# Understanding and addressing stigma associated with low health literacy

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THE UNIVERSITY OF NORTH TEXAS

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# Agenda

Understanding
Health
Literacy

Stigma in a Health Care Context Patients'
Perceived
Stigma

What is health literacy?

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"the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions"

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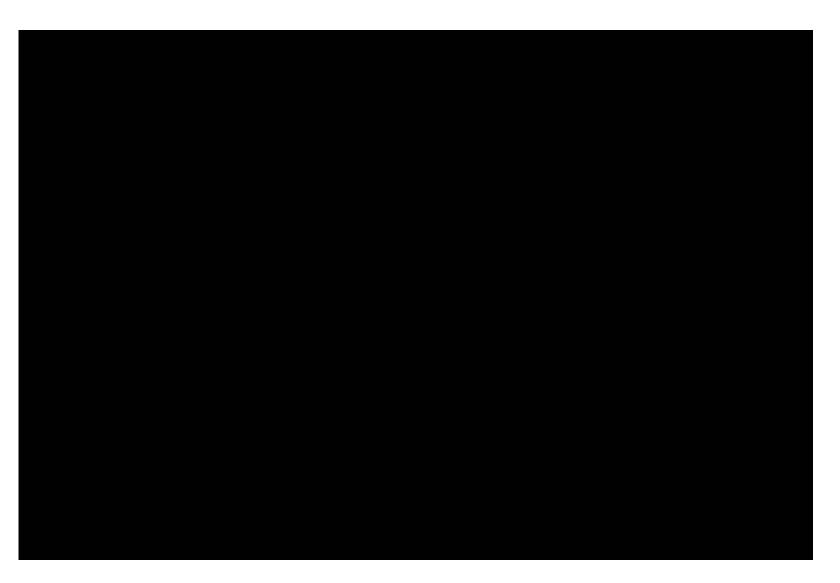
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Berkman, N.D., Davis, T.C., McCormack, L. (2010). Health literacy: What is it? Journal of Health Communication, Suppl 2, 9-19.



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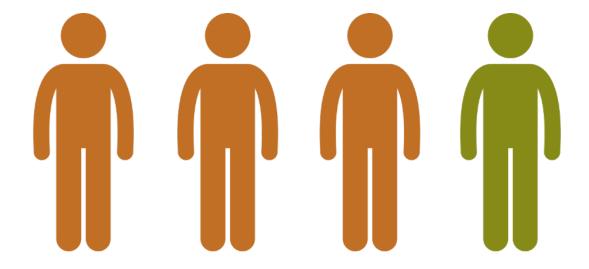


## Prevalence

Limited large-scale studies

## Prevalence

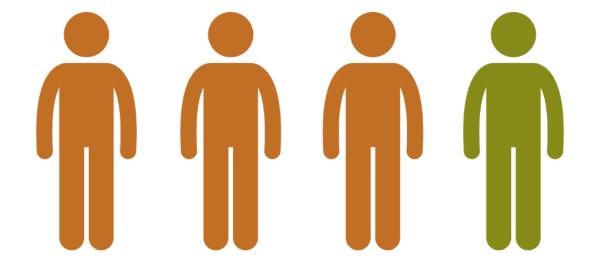
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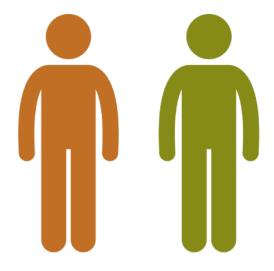
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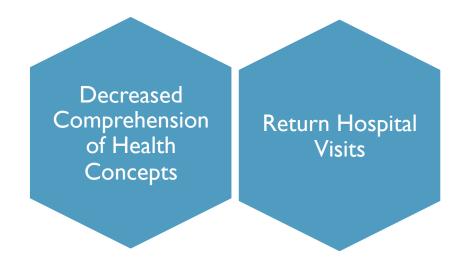


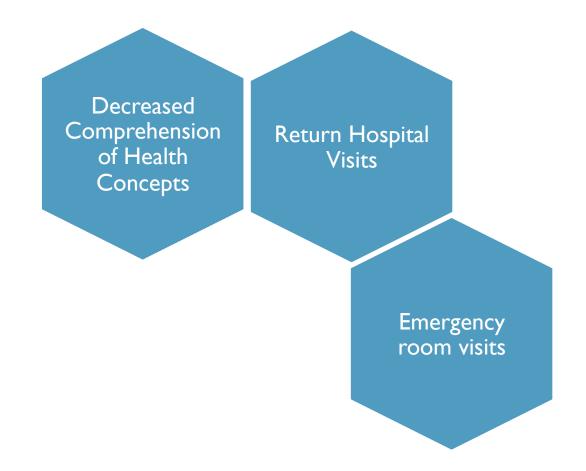
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## Outcomes

Widespread challenges

Decreased Comprehension of Health Concepts





Decreased Comprehension Return Hospital of Health Visits Concepts Emergency room visits Decreased Use of Preventive Health Services

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Outcomes

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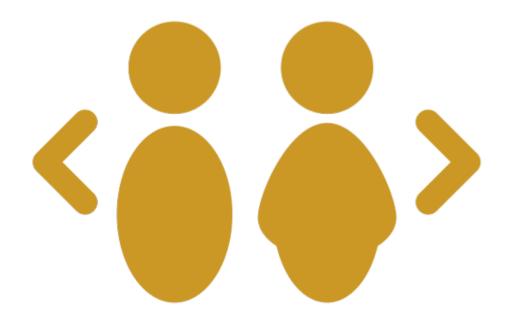


Outcomes

Widespread challenges



# Existing Programs

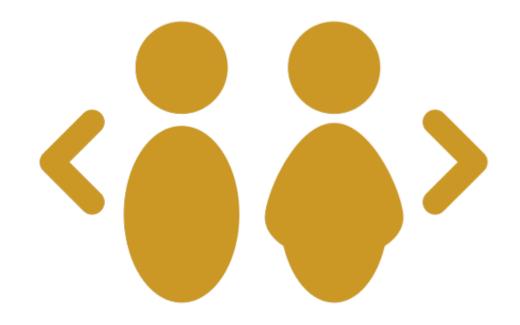


## Existing Programs

Identifying Challenges

Patient Education

Communication Strategies



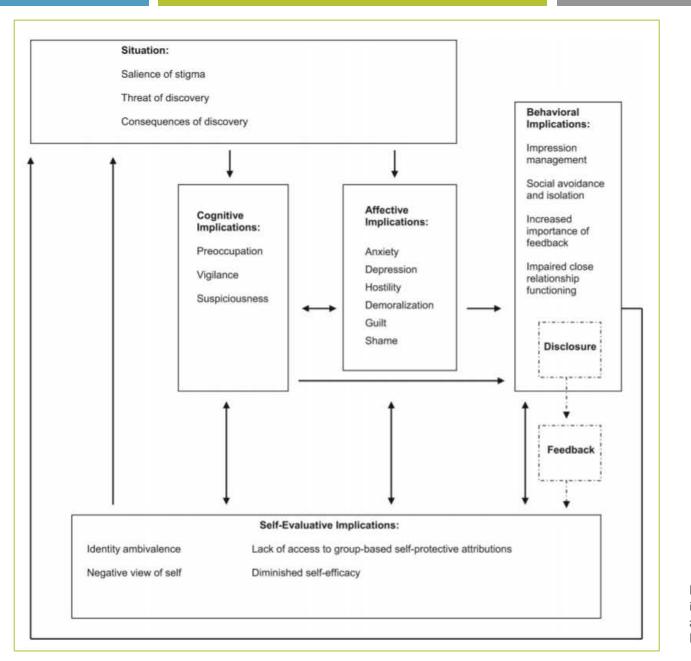




### Stigma can be:

- Enacted by others
- Perceived by self

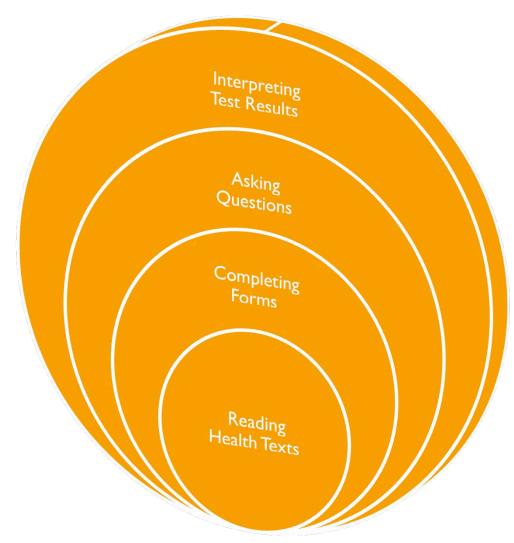
### Stigma A call for research



Pachankis, J.E. (2007). The psychological implications of concealing a stigma: A cognitive-affective-behavioral model. Psychological Bulletin, 133 (2), 328-45.

### Stigma Exacerbating effects





### Stigma Non-disclosure





Table 3. Patient perceptions of shame associated with disclosure of literacy ability

	REALM Score				
Disclosure	Level I $\leq$ 3rd grade $(n = 66)$	Level II $4th-6th grade$ $(n = 78)$	Level III $7$ th- $8$ th grade $(n = 79)$	P Value	
Doctor				9,0	
Helpful if doctor knows	93.9	96.0	94.8	0.78	
Feel ashamed if doctor knows	36.4	24.4	16.7	0.03	
Nurse					
Helpful if nurse knows	95.5	92.1	92.1	0.26	
Feel ashamed if nurse knows	33.8	21.9	15.5	0.05	
Clerk					
Helpful if clerk knows	93.7	91.9	84.2	0.28	
Feel ashamed if clerk knows	34.4	20.5	13.0	0.08	
Ashamed if documented in chart	35.7	19.7	14.1	0.03	
Ashamed if documented on card	36.9	22.1	20.6	0.39	
Refuses to have a card	9.2	13.0	16.7	0.42	

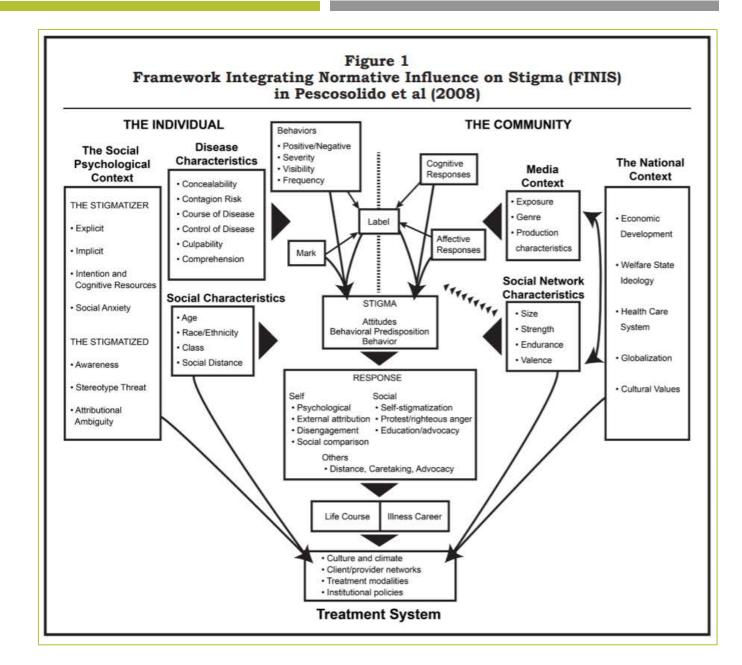
Wolf, M.S., Williams, M.V., Parker, R.M., Parikh, N.S., Nowlan, A.W., & Baker, D. W. (2007). Patients' Shame and Attitudes Toward Discussing the Results of Literacy Screening, Journal of Health Communication, 12:8, 721-732,



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Mackert, M., Donovan, E.E., Mabry, A., Guadagno, M., & Stout, P.A. (2014). Stigma and health literacy: An agenda for advancing research and practice. American Journal of Health Behavior, 38(5), 690-698.

Pescosolido BA, Martin JK, Lang A, Olafsdottir S. Rethinking theoretical approaches to stigma: a Framework Integrating Normative Influences on Stigma (FINIS). Soc Sci Med. 2008;67:431-440.









#### Research Question 1:

How does participants' self-reported health literacy compare

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#### Research Question 3:

How do demographic characteristics of a person with lower

health literacy influence stigmatized perceptions?

# Health Literacy

Newest Vital Sign – Objective Measure

Nutrition Facts Serving Size Servings per container		½ cu	
Amount pe	r serving		
Calories	250	Fat Cal	120
			%DV
Total Fat 13g			20%
Sat Fat 9g			40%
Cholesterol 28mg			12%
Sodium 5	5mg		2%
Total Carbohydrate 30g			12%
Dietary F	iber 2g		
Sugars	23g		
Protein 4g			8%

\*Percentage Daily Values (DV) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

Ingredients: Cream, Skim Milk, Liquid Sugar, Water, Egg Yolks, Brown Sugar, Milkfat, Peanut Oil, Sugar, Butter, Salt, Carrageenan, Vanilla Extract.

REA	AD TO SUBJECT:	ANSWER (	CORRECT?
Thi	This information is on the back of a container of a pint of ice cream.		no
1.	If you eat the entire container, how many calories will you eat?  Answer: 1,000 is the only correct answer		
2.	If you are allowed to eat 60 grams of carbohydrates as a snack, how much ice cream could you have?  Answer: Any of the following is correct: 1 cup (or any amount up to 1 cup), half the container. Note: If patient answers "two servings," ask "How much ice		
3.	Your doctor advises you to reduce the amount of saturated fat in your diet. You usually have 42 g of saturated fat each day, which includes one serving of ice cream. If you stop eating ice cream, how many grams of saturated fat would you be consuming each day?		
4.	Answer: 33 is the only correct answer  If you usually eat 2,500 calories in a day, what percentage of your daily value		
	of calories will you be eating if you eat one serving?  Answer: 10% is the only correct answer		
RE/	AD TO SUBJECT:		
	etend that you are allergic to the following substances: penicillin, peanuts, ex gloves, and bee stings.		
5.	Is it safe for you to eat this ice cream?  Answer: No		
6.	(Ask only if the patient responds "no" to question 5): Why not?  Answer: Because it has peanut oil.		
	Number of correct answers:		

Weiss, B. D., Mays, M. Z., Martz, W., Castro, K. M., DeWalt, D. A., Pignone, M. P., ... Hale, F. A. (2005). Quick Assessment of Literacy in Primary Care: The Newest Vital Sign. *Annals of Family Medicine*, *3*(6), 514–522. http://doi.org/10.1370/afm.405

# Health Literacy Single Item Measure – Self-Reported

"How confident are you filling out medical forms by yourself?" (Not at all, A little bit, Somewhat, Quite a bit, Extremely)

Chew, L. D., Bradley, K. A., & Boyko, E. J. (2004). Brief questions to identify patients with inadequate health literacy. Family Medicine, 36, 588-594.

Chew, L. D., Giffin, J. M., Partin, M. R., Noorbaloochi, S., Grill, J. P., Snyder, A., . . . VanRyn, M. (2008). Validation of Screening Questions for Limited Health Literacy in a Large VA Outpatient Population. Journal of General Internal Medicine, 23(5), 561-566.

### Stigma Vignettes



#### Vignette I

Mr. S (Ms. S) is a 33-year old White (Hispanic/African American) father (mother) of one. He\* has health insurance through Blue Cross/Blue Shield through his employer (Medicare/Medicaid). His daughter had an ear infection. When he picked up her medicine from the pharmacy, he was told to give her one tablespoon twice a day. The pharmacist asked him if he had any questions, and he did not. He thought this was easy and didn't feel like he should have any questions. When he got home, he poured one tablespoon of medicine into her ear – leading to a trip to the emergency room. The doctor at the emergency room could not believe Mr. S. poured medicine into his daughter's ear, but Mr. S. explains that he thought medicine should go where the problem was.



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#### Vignette 2

Mr. S (Ms. S) is a 72-year old White (Hispanic/African American) man (woman). He\* has Blue Cross/Blue Shield health insurance through his employer (Medicare/Medicaid). He has high blood pressure and high cholesterol. He is on several medications to manage these conditions, but he does not always take his medicine correctly. Sometimes he takes too many pills in a day, sometimes he forgets to take them at all. He always feels fine, though, so he does not think there is any kind of problem. At his annual check-up, Mr. S.'s doctor explains that his high blood pressure and high cholesterol are getting worse - putting him at risk for a heart attack, a stroke, or even death. They discuss how Mr. S. is taking his medicine, and when asked Mr. S. assures the doctor he knows how he is supposed to take his medicine. Mr. S. feels like taking his medication should be simple, and he shouldn't have any questions.



Corrigan, P., Markowitz, F. E., Watson, A., Rowan, D., & Kubiak, M. A. (2003). An attribution model of public discrimination towards persons with mental illness. Journal of Health and Social Behavior, 162-179.

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Pity	I would feel pity for Mr. S.  How much sympathy would you feel for Mr. S?  How much concern would you feel for Mr. S?	
Anger	I would feel aggravated by Mr. S. How angry would you feel at Mr. S? How irritated would you feel at Mr. S?	9-Pt Likert Scales
Personal Responsibility	How controllable, do you think, is Mr. S's ability to use medicine correct How responsible, do you think, is Mr. S for being able to use medicine of	•

# Study Sample

N = 4,974

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Table I			
Average Age (SD)	43.5 (16.7)		
	, in the second second		
	% (n)		
Work in healthcare	12.1 (603)		
Gender			
Male	42.3 (2,102)		
Race			
White	63.2 (3,146)		
Hispanic	13.5 (671)		
African American	16.0 (794)		
Asian	4.4 (218)		
Other	2.4 (121)		
Education			
2-Year College Degree or Higher	59.9 (2,980)		
Household Income			
Below \$10,000	4.6 (230)		
\$10,000-49,999	38.3 (1,908)		
\$50,000-99,000	35.5 (1,764)		
\$100,000 and over	21.5 (1,068)		

RQ:
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n=251 5%

Self-Reported Low Health Literacy

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n=794 16%

n=251 5%

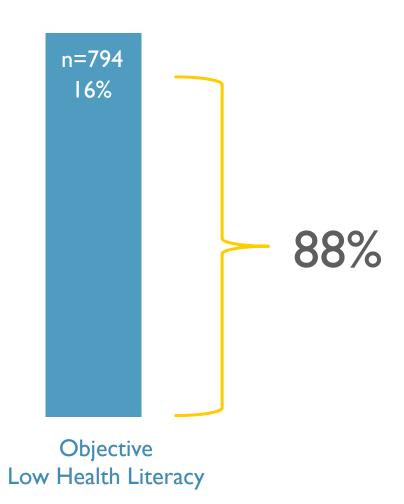
> Self-Reported Low Health Literacy

Objective Low Health Literacy

How does participants' self-reported health literacy compare to their measured health literacy?



Self-Reported Low Health Literacy



How does one's level of health literacy influence their perceptions of stigma related to others' health literacy?

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Means, standard deviation, t-tests for stigma scales						
Scale	Subjective Health Literacy		Objective Health Literacy		th Literacy	
	Higher M (SD)	Lower M (SD)	T-Test	Higher M (SD)	Lower M (SD)	T-Test
All vignettes						
Pity	5.99 (1.82)	5.67 (1.85)	$t (4942) = -3.143^{**}$	6.01 (1.77)	5.75 (2.06)	t (4948) = -3.688***
Anger	5.04 (2.32)	5.22 (2.25)	t (4935) = 1.413	5.02 (2.31)	5.25 (2.37)	t (4941) = 2.527*
Personal responsibility	5.39 (1.99)	5.32 (1.95)	t (4932) = -0.637	5.49 (1.95)	4.86 (2.06)	t (4937) = -8.173***
Vignette I						
Pity	5.77 (1.88)	5.50 (1.81)	t (2486) = -1.923	5.82 (1.82)	5.40 (2.11)	t (2488) = -4.094***
Anger	5.55 (2.29)	5.69 (2.13)	t (2482) = 0.774	5.53 (2.26)	5.75 (2.34)	t (2428) = 1.748
Personal responsibility	5.67 (1.97)	5.57 (1.97)	t (2478) = -0.680	5.78 (1.93)	5.07 (2.09)	t (2480) = -6.545***
Vignette 2						
Pity	6.21 (1.73)	5.88 (1.89)	$t(2454) = -2.430^*$	6.20 (1.70)	6.09 (1.95)	t (2458) = -1.098
Anger	4.53 (2.24)	4.71 (2.28)	t (2451) = 0.984	4.50 (2.23)	4.75 (2.30)	$t(2455) = 2.013^*$
Personal responsibility * = significant at p < 0	5.11 (1.96)	5.05 (1.91)	t (2452) = -0.393	5.20 (1.93)	4.65 (2.04)	t (2455) = -5.059***

<sup>\* =</sup> significant at p < .05, \*\* = significant at p < .01, \*\*\* = significant at p < .001

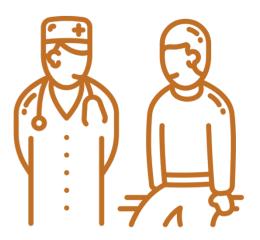
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How do demographic characteristics of a person with lower health literacy influence stigmatized perceptions?



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#### Person included in vignette:

• Sex:

• Age:

Race/Ethnicity:

• Insurance:

Male // Female patient

33 y.o. // 72 y.o. patient

White // Hispanic // African American patient

Medicare // Medicaid



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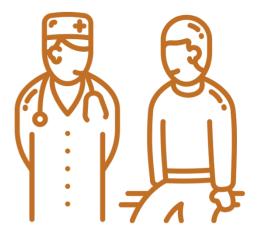
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Pity	Anger	Personal Responsibility
M <sub>33</sub> =5.75	M <sub>33</sub> =5.57	M <sub>33</sub> =5.67
M <sub>72</sub> =6.18	M <sub>72</sub> =4.54	M <sub>72</sub> =5.12

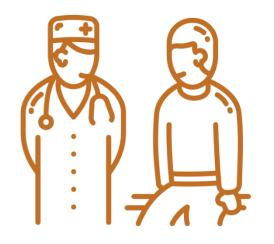
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33 y.o. self-reported

33	y.o.
obje	ective

Pity	Anger	Personal Responsibility
M <sub>Low</sub> =5.50		
M <sub>High</sub> =5.77		

Pity	Anger	Personal Responsibility
	M <sub>Low</sub> =5.40	M <sub>Low</sub> =5.07
	M <sub>High</sub> =5.82	M <sub>High</sub> =5.78

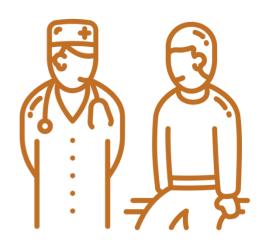
How do demographic characteristics of a person with lower health literacy influence stigmatized perceptions?

Pity	Anger	Personal Responsibility
M <sub>33</sub> =5.75	M <sub>33</sub> =5.57	M <sub>33</sub> =5.67
M <sub>72</sub> =6.18	M <sub>72</sub> =4.54	M <sub>72</sub> =5.12



How do demographic characteristics of a person with lower health literacy influence stigmatized perceptions?

Pity	Anger	Personal Responsibility
M <sub>33</sub> =5.75	M <sub>33</sub> =5.57	M <sub>33</sub> =5.67
M <sub>72</sub> =6.18	M <sub>72</sub> =4.54	M <sub>72</sub> =5.12



72 y.o. self-reported

72 y.o. objective

Pity	Anger	Personal Responsibility
M <sub>Low</sub> =5.87		
M <sub>High</sub> =6.21		

Pity	Anger	Personal Responsibility
	M <sub>Low</sub> =4.75	M <sub>Low</sub> =4.65
	M <sub>High</sub> =4.50	M <sub>High</sub> =5.20



How does the general public view low health literacy?



# How does the general public view low health literacy?

Differed by own health literacy abilities.



# How does the general public view low health literacy?

Differed by own health literacy abilities.

Low HL

Adequate HL



# How does the general public view low health literacy?

Differed by own health literacy abilities.

LOW HL ↑ Anger
↓ Pity

Adequate HL



# How does the general public view low health literacy?

Differed by own health literacy abilities.

Low HL ↓ Personal Responsibility

Adequate HL



Stigma may exacerbate negative outcomes associated with low health literacy.



# Stigma may exacerbate negative outcomes associated with low health literacy.

Incorporate into programs and interventions.



### **THANKS!**

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The University of Texas

Center for Identity

Icons from the Noun Project

Person Icon, Forgot Icon: Gan Khoon Lay
Doubt Icon: by AB
Doctor talking: Artem Kovyazin
Double Icon: asianson.design
Family: DewDrops