Influence of Culture and Religion on Cancer Fatalism

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Background

Cancer fatalism has been found to negatively impact Blacks adults' adoption of cancer prevention behaviors. Sociodemographic factors, healthcare experiences, and religious identification have been identified as contributors to cancer fatalism in Black populations, however it is not clear how other facets of religion impact this belief. Additionally, other cultural factors have not been incorporated in examinations of cancer fatalism in Black adults. Present time orientation is defined as a focus on actions/concerns in the current time period as opposed to the future. This orientation is more common in Black adults and may, in concert with religiousness may help improve our understanding of cancer prevention behaviors in populations with high levels of cancer fatalism.

Purpose

To determine how sociodemographic characteristics, healthcare experiences, religious, and cultural factors contribute to cancer fatalism in a sample of Black adults. We hypothesized that having negative healthcare experiences, having a present time orientation, identifying as highly religious, and engaging in religious activities will be associated with higher levels of cancer fatalism.

Methods

Selected measures from a survey about research participation were included in this analysis. The survey was administered to a sample of Black adults with no personal history of cancer between November 2014 and July 2015. Of the 208 surveys collected, 194 met eligibility criteria. Analyses were restricted to 132 participants with complete responses for key variables.

Survey items assessed participant demographics, religious identity and behaviors, healthcare access, cultural, and cancer related experiences and beliefs. A revised version of the 11-item Powe Fatalism Inventory was used to assess cancer fatalism. Experiences or connection to individuals with cancer was measured with items from the Connection to Experience of Cancer Scale (Hawkins et al., 2012). Healthcare mistrust was measured using Thompson's (2004) Group-Based Medical Mistrust Scale, which assesses perceptions of racial discrimination in the healthcare system. Cancer risk and worry were each measured with single, forced choice items. Items from the Multidimensional Measure of Religious Involvement were used to measure religious identity and behavior (Chatters et al., 1992). Present time orientation was measured with 5 items from a larger cultural belief scale created by Lukwago (2001). Health literacy was assessed with Morris's (2006) Single Item Literacy Screener. A regression model designed to predict cancer fatalism scores was created in STATA 13.

Results

Participant Demographics

Participants were predominately (female 89%), had a mean age of 49.4 years (Range 19.9 to 75.8), and had a high school education or less (56%). The majority of participants had high health literacy levels (95%), lived in urban areas (84%), and were insured (92%). Table 1 contains selected participant characteristics.

Table 1. Selected Demographic Characteristics (n =132)

Characteristics	Frequency (n)	Percentage (%) or Mean (Std)
Male	4	11
Female	118	89
Age	132	49.4 years (14.7)
Education		
High School or less	74	56
College or more	58	44
Health Literacy		
Low	7	5
High	125	95
Geographic area - Urban		
Rural	21	16
Urban	111	84
Health Insurance Status		
Uninsured	10	8
Insured	122	92

Cancer Related Experiences and Beliefs

Information about participants' cancer-related experiences and beliefs is presented in Table 3. Virtually all of the participants knew someone with cancer (98%). The majority of participants perceived their risk of cancer to be low (67%) yet reported worrying about cancer to some degree (79%).

Table 3. Cancer Related Experiences and Beliefs (n =132)

Constructs	Frequency (n)	Percentage (%)
Knows someone with cancer	129	98
Perceived cancer risk		
Low (Less than 50%)	89	67
High (50% or greater)	43	33
Worry about cancer		
Not worried	28	21
Worried	104	79

Religious Identity and Activities

Table 2 contains data on participants' religious identification and activities. Eighty-six percent of participants reported attending religious services at least weekly. A vast majority engaged in prayer nearly everyday (88%) and considered themselves fairly or very religious (96%).

Table 2. Religious Identity and Activities n =132

Constructs	Frequency (n)	Percentage (%)
How often do you usually attend religious services?		
Less than weekly	19	14
Weekly or more	113	86
How often do you pray?		
Once a week or less	16	12
Nearly everyday	116	88
How religious would you say you are?		
Not religious/ Not too religious	5	4
Fairly/Very religious	127	96

Cancer Fatalism, Healthcare Mistrust, and Present Time Orientation

Scores for the cancer fatalism, healthcare mistrust, and present time orientation scales are displayed below in Table 4. Higher scores indicate higher levels of each construct. The mean cancer fatalism score was 27.7 with possible scores ranging from 11 to 66. Healthcare mistrust was similarly distributed with a mean score of 32.8 and possible scores ranging from 11 to 66. Present time orientation was low in this sample with a mean score of 9.9 out of possible score range of 5 to 30.

Table 4. Cancer Fatalism, Healthcare Mistrust, and Present Time Orientation (n =132)

Constructs	Frequency (n)	Mean (Std)	Min/ Max
Cancer Fatalism Score	132	27.8 (8.3)	14/60
Healthcare Mistrust Score	132	32.8 (6.3)	19/56
Present Time Orientation Score	132	9.9 (3.4)	5/25

Bivariate Associations

Only the religious variables, daily prayer (r=0.26) and being fairly/very religious (r=0.22) were associated with cancer fatalism. Daily prayer was positively associated with female sex (r=0.25).

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Religious identity was positively correlated with female sex (r=0.45), being college educated (r=0.18), and negatively correlated with present orientation (r=-0.25).

Multivariate Analysis

Table 5 displays mean cancer fatalism scores for each variable in a regression model predicting cancer fatalism. The model was significant (R²=0.25, p=0.00) but education (p=0.18), healthcare mistrust (p=0.11), cancer worry (p=0.12), and cancer risk (p=0.59), did not predict cancer fatalism. Both age and health insurance were inversely related to cancer fatalism, as younger individuals and those with health insurance displayed higher mean fatalism scores. Low health literacy, daily prayer, and high present orientation scores also generated higher mean scores for cancer fatalism. Religious identity was close to but did not achieve statistical significance (p=0.06).

Discussion

Our results support some previously researched contributors to cancer fatalism: sex and education (through the influence of health literacy). Other variables either didnot impact cancer fatalism (negative healthcare experiences and cancer related beliefs) or influenced fatalism scores in unexpected directions (health insurance and age).

Only one religious variable predicted cancer fatalism. Daily prayer was associated with high levels of fatalism. It is unclear whether prayer fosters cancer fatalism or if those with fatalistic beliefs use prayer as a coping mechanism. Present time orientation also predicted cancer fatalism, strengthening the idea of prayer as a coping mechanism as it provides comfort in the present time. Cancer fatalism maybe indirectly associated with religion, specifically religious practices that indicate a high external locus of control, through present time orientation.
A detailed examination of cultural and religious beliefs and practices can enhance our understanding of influences on cancer prevention behaviors in Black adults such as cancer fatalism. The knowledge generated from such analyses can generate more effect cancer communications and programming.

Table 5. Contributors to Fatalistic Cancer Beliefs

Predictor	Cancer Fatalism (R²=0.25)	
	Mean (SE)	p
Age		0.02
19	31.3 (1.58)	
40	28.9 (0.79)	
65	26.0 (0.98)	
Sex		0.13
Male	24.3 (2.36)	
Female	28.2 (0.71)	
Education		0.18
HS or less	28.6 (0.90)	
College or More	26.7 (1.03)	
Health Literacy		0.02
Low	35.3 (3.20)	
High	27.4 (0.68)	
Geographic area		0.52
Rural	28.8 (1.73)	
Urban	27.6 (0.72)	
Health Insurance Status		0.01
Uninsured	21.3 (2.60)	
Insured	28.3 (0.69)	
Religious Service Attendance		0.51
Less than weekly	29.0 (2.00)	
Weekly or more	27.6 (0.76)	
Prayer Frequency		0.02
Once a week or less	22.2 (2.46)	
Nearly everyday	28.4 (0.76)	
Religious Identity		0.06
Not religious/ Not too religious	18.9 (4.64)	
Fairly/ Very religious	28.6 (0.73)	
Perceived Cancer Risk		0.59
Low (Less than 50%)	27.5 (0.82)	
High (50% or greater)	28.3 (0.76)	
Cancer Worry		0.12
Not worried	25.5 (1.59)	
Worried	28.4 (0.76)	
Healthcare Mistrust Score (Percentile)		0.11
28 (25th)	27.8 (0.85)	
32 (50th)	27.7 (0.66)	
36 (75th)	27.9 (0.75)	
Present Time Orientation Score (Percentile)		0.00
7 (25th)	25.9 (0.91)	
10 (50th)	27.8 (0.65)	
12 (75th)	29.1 (0.79)	