

11-1-2008

Breast Cancer Fatalism: The Role of Women's Perceptions of the Health Care System

Allyson G. Hall
University of Florida

Amal J. Khoury
East Tennessee State University

Ellen D.S. Lopez
University of Florida

Nedra Lisovicz
University of Alabama

Amanda Avis-Williams
University of Southern Mississippi

See next page for additional authors

Follow this and additional works at: https://aquila.usm.edu/fac_pubs

 Part of the [Public Health Commons](#)

Recommended Citation

Hall, A. G., Khoury, A. J., Lopez, E. D., Lisovicz, N., Avis-Williams, A., Mitra, A. K. (2008). Breast Cancer Fatalism: The Role of Women's Perceptions of the Health Care System. *Journal of Health Care for the Poor and Underserved*, 19(4), 1321-1335.
Available at: https://aquila.usm.edu/fac_pubs/1587

Authors

Allyson G. Hall, Amal J. Khoury, Ellen D.S. Lopez, Nedra Lisovicz, Amanda Avis-Williams, and Amal K. Mitra



PROJECT MUSE®

Breast Cancer Fatalism: The Role of Women's Perceptions of the Health Care System

Allyson G. Hall, Amal J. Khoury, Ellen D. S. Lopez, Nedra Lisovicz, Amanda Avis-Williams, Amal Mitra



Journal of Health Care for the Poor and Underserved, Volume 19, Number 4, November 2008, pp. 1321-1335 (Article)

Published by Johns Hopkins University Press

DOI: <https://doi.org/10.1353/hpu.0.0091>

➔ *For additional information about this article*

<https://muse.jhu.edu/article/253915>

Breast Cancer Fatalism: The Role of Women's Perceptions of the Health Care System

Allyson G. Hall, PhD
Amal J. Khoury, PhD, MPH
Ellen D. S. Lopez, PhD
Nedra Lisovicz, PhD, MPH, CHES
Amanda Avis-Williams, MPH, CHES
Amal Mitra, MD, DrPH

Abstract: Cancer fatalism, which can be understood as the belief that cancer is a death sentence, has been found to be a deterrent to preventive cancer screening participation. This study examines factors associated with breast cancer fatalism among women. We analyzed data from a 2003 survey of women 40 years of age. The survey collected information about respondents' knowledge and attitudes regarding breast health. Analyses compared the characteristics of women who reported and those who did not report a fatalistic attitude. Women with a fatalistic attitude were more likely to be African American, to have a family history of breast cancer, to rate their quality of care as fair or poor, to believe that not much could be done to prevent breast cancer, to believe that breast cancer could not be cured if found early, and to believe that treatment could be worse than the disease.

Key words: Fatalism, cancer, breast cancer, health survey.

Breast cancer is a major public health issue.¹⁻⁴ It was estimated that during 2007, 178,480 new cases of female invasive breast cancer would be diagnosed, and 40,460 deaths would be attributed to the disease.⁵ Overall, breast cancer mortality rates have declined since 1990 due to advances in early detection and treatment options, and possibly due to the reductions in the use of hormone-replacement therapy.^{2,6,7} The rate of women reporting ever having had a mammogram has risen substantially, from just under 30% in 1987 to nearly 70% in 2003.⁸

While these overall figures are encouraging, disparities exist between subgroups of women. Although White women experience a higher breast cancer incidence rate, African American women are more likely to die from the disease. In 2003, female age-adjusted breast cancer incidence rates were 125.7 and 119.2 per 100,000 for White and

ALLYSON HALL is an Associate Professor in the Department of Health Services Research, Management, and Policy at the University of Florida (UF), where she can be reached at 101 S. Newell Drive, PO Box 100195, Gainesville, FL 32611-0195; (352) 273-5129; hallag@phhp.ufl.edu. *AMAL KHOURY* is on the faculty at East Tennessee State University. *ELLEN LOPEZ* is also on the faculty at UF. *NEDRA LISOVICZ* is affiliated with the University of Alabama at Birmingham School of Medicine. *AMANDA AVIS-WILLIAMS* and *AMAL MITRA* are affiliated with the University of Southern Mississippi.

Black women, respectively. However, age-adjusted mortality rates were 25.4 and 34.4 per 100,000 for White and Black women.⁸ A meta-analysis of studies that examined survival differences between Black and White patients for all forms of cancer found that, when treatment was comparable, only modest cancer-specific survival differences were found between African Americans and Whites. This finding led to the conclusion that cancer biology is not responsible for racial disparities in mortality, pointing rather to such possible explanations as the lack of early detection, later stage presentation, and differential treatment.⁹

Focusing on early detection, the current literature is replete with research exploring barriers to mammography screening for African American women. Both socio-demographic and health care system-related factors have been identified. These factors include being older,¹⁰ having lower education and income status,^{11–14} being uninsured,^{11,14} lacking a usual source of care,^{11,13} not receiving a clinical referral,¹² and having an inadequate understanding of cancer and screening.^{10,13} Findings from such studies have been used to develop and offer screening programs that strive to decrease or eliminate costs, increase access and availability of services, and promote knowledge and awareness. However screening rates for African Americans remain lower than those of other populations.^{12,13} Such persistent disparities suggest unique and unaddressed barriers to screening and treatment that may not be entirely explained by poverty, under-education, and limited access to care.^{15,16}

Psychological, social, and cultural factors that affect beliefs, attitudes, and knowledge regarding cancer have also been found to influence women's screening behaviors.^{16–18} The mere mention of the word *cancer* can evoke images of death and suffering.¹⁵ According to Merriam-Webster's Dictionary, fatalism is "a philosophical doctrine holding that all events are predetermined in advance for all time and human beings are powerless to change them."¹⁹ Fatalism has been identified as a barrier to cancer screening that merits further investigation.²⁰ Over the past decade, fatalism has received increased attention as an independent, culturally specific variable that affects care-seeking behaviors.^{21,22}

Definitions of fatalism are rife, and they differ across studies, contexts, and methods of measurement.²³ Straughan and Seow conceptualized fatalism as "a belief that some health issues are beyond the individual's control" and further, that fatalism involves "the notion of predestination, luck and faith."^{24, p. 1697} Specifically with respect to cancer, fatalism has been defined as "helplessness,"^{25, p. 22} as the belief that screening and treatment may be futile and surgery causes cancer to spread,²⁶ and "the belief that death is inevitable when cancer is present."^{27, p. 386} Research suggests that cancer fatalism is a deterrent to cancer screening participation, particularly among African Americans.^{15,16,18,20,27–30}

Fatalistic views of cancer have noteworthy consequences. In a study of colorectal cancer screening, elderly African Americans were not only significantly more likely to hold fatalistic beliefs than their White counterparts, but after demographic variables known to influence screening practices (age, education, income) were controlled for, fatalism was the only significant predictor of participation in fecal occult blood testing.²⁷ With regard to breast cancer screening, another study found that fatalism was prevalent among poorer and less educated populations and that, after controlling for education and economic status, differences in fatalism scores by race declined sharply.²³ Fatalistic attitudes have figured importantly in explanations of why women

from marginalized populations may fail to seek breast cancer screening and thus often present with advanced-stage breast cancer.^{18,21}

Bearing on early detection, cancer fatalism is seen as arising and sustaining itself as a self-fulfilling prophecy where personal and vicarious experiences are captured within a cycle of late-stage cancer diagnosis, limited treatment options, and poor health outcomes.^{23,30} Freeman suggested a strong relationship between a *web of poverty* and perceptions of fatalism, in that poor people trust the health care system less than people who are more well off.³⁰ Within the cultural and historic context of African American society, the historical forces of slavery, discrimination, segregation, and poverty are inextricably woven into a social fabric where individuals and groups experience inadequate access to quality health care, a profound mistrust of the health care system, and a lack of understanding about cancer, early detection, and treatment.³¹ This social backdrop of oppression creates a fertile setting for a sense of powerlessness, hopelessness, and social despair that fosters fatalistic attitudes.³¹ Therefore, early detection is considered to be of no value in influencing a deadly cancer outcome. These explanations of cancer fatalism are focused on socioeconomic characteristics and health status, personal perceptions of health and health care experiences, and knowledge and understanding about cancer and early detection. In sum, as shown in Figure 1, a fatalistic attitude can arise from the interaction of several factors, including health status and family history of cancer, sociodemographic characteristics, and knowledge and attitudes about cancer. These factors can contribute to feelings of mistrust and to fatalistic attitudes. People who are fatalistic are less likely to engage in preventive health behavior.

To understand cancer fatalism and its impact on breast cancer screening better, researchers have attempted to assess the predictors of fatalistic attitudes and beliefs. Parallel to sociodemographic factors associated with lower screening rates, cancer fatalism has been correlated with such variables as minority status,^{18,20,27} older age,^{18,20} less education,^{18,20} and lower income.¹⁸ However, findings have been inconsistent, and studies have been limited by relatively small sample sizes, non-population-based sampling methods, and a focus on specific population groups. For example, fatalism research has often focused solely on African American populations, providing less insight into White populations.^{15,16,32} Furthermore, despite the notion that fatalism is related to lived experiences, there is a dearth of research on the association between cancer fatalism and such experiential factors as personal health care history, perceptions of the health care system, and knowledge and attitudes about breast cancer, screening, and treatment.

In order to design effective health education and prevention strategies that incorporate cultural attitudes, beliefs, and experience,¹⁵ it is imperative that there be a broader understanding of not only how sociodemographic characteristics factors bear on fatalism, but also how perceptions are linked to fatalistic beliefs. The objective of this study was to identify factors associated with breast cancer fatalism among women. The study extends current knowledge by reporting results from a large population-based survey that comprehensively examined women's attitudes and beliefs about breast cancer, including perceptions of the health care system, and knowledge/attitudes towards breast cancer, screening, and treatment.

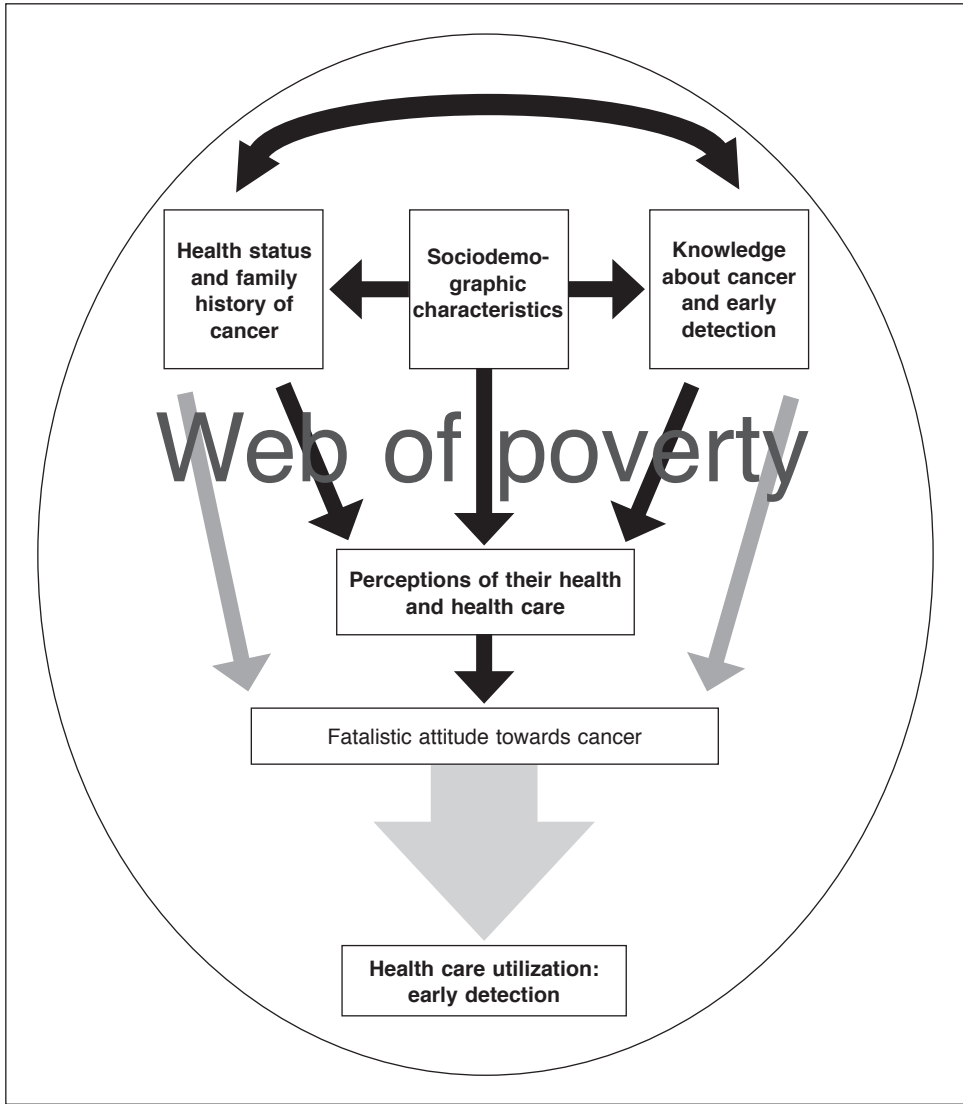


Figure 1. Roots of fatalism.

Methods

Survey design. We analyzed data from a statewide survey of women 40 years of age and older in the state of Mississippi that was conducted in the summer of 2003. American Cancer Society breast cancer screening guidelines recommend that women age 40 years and older receive a mammogram every year.³³ Trained interviewers at the survey research center of the University of Southern Mississippi conducted the survey using computer-assisted telephone interviewing (CATI). A sampling firm provided a representative sample of households. The sample was screened for disconnected telephone lines and for households that did not include a woman 40 years of age or older.

The University of Southern Mississippi's Human Subjects Protection Review Committee approved the survey. Interviewers obtained verbal consent from participants at the beginning of each telephone call. Interviewers made an oral presentation, describing the purpose the survey and other elements of informed consent. Interviewers signed and dated the oral presentation each time it was read to a participant.

Survey instrument. The survey instrument was developed using a systematic review of the literature and a series of focus groups. Investigators conducted six focus groups in 2002 with women in urban and rural parts of the state in order to collect in-depth qualitative data regarding breast cancer knowledge, attitudes, and behaviors. Three focus groups included women ages 40–49, and three groups included women ages 50 and older. We recruited low-income community women who did not have mammograms on a regular basis. Each focus group lasted two hours and was conducted by a professional female moderator who is a native of Mississippi and who had experience guiding group dynamics. A discussion guide was developed to facilitate the focus groups and included a series of open-ended questions with probes, where appropriate. A total of 58 women participated in the discussion. All participants provided written informed consent. The discussions were audio-taped, transcribed and analyzed for issues and themes. Findings were used to develop some of the survey questions and response categories.

A systematic review of the literature was used to develop other survey questions and establish face validity of the questionnaire. Breast cancer experts who served on the advisory committee of the project established content validity of the questionnaire. Experts included breast health educators, managers of cancer screening and outreach programs, academic faculty, primary care providers, and specialty providers, including oncologists.

The questionnaire was pilot-tested with 30 women 40 years of age and older. The women completed the telephone survey and were then asked about the meaning of some of the questions. Women were also asked to re-state some of the questions using their own words. The pilot test showed that women understood the survey and were able to complete it in 15–20 minutes. The wording and sequencing of some questions were revised based on participants' feedback, and the survey was finalized.

The questionnaire used closed-ended questions to collect data about primary health care practices, knowledge, attitudes, and practices regarding breast cancer screening (including mammography, clinical breast exam, and breast self exam), awareness of breast cancer risk factors, attitudes towards treatment, perceptions of the health care system, and sociodemographic characteristics.

Study variables. The outcome variable was breast cancer fatalism as measured by the item *Breast cancer is a death sentence*. Based on the literature review and on the formative work done by the investigators, we concluded that this survey item captures the theoretical concept of fatalism. Respondents strongly agreed, agreed, disagreed, or strongly disagreed with the statement. We compared women who reported a fatalistic attitude (i.e., strongly agreed or agreed with the statement) and women who did not report a fatalistic attitude (i.e., disagreed or strongly disagreed with the statement).

Consistent with the conceptual framework illustrated in Figure 1, we included three sets of explanatory variables in the analysis: sociodemographic characteristics, health status and family history of breast cancer, perceptions of the health care system, and

knowledge/attitudes towards breast cancer. Sociodemographic and health characteristics included age, educational attainment, race/ethnicity, household income, marital status, and urban/rural location. Women reported their birth years, allowing researcher to determine their age in years. Women reported their race/ethnicity as African American; White, non-Hispanic; Hispanic/Latina; American Indian; Asian American; or Other. The last four categories were merged into Other due to small sample sizes. Women also reported their education level (less than high school degree, high school degree, some college, college or graduate degree), annual household income (less than \$10,000; between \$10,000 and \$20,000; between \$20,000 and \$30,000; and greater than \$30,000), and marital status (married, living with a partner, divorced, widowed, never married). Data about town/city and county of residence were designated as either an urban or rural location.

Health status was examined using perceived health status. Perceived health status was rated as excellent, good, fair, or poor. Family history was defined as whether or not anyone in the woman's family had been diagnosed with breast cancer.

Six items assessed women's perceptions of the health care system, including three items that measured mistrust (Rich people receive better medical care than poor people; Hospitals sometimes do not tell patients the truth; Health insurance affects the kind of care that a person receives) and three items that measured perceived racism (Doctors take the medical complaints of people of your race seriously; Doctors sometimes hide information from patients of your race; Hospitals provide the same care to people of different racial groups). Those items were derived from the work of LaVeist and colleagues.^{34,35} Women indicated whether they strongly agreed, agreed, disagreed, or strongly disagreed with each of the six statements. In addition, women rated their overall quality of care as excellent, good, fair, or poor.

Six statements measured knowledge and attitudes regarding prevention and treatment of breast cancer: 1) There is not much you can do to keep from getting breast cancer, 2) Breast cancer could be cured if found early, 3) Surgery exposes breast cancer to the air and causes it to spread, 4) Getting treated for breast cancer can be worse than the disease, 5) You would be able to afford treatment if diagnosed with breast cancer, and 6) You would rather not know if you had breast cancer. Women reported whether they strongly agreed, agreed, disagreed, or strongly disagreed with each of the six statements.

Statistical methods. Data were entered and analyzed using SPSS version 11 for Windows.³⁶ The characteristics of women who reported and who did not report a fatalistic attitude were compared at the bivariate level using t-tests or chi-squared tests, as appropriate. A binary logistic regression model examined the association between breast cancer fatalism and explanatory variables at the multivariate level. All independent variables that were associated with breast cancer fatalism at the bivariate level ($p < .05$) were entered into the regression model.

Results

Description of the sample. A total of 1,050 women responded to the survey, which translates into a 59.2% response rate. For purposes of this analysis, we excluded women

who reported a previous a breast cancer diagnosis ($n=63$) and women who responded that they did *not know* whether or not breast cancer was a death sentence ($n=29$). The analytic sample size was 958 women. Almost one in three women strongly agreed or agreed that breast cancer was a death sentence. Table 1 presents the characteristics of the final sample. Participants ranged in age between 40 and 97 years, with an average age of 59 years. More than half of the women had a high school degree or less education and household incomes of less than \$30,000 per year. The majority of respondents were White non-Hispanic (71%), married (61%), and living in rural areas (58%). Approximately one in three women reported that their health status was fair or poor. Also, one-third of the sample reported a family history of breast cancer.

Bivariate analysis. Table 1 presents the sociodemographic and health status characteristics of women who agreed and disagreed that breast cancer was a death sentence. Women with a fatalistic attitude were more likely than women who were not fatalistic to be African American (41.0% vs. 24.4%, $p<.001$), to have low education (less than high school degree) (30.6% vs. 13.9%, $p<.001$) and low household income levels (less than \$10,000 per year) (33.5% vs. 18.5%, $p<.001$). Women with fatalistic attitudes were, on average, two years older than other women. Urban/rural location was not associated with breast cancer fatalism in the bivariate analysis. In addition, women with fatalistic attitudes were more likely than their counterparts to report a family history of breast cancer (39.0% vs. 29.9%, $p=.007$) and a fair/poor health status (37.4% vs. 27.1%, $p=.002$).

Table 2 describes perceptions of the health care system and associations between those perceptions and breast cancer fatalism. For the quality of care rating, we report percent distributions for excellent/good and fair/poor ratings. For the remaining items, we report the proportion of women who either strongly agreed or agreed with each statement. Although nine of ten women rated their overall quality of care as excellent or good, a majority expressed some mistrust of the health care system and believed that health insurance affected the kind of care that a person received (79%), and that rich people received better care than poor people (63%).

Women with fatalistic attitudes were more likely than their counterparts to rate their quality of care as fair or poor (16.7% vs. 7.3%, $p<.001$). In addition, women with fatalistic attitudes were more likely to agree that Hospitals sometimes did not tell patients the truth (54.7% vs. 40.6%, $p<.001$), that Doctors sometimes hid information from patients of their race (46.4% vs. 24.4%, $p<.001$), and that Doctors did not take the medical complaints of people of their race seriously (29.5% vs. 21.9%, $p=.013$). Women with fatalistic attitudes were marginally more likely to believe that Rich people received better medical care than poor people (67.3% vs. 61.2%, $p=.077$). There were no differences between the two groups of women regarding their perception that Health insurance affected the kind of care that a person received and that Hospitals provided the same care to people of different racial groups.

Table 3 presents results concerning women with and without breast cancer fatalism regarding their knowledge/attitudes of the disease. Overall, the vast majority of women indicated that breast cancer could be cured if found early (95%). However, sizeable proportions believed that surgery exposed breast cancer to the air and caused it to spread (46%), and that treatment could be worse than the disease (33%). One in three

Table 1.

**SOCIODEMOGRAPHIC AND HEALTH STATUS
CHARACTERISTICS OF WOMEN WHO AGREED OR DISAGREED
THAT BREAST CANCER WAS A DEATH SENTENCE**

Characteristics	Women by Group (n, %)		Total N=958	p
	Strongly agree/ agree <i>fatalistic</i> N=278	Strongly disagree/ disagree <i>not fatalistic</i> N=680		
Age (mean, SD)	59.8 (12.72)	58.1 (12.16)	59.25 (12.57)	.045
Education				.000
Less than high school	85 (30.6)	94 (13.9)	179 (18.7)	
High school degree	96 (34.5)	224 (33.1)	320 (33.5)	
Some college	56 (20.1)	204 (30.1)	260 (27.2)	
College degree	41 (14.7)	155 (22.9)	196 (20.5)	
Race/ethnicity				.000
African American	112 (41.0)	162 (24.4)	274 (29.2)	
White, non-Hispanic	161 (59.0)	503 (75.6)	664 (70.8)	
Annual household income				.000
Less than \$10,000	93 (33.5)	126 (18.5)	219 (22.9)	
\$10–20,000	47 (16.9)	112 (16.5)	159 (16.6)	
\$20–30,000	36 (12.9)	82 (12.1)	118 (12.3)	
More than \$30,000	74 (26.6)	276 (40.6)	350 (36.5)	
Refused	28 (10.1)	84 (12.3)	112 (11.7)	
Marital status				.045
Married/with partner	156 (56.1)	427 (63.1)	583 (61.0)	
Divorced/widowed/ never married	122 (43.9)	250 (36.9)	372 (39.0)	
Location				NS
Urban	109 (39.6)	289 (53.5)	398 (42.3)	
Rural	166 (60.4)	376 (56.5)	542 (57.7)	
Unknown	3 (1.1)	15 (2.2)	18 (1.9)	
Perceived health status				.002
Excellent/good	174 (62.6)	496 (72.9)	670 (69.9)	
Fair/poor	104 (37.4)	184 (27.1)	288 (30.1)	
Family history of breast cancer	.007			
	108 (39.0)	203 (29.9)	311 (32.6)	

Note: p-values based on chi-square tests for cross-tabulations and t-tests for mean differences.
NS = not significant

Table 2.

**PERCEPTIONS OF THE HEALTH CARE SYSTEM OF
WOMEN WHO AGREED OR DISAGREED THAT
BREAST CANCER WAS A DEATH SENTENCE**

Characteristics	Women by Group (n, %)			p
	Strongly agree/ agree <i>fatalistic</i> N=278	Strongly disagree/ disagree <i>not fatalistic</i> N=680	Total N=958	
Quality of care rating				.000
Excellent/good	229 (82.4)	621 (91.3)	850 (88.7)	
Fair/poor	46 (16.5)	49 (7.2)	95 (9.9)	
Unknown	3 (1.1)	10 (1.5)	13 (1.4)	
% strongly agree or agree with the following statements:				
Rich people receive better medical care than poor people	187 (67.3)	416 (61.2)	603 (62.9)	.077
Hospitals sometimes do not tell patients the truth	152 (54.7)	276 (40.6)	428 (44.7)	.000
Health insurance affects the kind of care that a person receives	221 (79.5)	532 (78.2)	753 (78.6)	NS
Doctors take the medical complaints of people of your race seriously	196 (70.5)	531 (78.1)	727 (75.9)	.013
Doctors sometimes hide info from patients of your race	129 (46.4)	166 (24.4)	295 (30.8)	.000
Hospitals provide the same care to people of different racial groups	160 (57.8)	400 (58.9)	560 (58.6)	NS
Note: p-values are based on chi-square tests. NS = not significant				

women also reported that they would not be able to afford treatment if diagnosed. Negative attitudes regarding prevention and treatment were associated with breast cancer fatalism. Women who agreed that breast cancer was a death sentence were more likely to believe that there was not much one could do to keep from getting breast cancer (47.1% vs. 35.7%, $p=.001$), and that treatment could be worse than the disease (47.5%

Table 3.**KNOWLEDGE/ATTITUDES OF WOMEN WHO AGREED OR DISAGREED THAT BREAST CANCER WAS A DEATH SENTENCE**

% strongly agree or agree with the following statements	Women by Group (n, %)		Total N=958	p
	Strongly agree/ agree <i>fatalistic</i> N=278	Strongly disagree/ disagree <i>not fatalistic</i> N=680		
Not much you can do to keep from getting breast cancer	131 (47.1)	243 (35.7)	374 (39.0)	.001
Breast cancer could be cured if found early	254 (91.4)	655 (96.3)	909 (94.9)	.002
Surgery exposes breast cancer to air and causes it to spread	174 (62.6)	266 (39.1)	440 (45.9)	.000
Getting treated can be worse than the disease	132 (47.5)	185 (27.2)	317 (33.1)	.000
Could afford treatment if diagnosed	167 (60.1)	470 (69.1)	637 (66.5)	.007
Would rather not know of breast cancer	36 (12.9)	40 (5.9)	76 (7.9)	.000

Note: p-values are based on chi-square tests.

vs. 27.2%, $p < .001$). In addition, they were more likely to believe that they could not afford treatment (39.9% vs. 30.9%, $p = .007$) and preferred not to know if they had the disease (12.9% vs. 5.9%, $p < .001$).

Regression analysis. Table 4 presents the results of the logistic regression on breast cancer fatalism. Among the sociodemographic characteristics, age, race/ethnicity, and education were significantly associated with fatalism. Older women, African American women, and women with no college education were more likely than younger women, White non-Hispanic women, and women with a college education to agree that breast cancer was a death sentence. Household income and marital status were not associated with breast cancer fatalism at the multivariate level. Individuals with a family history of breast cancer were also more likely to be fatalistic.

Among variables measuring perceptions of the health care system, two emerged as significant correlates of fatalism. Women who rated their quality of care as fair/poor and women who believed that physicians hid information from patients of their race were twice as likely as other women to agree that breast cancer was a death sentence.

Table 4.

LOGISTIC REGRESSION ANALYSIS OF BREAST CANCER FATALISM^a: ESTIMATES OF ODDS RATIOS OF EXPLANATORY VARIABLES AND 95% CONFIDENCE INTERVALS

Explanatory variable	Odds ratio of fatalism	95% confidence interval
Sociodemographic characteristics and health status		
Age (years)	1.02*	1.00, 1.03
Education (high school or less vs. college education)	1.58*	1.10, 2.28
Race/ethnicity (African American vs. White, non-Hispanic)	1.59*	1.09, 2.30
Household income (Each category vs. less than \$10,000)	NS	NS
Marital status (married vs. other)	NS	NS
Perceived health status (fair/poor vs. excellent/good)	NS	NS
Family history vs. no family history	1.43*	1.03, 2.00
Perceptions of the health care system		
Quality of care (fair/poor vs. excellent/good)	1.80*	1.08, 3.00
Hospitals tell patients the truth vs. not	NS	NS
Doctors take complaints of your race seriously vs. not	NS	NS
Doctors hide info from patients of your race vs. not	2.14***	1.49, 3.08
Knowledge/attitudes about breast cancer ^b		
Not much you can do to prevent breast cancer	1.38*	1.00, 1.91
Breast cancer could not be cured if found early	2.14*	1.10, 4.16
Surgery causes cancer to spread	1.68**	1.20, 2.35
Treatment can be worse the disease	2.16***	1.56, 3.00
Would afford treatment	NS	NS
Would rather not know of breast cancer	NS	NS

^aAgreeing or strongly agreeing that breast cancer is a death sentence

^bAgreeing or strongly agreeing vs. disagreeing or strongly disagreeing

NS = not significant.

*p<.05

**p<.01

***p<.001

Finally, negative attitudes regarding prevention, detection, and treatment were strongly associated with fatalism. Women who believed that breast cancer could not be cured if found early and that treatment could be worse than the disease were more than twice as likely as other women to have fatalistic attitudes. Women who believed that surgery exposed cancer to the air and caused it to spread were 1.7 times as likely as women who did not hold this belief to have fatalistic attitudes.

Discussion

In this study, fatalism was defined as whether or not a woman agreed that having breast cancer was a death sentence. Using this definition, all measures of sociodemographic and health status characteristics (except geographic location), knowledge and attitudes about breast cancer, and the majority of measures of perceptions of the health care system were found to be associated with fatalism at the bivariate level. Interestingly, about 80% of the sample, regardless of whether they were fatalistic or not, believed that health insurance affects the kind of care a person receives.

In the multivariate analysis, the variables that emerged as strong predictors of a fatalistic attitude were a few that measured perceptions of the health care system and knowledge and attitudes about breast cancer. As in other studies,^{18,20,27} race, age, education, and family history of breast cancer remained statistically significant correlates of having a fatalistic attitude. In addition, the multivariate analysis showed that women who believed that doctors hid information from patients of their race, that surgery caused cancer to spread, and that treatment could be worse than the disease were over two times more likely to be fatalistic than other women. Perceptions and beliefs, likely based on prior experiences, are related to having a fatalistic view of cancer.

There are limitations to this study. As with all surveys, responses were self-reported and subject to biases associated with respondent recall and a respondents' desire to report what she believed to be the correct answer. Nevertheless, even if imperfectly, responses reflected participants' perceptions and therefore can help in understanding women's attitudes and beliefs about breast cancer and treatment. Our sample size is relatively large, which makes it easier to observe statistical significance.

The survey was conducted in Mississippi, 80% of whose counties are designated as rural communities and 56% of whose population lives in a rural area.³⁷ It is unclear to what degree the urban/rural variable included in the analysis adequately differentiates between women living in rural and urban areas. Consequently, using this analysis to draw broad conclusions about women in states that are not similar to Mississippi in terms of population and geographic characteristics requires caution.

Another limitation of this study is its inability to disentangle the web of poverty. The survey asked about family history of cancer. However, this was limited to one question, and there were no items on family and personal history with illness and disease in general, leaving us unable to discern the linear relationship between past health care and other lived experiences and having a fatalistic attitude. That is, the pathways connecting lived experiences of low-income individuals and their friends and families, to beliefs about health and health care, and to fatalistic attitudes could not be fully explored in this analysis. Further qualitative and survey research is needed to describe the connections between experience with disease and a fatalistic attitude.

Finally, we measured fatalism using one item in our survey (Having cancer is a death sentence). The research literature uses different conceptual definitions of fatalism, and studies have used a variety of approaches to measure it. For example, several small surveys that examined the relationship between fatalism and cancer-related health care utilization used a scale, such as the Powe Fatalism Inventory, which represents a

composite of items that measure fear, pessimism, predetermination, and inevitability of death.^{20,27,28,38} Therefore, comparisons between our work and that of others must be done cautiously.

Conclusion

This study makes an important contribution to describing the characteristics of women who are likely to have fatalistic attitudes towards breast cancer. We have shown that sociodemographic characteristics, knowledge about cancer, and perceptions of the health care system are all associated with having a fatalistic attitude. Women who are less educated and are African American are more likely to be fatalistic than their counterparts. Powe suggested a relationship between mistrust of the health care system and fatalism.²⁸ This study provides additional evidence for her hypothesis. Using one of the largest sample sizes to date, this study has demonstrated the extent to which perceptions and attitudes are critical determinants of whether a woman believes that cancer is a death sentence. While our conclusion is not definitive, our findings appear to indicate that beliefs about health and health care may serve as explanations for sociodemographic differences in fatalism, and therefore for breast health care utilization. The key lesson is not necessarily the fact that certain perceptions and attitudes proved significant, but rather that knowledge, attitudes, and perceptions, in general, were found to be important predictors of fatalism.

Our findings suggest strategies for addressing fatalistic beliefs towards breast cancer and for improving attitudes towards breast screening and treatment, particularly among vulnerable women. Education about breast cancer is critical and could occur in numerous contexts, including one-on-one conversations with clinicians, community-based programs at churches and local organizations, and broad-based media campaigns. The purpose of such educational activities would be to dispel misperceptions of the disease and negative attitudes towards prevention and treatment, and to promote the view that survival is possible with early detection. Highlighting positive survival experiences would be a critical component of health promotion and education programs.

Health care organizations also must work towards improving overall perceptions of the delivery systems. This can be accomplished in part by ensuring that those currently undergoing treatment for chronic and acute illness have positive interactions with the delivery system. Such interactions are necessary for building trust of the health care system within the community, thus encouraging greater use of appropriate health care services.

Further research is warranted on the determinants of fatalism and its impact on health care use and health. Especially key is the need to understand better how lived experiences can shape attitudes and beliefs and subsequently affect utilization of screening and treatment programs. Such research should inform the development of educational and other programs designed to improve rates of screening and other breast health care utilization.

Notes

1. Alberg AJ, Singh S. Epidemiology of breast cancer in older women: implications for future healthcare. *Drugs Aging*. 2001;18(10):761–72.
2. Berry DA, Cronin KA, Plevritis SK, et al. Effect of screening and adjuvant therapy on mortality from breast cancer. *N Engl J Med*. 2005 Oct 27;353(17):1784–92.
3. Kolker ES. Framing as a cultural resource in health social movements: funding activism and the breast cancer movement in the US 1990–1993. *Social Health Illn*. 2004 Sep;26(6):820–44.
4. Hunter CP. Epidemiology, stage at diagnosis, and tumor biology of breast carcinoma in multiracial and multiethnic populations. *Cancer*. 2000 Mar 1;88(5 Suppl):1193–202.
5. American Cancer Society. *Cancer facts and figures 2007*. Atlanta, GA: American Cancer Society, 2007.
6. Ravdin PM, Cronin KA, Howlader N, et al. The decrease in breast-cancer incidence in 2003 in the United States. *N Engl J Med*. 2007 Apr 19;356(16):1670–4.
7. Shen Y, Yang Y, Inoue YT, et al. Role of detection method in predicting breast cancer survival: analysis of randomized screening trials. *J Natl Cancer Inst*. 2005 Aug 17;97(16):1195–203.
8. National Center for Health Statistics. *Health, United States, 2006 with chartbook on trends in the health of Americans*. Hyattsville, MD: U.S. Department of Health and Human Services/National Center for Health Statistics, 2006.
9. Bach PB, Schrag D, Brawley OW, et al. Survival of blacks and whites after a cancer diagnosis. *JAMA*. 2002 Apr 24;287(16):2106–13.
10. Young RF, Severson RK. Breast cancer screening barriers and mammography completion in older minority women. *Breast Cancer Res Treat*. 2005 Jan;89(2):111–8.
11. Coughlin SS, Uhler RJ, Bobo JK, et al. Breast cancer screening practices among women in the United States, 2000. *Cancer Causes Control*. 2004 Mar;15(2):159–70.
12. Coleman EA, O'Sullivan P. Racial differences in breast cancer screening among women from 65 to 74 years of age: trends from 1987–1993 and barriers to screening. *J Women Aging*. 2001;13(3):23–39.
13. Harris DM, Miller JE, Davis DM. Racial differences in breast cancer screening, knowledge and compliance. *J Natl Med Assoc*. 2003 Aug;95(8):693–701.
14. Rosenberg L, Wise LA, Palmer JR, et al. A multilevel study of socioeconomic predictors of regular mammography use among African-American women. *Cancer Epidemiol Biomarkers Prev*. 2005 Nov;14(11 Pt 1):2628–33.
15. Guidry JJ, Matthews-Juarez P, Copeland VA. Barriers to breast cancer control for African-American women: the interdependence of culture and psychosocial issues. *Cancer*. 2003 Jan 1;97(1 Suppl):318–23.
16. Champion V, Menon U. Predicting mammography and breast self-examination in African American women. *Cancer Nurs*. 1997 Oct;20(5):315–22.
17. Crump SR, Mayberry RM, Taylor BD, et al. Factors related to noncompliance with screening mammogram appointments among low-income African-American women. *J Natl Med Assoc*. 2000 May;92(5):237–46.
18. Conrad ME, Brown P, Conrad MG. Fatalism and breast cancer in black women. *Ann Intern Med*. 1996 Dec 1;125(11):941–2.
19. Webster, M. *Merriam-Webster's collegiate dictionary*; 11th edition. Springfield, MA: Merriam-Webster Inc., 2004.

20. Mayo RM, Ureda JR, Parker VG. Importance of fatalism in understanding mammography screening in rural elderly women. *J Women Aging*. 2001;13(1):57-72.
21. Lannin DR, Mathews HF, Mitchell J, et al. Influence of socioeconomic and cultural factors on racial differences in late-stage presentation of breast cancer. *JAMA*. 1998 Jun 10;279(22):1801-7.
22. Facione NC, Miaskowski C, Dodd MJ, et al. The self-reported likelihood of patient delay in breast cancer: new thoughts for early detection. *Prev Med*. 2002 Apr;34(4):397-407.
23. Powe BD. Cancer fatalism among African-Americans: a review of the literature. *Nurs Outlook*. 1996 Jan-Feb;44(1):18-21.
24. Staughan PT, Seow A. Attitudes as barriers in breast screening: a prospective study among Singapore women. *Soc Sci Med*. 2000 Dec;51(11):1695-703.
25. Underwood S. Cancer risk reduction and early detection behaviors among Black men: focus on learned helplessness. *J Community Health Nurs*. 1992;9(1):21-31.
26. Greiner KA, Born W, Nollen N, et al. Knowledge and perceptions of colorectal cancer screening among urban African Americans. *J Gen Intern Med*. 2005 Nov;20(11):977-83.
27. Powe BD. Fatalism among elderly African Americans. Effects on colorectal cancer screening. *Cancer Nurs*. 1995 Oct;18(5):385-92.
28. Powe BD, Finnie R. Cancer fatalism: the state of the science. *Cancer Nurs*. 2003 Dec;26(6):454-65; quiz 466-7.
29. Phillips JM, Cohen MZ, Moses G. Breast cancer screening and African American women: fear, fatalism, and silence. *Oncol Nurs Forum*. 1999 Apr;26(3):561-71.
30. Freeman H. Cancer in the economically disadvantaged. *Cancer*. 1989 Jul 1;64(1 Suppl):324-34; discussion 342-5.
31. Powe BD. Cancer fatalism among African-Americans: a review of the literature. *Nurs Outlook*. 1996 Jan-Feb;44(1):18-21.
32. Powe BD. Cancer fatalism among elderly African American women: predictors of the intensity of the perceptions. *J Psychosoc Oncol*. 2001;19:85-95.
33. American Cancer Society. American Cancer Society Guidelines for the Early Detection of Cancer. Atlanta, GA: American Cancer Society, 2007. Available at http://www.cancer.org/docroot/PED/content/PED_2_3X_ACS_Cancer_Detection_Guidelines_36.asp?sitearea=PED on August 2, 2007.
34. LaVeist TA, Nickerson KJ, Bowie JV. Attitudes about racism, medical mistrust, and satisfaction with care among African American and white cardiac patients. *Med Care Res Rev*. 2000;57 Suppl 1:146-61.
35. Boulware LE, Cooper LA, Ratner LE, et al. Race and trust in the health care system. *Public Health Rep*. 2003 Jul-Aug;118(4):358-65.
36. SPSS for Windows, Rel. 11.0.1. 2001. Chicago, IL: SPSS Inc., 2001.
37. United States Department of Agriculture, Economic Research Service. State fact sheets: Mississippi. Washington, DC: United States Department of Agriculture, 2007. Available at www.ers.usda.gov/statefacts/MS.htm.
38. Powe BD, Daniels EC, Finnie R. Comparing perceptions of cancer fatalism among African American patients and their providers. *J Am Acad Nurse Pract*. 2005 Aug;17(8):318-24.