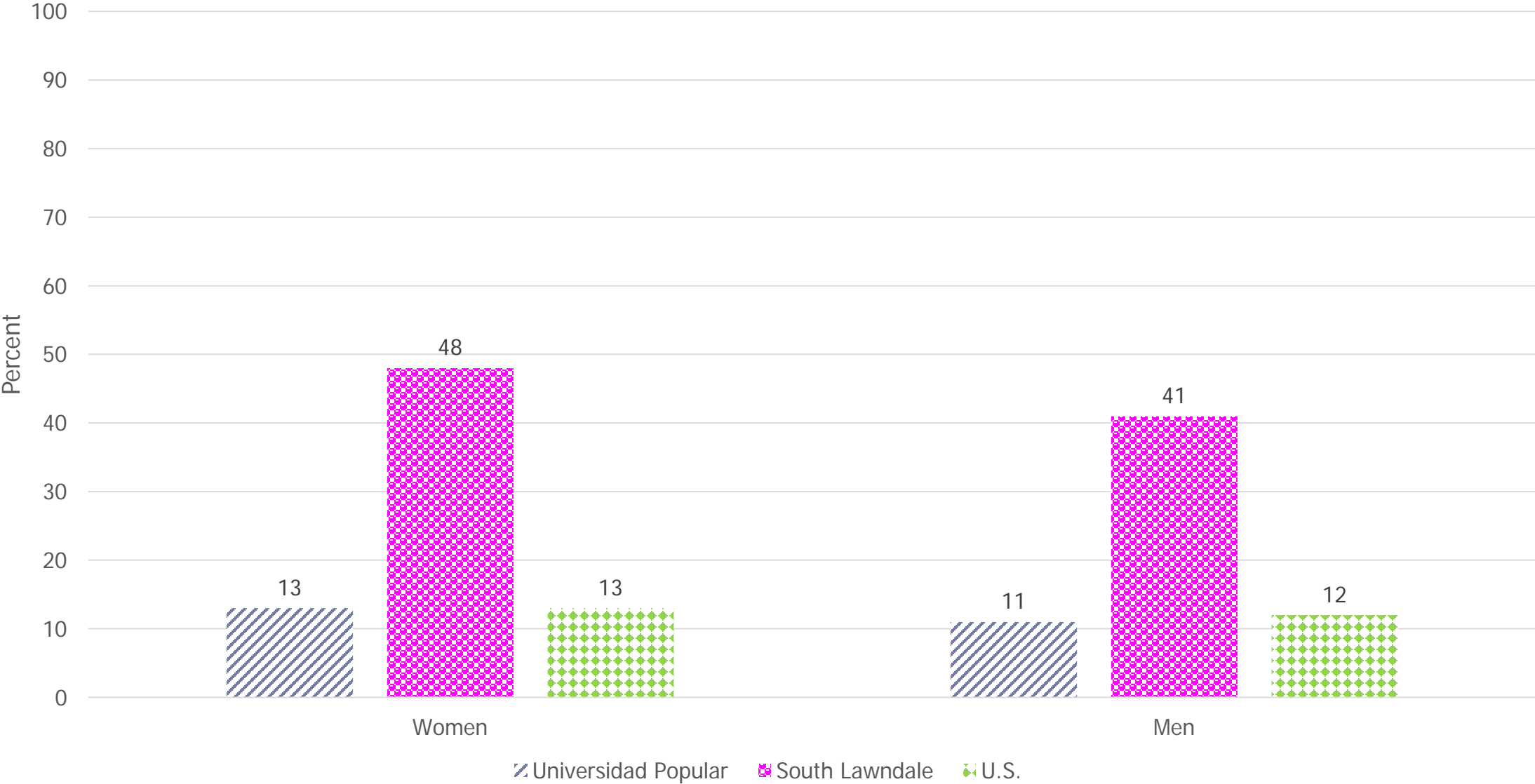
Health Literacy and Health Status

	Low Health LiTT (<i>n</i> =131)	High Health LiTT (<i>n</i> =55)	<i>p</i> -value
Health LiTT T-score, mean (SD)	47.3 (5.9)	59.0 (2.9)	<0.001
Overall Health			
Excellent	23 (18%)	10 (18%)	0.010
Very good	24 (19%)	24 (44%)	
Good	61 (49%)	17 (31%)	
Fair	16 (13%)	4 (7%)	
Poor	1 (1%)	0	

Average Health Scores, by Health Literacy Group






Percent With Poor or Fair Health



Preferencias de control

Seleccione la opción que describa mejor su preferencia.

				
Prefiero tomar decisiones acerca del cuidado de mi salud.	Prefiero tomar decisiones acerca del cuidado de mi salud después de tener muy en cuenta la opinión de mi médico.	Prefiero que mi médico y yo compartamos la responsabilidad de tomar decisiones acerca del cuidado de mi salud.	Prefiero que mi médico tome las decisiones acerca del cuidado de mi salud, pero que tenga muy en cuenta mi opinión.	Prefiero dejarle las decisiones acerca del cuidado de mi salud a mi médico.

Low Health LiTT: 8%
High Health LiTT: 8%

8%
24%

58%
43%

19%
22%

6%
4%

$p=0.097$

Evaluation of the Technology and the Study

	Low Health LiTT (<i>n</i> =131)	High Health LiTT (<i>n</i> =55)	<i>p</i> -value
No difficulty using La Pantalla Parlanchina	119 (93%)	52 (96%)	0.511
Overall rating of screen design, including colors and layout			
Excellent	44 (35%)	18 (34%)	0.600
Very good	54 (42%)	25 (47%)	
Good	27 (21%)	8 (15%)	
Fair	2 (2%)	2 (4%)	
Poor	0	0	
Study participation experience			
A lot better than expected	50 (39%)	13 (25%)	0.144
A little better than expected	59 (46%)	29 (55%)	
About the same as expected	18 (14%)	11 (21%)	
A little worse/a lot worse	0	0	

Summary and Implications: Health Literacy and Health Status

- Spanish-speaking community members with high health literacy reported better overall health, better physical health and better mental health compared to those with low health literacy.
- Those with low health literacy tended to report more interest in shared decision-making with their doctors, compared to high health literacy.
 - This finding could be useful for interventions to improve patient-physician communication and disease self-management for people with diverse health literacy skills.
- Regardless of prior computer experience or health literacy level, 94% of participants reported no difficulty using La Pantalla Parlanchina.
 - Multimedia adaptations enable expansion of eligibility criteria for self-administration of questionnaires in patient-reported outcomes research.

Summary and Implications: Community-Academic Partnerships

- Our partnership advanced understanding, exchange and action for strategies and plans to better understand health literacy and health outcomes in Spanish-speaking Latino community members.
- We demonstrated bi-directional long-term impact:
 - the academic partners learned important strategies to implement community-based participatory research
 - the community partners acquired additional skills needed to collect and analyze data, to disseminate findings to stakeholders, and to incorporate health literacy into all innovative programming and delivery of services
- We submitted an R01 proposal to the NIH:
 - to strengthen our partnership in a strategic and collaborative way
 - to produce interventions better targeted to underserved populations
 - to develop a sustainable community program to improve health literacy and health outcomes
 - to develop partnerships with other community-based organizations