Health Literacy and Colorectal Cancer Screening Decision Making Among African Americans

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Introduction

- African Americans are disproportionately impacted by colorectal cancer (CRC) incidence and mortality.[1]
- African Americans are screened for CRC at lower rates than Whites.[1]
- CRC screening tests have different pros and cons that can make the decision making process complex.[2]
- Informed decision making:
  - Helps individuals increase the quality of their decision
  - Has been linked to increased CRC screening completion.[2]
- Factors related to CRC screening completion include decisional conflict, decision self-efficacy, and stage of decision making.[2]
- Health literacy has been linked to greater CRC screening knowledge and CRC screening completion.[3]
  - However, research investigating the link between health literacy and CRC screening decision making is limited.

Purpose: Examine the relationship between health literacy and components of the decision making process for CRC screening among a population of African Americans.

Methods

Participants

- The study was conducted in the context of Project HEAL (Health through Early Awareness and Learning), a church-based cancer early detection intervention.
  - Participants attended a 3-workshop series covering breast, prostate, and colorectal cancer early detection.
- Participants were eligible for the present study if they (a) self-identified as African American, (b) were between the ages of 50 and 75, and (c) had no personal history of breast, prostate, or colorectal cancer.

Data Collection

- *Baseline survey*: paper-and-pencil survey administered at Project HEAL baseline
  - Assessed demographics, CRC knowledge, and CRC screening behavior
- *14-month follow-up survey*: administered via paper-and-pencil (mailed to participants), online (Qualtrics), or via phone interview
  - Assessed main study variables:
    - Health literacy
    - Decisional conflict
    - Decision self-efficacy
    - Stage of decision making

Methods continued

Measures

- *Health literacy*: Mean calculated from 5 items modified from STOFHLA and REALM (α = .74)[4]
  - Greater score indicates greater health literacy
- *Decisional conflict*: Total score calculated from a 10-item scale (α = .93)[5]
  - Lower score indicates lower decisional conflict
- *Decision self-efficacy*: Total score calculated from 11-item scale (α = .92)[5]
  - Greater score indicates greater health literacy
- *Stage of decision making*: Single item with greater score indicating increased readiness to engage in decision making[5]

Data Analysis

- Linear regression performed separately for each dependent variable controlling for potential covariates

Results

Participant demographics (N = 101)	
Characteristic	n (%) or mean (SD)
Age	60.7 (6.9)
Gender	
Female	70 (69.3%)
Male	31 (30.7%)
Education[a]	
< High school diploma	9 (9.0%)
High school diploma	25 (25.0%)
Some college	37 (37.0%)
College degree	29 (29.0%)
Employment	
Employed full-time	42 (41.6%)
Retired	33 (32.7%)
Other	26 (25.7%)
Health Insurance	
Private	42 (41.6%)
Medicare/Medicaid	10 (9.9%)
Other	41 (40.6%)
None	8 (7.9%)
CRC knowledge (max score = 8)	6.5 (1.8)
Ever had fecal occult blood test (FOBT)	41 (40.6%)
Ever had sigmoidoscopy	28 (27.7%)
Ever had colonoscopy	69 (68.3%)
Health literacy (max score = 5)	4.2 (0.72)
Decisional conflict (max score = 100)[a]	19.0 (26.23)
Decision self-efficacy (max score = 100)[a]	84.3 (18.7)
Stage of decision making (max score = 6)[b]	4.2 (1.9)

[a]n = 100
[b]n = 99

Results continued

Linear regression of decision making variables on covariate and health literacy

	Decisional Conflict (n = 100)			Decision Self-Efficacy (n = 100)			Stage of Decision Making (n = 99)		
	B	SE B	β	B	SE B	β	B	SE B	β
Age	-0.16	0.49	-.04	0.16	0.33	.06	0.02	0.04	.06
Gender	-8.75	5.40	-.16	4.89	3.58	.12	-0.50	0.42	-.13
Education	-6.30	2.94	-.23*	2.19	1.92	.11	0.20	0.23	.10
Employment[a]									
Retired	-5.20	6.76	-.09	3.70	4.47	.09	-0.20	0.52	-.05
Other	10.24	6.21	.17	1.62	4.11	.04	-0.17	0.48	-.04
Health insurance[b]									
Medicare/Medicaid	-9.15	8.86	-.11	5.37	5.87	.09	0.95	0.69	.16
Other	-0.17	5.73	-.003	-0.83	3.79	-.02	0.28	0.44	.07
None	-0.15	9.3	-.002	-7.56	6.17	-.11	-0.85	0.72	-.22
CRC knowledge	-0.49	1.40	-.03	-0.76	0.93	-.07	-0.08	0.11	-.08
Ever had FOBT	-3.98	4.94	-.07	-2.28	3.29	-.06	0.03	0.39	-.01
Ever had sigmoidoscopy	-4.60	5.76	-.08	-2.28	3.83	-.05	0.26	0.45	.06
Ever had colonoscopy	-0.57	5.44	-.01	-3.99	3.71	-.10	-0.46	0.42	-.12
Health literacy	-10.88	3.89	-.30**	15.62	2.54	.60***	1.00	0.30	.37**

[a]Reference group for employment: "full-time employment"
[b]Reference group for health insurance: "private health insurance"
*p < .05, **p < .01, ***p < .001

Conclusions

- Findings suggest health literacy significantly associated with decision making for CRC screening in this sample of church-attending African Americans.
  - Greater health literacy significantly related to lower decisional conflict
  - Greater health literacy significantly related to:
    - Greater decision self-efficacy
    - Greater readiness to engage in decision making
- Greater educational attainment significantly related to lower decisional conflict
- Future research should further investigate:
  - The relationship between health literacy and decision-making
  - The inclusion of health literacy in decision-making tools for CRC screening

References

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