

Health Literacy As a Mediator of Racial Disparities in Patient Activation

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Background

- Empowering patients to actively participate in their health care is important for improved health care quality and clinical outcomes
- Patient activation encompasses
 - Effective self-management of symptoms/problems
 - Being involved in treatment and diagnostic choices
 - Selecting providers/provider organizations based on performance or quality

Patient Activation Measure

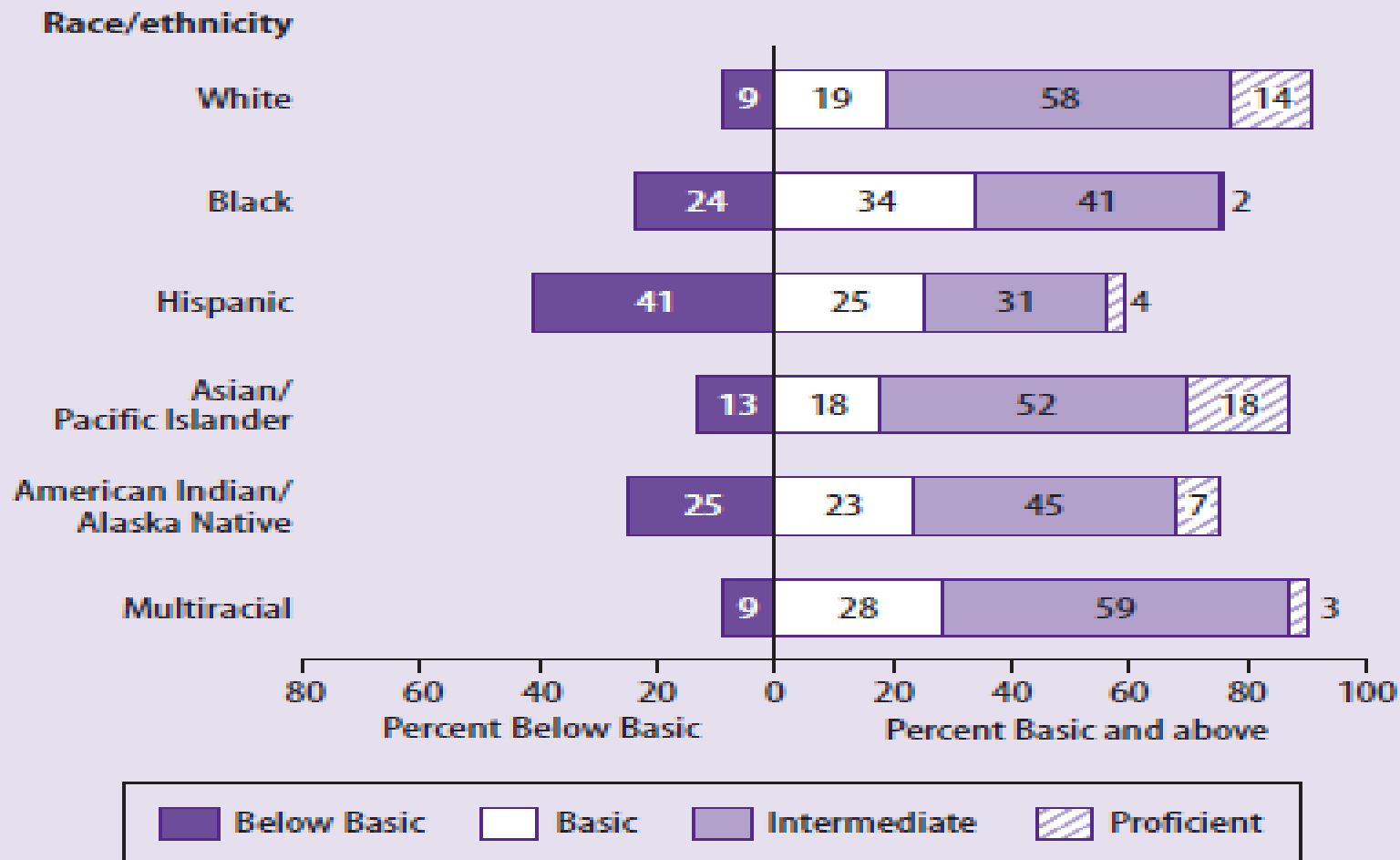
- Assesses aspects of patient engagement to distinguish passive and proactive behaviors
- Four stages of patient activation
 - Believes the patient role is important
 - Possesses the confidence and knowledge necessary to take action
 - Takes an active role in health care
 - Maintains an active role in personal health care even under stress

Patient Activation Measure

- “I am confident that I can follow through on medical treatments I need to do at home”
 - Strongly agree
 - Agree
 - Disagree
 - Strongly disagree

Health literacy

Figure 2-5. Percentage of adults in each health literacy level, by race/ethnicity: 2003



Racial Disparities and Patient Activation

- Hibbard et al, demonstrated that Whites scored higher than Blacks in national and Medicaid samples
 - No racial differences when looking at socio-environmental and clinical outcomes
- Cunningham et al, found racial differences with patient activation
 - Highest level of activation
 - Whites (45.3%)
 - Blacks (39.5%)
 - Hispanics (24.8%)

Hypothesis

- The association of race and patient activation is mediated by health literacy

Methods

- Study population – Data collected from the Elder Walk Study
- Inclusion criteria
 - Age ≥ 65
 - English-speaking

Methods

- Exclusion criteria
 - Cognitive impairment
 - Significant depressive symptoms
 - Answering “Strongly agree” to all PAM items
 - 25 individuals excluded

Methods

- Variables of interest
 - Demographics
 - Health literacy
 - Short Test of Functional Health Literacy in Adults (S-TOFHLA)
 - Patient Activation Measure (13 item)
 - Low Activation
 - High Activation
 - 240 patients completed the PAM

Methods - Analysis

- Bivariate associations between PAM (grouped into three categories, Stage 1/Stage 2, Stage 3, and Stage 4)
- Baseline characteristics were assessed through the chi-square test and Kruskal-Wallis test
- Four separate linear regression models were fit, with continuous PAM score as the dependent variable and race as the independent variable
- Model fit was summarized with the R^2 statistic

Table 1 - Baseline Characteristics

	All (N=225)	Stage 1/Stage 2 (N=48)	Stage 3 (N=113)	Stage 4 (N=87)	
Test of Functional Health Literacy in Adults (TOFHLA)					< 0.01
Low literacy (1-22)	99(39.9)	30 (62.5)	46 (40.7)	23 (26.4)	
High literacy (23-36)	149 (60.1)	18 (37.5)	67 (59.3)	64 (73.6)	

****Proportions listed as (percentages)****

Table 1 – Baseline Characteristics

	All (N=225)	Stage 1/Stage 2 (N=48)	Stage 3 (N=113)	Stage 4 (N=87)	
Race					0.02
Black	161 (64.9)	40 (83.3)	74 (65.5)	47 (54.0)	
White	71 (28.6)	7 (14.6)	31 (27.4)	33 (37.9)	
Other	16 (6.5)	16 (6.5)	8 (7.1)	7 (8.0)	
Education					< 0.01
< High School	54 (21.8)	16 (33.3)	28 (24.8)	10 (11.5)	
High School/GED	75 (30.2)	16 (33.3)	38 (33.6)	21 (24.1)	
> High School	119 (48.0)	16 (33.3)	47 (41.6)	56 (64.4)	

****Proportions listed as (percentages)****

Results

Table 2 - PAM scores by Race/Ethnicity

Race	N	Mean	Std Dev
Black	151	61.53	11.85
White	59	64.83	11.57
Other	15	66.69	13.87

Results

Model 1

Race		
White (ref)		0.0296
Black	-4.67 (-9.51, 0.17)	
Other	1.16 (-7.23, 9.55)	
Model R ²	0.06	

****Adjusted for clinic location, age, sex, comorbidities, PHQ-9****

Results

Model 2

Race		
White (ref)		0.1330
Black	-3.27 (-8.23, 1.68)	
Other	1.79 (-6.49, 10.07)	
Model R ²	0.10	

****Adjusted for education, clinic location, age, sex, comorbidities, PHQ-9****

Results

Model 3

Race		
White (ref)		0.3349
Black	-2.24 (-7.38, 2.89)	
Other	1.92 (-6.35, 10.18)	
Model R ²	0.10	

****Adjusted for health literacy, clinic location, age, sex, comorbidities, PHQ-9****

Results

Model 4

Race		
White (ref)		0.3919
Black	-1.88 (-7.06, 3.31)	
Other	2.17 (-6.06, 10.40)	
Model R ²	0.12	

****Adjusted for education, health literacy, clinic location, age, sex, comorbidities, PHQ-9****

Conclusions

- Racial differences in patient activation are mediated by health literacy and education
 - Racial disparities dictated by patients with low health literacy and those without post-secondary school instruction
 - Findings remained significant even after controlling for known factors associated with patient activation
- Important considerations when thinking of ways to strengthen physician/patient relationships and increase patient engagement

Limitations

- Sample size
 - Limited to metropolitan Boston area
 - Limited to native English speakers
 - Patients with severe depression and cognitive impairment excluded
- Unclear which domain of health literacy is important in this study

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