Family influence and Black men's prostate cancer screening behaviors
An analysis using the 2005 Health Information National Trends Survey (HINTS)

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Background

• The overall health of the United States (U.S.) population lags behind that of most industrialized nations due to the persistent and growing disparities in mortality, morbidity, and disability between whites of high socioeconomic status and people of color[1].

• African American men bear a disproportionate burden of many health problems. Morbidity and mortality are higher among African American men than any other racial or ethnic group[2].

• Prostate cancer is of particular importance because African American men have the highest rate of prostate cancer in the world[3] and have a prostate caner mortality rate of 57.4 per 100,000 compared to white men who have a rate of 24.4 per 100,000[4].

Introduction

• Families represent important social contexts within which illness occurs, lingers or resolves[5].

• Family interventions have been known to produce favorable outcomes in diet, nutrition, and exercise[6]. However, family communication about health and genetic risk along with detailed descriptions of the role of family in African American men's health seeking behavior is lacking in the literature.

• The importance of family and faith has been cited as possible levels of intervention for African Americans[7,8,9]. Therefore, elucidating the role that family plays in health seeking behaviors and in the African American community can provide valuable information for the design and measurement of culturally relevant family level health interventions.

Purpose

• Although national guidelines vary, the American Cancer Society (ACS) recommends that African American men undergo yearly prostate cancer testing beginning around age 40-45 due to the high risk among this group (ACS, 2006)[10].

• The purpose of this research is to assess the strength of family influence on African American men compared to white men aged 40 and older receiving a PSA test within a year or less, using a set of variables from the 2005 HINTS dataset.

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Sample and Methods

• Participants in this analysis met the following inclusion criteria: a male 35 years old or older and identified with belonging to the black or white racial category (n=625). Although the population of interest is men aged 40 and older, the HINTS data set consists of a categorical age group of age 35-49.

• The data were analyzed using a logistic regression analysis with the Software for the Statistical Analysis of Correlated Data (SUDAAN).

• A logistic regression analysis was performed to model the likelihood of having a PSA test within a year or less (WHENPSATEST) (criterion) measured as 0= no PSA test within a year or less vs. 1= having a PSA test within a year or less. Seven additional Predictors included: Race measured as 0=White vs. 1=Black; Age measured in three categories coded as 0= 35 to 49, 1= 50 to 64, and 2= 65 years of age or older; Education measured in three categories coded as 1= less then high school (no diploma), 2= high school diploma, vocational or trade school, some college, and 3= associate degree and above; The most recent time you wanted info on cancer, where did you go first? (LOOKFAMILY) measured as 0=non-family vs. 1=family; Have any of your family members ever had cancer? (FAMCANCER) measured as 0= no vs. 1= yes; Not including your doctor or health care provider, has someone else ever looked for information about cancer for you? (OTHERCANCER) measured as 0= no vs. 1= yes; and Who was that? (WHOFAMILY) measured as 0= other sources or 1= spouse or other family member.

Results: Description of Study Sample

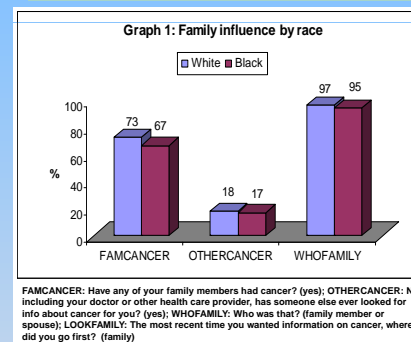| Variables	African American n=43 n (%)	White n=582 n (%)
Age		
35-49	12 (35%)	47 (11%)
50-64	17 (47%)	283 (56%)
65 and above	14 (18%)	252 (33%)
Education		
Less then high school (No diploma)	6 (15%)	43 (9%)
High school diploma, vocational or trade school, some college	23 (58%)	238 (49%)
Associate degree and above	14 (27%)	301 (42%)
Outcome Variable		
When did you have your most recent PSA test? (A year ago or less)	36 (78%)	415 (69%)
Family Influence Variables		
Have any of your family members ever had cancer? (Yes)	27 (67%)	422 (73%)
Not including your doctor or other health care provider, has someone else ever looked for information about cancer for you? (Yes)	7 (17%)	102 (18%)
Who was that? (WHOFAMILY) (Family member or spouse)	41(99%)	566 (98%)
The most recent time you wanted information on cancer, where did you go first? (LOOKFAMILY) (Family)	0	8 (1%)

Results: PSA Test within 1 Year or Less, or Not

Variables	PSA within 1 year or less (n=451) 95%[CI]	No PSA within a year or less (n=174) 95%[CI]
Age		
35-49	61% [40, 79]	39% [21, 60]
50-64	68% [64, 74]	32% [26, 39]
65 and above	77% [70, 83]	23% [17, 30]
Race		
Black	78% [49, 93]	22% [7, 51]
White	69% [64, 74]	31% [26, 36]
Education		
Less then high school (No diploma)	63% [45, 78]	37% [22, 55]
High school diploma, vocational or trade school, some college	68% [58, 76]	33% [24, 42]
Associate degree and above	74% [66, 81]	26% [19, 34]
Predictor Variables		
Have any of your family members ever had cancer? (Yes)	66% [60, 72]	34% [28, 40]
Not including your doctor or other health care provider, has someone else ever looked for info about cancer for you? (Yes)	68% [55, 78]	32% [22, 45]
Who was that? (Family member or spouse)	70% [65, 75]	30% [25, 35]
The most recent time you wanted information on cancer, where did you go first? (Family)	56% [12, 92]	44% [8, 88]

Results: Multivariate Association of 7 Characteristics with PSA Testing

Variables	Odds Ratio	95% Confidence Interval
Have any of your family members ever had cancer? (Yes)	0.49	[0.32, 0.73]
Not including your doctor or other health care provider, has someone else ever looked for info about cancer for you? (Yes)	1.02	[0.52, 2.03]
Who was that? (Family member or spouse)	1.21	[0.26, 5.52]
The most recent time you wanted information on cancer, where did you go first? (Family)	0.61	[0.05, 7.44]
Education	1.49	[1.00, 2.22]
Age	1.68	[1.10, 2.56]
Race	2.09	[0.56, 7.79]

Family Influence by Race

Graph 1: Family influence by race

FAMCANCER: Have any of your family members had cancer? (yes); OTHERCANCER: Not including your doctor or other health care provider, has someone else ever looked for info about cancer for you? (yes); WHOFAMILY: Who was that? (family member or spouse); LOOKFAMILY: The most recent time you wanted information on cancer, where did you go first? (family)

Seventy-three percent (73%) of whites had a family member with cancer compared to 63% of blacks. Eighteen percent (18%) of whites and 17% of blacks had someone other than a physician or health care provider look for cancer information for them. For 97% of whites and 95% of blacks the person who looked for the information was a family member or spouse. One percent (1%) of whites and none (0) of the black men in this study went to family first if they wanted information on cancer.

Limitations

There were many missing values for the family influence variables. For this reason the current study findings need to be considered with caution because the small sample of blacks created limitations that are evident in the wide confidence intervals for many of the predictor variables.

Conclusions

The findings of this study point to the importance of family as a possible level of intervention for both black and white men. Elucidating the role that family plays in PSA screening within the African American community will provide valuable information for the design and measurement of culturally relevant family level health interventions for prostate cancer prevention in particular and disease prevention overall.

References

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