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Factors Associated With Black Men's Preference for Health Information

Lauren J. Parker, PhD, MPH¹, Haslyn Hunte, MPH, PhD², Anita Ohmit, MPH³, and Roland J. Thorpe Jr., PhD¹

¹Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD, USA

²West Virginia University, Morgantown, WV, USA

³Indiana Minority Health Coalition, Indianapolis, IN, USA

Abstract

Black men are less likely to seek routine health care examinations or preventative care compared with their racial/ethnic and gender counterparts. Because of Black men's limited engagement with the health system, Black men's preference to receive health information is unclear. Guided by a revised version of the Andersen Healthcare Utilization Model, the aim of the study is to examine factors associated with Black men's preference for informal or formal health information.

Findings from the study demonstrate that financial barriers to care (odds ratio [OR] = 0.65, 95% confidence interval [CI] = 0.43–0.98) and higher income (OR = 2.44, 95% CI = 1.49–4.00) were most predictive of using a formal source for health information. Furthermore, age (OR = 1.02, 95% CI = 1.01–1.03) and having a college education (OR = 0.44, 95% CI = 0.26–0.76) were associated with using a formal place for health information. Interestingly, health care discrimination was not associated with preferred source or place for health information. Results from the study suggest that predisposing and enabling factors are most salient to the use of formal sources of health information among Black men.

Keywords

Black men; health promotion; men's health

Black American's, because of mistrust in the medical system, may not seek the help of medical professionals, who are commonly cited as a source for health information (Boulware, Cooper, Ratner, LaVeist, & Powe, 2003; Casagrande, Gary, LaVeist, Gaskin, & Cooper, 2007; Hammond, Matthews, Mohottige, Agyemang, & Corbie-Smith, 2010; Musa, Schulz, Harris, Silverman, & Thomas, 2009). Black Americans, compared with Whites, are more likely to have mistrust in their physician and to believe the health care system deceives

Address correspondence to Lauren J. Parker, Johns Hopkins University Bloomberg School of Public Health, 624 North Broadway, Suite 904, Baltimore, MD 21205-1999, USA; lparke27@jhmi.edu.

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or misleads patients and, thus, were less likely to believe that patients should follow medical advice (Boulware et al., 2003). Black men, in particular, are at risk to not follow medical advice from a health care professional due to their limited engagement with the health care system (Cherry, Woodwell, & Rechtsteiner, 2007; Hammond et al., 2010; Viera, Thorpe, & Garrett, 2006).

This limited contact with the health care system puts Black men at risk for missing key health information (Cherry et al., 2007; Sandman, Simantov, An, Fund, & Harris, 2000; Viera et al., 2006). According to the Centers for Disease Control and Prevention, the average American spends only 1 hour in a health care setting in a given year (Office of Disease Prevention and Health Promotion, U.S. Department of Health Human Services, 2010). However, Black men are less likely to seek routine health care examinations or preventative care compared with their racial/ethnic and gender counterparts (Cherry et al., 2007; Hammond et al., 2010; Viera et al., 2006). Because of a lack of insurance, many Black men may seek treatment at urgent care clinics or emergency rooms, neither of which are designed to provide preventative health information or services, as their focus is on curative care (Blewett, Johnson, Lee, & Scal, 2008; Cherry et al., 2007).

Additionally, the differential treatment in health care settings due to race—health care discrimination—might be perceived as a barrier to Black men's utilization of medical professionals for health information. Findings have demonstrated that discrimination is associated with a reluctance to use medical services, for example, undergoing less than optimal chronic disease screenings and less use of recommended preventative health services (Hausmann, Jeong, Bost, & Ibrahim, 2008b; Trivedi & Ayanian, 2006). Since Black men are at risk to perceive health care discrimination (Fowler-Brown, Ashkin, Corbie-Smith, Thaker, & Pathman, 2006; Hausmann, Jeong, Bost, & Ibrahim, 2008a; Parker, Hunte, & Ohmit, 2015), it is hypothesized that mistreatment may negatively influence their use of formal channels for health information, which subsequently may affect their use of preventative health services. Thus, Black men are apt to lack key health information that could be used to mitigate their high mortality rate from many medically amenable conditions.

Previous studies have highlighted the importance of informal sources in providing health information to Black men. These studies have demonstrated the use of faith community members (Griffith, Ellis, & Ober Allen, 2012; Ravenell, Johnson, & Whitaker, 2006), social network members (Griffith et al., 2012), and targeted community initiatives (Victor et al., 2009; Weinrich, Boyd, Bradford, Mossa, & Weinrich, 1998) as health information sources. Several studies have demonstrated that Black men feel that family is a trusted source of health information and many rely on their female family members to provide information and encouragement to seek care (Blocker et al., 2006; Plowden & Young, 2003). Community initiatives, developed to provide health information to Black men, use places such as barber-shops and churches (Victor et al., 2009; Weinrich et al., 1998). These initiatives have been designed to target common places that Black men visit in efforts to provide them with details about health screening and other useful information. While the previous studies offer valuable insight on Black men's use of health information (Blocker et al., 2006; Griffith et al., 2012; Plowden & Young, 2003; Ravenell et al., 2006; Victor et al.,

2009), there is still a great need to understand their preference for informal versus formal sources of and places to receive health information. These insights can help develop targeted initiatives to educate Black men about health risks and consequences that can be used to combat the prevalence of preventable chronic health conditions.

Guided by a revised version of the Andersen Healthcare Utilization Model (Andersen, 1995; Bradley et al., 2002), the aim of the study is to examine factors associated with Black men's preference for formal or informal health information. The original Andersen model proposed that factors such as predisposing (e.g., age, education, and marital status), enabling (e.g., income, insurance, and social support), and need (e.g., self-rated health) influence health care utilization (Andersen, 1995). The revised version of the model, proposed by Bradley et al. (2002), suggests that psychosocial factors (e.g., attitudes, knowledge, and social norms) should be added to the model to reflect psychosocial experiences. In the current study, the revised version of Andersen's model is used to assess predisposing, enabling, need, and psychosocial factors associated with the preferred formal versus informal sources and places of health information.

METHOD

Sample

Data from the Indiana Black Men's Health Study (BMHS) were used for the study. The BMHS was designed to identify social determinants that affect Black men's health, opportunities, and initiatives to prevent chronic health conditions, and gaps in awareness, access, and utilization of health services. The BMHS relied on convenience sampling to recruit participants from 11 counties known to have relatively high proportions of Black male residents compared with other counties in Indiana. The data, collected between July and August of 2011, came from members of targeted focus groups who self-administered paper-pencil surveys. Participants had the opportunity to complete two surveys that consisted mainly of questions from the Behavioral Risk Factor and Surveillance System. Men who self-identified as African American or Black, 18 years or older, and an Indiana resident were eligible to participate in the study. The participants were given a \$15 gift card for each completed survey. The data collection process was approved by the institutional review boards at Purdue University and Indiana University.

The first survey (Survey A) consisted of questions related to general health and use of health services, and the second survey (Survey B) consisted of questions related to perceived discrimination and help-seeking behaviors. Although potential respondents were encouraged to complete both surveys, some elected to complete only one (survey A's $n = 1,444$; survey B's $n = 1,151$). For this study, we used measures from both surveys. However, because the respondents did not complete both surveys and each survey was anonymous, we employed an automated matching process using the following demographic variables that were assessed on both surveys: respondent's age, education, income, employment, race, and marital status. Surveys that tied on two or more of the variables were not retained. Only those surveys that matched 1:1 were retained for this study. For the analytic sample used for the full sample analysis, of the 836 from the merged data set, 324 respondents had one or more missing variables. Thus, there were a total of 512 for the analytic sample. Although

linking related anonymous data sets is somewhat limited in the broader social science literature, this is not the case in the larger health services research literature (Blakely & Salmond, 2002; Christen, 2012; Simon, Mueller, Deapen, & Copeland, 2005).

Questions regarding health care discrimination (15.8%) and social support (2%) had the most missing responses, while other variables of interest had less than 1% missing. List wise deletion was used to handle the missing data. Findings from the one-way analysis of variance and Chi-square test suggests that the analytic sample and the respondents who were missing did not differ in reports of the source or place for which to receive health information, nor other variables of interest. Respondents with one or more missing variables were younger than the respondents with no missing variables.

Study Measures

Health Information.—There were two outcomes of interest for the study: source for health information and preferred place to receive health information. The source for health information was assessed by the following question from the BMHS, “Who would be the best source to share health information with you?” Possible responses were “barber, doctor, family member, friend, nurse, religious leader, or other.” Response options “barber, family member, friend, and religious leader” were coded as an informal source for care, and the options “doctor and nurse” were coded as a formal source (1 = *formal sources*, 0 = *informal sources*). The option “other” was dropped from the analysis because there is not a consistent item selected for this measure that can be coded into a formal or informal source of care.

The preferred place to receive health information was assessed using the following question from the BMHS, “Where would be the best place for you to get health promotion information?” The possible responses were “barbershop, community center, church, clinic or doctor’s office, health fair, hospital, school, social club, sports events, work, other.” The response options “barbershop, community center, church, school, social club, sports events, and work” were coded as informal places for care. The options “clinic or doctor’s office, health fair, and hospital” were coded as formal places for care (1 = *formal places*, 0 = *informal places*). The response item “other” was dropped from the analysis.

Independent Variables.—Predisposing factors were assessed by age (continuous), education (3-level categorical, high school education, some college or trade school, and college graduate or more), and marital status (married vs. all others).

Enabling factors were assessed by social support, health insurance status, medical cost being a barrier to care, and income. Social support was assessed by the item, “How often do you get the social and emotional support you need?” The responses were, “always, usually, sometimes, rarely, never, or do not know/not sure.” Responses were coded into three categories, always (“always”), usually (“usually” and “sometimes”), and rarely (“rarely” and “never”). The option “do not know/not sure” was treated as missing. Health care coverage was assessed using the question, “Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare?” (“yes” or “no”). Affordability of medical care was assessed by responses to the question “Was there a time in the past 12 months when you needed to see a doctor, nurse, or health

care provider but could not because of cost?” (“yes” or “no”). Income was assessed using a 3-level categorical variable (\$35,000, >\$35,000, and missing).

Need factors were assessed by self-rated health. Self-rated health was assessed by “would you say that in general your health is ...,” with the responses “excellent, very good, good, fair, poor, or very poor.” The variable was coded into three categories: excellent health (“excellent”), good health (“very good” and “good”), and poor health (“fair,” “poor,” and “very poor”).

Psychosocial factors were assessed by health care discrimination. Health care discrimination was assessed by respondents’ responses to the following question: “Within the past 12 months when seeking health care, do you feel you were treated worse than, the same as, or better than people of other races?” The possible responses were as follows: (1) worse than other races, (2) the same as other races, (3) better than other races, (4) worse than some races better than other races, and (5) only encountered people of the same race. Similar to previous studies (Crawford, Jones, & Richardson, 2010; Hausmann et al., 2008a; Parker et al., 2015), the response “worse than other races” was coded as experiencing health care discrimination, and the second and third responses were coded as not experiencing health care discrimination in the health care setting. The responses to the latter two options were treated as missing because they did not indicate a strong sense of favorable or unfavorable treatment (Crawford et al., 2010; Hausmann et al., 2008a; Parker et al., 2015).

Data Analysis

Sample characteristics were summarized for the total sample and additionally summarized by informal or formal sources and place for health information in Table 1. A multivariate logistic regression model was used to examine Black men’s preferred use of formal or informal source for health information in Table 2 and their preferred place to receive formal or informal health information in Table 3 controlling for predisposing, enabling, need, and psychosocial factors. All the analyses for the study were performed in STATA Version 13.

Results

Table 1 depicts the sample characteristics for the study, and by formal or informal sources and place to receive health information. The use of informal (51%) and formal (48%) sources of health information was distributed almost evenly among the men. About 63% of men preferred to use formal places for health information. The mean age for the full sample was 44 years. More than half of the sample had some college/trade school experience or were college graduates (60%). Thirty-nine percent of the full sample was married. About 59% of the sample felt that they usually received the social support they needed. A majority of the men (79%) felt that their health was excellent or good, and had health insurance (71%). A third of the sample (34%) reported that there was a time in the last year that they did not receive health care due to cost. About 52% of the sample earned less than \$35,000 a year. Only 22% of the sample reported that they experienced health care discrimination.

Men who preferred formal sources of health information were older, were college graduates, had health insurance, did not have any financial barriers to care, and earned more than

\$35,000 a year. Men who preferred formal places for health information were older, had at least a high school education, had health insurance, and had poor self-reported health. There were no differences in preferred formal or informal sources and places for health information by marital status, social support, or experiences with health care discrimination.

Table 2 presents the multivariate logistic regression identifying the factors associated with the use of formal sources for health information. Men who were unable to receive care due to cost within the last year had a decreased odds of using formal sources for health information, compared with men who were not financially burdened (odds ratio [OR] = 0.65, 95% confidence interval [CI] = 0.43–0.98). Men who earned more than \$35,000 had twofold increased odds of using formal sources for health information in comparison with those who made less than \$35,000 (OR = 2.42, 95% CI = 1.49–4.00).

Table 3 presents the results from the multivariate logistic regression identifying the factors associated with the use of formal places for health information. As age increases, men were more likely to use formal places for health information (OR = 1.02, 95% CI = 1.01–1.03). College graduates had a decreased odds of using formal places for health information compared with men who earned a high school degree (OR = 0.44, 95% CI = 0.26–0.76).

DISCUSSION

The aim of the study was to identify predisposing, enabling, need, and psychosocial factors associated with Black men's preference for formal versus informal sources and place to receive health information. Based on the findings, medical cost being a barrier to care was associated with the use of informal sources of health information, and having an income of greater than \$35,000 was associated with the use formal source for health information. Older age was associated with using a formal place for health information, while having at least a college education was associated with using informal places for health information. Findings from the study suggest that predisposing and enabling factors are important to consider with the use of formal sources and place for health information.

The study findings highlight key factors for health practitioners to consider when developing interventions to provide health information to Black men. Furthermore, the results identify Black men who may be vulnerable for missing health information from formal sources and places. As demonstrated by the study, medical cost being a barrier to care and lowered income are associated with the use of informal sources for health information. Historically, Black men have had limited access to health-promoting services such as health insurance and the availability of physicians and education/outreach services within their communities (Rich & Roe, 2002). While most Americans obtain health insurance through their employer, high rates of unemployment and lower income create financial barriers for Black men to seek formal sources of health information (Blewett et al., 2008; Brown, Ojeda, Wyn, & Levan, 2000; Rich & Roe, 2002). Health practitioners should consider the ramifications of Black men's limited access to health-promoting resources, and they should work in tandem with community coalitions to train lay interpersonal sources of health information to reach Black men.

Consistent with the revised Andersen model (Bradley et al., 2002), age, an enabling factor, was associated with the use of formal places for health information. Older age is associated with the onset of more chronic health conditions (House, Kessler, & Herzog, 1990). Thus, older men may rely on formal places to receive health information out of the need to manage chronic health conditions. With regard to education, we found that college education is associated with less use of formal places for health information. The education findings were surprising as men with a college education are more likely than men with a high school education to seek medical attention in the face of symptoms (Sandman et al., 2000). The occupational and educational advantages of having a higher education—and the means to navigate through the health care system—lessen the barriers to resources needed to maintain a healthy lifestyle (Rich & Roe, 2002), such as health insurance or an usual source of care. In the current study, the resources that college educated men may have to maintain a healthy lifestyle may be sufficient for their health promotion strategies.

Despite previous study results (Griffith et al., 2007; Griffith et al., 2012; Hausmann et al., 2008a), in the current study, social support and discrimination were not a significant factor associated with the use of formal sources or places to receive health information. Our study suggest that financial resources are most salient to the use of formal channels for health information among Black men. This is important for health practitioners to consider, as interventions or policies aimed at addressing the lack of resources to engage with health promoting resources might initiate formal use of such channels among Black men. For instance, health practitioners should consider partnering with unemployment agencies or career centers to provide health information to target Black men who may miss key health information due to lack of benefits to seek health care. Such partnerships may also be useful in engaging younger men with the health system earlier in the life course.

While the current study has offered valuable insight, it is not without limitations. First, the study relied on self-reported measures. The use of self-reported measures may be biased, as some may over-or underreport their experiences. A second limitation to the study is the relationship between the source for health information and the place to receive health information. In most cases, one has to go to a place associated with the source to seek health information, such as a doctor's office. While this is a valid concern, the relationship between sources of health information and place of health information in this study are independent ($\chi^2 = 60.79, p < .05$), which means that there is not a significant relationship between the two outcome variables. Therefore, we can assume that the sources and place of health information do not compound one another.

CONCLUSION

The sources and places Black men use to receive health information is important to consider, as they may miss key health information from formal channels because of their limited engagement with the health care system. The study is useful to health practitioners as it identifies predisposing and enabling factors associated with the use of health information. Furthermore, it adds to the literature by demonstrating that health-promoting resources are more salient to the use of formal versus informal forms of health information than psychosocial factors. Findings from the study highlight the need for targeted interventions to

consider the use of informal lay sources and places to provide health information to Black men.

Future studies should evaluate the community-level context and its role in the allocation of health resources in communities in which Black men reside. These studies should explore whether communities with a high population of Black men are equipped to provide them with reliable and factual health information. This is important, as the findings can be used to identify areas in need of health campaigns to target health issues. Communities can be a safety net in providing health information to men who would otherwise not receive this information due to lack of engagement with the health care system.

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Table 1
Sample Characteristics of the Indiana Black Men's Health Study by Sources and Places for Health Information.

<i>Characteristics</i>	<i>Full sample</i>	<i>Sources</i>		<i>Places</i>	
		<i>Formal^a</i>	<i>Informal^b</i>	<i>Formal^c</i>	<i>Informal^d</i>
Predisposing factors					
Age (18–92 years), mean (<i>SD</i>)	44.4 (15.2)	46.1 (15.2)	42.9 (15.1)*	46.4 (15.3)	41.1 (14.4)*
Education					
High school	39.7	39.2	40.1*	43.7	32.8*
Some college	37.3	31.2	43.1	36.9	38.1
College graduate	22.9	29.5	16.6	19.2	29.1
Married	39.5	42.9	36.3	41.6	35.9
Enabling factors					
Social support					
Always	27.9	31.5	24.6	31.0	22.7
Usually	58.5	56.2	60.6	56.8	61.3
Rarely	13.5	12.1	14.7	12.1	15.8
Health insurance	71.8	78.5	65.5*	75.7	65.0*
No care due to cost	34.0	27.1	40.5*	31.3	38.6
Income					
\$35,000	51.8	41.7	61.3*	50.6	53.9
>\$35,000	35.8	46.9	25.3	36.3	34.9
Missing	12.3	11.3	13.2	13.0	11.1
Need factors					
Self-rated health					
Excellent	12.1	10.5	13.6	9.63	16.4*
Good	68.6	72.4	65.1	69.5	67.2
Poor	19.1	17.0	21.2	20.8	16.4
Psychosocial factors					
Health care discrimination	22.5	21.0	23.8	21.1	24.8

NOTE: *N* = 512. Mean (*SD*) provided for continuous variables, and percentages provided for categorical variables.

^a Informal sources include barber, doctor, family member, friend, or religious leader.

^b Formal sources include doctor or nurse.

^c Informal places include barbershop, community center, church, school, social club, sports events, and work.

^d Formal places include clinic or doctor's office, health fair, and hospital.

* *p* < .05.

Table 2

Multivariate Logistic Regression Depicting the Likelihood to Use a Formal Sources^a for Health Information, Indiana Black Men's Health Study.

<i>Characteristics</i>	<i>OR</i>	<i>95% CI</i>
Predisposing factors		
Age	1.01	[0.99, 1.02]
Education		
High school (ref)	1.00	
Some college	0.67	[0.44, 1.03]
College graduate	1.30	[0.77, 2.20]
Married	0.67	[0.42, 1.06]
Enabling factors		
Social support		
Always (ref)	1.00	
Usually	0.91	[0.59, 1.42]
Rarely	0.97	[0.51, 1.85]
Health insurance	1.39	[0.88, 2.19]
No care due to cost	0.65	[0.43, 0.98] [*]
Income		
\$35,000 (ref)	1.00	
>\$35,000	2.44	[1.49, 4.00] [*]
Missing	1.22	[0.68, 2.17]
Need factors		
Self-rated health		
Excellent (ref)	1.00	
Good	1.48	[0.82, 2.67]
Poor	1.35	[0.65, 2.78]
Psychosocial factors		
Health care discrimination	1.14	[0.73, 1.80]

NOTE: *N* = 512. ref = reference group.

^aFormal sources include doctor or nurse.

^{*}*p* < .05.

Table 3

Multivariate Logistic Regression Depicting the Likelihood to Use Formal Places^a for Health Information, Indiana Black Men's Health Study.

<i>Characteristics</i>	<i>OR</i>	<i>95% CI</i>
Predisposing factors		
Age	1.02	[1.01, 1.03] [*]
Education		
High school (ref)	1.00	
Some college	0.73	[0.47, 1.14]
College graduate	0.44	[0.26, 0.76] [*]
Married	0.99	[0.62, 1.58]
Enabling factors		
Social support		
Always (ref)	1.00	
Usually	0.69	[0.44, 1.10]
Rarely	0.56	[0.29, 1.08]
Health insurance	1.41	[0.89, 2.22]
No care due to cost	0.77	[0.51, 1.16]
Income		
\$35,000 (ref)	1.00	
>\$35,000	1.01	[0.61, 1.68]
Missing	1.31	[0.29, 1.08]
Need factors		
Self-rated health		
Excellent (ref)	1.00	
Good	1.67	[0.94, 2.98]
Poor	1.87	[0.90, 3.87]
Psychosocial factors		
Health care discrimination	0.96	[0.61, 1.53]

NOTE: *N* = 512. ref = reference group.

^aFormal places include clinic or doctor's office, health fair, and hospital.

^{*}*p* < .05.