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13. ABSTRACT (Maximum 200 Words)
African American men are disproportionately affected by prostate cancer. In order to positively impact this disease, early interventions that encourage early detection and treatment are essential. The overall objective of this study is to explore motivators and barriers to seeking prostate cancer screening and treatment among urban African-American men. The proposed study has 2 phases. During phase 1, ethnographic interviews will be conducted with African-American men and other individuals who have insight into their culture. These other individuals could include health care providers and significant others of African-American men. Twenty-two informants were interviewed. After analysis of the qualitative data, the Plowden/Young Prostate Cancer Belief Instrument was refined. Psychometric properties of the instrument will be established, and data collection will begin. The findings will be utilized to design a culturally appropriate intervention that will motivate urban African-American men to seek early prostate cancer screening, participate in clinical trials, and seek effective treatment.

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Introduction

The overall aim of this 2-phase study is to explore motivators and barriers to seeking prostate cancer screening and treatment among urban African-American men. Ethnographic interviews will be conducted with African-American men and other individuals who have insight into their culture. An estimated 24 individuals will be interviewed. After analysis of the qualitative data, the Plowden/Young Prostate Cancer Belief Instrument will be refined and tested. An additional 120 men will be recruited to complete the instrument. After establishing the psychometric properties of the instrument, results will be analyzed. The results will be used design a culturally appropriate intervention that will motivate urban African-American men to seek early prostate cancer screening, participate in clinical trials, and seek effective treatment. Urban African American men will be recruited for the project. Inclusion criteria will include urban African-American men above the age of 40. The participants must be able to complete a study instrument and participate in a focus group. Exclusion criteria will be any man unable to complete the instrument or participate in an interview. These men will be recruited from community-based organizations in the Baltimore City and surrounding counties.

Motivators and Barriers to Seeking Prostate Cancer Screening and Treatment of Urban African-American Men.

Task 1. Project startup and program development. (Months 1-3)

a. Meeting with collaborating investigator to discuss interviews. A minimum of weekly meetings will be held between Principle Investigator and collaborator.
b. Consult with urologists, oncologists, and other health care practitioners to discuss strategies for recruitment of clients for interview and instrument completion.
c. Consult with community organizations to discuss recruitment of clients.
d. Purchase laptop computer for data collection.
e. Hire research staff- research assistant and transcriptionist.
f. Consult with biostatistician
g. Estimate content validity of instrument

Task 2. Assess prostate cancer beliefs, motivators, and barriers beliefs of urban African-American men in Baltimore, MD and surrounding counties. (Months 3-9)

a. Obtain Institutional Review Board approval from University of Maryland, Baltimore.
b. Recruit African-American men and others for the ethnographic interviews and instrument evaluation.
c. Conduct interviews to explore motivators and barriers and assess face validity of instrument. Interviews will continue until saturation has been reached (approximately 24 individuals).
d. Assess psychometric properties of instrument.

e. Data analysis- qualitative and quantitative
f. Continue to meet with collaborating investigator to discuss progress, item refinement, and instrument testing.

Task 3. Formulation of Research questions for further evaluation-Idea Award proposal (Months 9-12)

a. Analyze data gathered from interviews and instrument.
b. Formulate research question from data.
c. Submit final report summarizing project to DOD.
d. Summarize findings for presentation at research conference and scholarly journal.
e. Begin draft of manuscript and publication.
f. Design intervention for implementation.

Body:

Based on the recommendations of the Human Subjects Protection Specialist, the project was divided into 2 distinct phases. A separate proposal was submitted for each phase. Phase I of the study has been completed. Informants have been recruited and interviewed. Data analysis has been completed. Phase II of this study will be testing of an instrument developed from phase I data. This report will reflect work completed during phase I. Phase II is under human subjects review.

Task I: Project startup and program development. (Months 1-3)
A research assistant was hired to assist with data collection and analysis. This individual was a graduate student majoring in community health nursing. Due to the limited number of male students enrolled in the school of nursing, an African American female was hired as a research assistant. Data collection was completed. Dr. Plowden completed his Post-Doctoral studies at Johns Hopkins University and continued to study at the University of Maryland Baltimore County in the department of sociology. During this time, he completed the following classes:

1. Social Epidemiology- This course provided a critical review of social factors influence on health.
2. Statistics- This course was intended to provide a graduate level introduction to social statistics by providing basic training in descriptive and inferential statistics with social science applications.
3. Survey Development- This course is designed to provide hands on experience in the use of survey techniques in the social sciences. This course covered stages of the survey research process from determining the appropriate research question to investigate, how to determine what is an appropriate sample, modes of administration, question construction, survey layout and ordering, coding and data entry, and analysis.
4. Methods of Social Science Research- This course was designed to provide a graduate level understanding of the methodologies used in social science research. The major emphasis was on components of the research process, problem conceptualization, research design, measurement, sampling, qualitative field notes, questionnaire development, modes of data collection, and ethical issues.

These classes were instrumental in further refinement his research skills and in the development of the survey to be tested in phase II of this study. Dr. Plowden continued to participate in the Baltimore City Prostate Cancer Demonstration Project. This project is a multidisciplinary initiative at Johns Hopkins School of Public Health as a part of the cigarette restitution fund to decrease prostate cancer disparity among African American men. This allowed increase interaction with epidemiologist, statisticians, and community groups. As a member of this group, Dr. Plowden continued to assist team members with recruitment strategies. No new Equipment was purchased during this time.

Task II: Assess prostate cancer beliefs, motivators, and barriers beliefs of urban African-American men in Baltimore, MD and surrounding counties. (Months 3-9)

Final Institutional Review Board (IRB) approval was obtained on November 16, 2001. However, Human Subjects Protection Permission to recruit informants was obtained in January, 2002. The first interview took place on February 20, 2002. Interviews ended February, 2003. Informants were recruited until informational redundancy was reached, that is the point when no new data is gathered from the interviews. For this study, twelve Key Informants and twenty four General Informants were recruited before reaching informational redundancy. All informants were English speaking. Informants were recruited from community organizations (churches, health clinics, and community groups) and word of mouth. Key Informants in the study ranged in age 40-79 (mean 53 years SD 13.5). All Key informants were Black. The majority of the informants was married (50%), employed full time (50%) with insurance and had a household income at or above $20,000. Fifty percent of the men had participated in prostate screening in the past and were satisfied with the procedure. Two Key Informants has a history of treated prostate cancer. General Informants in the study ranged in age 30-72 (mean 45, SD 11.7). General Informants were significant others, wives, health care providers, and children of at risk men. Thirty-three percent of the General Informants knew someone with prostate cancer, but 58% had received some information about prostate cancer.

After analyzing the data, several social factors were identified as significant motivators of prostate cancer screening for urban Black men. These factors included:

1) Kinship/significant others: Kinship has been defined as any significant individuals associated with the informant. For this study, kinship/significant others were defined as family members (parents, siblings, and other blood relatives). Friends were also identified as a significant motivators for the men. Outreach programs should include someone with whom the men can identify with.
2) Knowledge: Knowledge was identified as both a facilitator and barrier to seeking screening. Informants believed that education about prostate cancer should begin prior to the recommended screening age. Education should also dispel myths about cancer (ie cancer equating death), symptoms of an enlarge prostate, and the testing procedure. Education allows the men the make informed decisions about screening.
3) Media/technology. Most informants received information about prostate cancer via the media, such as radio and/or television. Informants suggested using someone who could get the attention of the men, such as actors, athletes, or politicians. This factor supported the significance of kinship as a motivator for men.

Task III. Formulation of Research questions for further evaluation-Idea Award proposal.

Based on phase I data, a proposal was submitted entitled, "Baltimore City Faith-Based Prostate Cancer Prevention and Control Coalition" to the Health Disparity Research- Prostate Scholar Project (W81XWH-04-1-0297). Initial review and revisions have been completed. The primary purpose of this study is to test an investigator developed community-based intervention that explores the impact of peer-outreach workers on prostate cancer knowledge, perceived benefit and barriers, and overall screening behavior. The target sample for this study will be Black men over age 40 who have never participated in prostate cancer screening. Achievement of this objective will result in an increase in prostate cancer knowledge, an increase in perceived benefit prostate cancer screening and treatment; a decrease in perceived barrier to screening, and an increase in screening among men in the intervention group.

Key Research Accoomplishments:

- Completion of Phase I and development of survey
- Submission and funding of intervention study
- Completion of Post-Doctoral studies

Reportable Outcomes:
A manuscript has been completed with phase I data and being reviewed. The article was submitted to the Oncology Nursing Forum. The article is submitted as an appendix to this report. Funding of intervention study by Department of Defense.

Conclusion:
A current myth about Black men is that they are a hard to reach group. Because of this assumption, may be left out of many innovative strategies. By identifying factors associated with prostate cancer among urban Black men, these finding have the potential for increasing enrollment in prevention strategies and impacting the prostate cancer disparity. The need to identify factors that will reduce disparity among racial and ethnic population is the priority for most research agencies. Building on the finding of this study, specific interventions should be developed, tested, and measured quantitatively. Agencies should take an active role in educating communities regarding motivating strategies for urban Black and incorporate them into any outreach activity.

The men in this study expressed an interest in participating in prostate cancer prevention strategies that were culturally appropriate. Outreach activities should strive to create culturally appropriate environment that reduce barriers to participating in screening activities for Black men. Finding from this study and other studies begin to provide insight into reaching Black men and specific motivators. While generalization is limited, this study provides a foundation upon which other intervention might be developed.

Appendix I

Date _____

Motivators and Barriers to Seeking Prostate Cancer Screening and Treatment

Thank you for participating in this prostate cancer project. The information is being gathered in order to learn more about things that make a difference in whether or not African American men seek prostate cancer screening and treatment. You will be asked to answer some questions about prostate cancer. These questions are about things that might help or prevent you from seeking prostate cancer screening. The information we get will help us know how to develop cancer prevention and control programs aimed at helping African American men in the community. No one will ever see your answers. A code will place on the survey. Please do not place your name on this survey. Please answer all questions honestly. You may refuse to answer any question without any fear of anything happening to you. By answering these questions, you are agreeing to participate in this study. After answering these questions, you will receive $10.00 token of appreciation. There is not risk associated with answering these questions. Someone will remain around to assist you as needed. If you have any further questions, feel free to contact Dr. Plowden at 410-706-5868.

The statements are about things that motivate you to seek prostate cancer screening and treatment. We are interested in knowing how much you agree with each statement. Please circle the number in the box that goes with how much you agree or disagree with the statement.

1=strongly agree
2=agree
3=disagree
4=strongly disagree

Item	Strongly Agree	Agree	Disagree	Strongly Disagree
1. There is nothing I can do to stop from getting prostate cancer.	1	2	3	4
2. If a family member or close friend has prostate cancer, I am more likely to get checked for it.	1	2	3	4
3. Getting checked for prostate cancer could save my life.	1	2	3	4
4. If I get prostate cancer, I will receive the best treatment available	1	2	3	4
5. I would rather live with prostate cancer than get treated for it.	1	2	3	4
6. Problems urinating is normal in older men.	1	2	3	4
7. Having prostate cancer means death.	1	2	3	4

Item	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
8. I believe I can survive prostate cancer if I get it.	1	2	3	4
9. If a family member or close friend died from prostate cancer, I am more likely to get checked for it.	1	2	3	4
10. Getting treated for prostate cancer would make it worse.	1	2	3	4
11. If I had prostate cancer, I would rather not know.	1	2	3	4
12. A digital rectal exam is embarrassing.	1	2	3	4
13. If I had pain when I urinated, I would seek help.	1	2	3	4
14. If I wanted to get tested for prostate cancer, I would know where to go.	1	2	3	4
15. I can afford to get tested for prostate cancer.	1	2	3	4
16. Having a rectal exam would stop me from getting tested for prostate cancer.	1	2	3	4
17. I have received information about prostate cancer.		2	3	4
18. If treatment for prostate cancer caused me not to have an erection, I would not get treated for it.	1	2	3	4
Item	**Strongly Agree**	**Agree**	**Disagree**	**Strongly Disagree**
19. I am happy with the information I have about prostate cancer.	1	2	3	4
20. People who are important to me, such as friends and family,	1	2	3	4

talk about prostate cancer.				
21. My doctor has talked about prostate cancer with me.	1	2	3	4
22. Not being able to control my urine after being treated for prostate cancer would stop me from getting treated.	1	2	3	4
23. Not being able to have an erection would prevent me from seeking prostate cancer treatment.	1	2	3	4

Demographic Information
Please tell us about yourself. The following questions will gather information about you. You may refuse to answer any question without repercussions

Please answer or check the following information that best describes you.

How old are you? (Please write in) _____

What is your marital status? (Please check one)

- ❑ Single
- ❑ Widowed
- ❑ Married
- ❑ Separated
- ❑ Divorced
- ❑ Partnered

What is your race? (Please check one)

- ❑ African American or Black
- ❑ American Indian or Alaska Native
- ❑ White
- ❑ Native Hawaiian or other Pacifica Islander
- ❑ Asian
- ❑ Hispanic or Latino

What is your religion? (Please write it in)

_____

How much school have you completed? Check one for the highest level completed or degree received. If you are currently in

school, check the highest degree completed.

- ❑ 12th grade or less
- ❑ High school graduate or GED
- ❑ Some college but no degree
- ❑ Trade school
- ❑ Associate Degree
- ❑ Bachelors Degree
- ❑ Masters Degree
- ❑ Professional school degree (such as M.D., L.L.B, J.D., D.D.S., D.V.M.)
- ❑ Doctorate (such as Ph.D., Ed.D.)

What is your employment status? (Please check one)

- ❑ Employed full-time (work at least 40 hours per week)
- ❑ Employed part-time (work less than 40 hours per week)
- ❑ Retired
- ❑ Unemployed

What is your main source of health insurance? (Please check one)

- ❑ Private Insurance
- ❑ Veteran Administration
- ❑ Medicaid
- ❑ Medicare
- ❑ Military health care
- ❑ No Insurance

What is your household income? (Please check one)

- ❑ Less than $10,000
- ❑ $10,000-$19,999
- ❑ $20,000-$29,999
- ❑ $30,000-39,999
- ❑ $40,000-$49,999
- ❑ Greater than $50,000

Do you know anyone with cancer? (Please check one)

- ❑ Yes
- ❑ No

Do you know anyone with Prostate Cancer? (Please check one)

- ❑ Yes
- ❑ No

If yes, who? (ie father, brother, cousin, friend, etc.). Please write in **(Please do not give names)**

_____

In the past 6 months, have you received any information about prostate cancer? (Please check one)

- ❑ Yes
- ❑ No

If yes, where did you receive the information?

_____

In the past 12 months, have you ever been tested for prostate cancer? (Please check one)

- ❑ Yes
- ❑ No

If yes, check all of the test you received

- ❑ Blood test
- ❑ Rectal Exam

Are you aware of any prostate cancer clinical trials (research)

- ❑ Yes
- ❑ No

Appendix II

Sociostructural Factors Influencing Prostate Cancer Screening Participation among Urban Black Men

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Abstract

Purpose/objective: The overall purpose of this study was to explore social factors influencing participation in prostate cancer screening among urban Black men age 40 and over.

Setting: The study was conducted in community-based settings in an urban northeastern city.

Sample: For this study, individual interviews were conducted with two separate groups of informants. The first group included twelve Black men age 40 and older (Key Informants). The second group included twenty-four individuals who understood screening behaviors of the men (General Informants)

Methods: Individual ethnographic interviews were conducted.

Main Research Variables: Prostate cancer screening

Finding: Three critical social factors were associated with prostate cancer screening behaviors among these informants: Importance of significant others, knowledge deficit, and media coverage. All factors served as motivators to seeking and participating in prostate screening activities.

Conclusion: Critical social factors specific to urban Black men should be considered in designing primary and secondary prostate cancer prevention activities.

Implications for Nursing: Insight is gained as to critical social factors associated with screening behaviors of urban Black men. Findings need to be tested quantitatively.

Black men are disproportionately affected by prostate cancer incidence and mortality. For the years 1997-2001, age-adjusted incidence for prostate cancer was 271.3/100,000 for Black men compared to 172.3/100,000 for all races combined (Ries et al., 2004). Age-adjusted mortality rate was 70.4/100,000 for Black men compared to 31.5/100,000 for all races (Ries, 2004). The life time risk of being diagnosed with prostate cancer for 1999-2001 was 20.58% for Black men compared to 17.81% for all races (Ries et al., 2004). The risk of dying from prostate cancer was 4.73% for Black men compared to 3.01% for all races combined between 1999-2001 (Ries, 2004). Black men are more likely to develop prostate cancer at an earlier age and present with advanced (invasive) disease (Optenberg et al., 1995; Powell, Schwartz, & Hussain, 1995; Moul, 1998). Survival is strongly dependent on early detection and treatment (Greenlee, Hill-Harmon, Murray, Thun, 2001). However, the literature suggests that Black men are less likely to participate in primary or secondary prevention activities. Strategies for motivating Black men to participate in primary and secondary prevention initiatives are needed in order to reduce the current prostate cancer disparity. This article will explore factors influencing participation in prostate cancer screening among urban Black men.

Sociostructural factors and behavior

Illnesses are caused by a combination of social and biological factors (Airhihenbuwa, 1995; Morris, 1998; Cohen, Scribner, & Farley, 2000). It has been estimated that 80% of all chronic illnesses, such as cancer, are influenced by behavioral factors (Roderick, 1992). Sociostructural factors are things that facilitate or impeded preventive behaviors among at risk individuals (Sumartojo, 2000). The factors include social, cultural, organizational, community, economic, legal or policy (Sumartojo, Doll, Holtgrave, Gayle, and Merson, 2000). In looking at the current prostate cancer disparity, it is important to explore social factors that encourage healthy behavior and those that act as barriers to

accessing and utilizing prevention services.

Several studies have shown how social factors influence prostate cancer related behaviors among Black men. Bradley, Given, & Roberts (2002) found that low income played a role in explaining why ethnic minorities and individuals in the lower socioeconomic status groups had reduced cancer survival rates. Their study suggests that being diagnosed at a later stage was more likely related to income than race. In this country, there are a greater percentage of Blacks who are poor than any other racial group (US Census Bureau, 2002). Tingen, Weinrich, Heydt, Boyd, & Weinrich (1998) found poor men (annual income of $4800) were less likely to participate in screening as compared to men in higher income categories. Plowden & Miller (2000) found Black men were less likely to participate in health related behaviors, such as screening, because of perceived lack of resources in their community and neighborhoods. Tingen et al. (1998) observed that men who are less educated were less likely to participate in free prostate cancer screening. Likewise, Weinrich, Weinrich, Boyd, & Atkinson (1998) found that men who had more knowledge of prostate cancer were more likely to participate in a free prostate cancer screening. Agho & Lewis (2001) also found that men who demonstrated a poor knowledge of prostate cancer were less likely to report having a prostate exam as a part of their annual physical. While these variables reported each variable separately, Back men tend to face multiple variables when attempting to seek care, such as perceived community resources and income. Each variable creates another barrier to overcome when attempting to access prevention services.

Theoretical Framework

This study was conceptualized and guided by Leininger's Culture Care Diversity and Universality theory. Leininger's Culture Care Diversity and Universality theory was used to explain, interpret, and predict social and cultural factors that influence prostate cancer screening among urban Black men (Leininger, 1988, 1991a, 1991b, 1991c, 1995, 1998). According to the theory, religion, economics, kinship, politics, and education are critical factors that influence the development values, thoughts, and behaviors (Leininger, 1991a, 1991b, 1991c). Following this theory, participation in prostate cancer screening is expected to be culturally defined and influenced by one or more of these societal factors. In order to understand beliefs and behaviors, one must explore these social dimensions. For this study, the theory (Leininger, 1988, 1991a,

1991c) was used as a cognitive map to examine social dimensions that influence screening behaviors among Black men. Additionally, the critical social dimensions were used to develop codes and themes during data analysis.

Methodology

Design

Qualitative methodology, using an ethnographic approach, was used to collect data. Ethnography was used because it provided a means for a systematic process of observing, documenting, and analyzing the behavior of Black men in their familiar environments (Leininger, 1985, 1991b, 1991c). The study team's goal was to obtain data and analyze the data from the group's perspective in order to identify new and unexplored data of interest related to prostate cancer screening behaviors of urban Black men. The data were used to support current literature regarding health behaviors of urban Black men and generate new research questions needed further exploration (Leininger, 1985, 1991b, 1995; Robinson & Thorne, 1988; Van Manen, 1990).

Sample

A combination of sampling methods were used for this study in order to gain a greater understanding of screening behaviors among. Theoretical sampling technique was used as outlined in Leininger's theory. Leninger's theory provides suggestions on the type of informants required for a quality ethnographic study. The theory suggests recruiting Key and General Informants from the community (Leininger, 1991a). Key Informants are those individuals who are members of the culture, knowledgeable about the lifeways of the

community, and able to articulate the deeply held beliefs and values of the culture (Spradley, 1979; Leininger, 1985, 1990, 1995). According to Spradley (1979), key informants are individuals who have firsthand experience and current involvement in the culture being studied. For this study, inclusion criteria for key Informants were Black men over age 40 regardless of their health status. For this study, General Informants are those who have some knowledge of the domain of inquiry and are willing to share some of their ideas, such as significant others, health care provides, and other community individuals (Leininger, 1991a). Inclusion criteria for general informants were any adult who understood issues related to screening and other health behaviors of Black men. General Informants were interviewed because of earlier research that suggest they have significant influence on beliefs and health behavior of Black men (Plowden, 2000, 2001a, 2001b; Plowden & Young, 2003).

In addition to theoretical sampling, purposeful sampling technique, using snowballing, was used for this study (Sandelowski, 1995). At the end of each interview, informants were asked to identify men who met the inclusion criteria. These informants were contacted by the research team and invited to participate in the study. The triangulation of recruitment technique allowed a greater exploration of the issues associated with screening among urban Black men because it allowed different perspectives into the analysis.

Informants were recruited until informational redundancy was reached, that is the point when no new data is gathered from the interviews (Lincoln & Guba 1985). For this study, twelve Key Informants and twenty four General

Informants were recruited before reaching informational redundancy. All informants were English speaking. Informants were recruited from community organizations (churches, health clinics, and community groups) and word of mouth.

Procedure for Data Collection

Permission to conduct the study was obtained from the Institutional Review Board (IRB) and Department of Defense Human Subjects Protection office. The data collection procedure was guided by Leininger's Culture Care and Universality Theory. All informants completed a data profile sheet, which included name and contact information. This form was necessary in the event we needed to contact informants for a second interview for data clarification. Each informant was given a code that was used as an identifier on the transcribed interviews. This increased anonymity of all informants. Only the research team had access to these codes. Each informant signed an approved consent form before starting the interview. All data and contact information were kept in separate locked file cabinets.

Semi-structured interviews were conducted with all informants using a set of general probes developed by the research team. However, other probes were added based on the data collected. In addition, using constant comparative analysis technique, probes were added or modified based on previous interviews. Each interview started with the same probe, "what would motivate you to seek prostate cancer screening." General Informants were asked a

similar probe, "what would motivate Black men to seek prostate cancer screening." Additional probes included:

1. What does cancer mean to you?
2. What do you know about screening?
3. When you think of screening, what comes to mind?
4. If you wanted to receive prostate cancer screening, would you know where to go?
5. If you had to develop a program that would encourage other men to seek prostate cancer screening, how would you design it?

All interviews were conducted at a site convenient to the informants (Kruger, 1994; Weinrich et al., 1998). Most interviews took place in the community, such as the informant's home.

Data Analysis

All audiotaped interviews were transcribed and managed using Atlas .ti qualitative data software. All data was transcribed verbatim by the investigator or a research assistant. Constant comparative analysis, using Leininger's analysis model (Leininger, 1991b), was done beginning with the first interview. Leininger's model lists the activities for each phase of analysis, from raw data transcription and identification of descriptors (that is emic and etic codes assigned to transcribed data), to selection of patterns or categories, and finally to conceptualization of themes derived from data synthesis and inductive reasoning (Leininger, 1991b). As the raw data were transcribed, initial coding was done by the investigator. Codes were developed from Leininger's model. Open coding was also done if the data did not fit the model. Field notes were taken and incorporated into the transcripts.

After all data were transcribed and coded, data were analyzed for patterns and meanings in context. That is, data were scrutinized to discover saturation of ideas and recurrent patterns of similar and different meanings, expressions, and practices. Major themes, research findings, and recommendations were abstracted from the data. At all times, findings were traced back to raw data to ensure credibility, recurrent patterning, and confirmability of data and analysis. This also guided the research process in further collection of data and checking among informants on the credibility of the findings.

Results

Sample Demographics

Key Informants in the study ranged in age 40-79 (mean 53 years SD 13.5). All Key informants were Black. The majority of the informants was married (50%), employed full time (50%) with insurance and had a household income at or above $20,000. Fifty percent of the men had participated in prostate screening in the past and were satisfied with the procedure. Two Key Informants has a history of treated prostate cancer. General Informants in the study ranged in age 30-72 (mean 45, SD 11.7). General Informants were significant others, wives, health care providers, and children of at risk men. Thirty-three percent of the General Informants knew someone with prostate cancer, but 58% had received some information about prostate cancer.

After analyzing the data, several social factors were identified as significant motivators of prostate cancer screening for urban Black men. These factors included: 1) Kinship/significant others; 2) knowledge; and 3) media/technology. Each factor will be explored separately.

Kinship/Significant others

Following Leininger's model, kinship, defined as significant others, was a strong motivator to seeking prostate cancer screening. According to the model, kinship is defined as any significant individuals associated with the informant (Leininger, 1995). For this study, most Key Informants referred to a significant other who was diagnosed with cancer as a strong motivator for them to seek prostate cancer screening. A 52 year old key informant stated,

> "My father had it [prostate cancer] and all of his brothers. He had three brothers. So I ask for it with my yearly exam and most times they tell me your prostate is swollen. Knowing this data, and it is preventable if it's caught in time helps me to get screened. My father and uncles caught it in time. I am convinced that I am going to get it at some point so I stay motivated to get the test. The family history plays a factor and my age."

Another Key Informant stated, "after my friend died of cancer, I started reading and making myself aware of what was going on. I started going to cancer seminars. I want to find out what the prevalence of certain things were. I'm

managing my care better." This Key Informant was a 50 year old male who was a health educator. Although this informant knew about prostate cancer screening, he became more aware and actively sought screening after a close friend died of cancer.

Another prostate cancer survivor stated,

"I had a sister die of cancer, but she got it from smoking. She had cancer all through her body; she was 30 years old when she died. If I know about it now, I don't get afraid or upset behind the word cancer like I did before because if they diagnose it in time, there's something that can be done and all you have to do is follow suit-."
Although his sister died of lung cancer, he understood the importance of seeking screening for early diagnosis.
This experience motivated him to seek early screening for prostate cancer and other illnesses. This informant was diagnosed with early stage prostate cancer and successfully treated.

Informants were asked to design an "ideal" prostate cancer outreach program to include recruitment strategies for other Black men. When asked about designing an outreach project, all informants stressed the importance of including peers in the program, specifically a prostate cancer survivors should be used in the outreach. An Key Informant stated, "other men should be used for the outreach. Men who may have been treated with the disease, not a doctor, but someone who is real and could say this happened to me and let me share my experience with you and tell you what you should do."

Knowledge

Another major factor identified by informants was knowledge. Knowledge was identified as both a motivator and barrier. A key informant stated, "a lot of men don't want to talk about cancer. I think lack of knowledge is a barrier for

most men. If I didn't have a background in health or public health, I would still be wedded to that idea that cancer is death. There is lack of knowledge. They still think it's deadly." This informant received a yearly screening because of his knowledge of the benefit of early detection. However, he knew that men were not participating in screening because of lack of knowledge about the benefits of screening. Another key informant stated, "If young people learned about cancer now, they will look forward to it [screening] when they turn 40. The only thing we heard about cancer in school was smoking cigarettes." Finally, another key informant stated, people start to getting symptoms of going to the bathroom regularly, and they get all fearful. That's why education is very important. You might have prostatitis not cancer and there's treatment for that. We need to educate people about the test, where to go. Convenience promotes compliance." According to this informant, more men would participate in screening activities if more education regarding the benefits of screening was provided and men knew where to receive screening. A General Informant commented, "I think education would certainly be key to getting them [men] screened. Men see themselves as the provider and would do something if it meant being able to provide for their family."

Media

Another major motivator of screening behavior was media. Most informants received prostate cancer information from the media, such as television and radio. A key informant stated, "I was watching the Adam Clayton Powell story on TV the other night and he died of prostate cancer and that really

motivated me to get screened." A key informant who had recently been treated for prostate cancer commented, "it worried me at first because you hear on the television so and so died of prostate cancer." The informant went on to talk about the difficulty in making a decision to treat his prostate cancer because of the negative information received via the media. When asked about a method for motivating Black men, a general informant commented, "you should use something to get their attention. It depends on the way they present it. State the facts. You should show men being treated by the doctor or something else to grab their attention." Many men utilize some form of the media, mainly the radio. Most informants believed this was an effective motivator for Black men.

Discussion

It has been suggested that understanding the meaning of illness from a cultural perspective is essential in the development and implementation of effective prevention interventions (Airhihenbuwa, 1995; Morris, 1998; Cohen, Scribner, & Farley, 2000). Research shows that Black men will participate in screening, clinical trials, and treatment programs if appropriate motivators are present (Gelfand, Parzuchowski, & Powell, 1995; Robinson, Ashley, & Haynes, 1996; Myers, Wolf, McKee, McGory, Burgh, Nelson, & Nelson, 1996; Plowden & Miller, 2000). This study uncovered critical social factors associated with prostate cancer screening among urban Black men. The informants in this study were eager to discuss their views with the expectation of helping reduce barriers to screening and encouraging at risk men to seek screening. The informants clearly identified motivators and strategies for reaching what has been described

as a hardly reached population. The findings from this study are consistent with other studies involving Black men and Blacks in general.

Significant others were the most frequently identified motivator for Black men. Similar studies have suggested that individuals from the community play a significant role in determining whether Black men seek care, especially preventive care (Plowden & Miller, 2003; Plowden & Young, 2003). A number of studies have used community workers to motivate hard to reach populations. Roman, Lindsay, Moore, and Shoemaker (1999) found individuals from the community provided a conduit for reconnecting single mothers with health care services and increasing compliance with child immunization. Sung et al. (1997) found outreach workers improved the rate at which inner-city women obtained clinical breast examinations and mammograms. Erhard (1999) found outreach workers significantly decreased drug usage and curiosity about use of drugs among minority teens. Birkel & Golaszewski (1993) found a reduction in needle risk, sexual risk reduction, and an increase in perceived personal risk among urban Hispanics when outreach workers were used. Informants in this study reported knowing someone diagnosed with prostate cancer was a strong motivator to seeking screening.

Knowledge has long been identified as an essential dating back to biblical times and literature shows education as a strong motivator for screening, especially breast cancer. Many informants in this study referred to a King James biblical passage that states, "my people are destroyed for lack of knowledge" (Hosea, 4:6). Knowledge of prostate cancer and other preventive measures

were needed in order to motivate men. Educational resources have been identified in earlier studies as essential in motivating primary and secondary prevention behaviors. Plowden & Miller (2000) and Plowden & Young (2003) found a lack of community resources and the availability of neighborhood services, such as education and screening, were perceived as major barriers to seeking care for urban Black men. Tingen, Weinrich, Heydt, Boyd, & Weinrich (1998) observed that men who were less educated about prostate cancer were less likely to participate in free screening. Additionally, Bennett et al. (1998) found low literacy as a barrier to early screening. Men who were diagnosed with advanced prostate cancer were more likely to have literacy levels below sixth grade (Bennett et al., 1998). Young, Waller, and Smitherman (2002) found a significant increase in breast cancer screening among women who participated in an educational program when compared to women who had not received the education. Husaini et al (2001) found that women participating in an educational intervention demonstrated a significantly higher participation rate in mammogram screening than women who had not received the education. Meade, Calvo, Rivera, and Baer (2003) identified lack of knowledge about prostate cancer was a major concern for Black men. Education continues to be a strong component of any primary or secondary prevention intervention.

The media has been identified as a strong motivator for cancer screening in earlier studies. Beeker, Kraft, Southwell, and Jorgensen (2000) conducted focus groups with older individuals to identify strategies for motivating colorectal screening. Their participants identified the media as a strong motivator seeking

screening. Nivens, Herman, Weinrich, & Weinrich (2001) identified electronic media as the most common means of hearing about prostate cancer among Black men. Meade, Calvo, Rivera, & Baer (2003) identified media, such as television and radio, as the preferred methods of learning about prostate cancer for Black men. The importance of media as a method for increasing knowledge, reducing barriers to screening, and motivating men to participate in primary and secondary prevention initiatives has been supported in earlier research.

In considering the limitations of this study, generalizability is limited because of the sample size and recruitment method (nonprobability). Transferability of methods to similar populations is possible. The findings of this study are applicable only to men in the study but can be used to generate other research questions with the same or similar populations. The results of this study were used to design an intervention targeting at risk men.

Implications for Nursing Practice and Research

A current myth about Black men is that they are a hard to reach group. Because of this assumption, may be left out of many innovative strategies. By identifying factors associated with prostate cancer among urban Black men, these finding have the potential for increasing enrollment in prevention strategies and impacting the prostate cancer disparity. The need to identify factors that will reduce disparity among racial and ethnic population is the priority for most research agencies (National Institute for Nursing Research, 2000; National Institute on Aging, 2001). Building on the finding of this study, specific interventions should be developed, tested, and measured quantitatively. Nurses

must take an active role in educating communities regarding motivating strategies for urban Black and incorporate them into any outreach activity.

The men in this study expressed an interest in participating in prostate cancer prevention strategies that were culturally appropriate. Outreach activities should strive to create culturally appropriate environment that reduce barriers to participating in screening activities for Black men. Finding from this study and other studies begin to provide insight into reaching Black men and specific motivators. While generalization is limited, this study provides a foundation upon which other intervention might be developed.

References

Agho, A.O. Lewis MA (1991). Correlates of actual and perceived knowledge of prostate cancer among African Americans. *Cancer Nursing, 24*(3), 165-17.

Airhihenbuwa, C.O. (1995). *Health and Culture : Beyond the Western Paradigm.* Newbury Park, CA: Sage.

Beeker, C., Kraft, J.M., Southwell, B.F. (2000). Colorectal cancer screening in older men and women: qualitative research findings and implications for intervention. *Journal of Community Health 25(3),* 263-78.

Bennett, C.L., Ferreira, R., Dvis, T.C., Kaplan, J., Weinberger, M., Kuzel, T., Seday, M.A., & Oliver, S (1998). Relation between literacy, race, and stage of presentation among low-income patients with prostate cancer. *Journal of Clinical Oncology,16,* 3101-3104.

Birkel, R.C. & Golaszewski, T. (1993). Findings from the horizons acquired immune deficiency syndrome education project: The impact of indigenous outreach workers as change agents for injection drug users. *Health Education Quarterly,20,* 523-539.

Bradley C.J, Given, C.W., Roberts, C. (2002) Race, socioeconomic status, and breast cancer treatment and survival. *Journal of the National Cancer Institute, 94*, 90–6.

Cohen, D.A., Scribner, R.A., & Farley, T.A. (2000). A structure model of human behavior: A pragmatic approach to explain and influence health behaviors at population level. *Preventive Medicine, 30,* 146-154.

Erhard, R. (1999). Peer-led and adult-led programs--student perceptions. *Journal of Drug Education, 1999*, 295-308.

Gelfand, D.E., Parzuchowski, J., Cort, Powell, I. (1995). Digital rectal examination and prostate cancer screening: Attitude of Black men. *Oncology Nursing Forum, 22,* 1253-1255.

Greenlee, R.T., Hill-Harmon, M.B., Murray, T., & Thun, M. (2001). Cancer statistics, 2001. *CA: A cancer journal for clinician,51,* 15-36.

Husaini, B.A., Sherkat, D.E., Bagg, R., Levine, R., Emerson, J.S., Mentes, C.M., Cain, V.A. (2001). Predictors of breast cancer screening in a panel study of African American women. *Women & Health* 34(3), 35-51.

Krueger, R.A. (1994). *Focus groups* (2nd ed.). Thousand Oaks, CA: Sage.

Leininger, M.M. (1985). Ethnography and ethnonursing: Models and modes of qualitative data analysis. In M.M. (Ed.) *Qualitative research methods in nursing* (pp. 33-71). Philadelphia: W.B. Saunders.

Leininger, M.M. (1988) Ethnography and ethnonursing: Models and modes of qualitative data analysis. In MM Leininger (Ed.), *Qualitative research methods in nursing* (pp. 33-72). New York: W.B Saunders.

Leininger, M.M. (1990). Ethnomethods: The philosophic and epistemic bases to explicate transcultural nursing knowledge. *Journal of Transcultural Nursing, 1*(2), 40-51.

Leininger, M (1991a). Ethnonursing: A research method with enablers to study the theory of culture care. In MM Leininger (Ed.), Cultural care diversity and universality: A theory of nursing (pp 73-118). New York: National League of Nursing.

Leininger, M (1991b). Becoming aware of types of health practitioners and cultural impositions. *Journal of Transcultural Nursing, 2*(2), 32-39.

Leininger, M (1991c). The theory of culture care diversity and universality. In Leininger, M. (ed.) *Culture care diversity & universality: A theory of nursing.* (pp 5-68). New York: National League for Nursing.

Leininger, M (1995). *Transcultural nursing: Concepts, theories, research and practices* (2nd ed,) Columbus, OH: McGraw Hill.

Leininger, M. (1998). Special research report: Dominant culture care (emic) meanings and practice findings from Leininger's theory. *Journal of Transcultural Nursing, 9* (2), 45-48.

Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic inquiry.* Newbury Park, CA: Sage.

Meade, C.D., Calvo, A., River, M.A., Baer, R.D., (2003). Focus groups in the design of prostate cancer screening information for hispanic farmworkers and African American men. *Oncology Nursing Forum 30(6),* 967-975.

Morris, D.B. (1998). *Illness and culture in the postmodern age.* Berkley: University of California.

Moul J. W. (1998). Pelvic muscle rehabilitation in males following prostatectomy. *Urologic Nursing, 18,*296-301.

Myers, R.E., Wolf, T.A., McKee, L., McGory, G, Burgh, D.Y., Nelson, G, & Nelson, G.A., (1996). Factors associated with intention to undergo annual prostate cancer screening among Black men in Philadelphia. *Cancer, 78,* 471-479.

National Institute of Nursing Research (2000) Strategic Planning for the 21st Century. Available on line: http://www.nih.gov/ninr/research/diversity/mission.html

National Institute on Aging (2001). Aging, race, and ethnicity in prostate cancer. RFA: RFA-AG-02-003, August 2001.

Nivens, A.S., Herman, J., Weinrich, S.P., Weinrich, M.C. (2001). Cues to participation in prostate cancer screening: a theory for practice. *Oncology Nursing Forum 28(9),* 1449-56.

Optenberg, S.A, Thompson, I.M., Friedrichs, P., Wojcik, B., Stein, C.R., & Kramer, B. (1995). Race, treatment, and long-term survival from prostate cancer in an equal-access medical care delivery system. *JAMA, 274,* 1599-1605.

Plowden, K (2000). HIV Fatalism in Black Americans. Unpublished raw data.

Plowden, K (2001a). Health seeking behaviors of urban Black men. Unpublished raw data

Plowden, K. (2001b). Motivators and barriers to prostate cancer screening among urban Black men. Unpublished raw data.

Plowden, K & Miller, J.L. (2000). Motivators and barriers to health seeking behavior in African American men. *Journal of Black Nurses Association, 11* (1), 15-20.

Plowden, K. & Young, A (2003). Sociostructural Factors Influencing Health Behaviors of Urban Black Men. *Journal of National Black Nurses' Association (14)* (1), 45-51.

Powell, I.J., Scwartz, K., & Hussain, M. (1995). Removal of financial barrier to health care: Does it impact on prostate cancer at presentation and survival? A comparative study between black and white men in a veterans affairs system. *Urology, 46,* 825-830.

Ries LAG, Eisner MP, Kosary CL, Hankey BF, Miller BA, Clegg L, Mariotto A, Feuer EJ, Edwards BK (eds). *SEER Cancer Statistics Review, 1975-2001*, National Cancer Institute. Bethesda, MD, http://seer.cancer.gov/csr/1975_2001/, 2004.

Robinson, C and Thorne, S (1988). "Dilemmas of Ethics and Validity in Qualitative Nursing Research." *The Canadian Journal of Nursing Research, 20* (1).

Robinson, S.B., Ashley, M., & Haynes, M.A. (1996). Attitude of Blacks regarding prostate cancer clinical trials. *Journal of Community Health, 21* (2), 77-86.

Roderick, J.V. (1992). Calculated risks: Understanding the toxicity and human health risk of chemicals in our environment. New York: Cambridge University Press.

Roman LA, Lindsay JK, Moore JS, Shoemaker AL (1999). Community health workers: examining the Helper Therapy principle. *Public Health Nursing,16*(2), 87-95.

Sandelowski M (1995). Focus on qualitative methods. Sample size in qualitative research. *Research in Nursing & Health. 18*(2):179-83,

Spradley, J.(1979). *The Ethnographic Interview.* New York: Holt, Rinehart and Winston.

Sumartojo, E. (2000). Structural factors in HIV prevention: Concepts, examples, and implications for research. *AIDS 2000, 14* (Suppl 1), S3-S10.

Sumartojo, E., Doll, L., Holtgrave, D., Gayle, H., & Merson, M. (2000). Enriching the mix: Incorporating structural factors in HIV prevention. *AIDS 2000, 14* (Suppl 1), S1-S2.

Sung, J.F.C., Blumenthal, D.S., Coates, R.J., Williams, J.E., Alema-Mensah, E., & Liff, J.M. (1997). Effect of a cancer screening intervention conducted by lay health workers among inner-city women. *American Journal of Preventive Medicine, 13,* 51-57.

Tingen M.S., Weinrich S.P., Heydt D.D., Boyd M.D., Weinrich M.C. (1998). Perceived benefits: a predictor of participation in prostate cancer screening. *Cancer Nursing, 21*(5), 349-57.

U.S. Census Bureau (2002). *Population characteristics.* Available: America On-line:www.census.gov.

Van Manen, M. (1991). *Researching Lived Experience: Human Science for an Action Sensitivity Pedagogy.* New York: State University of New York Press.

Weinrich, S.P., Weinrich, M.C., Boyd, M.D. and Atkinson, C. (1998) The impact of prostate cancer knowledge on cancer screening. *Oncology Nursing Forum. 25,* 527-34.

Young, F.F., Waller, J.B., Simtherman, H. (2002). A breast cancer education and on-site screeing intervention for unscreened African American women. *Journal of Cancer Education 17(4),* 231-6.