

Early Detection Of Prostate Cancer Among Black And White Men

Naomi N. Modeste¹, Curtis Fox¹, and Malcolm Cort²

¹Loma Linda University

²Oakwood College

Abstract

The purpose of this study was to identify attitudes toward prostate cancer, screening practices and deterrents to early detection and treatment among Black and White men 40 years and older residing in San Bernardino and Riverside, California. Data was collected using a structured questionnaire developed and pre-tested among similar participants in the study. Two hundred and fourteen men participated in the study, of which 75% were Black and 25% White. The majority (53%) was between the ages of 40-50 years, and 74% were married. The study found that there was very little difference in socioeconomic status between Whites and Blacks. Most (34%) had a college degree, but more Whites (92%) had a personal family physician than Blacks (77%), and slightly more Whites (62%) than Blacks (57%) said that prostate screening was done regularly. Findings from this study should aid in the design and development of culturally appropriate programs that will detect prostate cancer in this population at an earlier stage when treatment is more successful.

© 2003 Californian Journal of Health Promotion. All rights reserved.

Keywords: Prostate cancer, Blacks, Whites, early detection

Introduction

Prostate cancer is an important concern for all men since it poses a health threat especially to men over the age of 40. However, there is a higher prevalence of this disease among Black men compared to men from other racial or ethnic groups in the United States. Actually, According to the American Cancer Society facts and figures (2002), American Blacks are seen as having the highest incidence rates of prostate cancer in the world. In general, Blacks are more likely to have prostate cancer detected at a later stage and the incidence as well as mortality rates of prostate cancer among Blacks are disproportionately higher than White males. Blacks are more prone to die from the disease when compared with Whites (Merrill, & Lyon, 2000). In addition to late detection, socioeconomic status is an important factor in the morbidity and mortality rates of prostate cancer (Boring, et. al. 1992; Bal, 1992). There is still a lack of knowledge regarding prostate cancer screening as well as symptoms and treatment modalities more so for Black men than for Whites (Nash & Hall, 2002).

Although prostate cancer incidence and mortality increased during the 1980s and 1990s, this was followed by a decrease that was promising. However, the rates continued to increase for Blacks during that same period (Sarma & Schottenfeld, 2002). During the period 1991-1998, the use of PSA tests among older adults (65 years and above) on Medicare were sampled to detect whether there was an increase or decrease in prostate cancer trends. The results showed that Black men in this age group were tested less often than Whites (Etzioni, et. al., 2002). It is not fully known how acceptable the PSA test is to Black men or whether this is even the best screening method for this population. Furthermore, an investigation of health beliefs and practices of Black men about prostate cancer screening showed that knowledge of prostate cancer was fairly high. They were also aware of early detection benefits and were regularly being screened. However, they did not believe that prostate cancer was preventable, but that it was important to have good health habits. Their faith

was also important to them in staying healthy and they believed that treatment for prostate cancer would interfere with sexual function (Fearing, et. al. 2000).

Black men have been shown to have a higher risk of prostate cancer when compared to men from other ethnic groups, and they also die at a younger age. Although many Black men are aware of the benefits of screening, they are less aware of limitations. Some researchers felt that decisions were made to participate in screening without fully understanding the necessity for screening. More information is needed to help them make informed decisions about prostate cancer screening for early detection (Taylor, et. al., 2001; Taylor, et. al., 2002). A study among African American men living in Philadelphia to ascertain how receptive they were to regular screening for prostate cancer, showed that African American males in that setting were willing to participate in annual prostate screening modalities. The study further indicated a need for education and advice about prostate cancer screening and prevention for Black men (Myers, et. al., 1996). This and other studies also indicate certain obstacles to screening and a need for education and advice about prostate cancer and participation in activities for early detection. Some obstacles to early detection included: being able to make and keep an appointment, and attitudes of other family members toward prostate screening. It is important to know that when the cancer is detected early, there can be a reduction in early mortality and an improvement in the quality of life as well. When the cancer the detected late, as in the case for many Black men, there is an increase in mortality and a faster rate of recurrence (Boyd, et. al., 2001; Kirby, 1996; Banerjee, et. al, 2002).

A study of attitudes of Blacks toward prostate cancer screening trials was conducted in Los Angeles, California. Results indicated that African American males at the middle socio-economic level were more willing to participate in clinical trials when compared to those of lower socio-economic levels. The study also examined possible barriers to participation in screening and found that fear of medical

experimentation and distrust for the “medical establishment” were main barriers for African Americans (Robinson, et. al., 1996). Differences in socio-economic status and survival after prostate for Black and White men are also supported by other studies (Robbins, et.al., 2000). Furthermore, younger Black men in a lower income bracket and with less education appear to have more prostate problems when compared to White men and the outcomes for treatment are not as promising for Black men who also experience poorer survival and increased mortality (Lubeck, et. al., 2001; Piffath, et. al., 2001; Walker, et. al., 1995).

The literature shows the importance to prostate cancer to men, especially to Black men. It further showed the importance of early detection in circumventing mortality rates as a result of prostate cancer. While many studies have focused on Black men and prostate cancer, many of them failed to investigate the factors that inhibit early detection. The present study seeks to fill this gap in the literature so as to affect better health seeking behaviors among Black and White men and to produce better outcomes with respect to prevention or early detection and treatment of prostate cancer.

Method

Subject Selection

The priority population for this study was Black and White men age 40 and older residing in San Bernardino and Riverside Counties in California. A population-based convenience sample was selected from community clubs, churches, worksites, and bus stops. Men fitting the age criteria who volunteered to complete the questionnaire were included in the study, and the questionnaire was self-administered. Altogether, a sample of 214 men was obtained.

Instrumentation

A structured questionnaire was developed and pre-tested among Black and White men (n=25) within the priority population. After review and final changes, this questionnaire was used as the instrument for data collection for the present study. The questionnaire included 25 questions with several items to ascertain the respondents' attitude towards prostate cancer screening and

early detection, beliefs about prostate cancer, access to screening, prostate cancer information, and family history of prostate cancer. In addition, there were demographic questions such as age, education, income, marital status and occupation. Questions dealing with attitudes and beliefs about prostate cancer were measured using a five-point Likert Scale (strongly agree to strongly disagree). Participants were asked to respond to statements designed to measure attitudes and beliefs. This psychosocial scale for the measurement of attitudes and beliefs has been used for decades in various populations.

Procedure

Prior to conducting the survey, letters were sent to several churches and men's organizations in the area explaining the purpose of the survey and asking them to encourage men within the age group to participate. Some churches and organizations responded positively and invited us to conduct the survey on a day and time designated by them. No follow-up was done on churches that did not respond. Men within the age criteria who volunteered to be in the study completed a questionnaire and returned it to the person collecting the data. Some church leaders and organizations asked that the questionnaires be left with them to be distributed to members. Completed questionnaires were returned in a sealed envelope. For anonymity, participants were asked not to write their names on the questionnaire. Both Black and White men were recruited to be part of the study.

Data Analysis

Data was entered and analyzed using the Statistical Packages for the Social Sciences (SPSS/PC) version 10. The data set was investigated for missing values and outliers, and irregular value recording. Descriptive information was calculated for all variables. Correlations were done on all major variables of interest for the present study.

Results

There were 214 who participated in the study and completed the survey. Of these, 75% were

Black and 25% were White. Most (53%) were within the 40-50 years age group, 26% in the 51-60 age group, and 21% indicated that they were over 60 years old. Seventy-four percent were married, most had a college degree with a yearly income greater than \$21,000. Approximately 39% reported earning \$50,000 or more per year (Table 1).

Participants were asked how difficult it was for them to obtain a screening test for prostate cancer. The majority (76%) reported that it was not difficult, 15% thought that it was difficult and 9% reported that they did not know whether or not it was difficult to obtain a screening test for prostate cancer. A little more than half of the sample (54%) reported that they had a prostate test within the last year, at the time the survey was conducted, but 46% did not have a test within that year. As to whether screening for prostate cancer was part of their regular medical check-up, 58% reported yes and 42% indicated that this was not a part of their regular check-up. More Whites (62%) than Blacks (57%) said that prostate screening was part of their regular medical check-ups. As to whether their doctor discussed prostate cancer or the need for screening with them, 50% said yes while the other 50% said no.

The television ranked highest as their source of information about prostate cancer, followed by their doctor and brochures at health centers. Participants were asked about their knowledge about screening tests for prostate cancer. Of the sample, 67% indicated that they knew what screening tests are done for detecting prostate cancer. There were 33% that did not know. Participants were asked about their family history of prostate cancer. Twenty-five percent did not know about their family history, and 22% said that they had a relative with prostate cancer. Of the relatives who had prostate cancer, 38% were fathers, 17% brothers, 19% cousins, and the rest were other relatives.

Table 1
Demographics of Participants (N=214)

Variables	Number	Percent
RACE/ETHNICITY:		
Blacks	157	75
Whites	57	25
AGE		
40-50	112	53
51-60	55	26
>60	45	21
MARITAL STATUS:		
Single	16	8
Married	158	74
Divorced	22	10
Separated	7	3
Widowed	7	3
Living with someone	4	2
EDUCATION:		
Elementary	9	4
High School	37	18
Junior College	32	15
College	72	34
Graduate Degree	62	29
OCCUPATION:		
Professionals	60	30
Managerial	26	13
Skilled	55	28
Service	20	10
Self-employed	2	1
Retired	26	13
Unemployed	11	5
INCOME:		
\$ 5,000 - \$10,000	14	7
11,000 - 20,000	14	7
21,000 - 30,000	42	21
31,000 - 40,000	22	11
41,000 - 50,000	29	15
>50,000	79	39

Numbers in some categories may not add up to 214 because of missing values.

Of those who indicated that they had a relative with prostate cancer approximately 30% of them said that they had a prostate test within the last year. Only 13% of respondents said that they had experienced having prostate cancer themselves or were told that they had an enlarged prostate. When comparing Blacks and Whites on this question, more Blacks (15%)

than Whites (10%) were told that they had cancer of an enlarged prostate. They were asked if they had a personal family doctor and 81% said yes, however, there were some differences when comparing Blacks and Whites. More Whites (92%) than Blacks (77%) reported having a personal family physician they can see on a regular basis.

When responding to attitudes and beliefs about prostate cancer screening, 84% either agreed or strongly agreed that if they had prostate cancer it would be serious enough to want to do something about it. Over 65% felt that the blood test for prostate cancer, PSA can detect the cancer early, 33% were not sure what tests were actually carried out and 42% believed that screening would be uncomfortable. Those who felt that the screening would be uncomfortable were also less likely to get screened.

The majority (72%) felt that their doctors cared about them enough and did not withhold important information from them, but 21% said they were uncertain as to whether their doctors would withhold information. Fifty-three percent did not believe that prostate cancer was a common part of aging, but 34% were uncertain.

Overall, 53% of respondents and 55% of Blacks expressed uncertain feelings as to whether or not they were likely to develop prostate cancer. The majority (82%) believed that prostate cancer can be cured if detected early and 83% believed that screening is effective in finding the cancer early. Most (48%) were uncertain as to whether a person with prostate cancer will die within a few years and 43% did not believe they will die within a few years. Although 72% believed that men can have prostate cancer without having a family history of the disease, 25% were uncertain.

Generally, most respondents (60%) said that they wanted to do what their immediate family thought was important for detecting prostate cancer early. More Blacks (82%) than Whites (55%) said that they would do what their family member thought was important. Half (50%) said that they would get tested for prostate cancer if their wife or girlfriend told them to get a test.

Discussion

This exploratory analysis done with the use of descriptive statistics yielded some valuable results. It was found that most of the men in the sample did not find it difficult to obtain screening for prostate cancer. However, far too many did not avail themselves of this vital

screening. That finding shows that while they have the sense that the screening is important, knowledge alone did not offer sufficient motivation to take decisive action to engage in health-seeking behaviors. Also, it was found that among those who had regular checkups, about half of the men did not discuss prostate cancer with their doctors. These findings are interesting in that they point to the fact that there are indeed barriers that short-circuit the motivation necessary for acting consistent with knowledge about this important health concern, prostate cancer. These findings are consistent with those of Fearing, et. al., 2000, and Etzioni, et. al., 2002).

Another interesting finding of the study was the lack of knowledge of the men about the presence of prostate cancer in their family history. This finding points to the need of men in this context to be sensitized to risk factors for prostate cancer and how to manage these risk factors. Doctors played a crucial role in the diagnosis of this problem. Therefore, patients should be invited to discuss the issue on their regular checkups and care should be taken to educate men about this problem

In targeting populations for intervention it is helpful to understand the existing socioeconomic status (SES), therefore, every effort was made to interview men of different socioeconomic and education levels, but as was shown in the demographics the socioeconomic status there was very little difference between blacks and whites in the sample. According to Robbins, et. al., 2000 & Liu, et. al., 2001, people in higher economic status may have an advantage in that they can afford better health insurance and access to health care, and may therefore experience a higher survival rate. In their study men with higher socioeconomic status reported more frequent prostate screening than men in lower SES. In our study, however, there was a lack of variation in screening behavior by race.

More Blacks than Whites indicated that the television was their most important source of information on prostate cancer, followed by regular newspapers and literature received at health centers. Television as a medium for

educating men seems to be crucial and should be utilized more by people working with African Americans in the field. When comparing the two groups it appeared that more whites than blacks received information from health centers as well as from their personal physicians, but this was not significant.

This study is not without its limitations. In the present study, there was a sole dependence on self-report measures to gather data. Also, the cross-sectional design disallows any allusion to causality. More sophisticated designs are necessary to establish causality in previous studies. It should be noted also that the sample size was somewhat small especially for White males in the study. However, the intent was to study Blacks, but a cohort of White men was included in order to make comparisons and strengthen the study. Therefore, results may not be representative of all Blacks and Whites in the counties. Most men were surveyed at churches, organizations or at the workplace, and it is possible that those who completed the survey were already actively engaged in prostate cancer screening and education. While there are some important limitations with the study, some of the

strengths of the study should be noted as well. This present study sheds important light on the topic characterized by a paucity of empirical analyses. Because of the importance of the subject, this study has implications for health promotion and education of men in general and particularly Black men who tend to have a larger burden of the disease.

Aggressive health promotion for early detection of prostate cancer is likely to increase participation in programs. If we are able to distinguish and enumerate some reasons for lack of early detection especially in black men, and explain attitudes that prevent them from seeking help early, health providers will be better able to translate this into more appropriate service and reduce the disparities that exist between the two groups. The findings may be quite different if we had a larger percent of men from a lower socioeconomic and educational background. We therefore recommend further study with a larger group of men, particularly Black men in lower socioeconomic status. Future studies could include more cultural factors and their impact on early prostate screening.

References

- Bal, D. G. (1992) Cancer in African Americans. *CA Cancer Journal for Clinicians*, 42, 5-6.
- Banerjee, M., Powell, I. J., George, J. Biswas, D., Bianco, F., & Severson, R. K. (2002). Prostate specific antigen progression after radical prostatectomy in African American men versus White men. *Cancer*, 94, 2577-2583
- Boring, C. C., Squires, T. S., & Heath, C. W. Jr.(1992). Cancer statistics for African Americans. *CA Cancer Journal for Clinicians*, 42, 7-17.
- Boyd, M. D., Weinrich, S. P., Weinrich, M., & Norton, A. (2001). Obstacles to prostate cancer screening in African American men. *Journal of National Black Nurses Association*, 12, 1-5.
- American Cancer Society. (2002). Prostate cancer. *Cancer Facts and Figures*, 15-16.
- Etzioni, R., Berry, K. M., Legler, J. M., & Shaw, P. (2002). Prostate specific antigen testing in black and white men: An analysis of medicare claims from 1991-1998. *Urology*, 59, 251-255.
- Fearing, A., Bell, D., Newton, M., & Lambert, S. (2000). Prostate screening health beliefs and practices of African American men. *Association of Black Nursing Faculty Journal*, 11(6),141-144.
- Kirby, R. S. (1996). The future management of prostate cancer. *Urology*, 29 (Suppl 2), 132-133.
- Lubeck, D. P., Kim, H., Grossfeld, G., Ray, P., Penson, D. F., Flanders, F. C., & Carroll, P. (2001). Health related quality of life differences between black and white men with prostate cancer: Data from the cancer of the prostate strategic urologic research endeavor. *Journal of Urology*, 166, 2281-2285.
- Merrill, R. M., & Lyon, J. L. (2000). Explaining the difference in prostate cancer mortality rates between White and Black men in the United States. *Urology*, 55, 750-755.

- Myers, R. E., Wolf, T. A., Mckee, L., McGrory, G., Burgh, D. Y., Nelson G., & Nelson, G. A. (1996). Factors associated with intention to undergo annual prostate cancer screening among African American in Philadelphia. *Cancer*, 78, 471-479.
- Nash, C., & Hall, C. (2002). Prostate cancer in Arkansas. *Journal of Arkansas Medical Society*, 98, 331-338.
- Piffath, T. A., Whiteman, M. K., Flaws, J. A., Fix, A. D., & Bush, T. L. (2001). Ethnic differences in cancer mortality trends in the US, 1950-1992. *Ethnicity and Health*, 6, 105-119.
- Robbins, A. S., Whittemore, A. S., & Thom, D. H. (2000). Differences in socioeconomic status and survival among white and black men with prostate cancer. *American Journal of Epidemiology*, 151, 409-416.
- Robinson, S. B., Ashley, M., & Haynes, M. A. (1996). Attitude of African-Americans regarding prostate cancer clinical trials. *Journal of Community Health* 21, 77-87.
- Sarma, A. V., & Schottenfeld, D. (2002). Prostate cancer incidence, mortality, and survival trends in the United States 1981-2001. *Seminars Urology and Oncology*, 20(1), 3-9.
- Taylor, K. L., Turner, R. O., Davis, J. L. 3rd, Johnson, L., Schwartz, M. D., Kerner, J., & Leak, C. (2001). Improving knowledge of the prostate cancer screening dilemma among African American men: An academic-community partnership in Washington, DC. *Public Health Reports*, 116, 590-598.
- Taylor, K. L., Shelby, R., Kerner, J., Redd, W., & Lynch, J. (2002). Impact of undergoing prostate carcinoma screening on prostate carcinoma-related knowledge and distress. *Cancer*, 95, 1037-44.
- Walker, B., Figs, L. W., & Zahn, S. H. (1995). Differences in cancer incidence, mortality and survival between African Americans and whites. *Environmental Health Perspective*, 103, 275-81.

Author Information

Naomi N. Modeste, DrPH*
Professor
Loma Linda University
School of Public Health
Loma Linda CA 92350
Ph: 909-558-4741
Fax: 909-558-4087
E-Mail: nmodeste@sph.llu.edu

Curtis Fox, PhD
Associate Professor
Loma Linda University
Graduate School
Loma Linda CA 92350

Malcolm Cort, PhD
Assistant professor
Oakwood College
Huntsville Alabama 35896

* Corresponding author