Improving the health of African American men: experiences from the Targeting Cancer in Blacks (TCiB) Project

Keywords

African Americans/

Attitude to health

Men

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Abstract

Background: African-American men lack knowledge of cancer facts and risk factors, and their personal attitudes and beliefs along with health care system interactions are barriers to cancer prevention. This paper highlights cancer prevention information from men in the Southeastern United States.

Methods: This community-based participatory research project surveyed 12,444 Black adult residents in Nashville and Chattanooga, Tennessee and in Atlanta and Decatur, Georgia regarding their cancer prevention knowledge, attitudes and practices. A sample (928) of 1407 men's responses was analyzed for education and income differences.

Results: Analyses found no significant differences in cancer prevention *practices* between men with high income and high education versus those with lower income and lower education level, but did show significant differences between education and income groups in cancer prevention knowledge and attitudes.

Conclusions: Income and education are not equal predictors of cancer prevention. Direct outreach efforts to black men of low education and income levels may be effective if interventions are tailored to separate socio-economic groups. Clear and thorough information about diseases, including their risks, prevention/detection procedures, treatment and cure are needed within the health care system itself, as well as for patients in the office, clinic, and community in innovative interactions to assist underserved men to increase and improve their knowledge, attitudes and practices regarding health promotion. © 2007 WPMH GmbH. Published by Elsevier Ireland Ltd.

Introduction

National statistics and reports indicate racial/ ethnic minorities more often exhibit greater disease rates than their white counterparts, raising concerns within the health care system (HCS) that have led to special efforts and recommendations to reduce, and even eliminate, racial and ethnic disparities in health [1– 7]. Men in general, and black men in particular, are at especially high risk for disease, disability, and death; while there are continuing improvements in the health of the nation's populations, men's life expectancy at birth and at age 65 continues to be less than that of women; reports identify men as having less contact with the HCS than women, and state that when men do interact with the system, they tend to present at more advanced stages of disease and are harder to reach in intervention activities for prevention behavior discussions or practices [8–20].

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While rates of cancer, the second leading cause of death in America, are declining in the nation, black incidence and mortality rates are greater than those for other populations [21-26]. The cancer objectives for HP2010 (Healthy People 2010) include the reduction of morbidity and mortality rates for cancers of the prostate, lung, and colonrectum, all of which black men exhibit at high rates regardless of socio-economic status. Disparities data are used to emphasize the need to create and maintain health promotion and disease prevention efforts tailored to the black community [1-5]. Research has included assessments of specific barriers Blacks may experience in prevention and treatment efforts, including daily realities such as racism and discrimination, not only experienced from society in general, but also from the HCS and its personnel [4,7-8,27-30].

Researchers identify barriers to screening in black men that include lack of knowledge about general cancer prevention facts and risk factors and about specific cancers, as well as attitudes, particularly those relating to components of masculine behavior [12-13,24,30-36]. Additionally, screening involves patient behavioral choices that require information sufficient to facilitate informed decisions about prevention and treatment. The HCS has established detailed 'informed decisionmaking' procedures and recommendations for system-patient interactions for cancer [37]. In such efforts, the health care provider's role is cited as crucial; a provider recommendation is identified as an important, or even the determining, factor in adherence to advice for disease prevention and health promotion [38-42].

Meharry Medical College in Nashville, Tennessee and Morehouse School of Medicine in Atlanta, Georgia, two historically Black health care training institutions, implemented a community-based participatory research project as part of the National Cancer Institute program 'Cancer Prevention Awareness: The Black College as a Resource' [43–44]. The Meharry–Morehouse project sought to inform Blacks about cancer risks and risk reduction, and ascertain the factors that hinder or promote the diffusion of health information to Black and other minority populations. Choosing to address the most prevalent and preventable cancers affecting Blacks, the project obtained self-reported cancer prevention knowledge, attitudes, and practices of African American/Black adults in the home states of the two institutions, Tennessee and Georgia, where cancer statistics are just as severe as those for the nation [45-47]. The project, reported elsewhere, was entitled Targeting Cancer in Blacks (TCiB) and addressed cancers of the lung, female breast, prostate, colon and cervix, along with related risk-reduction behaviors: smoking cessation, early screening, exercise and diet [48]. Mitchell considered the self-reported cancer prevention practices, knowledge, and beliefs of a subpopulation of TCiB men in relation to their education and income status; the current paper reports some of the responses of these men [49].

Methods

The TCiB project conducted surveys in 1994 and 1996 of African American/Black adults 18 years of age or older, residing in census tracts in Nashville and Chattanooga, Tennessee and in Atlanta and Decatur, Georgia with high concentrations of black adults (1990 census). Mitchell chose a cross-sectional sample from the four cities yielding 1407 men's responses to explore any differences in cancer prevention knowledge, attitudes and practices between men of low versus high income and low versus high education. He defined annual household income as low at \$20,000 or less and as high at \$40,000 or more, while low education was defined as completion of grade 12 or less of high school versus completion of college or higher degree.

The project's 'Knowledge, Attitudes, and Practices Questionnaire' was designed as a 35-minute random-digit-dial computerassisted telephone survey and was conducted by Westat, Inc., a research company in Rockville, MD. The pre- and post-intervention surveys included a demographic screener and questions to one respondent per contacted household to obtain: self-identification of respondent as Black/African American adult resident, date of birth, highest grade completed, and annual household income. Mitchell analyzed the following questions in his subsample:

- (1) Screening practices: digital rectal exam, blood stool test, proctoscopic exam
 - (a) Have you ever had...?
 - (b) Within the last 2 years, how many times have you had...by a doctor or nurse?
- (2) Knowledge of cancer risk: more likely, no difference, less likely
 - (a) Having other family members who had cancer
 - (b) Eating lots of fresh fruit and vegetables
 - (c) Smoking cigarettes or chewing tobacco
 - (d) Having a lot of stress in your life
 - (e) Eating high fiber foods such as whole grain breads and cereals, fruits, and vegetables
- (3) Attitude regarding cancer: agree, no opinion, disagree
 - (a) Getting cancer is a death sentence for most people
 - (b) If I had cancer, I would rather not know about it
 - (c) There are some things I can do to help me keep from getting cancer
 - (d) It's too late for me to start worrying about cancer now
 - (e) What people eat or drink doesn't affect whether they will get cancer
 - (f) By eating certain kinds of foods, people can make it less likely they will get cancer

Results

The TCiB respondent population of 12,444 (41-45% men) was representative of the target census tracts and was predominantly aged 18-39 years (52%). Median household incomes ranged from \$4,999 to \$29,531 with 90% of respondents reporting a household income below \$20,000; 39% of the survey participants reported a high school education or less. The respondent population reported having health insurance (84%) at least partially provided by their employer (63%) with their health care being provided at a private doctor's office (56%) with the doctor as the usual provider (86%). Mitchell's sample of 1407 men yielded roughly equal numbers from the four cities (Nashville: 315; Chattanooga: 325; Atlanta: 371; Decatur: 396); education and income selection criteria were met by 928 (66%) of the men.

Using a Chi-square (χ^2) alpha level of less than 0.05 to determine significance, Mitchell found no significant differences in cancer prevention practices ('Ever had/recency of digital rectal exam, blood stool test, proctoscopic exam') between men with high income and education and those with lower income and education; they tended not to have had any procedure (see Table 1).

However, the analyses of knowledge and attitudes of TCiB men did show some signifi-

 Table 1
 Cancer prevention practices among high and low education and high and low income African

 American males 1994/1996 in Tennessee and Georgia
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	High education	Low education	Chi square education	High income	Low income	Chi square income
	N (%)	N (%)	Value	N (%)	N (%)	Value
			(probability)			(probability)
DRE						
No, never	11 (15)	99 (21)		137 (53)	194 (53)	
Once in past 2 years	27 (36)	124 (27)		50 (19.5)	53 (14.5)	
DRE result			3.99 (0.273)			3.5 (0.318)
BST						
No, never	36 (50)	208 (52)		52 (20)	104 (24)	
Once in past 2 years	10 (14)	67 (17)		76 (29)	101 (23)	
BST result			1.12 (0.887)			6.05 (0.107)
Procto						
No, never	41 (67)	183 (69)		125 (68)	178 (71.5)	
Once in past 2 years	20 (33)	84 (31)		29 (16)	31 (12.5)	
Procto result			0.046 (0.841)			1.6 (0.657)

DRE, digital rectal examination; BST, blood stool test; Procto, proctosigmoidoscopy.

cant differences between education and income groups. There was no significant difference ($\chi^2 = 0.107$) between men of higher or lower education levels regarding knowledge of cancer risk related to tobacco use ('Smoking cigarettes or chewing tobacco will make it more likely/won't make any difference/less likely you will get cancer'); both groups agreed it will make it more likely. However, significantly more men of higher income than men of lower income agreed that smoking cigarettes or chewing tobacco will make it more likely one will get cancer ($\chi^2 = 0.014$).

TCiB men of higher income and education demonstrated greater knowledge regarding the role of family history, diet, and stressors in cancer prevention than those of lower education and income ($\chi^2 < 0.000-0.022$). Men of lower education and lower income did not agree that having other family members who had cancer will make it more likely one

will get cancer or that more fresh fruits and vegetables and whole grains in the diet will make it less likely one will get cancer, and they also were unaware of the role stress may play in increasing one's likelihood of getting cancer (see Table 2).

There was also no difference between men with higher or lower education levels in their disagreement with the attitude that 'It's too late for me to start worrying about cancer now' ($\chi^2 = 0.185$), however, men of lower *income* were significantly less likely to disagree with this statement than men of higher income ($\chi^2 < 0.000$). TCiB men of high education and income expressed more positive attitudes ($\chi^2 < 0.000$ –0.013) than those of lower education and income who agreed that getting cancer is a death sentence for most people, and who indicated they would rather not know if they had cancer. Table 3 presents the men's responses to the following attitude statements:

	High education	Low education	Chi square education	High income	Low income	Chi square income		
	N (%)	N (%)	Value (probability)	N (%)	N (%)	Value (probability)		
A. Smoking cigarettes or chewing tobacco								
More likely	76 (95)	604 (89)		287 (94)	556 (89)			
No difference or less likely	4 (5)	72 (11)		19 (6)	70 (11)			
Tobacco result			2.53 (0.107)			5.9 (0.014)*		
B. Having other family members who had cancer make it								
More likely	60 (77)	346 (51)		217 (71)	311 (52)			
No difference or less likely	18 (23)	314 (49)		89 (29)	284 (48)			
Family result			16.9 (0.000)*			29.2 (0.000)*		
C. Eating lots of fresh fruit ar	C. Eating lots of fresh fruit and vegetables							
More likely	71 (90)	524 (79)		268 (87)	489 (79.5)			
No difference or less likely	8 (10)	142 (21)		39 (13)	126 (20.5)			
Fruits/veg result			5.5 (0.017)*			8.3 (0.004)*		
D. Having a lot of stress in your life								
More likely	59 (76)	409 (63)		214 (72)	381 (63)			
No difference or less likely	19 (24)	244 (37)		85 (28)	225 (37)			
Stress result			5.2 (0.022)*			6.8 (0.009)*		
E. Eating high fiber foods such as whole grain breads and cereals, fruits, and vegetables								
More likely	74 (92.5)	506 (76)		-	471 (77)			
No difference or less likely	6 (7.5)	162 (24)		31 (10)	144 (23)			
Fiber result			11.6 (0.001)*			23.8 (0.000)*		

 Table 2
 Cancer prevention knowledge among high and low education and high and low income

 African American males
 1994/1996 in Tennessee and Georgia regarding risks

* Significance = Chi-square <0.05.

	High	Low	Chi square	High	Low	Chi square		
	education	education	education	income	income	income		
	N (%)	N (%)	Value	N (%)	N (%)	Value		
			(probability)			(probability)		
A. It's too late for me to start worrying about cancer now								
Disagree	70 (87.5)	557 (82)		292 (94.5)	516 (81.5)			
No opinion or agree Late result	10 (12.5)	126 (18)	1.8 (0.185)	17 (5.5)	117 (18.5)	28.8 (0.000)*		
B. Getting cancer is a de	B. Getting cancer is a death sentence for most people							
Disagree	51 (64)	268 (47)		192 (62)	243 (38)			
No opinion or agree	29 (36)	416 (53)	*	116 (38)	391 (62)	*		
Death result			17.7 (0.000)*			48.2 (0.000)		
C. If I had cancer, I wou	Ild rather not	know about i	t					
Disagree	72 (90)	479 (70)		249 (81)	454 (72)			
No opinion or agree	8 (10)	205 (30)	* * * * * * *	60 (19)	180 (28)	• - • (• • • • *		
Know result			14.2 (0.000)*			8.7 0(.003)*		
D. There are some thing			from getting ca					
Disagree	75 (95)	574 (85)		284 (92)	539 (86)			
No opinion or agree I can do result	4 (5)	103 (15)		25 (8)	87 (14)			
			5.9 (0.013)*			6.6 (0.009)*		
E. What people eat or d			r they will get ca					
Disagree	67 (86)	460 (68)		260 (84)	440 (70)			
No opinion or agree	11 (14)	220 (32)	11 (0 001)*	48 (16)	189 (30)	22.0.(0.000)*		
Eat/drink result			11 (0.001)*			22.9 (0.000)*		
	F. By eating certain kinds of foods, people can make it less likely they will get cancer							
Disagree	75 (95)	503 (74)		274 (89)	467 (74)			
No opinion or agree	4 (5)	179 (26)	17.4 (0.000)*	35 (11)	162 (26)	26 (0.000)*		
Foods result			17.4 (0.000)*			26 (0.000)*		

Table 3 Cancer prevention attitudes among high and low education and high and low income AfricanAmerican males 1994/1996 in Tennessee and Georgia regarding risks

^{*} Significance = Chi-square <0.05.

- It's too late for me to start worrying about cancer now.
- Getting cancer is a death sentence for most people.
- If I had cancer, I would rather not know about it.
- There are some things I can do to help me keep from getting cancer.
- What people eat or drink doesn't affect whether they will get cancer.
- By eating certain kinds of foods, people can make it less likely they will get cancer.

Discussion

Mitchell's results indicate, as do those of other researchers, that economic level impacts

health [1-20,35]. Lack of insurance is cited as having the greatest negative impact on health care quality and access, an impact greater than race, ethnicity, income, or education [7]. Early reports suggested that there are cultural and economic barriers to prevention, and that lower socioeconomic status, especially when measured by census tract population density, can determine cancer morbidity and mortality in prostate cancer screening of black men [18,29]. Among other factors, income has been a stable predictor of adherence to colorectal cancer (CRC) screening practices since 2000; some consider income the most predictive of various demographic factors in prostate cancer screening [50-53]. However, some researchers report that, with regard to physician's visits, women were the ones affected by

income level; men tend to be more affected by non-financial barriers such as time [24,54,55].

Lack of employer or public health insurance is cited as a barrier to health care, however, reports identify men as 'absent' from health care services, especially preventive procedures, even when they have comprehensive, affordable. health insurance [10,13,30,56-59]. Reports indicate men are not being given information about cancer or about screening procedures to help prevent it even when they interact with the HCS for annual physicals and for periodic procedures, although knowledge of factors regarding cancer is cited as facilitating men's adherence to cancer prevention [24,30,42]. Richardson et al. suggest that knowledge is the most important factor in cancer prevention, reporting that even when men recognized family history as a risk factor for prostate cancer, the men thought they, themselves, were immune if their father, brother, or grandfather had not experienced the disease, proposing that accurate knowledge will de-bunk myths, allowing the development of positive attitudes which will then lead to protective health behaviors [32]. Chan and others feel men must be provided with sufficient information from a trusted source in order to make appropriate informed decisions about prostate cancer treatment in concert with their physician [34,60]. TCiB men with low income evidenced less knowledge than did men of higher income about well-known risk factors for cancer, including tobacco use, considered the most important and best-documented cancer risk, disagreeing that smoking cigarettes or chewing tobacco would increase one's risk of cancer.

Prostate cancer screening using the prostate specific antigen (PSA) test is recommended now for populations at high risk such as black men, unlike in the middle 1990s when the TCiB data were obtained [1,3,22,61-63]. Black men receive the PSA test at lower rates than their white American counterparts, generating numerous theories and projects to identify the cause of lower rates of service and adherence [30,50]. The TCiB survey did not inquire about the PSA, but about three other cancer screening procedures; Mitchell reported no significant difference in screening rates for digital rectal examination (DRE), blood stool test (BST), or proctosigmoidoscopy (procto) between high and low levels of income or education among adult black men in Tennessee and Georgia. Education and income status appear not to determine TCiB men's actual behaviors regarding cancer prevention.

Patient personal traits, for example, their attitudes and beliefs, and even demographic qualities such as marital status, are also noted as facilitators and as barriers to screening. [25,32]. Many of the challenges found in providing men with competent health care and in supporting their adoption of recommended practices are similar to those found with other underserved sub-populations and are related to the attitudes held, including distrust, diminished self-esteem, and avoidance of condescending treatment from the HCS [24,64-66]. Additionally, researchers find that men's ideas of masculinity interfere with the adoption of healthy behaviors [12,13,36]. TCiB men of low education and income expressed significantly more attitudes that are associated with poor health outcomes, agreeing that cancer is a death sentence for most people, and that if they had cancer they would rather not know about it; they also disagreed that there are things they can do to help avoid cancer.

For men, recommendations are made for innovations that expand the range of strategies beyond even the comprehensive community health center to include use of non-health care settings including embracing off-site outpatient venues and approaches [26,36,55,67-69]. Patients who prefer to make independent health care decisions may respond best to interventions that are external to the HCS rather than to ones provided by health care personnel [70]. Including client-provider opportunities to discuss risks and benefits of screening procedures being recommended or offered, is a practice some consider an especially important affirmation of men's sense of autonomy [37,71,72].

The HCS currently advocates developing partnerships or collaborations with community organizations and institutions to facilitate adherence to healthy lifestyles; consideration of the various possibilities may lead to greater successes [73,74]. TCiB established and maintained broad-based relationships across the community with businesses, organizations, institutions and individuals and partnered with fraternities to reach educated men, who, in turn, participate in service projects that involve less well-educated and younger men. Those active in their fraternity were usually also active in faith institutions. Such men were willing to recommend innovative approaches for the content and structure of outreach activities, like their annual Men's Day observance, and encouraged increased screening and behavior change for other men and for the women in their families, as well.

Researchers have established partnerships with local churches that serve the communities for which interventions are tailored and subsequently observed improved health practices [60,75]. While religious involvement improves health care practices, TCiB found many more survey respondents indicated their source of cancer prevention information was the print and electronic media [48,76]. In Nashville, a transportation bus painted with project messages traveling throughout the community was identified as the source of cancer prevention information for as many respondents as identified the various HCS entities, and for even more than identified any of the community entities like family/friends, worksite, health fairs, church, community group, hairstylists [77].

TCiB attempted to partner with local barbershops to provide information to their clients as had been successful with the project women through the local beautician's union. However, greater success was experienced through direct independent contact with individual owners than through the barbers' organizational structure. Barbershops may prove valuable since they are locales where men already dialog among themselves about many issues [78,79]. Discussion of sensitive health topics such as beliefs and behavior may be more acceptable when presented by familiar figures and in less intimidating 'men only' surroundings and interactions than those of the HCS [80,81].

The most important result from the Institute of Medicine report, *Unequal Treatment*, may be *Finding 3-1* indicating the health care system itself as contributing to the nation's current health disparities as a result of lack of, or limited, access to its procedures, services, acceptable standards of quality, and materials [2]. Research shows that the health care provider's recommendation for screening is important, and possibly the crucial factor in patient adherence to health promotion practices [5,38, 40,41,59,72,82–86].

Advocating that providers share information with their patients also requires acknowledging the need for and providing support to providers' efforts to stay abreast of prevention information and issues regarding sub-populations at increased risk, specific risk factors, and system and community resources that support identified risk reduction activities [7,8,37,67, 86]. McFall noted that discussion of risks and benefits were more likely when the PSA test was being recommended and more likely with African American men, but not necessarily with more educated men, denoting an increased awareness among providers of the risk for African Americans and men of low education [72]. CRC screening options present a particularly challenging set of decisions regarding recommendation, for the option advocated could lead to increases rather than decreases in ethnic and economic disparities, particularly if the preferred or recommended method is expensive [87-89].

Summary Recommendations and Implications

In the final analysis, the responsibility remains with the HCS itself to see that men's health care practices improve, particularly for diseases such as cancer, heart disease and diabetes, where personal behaviors play a major role in prevention and treatment. Communitybased health services may be particularly successful, especially when provided in non-traditional formats and venues by a usual source of care - a provider who is sensitive to the cultural nuances of the patient and who makes recommendations for appropriate prevention practices. The Sullivan Commission's report, Missing Persons, recommends that one important means of gaining health equity could come from increased access through augmenting the nation's health care workforce to include caring, culturally-sensitive providers in addition to its physicians [90]. Nurse practitioners, physician assistants, as well as registered nurses, dietitians, social workers and also para-professionals, system navigators, lay health or community outreach workers or advisors, all can make valuable contributions on a prevention team to augment coordinated care. Services provided by these professionals may free additional time for the primary provider (preferred by the TCiB population) to interact with a patient allowing

communication of essential information about findings, risks, and possible recommended treatments. Utilizing such opportunities can result in screening and services that might not otherwise occur and consequently facilitate men's positive interactions with the system [24,65,91–93].

Special efforts are being mounted to improve men's health status ranging from assertive outreach within and outside of the system, through modification of screening guidelines for those most at risk, to partnering with social and political entities that increase attention and action on policies affecting communities [4,5,94–110]. Capitalizing on men's attraction to technology and coupling it with the national and international growth of the Internet may prove a valuable innovation to capture men's interest and attention; 'patient-friendly' websites are increasingly available [68,111–116].

The national HCS has embraced its responsibility to improve the health status of the country's citizens, especially those in the most vulnerable sub-populations, and is undergoing significant change. Summaries of evidencebased approaches are increasingly available for the implementation of clinical practice modifications [63,82,87,88,117,118]. Put Prevention Into Practice (PPIP) encourages a review of one's own as well as patients' values and beliefs, an assessment of the practices currently offered and implemented, incorporation of specific prevention services delivered, and recommendations for the evaluation of successes and challenges [119]. Such features are all part of the health care system's program

of objectives for growth and implementation and are identified as priorities considered essential elements in successful outreach to men, especially men of color, and particularly black men [3,5,120–127].

Advocating and establishing partnerships with others seeking changes in societal laws and regulations may be the most important actions for the nation's health care system to observe healthier citizen behaviors while it continues to work to increase and improve knowledge and to alter attitudes and beliefs both within and outside of the health care disciplines. The success of the system's efforts to improve and expand its services will determine when and to what extent men's health practices and status, particularly those of black men, demonstrate improvement.

Limitations of this study arise from the error inherent in its reliance on self-report recalled information and on the characteristics of random-digit-dial survey procedures. The sample, while representative of the populations of the four cities, does not represent urban populations of the nation as a whole or of other areas with predominantly black residency as geographical comparisons of health status indicate.

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