ANNALS OF FAMILY MEDICINE

Online Supplementary Material

Bennett IM, White S, Chen J, Soroui JS. The contribution of health literacy to disparities in self-rated health status and preventive health behaviors in older adults. *Ann Fam Med*. 2009;7(3):204-211.

http://www.annfammed.org/cgi/content/full/7/3/204/DC1

Supplemental Table 1. Adjusted Relationship of Race/Ethnicity and Educational Attainment to Health Literacy for US Adults Aged 65 Years and Older in Households, Based on Marginal Maximum Likelihood (MML) Regression

Parameter	Estimate of Regression Coefficient	Standard Error	*P* value
Constant	2.75	0.13	< .001
Race/ethnicity			
White	Reference	Reference	Reference
Black	–0.47	0.10	< .001
Hispanic	–0.82	0.12	< .001
Other	–0.05	0.22	0.811
Educational attainment			
> High school	Reference	Reference	Reference
High school[a]	–0.39	0.07	< .001
< High school	–0.90	0.10	< .001
Age	–0.04	0.005	< .001
Sex			
Male	Reference	Reference	Reference
Female	0.22	0.06	< .001
Income			
> 175% poverty level	Reference	Reference	Reference
100-175% poverty level	–0.33	0.09	< .001
< Poverty level	–0.57	0.11	< .001
Nativity			
US born	Reference	Reference	Reference
Foreign born	–0.57	0.11	< .001

Source: Data used are from the 2003 National Assessment of Adult Literacy, conducted by the National Center for Education Statistics, Institute of Education Sciences, US Department of Education.

[a] High school diploma or equivalency degree.

Supplemental Table 2. Sobel Tests of Significant Mediation Effects of Health Literacy

	Regression		Sobel Test			
Variable	**Coefficient**	**SE**	**Value**	**SE**	***Z***	***P* Value**
Race/ethnicity						
Black → HL	-0.47	0.10	0.12	0.03	3.77	< .001
HL (black) → health status	-0.24	0.04				
Black → HL	-0.47	0.10	0.08	0.03	3.28	< .001
HL (black) → flu vaccine	-0.18	0.04				
Educational attainment						
< High school → HL	-0.90	0.10	0.33	0.06	5.63	< .001
HL (< high school) → health status	-0.36	0.05				
< High school → HL	-0.90	0.10	0.16	0.05	3.54	< .001
HL (< high school) → flu vaccine	-0.18	0.05				
High school → HL	-0.39	0.07	0.14	0.04	4.00	< .001
HL (high school) → mammogram	-0.36	0.06				
< High school → HL	-0.90	0.10	0.42	0.07	5.79	< .001
HL (< high school) → mammogram	-0.46	0.06				
High school → HL	-0.39	0.07	0.12	0.03	4.33	< .001
HL (high school) → dental checkup	-0.31	0.04				
< High school → HL	-0.90	0.10	0.72	0.09	7.67	< .001
HL (< high school) → dental checkup	-0.80	0.05				

→ = path, Black → HL = the association between the independent variable (black dummy variable) and the mediator (health literacy); this is path a. HL = health literacy; HL (black) → health status = the association between the mediator (health literacy) and the dependent variable (health status) when controlling for the independent variable (black dummy variable); this is path b.

Note: Sobel test equation is $Z = a*b/\sqrt{(b^2*s_a{}^2 + a^2*s_b{}^2 + s_a{}^2*s_b{}^2)}$. This Sobel test is the Aroian version suggested in Baron and Kenney.[1] Sobel tests were conducted only if Supplemental Table 1 showed that estimated regression coefficients of independent variables (ie, race/ethnicity and education dummy variables) were statistically significant in model A and the magnitude of the coefficients decreased after controlling for health literacy (model B), indicating potential mediation effects of health literacy.

Reference

1. Baron RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and consideration. *J Pers Soc Psychol.* 1986;51(6):1173-1182.