

**Prostate Cancer Screening in African American Men
The Role of Culturally Sensitive Informed Decision Making with Values
Clarification**

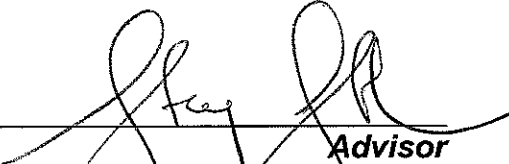
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Abstract

Objectives: The purpose of this paper is to determine the culturally based values, attitudes and beliefs that influence African American men in their decisions to undergo prostate cancer screening. These beliefs, values and concerns will then be used to create a research design to assess effectiveness of a culturally tailored intervention (educational video and values clarification exercise) in helping men make decisions that are consistent with their values and beliefs, by increasing knowledge, identifying values, attitudes and beliefs, reducing decisional conflict and identifying preferred role in decision making.

Methods: A systematic evidence review was conducted to determine the culturally specific values, attitudes and beliefs of African American, Latino and White men. The thematic results of the systematic evidence review were used to craft a research design including surveys, educational videos, and values clarification exercises (social matching and ranking and rating).

Results: Important recurring themes were identified in the systematic evidence review. These themes included lack of knowledge, machismo, fear, patient doctor relationship, family and faith. All men reported poor patient doctor relationship, negative perceptions of prostate cancer, lack of knowledge and the importance of family. African American and Latino men were more likely to fear prostate cancer screening methods (DRE). All groups gave specific and unique suggestions for the content, design and themes they would prefer in educational materials.

In the research design, the primary outcomes will be knowledge, decisional conflict and values, attitudes and beliefs and preferred role in decision making. We do not expect a statistically significant difference between groups in intent to screen and knowledge. However, a statistically significant difference in decisional conflict is hypothesized between the culturally tailored, neutral and no education groups. Values, attitudes and beliefs will be assessed through values clarification exercises and survey questions. We expect that importance of support

Introduction

Prostate cancer is the most common cause of non-melanoma cancer in men as well as the second leading cause of cancer related mortality in American men⁽¹⁾. Age is perhaps the most important risk factor since prostate cancer is rarely diagnosed before the age of 45⁽²⁾. Diets high in animal fat and alcohol and low in fruits and vegetables have been associated with higher prostate cancer risk^(3,4,5). Race and family history are also important risk factors in prostate cancer. African Americans are disproportionately affected by high prostate cancer incidence, morbidity and mortality⁽¹⁾. The incidence rates of prostate cancer in the overall population and African Americans peaked in 1993 largely due to the advancements made in screening and diagnostic measures⁽¹⁾. Since 1993, the number of prostate cancer cases and deaths has steadily declined due to better treatment efficacy, however the large disparity in cases and mortality between African Americans and the rest of the population remain. Therefore, culturally tailored interventions are of particular interest in prostate cancer prevention in this population.

For all populations, prostate cancer screening is currently an area of intense debate. Awareness surrounding the prevalence of prostate cancer has raised media coverage and increased screening rates. However, the media reports are not educating men on the uncertainties surrounding the benefits of screening⁽⁷⁷⁾. Treatment side effects may permanently and unnecessarily impact patient quality of life. Men should be aware of these issues and be empowered to make their own personal decision regarding screening. Professional organizations recommend that physicians fill the role of educator and invite men to participate in the decision making process.

In this paper, current prostate cancer prevention strategies and recommendations will be discussed. New strategies that involve patient participation in prostate cancer prevention, such as culturally based values clarification and decision aids, will be presented. I will also discuss

agents that will decrease their risk of developing cancer without conferring unnecessary harm on the individual. Multiple agents have been studied, including anti-androgens, non-steroidal anti-inflammatory drugs (NSAIDs), Carotenoids, Selenium and Vitamins C, D and E. To date, studies have shown conflicting findings on the efficacy of vitamin and mineral supplementation in the primary prevention of prostate cancer.

Anti-Androgen Therapy

The primary prevention of prostate cancer with anti-androgens, such as 5-alpha reductase inhibitors, is of particular interest in African American men given reports of higher androgen levels and the known androgen dependent nature of prostate cancer⁽¹⁾. The use of the anti-androgen, Finasteride, has shown promise in the Prostate Cancer Prevention Trial (PCPT)⁽⁸³⁾.

The study enrolled 24,482 men and randomized 18,882 men who were ≥ 55 years old, with normal digital rectal exam (DRE), PSA levels $<3.0\text{ng/ml}$ and no clinically significant coexisting conditions. Healthy men were randomized to Finasteride therapy ($n = 9,423$) or placebo ($n = 9457$) over a seven year period. Baseline characteristics were similar between groups, selection bias was minimal with similar loss to follow up rates in both the intervention and placebo groups (8% vs. 7.4%). Researchers utilized an intention to treat analysis for loss to follow up, crossovers and drop-ins.

To assess adherence, study participants were included in a 3 month placebo run-in period after which they were randomized by an unspecified dynamic allocation scheme to ensure balanced randomization throughout the 221 study sites. Annually, participants received DRE and serum PSA levels. If PSA levels were $>4\text{ng/ml}$ or abnormal DRE was assessed on exam, TRUS guided prostate biopsy was recommended. Due to the PSA lowering effects of Finasteride, there was a potential for detection bias in the control group since higher PSA levels are more likely to result in referral for biopsy. To minimize this potential bias, PSA levels in the

Consequently, this potential preventive strategy is undergoing further study in the REDUCE trial. This international, multi-center, double-blind, placebo-controlled chemoprevention trial is designed to determine if the 5-alpha reductase inhibitor, Dutasteride, decreases the risk of prostate cancer in high risk populations⁽¹¹⁾. A race stratified analysis was not conducted and the small sample size (n=298; 3.3%) was insufficient to power a subgroup analysis. Therefore, these study results may not be generalizable to African American men as a whole. Given this shortcoming of the previous study, REDUCE researchers have indicated that they intend to make a strong effort to recruit this high risk group.

Given that the etiology of prostate cancer is poorly understood, primary prevention of prostate cancer will be challenging. However, with the high incidence of prostate cancer and the high morbidity and mortality associated with its treatment, primary prevention of prostate cancer serves as a particularly attractive option and remains an area of interest in prostate cancer prevention research.

Vitamin and Mineral Supplementation

Overall, the current data on vitamin and mineral supplementation and the primary prevention of prostate cancer is largely weak and inconsistent^{(12), (13), (14)}. Much of the available data on primary prevention of prostate cancer are based on secondary analyses.

Alpha Tocopherol was studied in the primary prevention of prostate cancer due to its antioxidant properties. The Alpha Tocopherol and Beta Carotene Study (ATBC) trial was developed to study the effect of alpha tocopherol and beta-carotene on lung cancer incidence in male smokers between the ages of 50 and 69. The study was a randomized, double-blind, placebo controlled trial that found no overall effect on lung cancer, however it found that alpha tocopherol and beta-carotene was associated with a reduction in prostate cancer incidence⁽¹²⁾. This finding prompted a secondary analysis. This analysis revealed a 32% decrease (95% CI: -47% to -12%) in prostate cancer incidence in the alpha-tocopherol supplementation groups⁽¹³⁾.

Consequently, there are new randomized controlled trials underway that look at prostate cancer prevention as a primary outcome. The Selenium and Vitamin E Cancer Prevention Trial (SELECT) and Physician Health Study II (PHS-II) are two such trials. The SELECT trial, which began enrollment of 35,000 men in 2001, will examine prostate cancer incidence as the primary outcome in healthy men receiving Vitamin E and Selenium supplementation or placebo. The final study results are expected in 2013⁽¹⁵⁾. The Physician's Health Study II (PHS-II) which is slated to end in December 2007, is another study that looks at the efficacy of vitamin C, vitamin E, beta-carotene, and a multivitamin in the primary prevention of cardiovascular disease, total cancer, and prostate cancer⁽⁷²⁾. The PHS-II study enrolled 16,743 physicians in the study and will likely give us some answer in the next year. Given the studies available, it is difficult to identify the strategy with the most potential benefit⁽¹⁰⁾. The ongoing SELECT trial and the Physician's Health Study II may help shed light on this ongoing debate.

Secondary Prevention Strategies

The aim of prostate cancer screening is to identify low stage prostate cancer in asymptomatic men, at a stage when the disease may be most treatable⁽¹⁶⁾. However, it is unclear if early detection of prostate cancer is of beneficial. The natural history of prostate cancer is heterogenous. Most prostate cancers are slow growing, low grade neoplasms that remain within the capsule of the prostate gland. The men who develop these slow growing cancers typically die of other causes. However, other prostate cancers are rapidly growing, highly differentiated neoplasms that spread quickly. If these cancers are detected early, they are potentially more treatable. Currently, digital rectal exam (DRE) and Prostate Specific Antigen (PSA) are the two main secondary prevention strategies being utilized for the identification of early prostate cancers in asymptomatic men.

DRE involves the palpation of the prostate gland for nodularity and abnormalities. If abnormalities are detected on DRE, men are typically given a PSA test. The PSA test is a blood

to determine the true benefit of prostate cancer screening in the reduction of prostate cancer related deaths and improvement of other health outcomes.

Raising further questions, the large prostate cancer incidence to mortality ratio brings the benefit of early detection into question. Additionally, the various prostate cancer treatment options are not without risk. In fact, these treatments are often accompanied by urinary, bowel, and sexual dysfunction⁽¹⁹⁾. Given the latent nature and variable natural history of prostate cancer, some men with harmless cancers will inevitably be treated and will needlessly be subjected to treatments known to lower quality of life in about 50% of men receiving treatments.

Given this uncertainty about the benefits in the face of known harms, it is felt that men should be involved in the decision making process until additional researchers can learn more about the net benefits of screening.

Summary of Primary and Secondary Prevention Strategies

The efficacy of primary prevention methods in the prevention of prostate cancer is still unclear. The benefits of prostate cancer screening are still unknown and the limitations of our current screening methods are substantial. In addition, the known risks of treatment create challenges in determining who to treat and who to watch. The complexity of the prostate cancer screening decision is reflected in the lack of consensus among professional societies.

Current Recommendations for Prostate Cancer Screening

American Urological Association (AUA): Recommends that men ≤ 50 years old should be screened for prostate cancer with a combination of DRE and PSA to detect small cancers missed by the PSA test (PSA < 4 ng/mL). All men should participate in the decision making process⁽¹⁶⁾.

study, the Prostate, Lung, Colon and Ovarian (PLCO) cancer screening study is a 16 year multi-center randomized control trial whose major aim is to determine whether cancer screening reduces mortality in individual between the ages of 55 and 74. Multicenter randomized control studies such as the PLCO will hopefully help us determine whether a survival benefit exists for prostate cancer screening.

Systematic Evidence Review

Background

Shared Decision making and Values Clarification

Given that immediate answers to the uncertainties surrounding prostate cancer screening are not yet present and professional medical societies agree that patients should participate in the decision making process, we must develop strategies to empower all populations of men to make informed decisions. Prostate cancer screening is a perfect example of a decision that should be shared between the physician and patient. Shared decision making with educational videos and decision aids are essential in educating men on a screening decision that is best tailored to their prostate cancer risk and their beliefs and attitudes. Effective decision aids include clear information and instruments that incorporate individual risk profiles and personal preferences which increase their confidence in making medical decisions and decreasing their decisional conflict ^(24, 25, 29).

Shared decision making is process whereby a patient and physician make joint health care decisions. According to Sheridan et al, this process requires that the patient understand their risk, susceptibility and the severity of the condition. It also assumes that the patient understands the screening process, the alternatives to screening and the risks, benefits, uncertainties, and limitations of the screening process. Effective shared decision making also necessitates patient consideration of the risks and benefits of screening, and an assignment of value that reflects their own personal preferences. Finally, shared decision making assumes

exercise by trained health care workers, thereby allowing the physician to move immediately to the discussion and decision making.

Beyond the challenges and uncertainties surrounding health outcomes and satisfaction, it is the ethical duty of physicians to educate their patients, grant them autonomy and help them become informed consumers.

Special issues in shared decision making for African American Men

In addition to the traditional challenges of shared decision making previously discussed, African American men face additional challenges. There are sociocultural factors that influence when and how men seek medical attention. Poor access to care, lack of insurance and general mistrust of the health care system are all factors that limit opportunities for men to engage in the decision making process. In addition, African American men may have unique concerns that are not addressed in the decision making process. Consequently, non-traditional strategies with tailored decision aids (e.g. pamphlets, videos, posters) administered by non-traditional, non-medical members of the community should be considered in order to more effectively involve these populations.

Culturally Sensitive Decision Aids

Effective decision aids take differences in cultural, ethnic, religious, and social beliefs into consideration ^{(26), (27)}. Hence, culturally-sensitive values clarification, a process by which people make decisions based on the values they place on the features of each decision option, also plays an important role in creating effective decision aids ⁽²⁶⁾.

A culturally sensitive intervention is defined as an intervention that takes the target population's ethnic, cultural and sociodemographic characteristics, experiences, norms, values, behavioral patterns and beliefs into consideration during its development, implementation and impact measurement ⁽²⁷⁾. In recent years, the need for culturally sensitive health promotion has

systematic evidence review of qualitative work exploring prostate cancer related knowledge, values, attitudes and beliefs surrounding prostate cancer and prostate cancer screening.

Objectives of the Systematic Review

To determine the culturally based values, attitudes and beliefs that influence African American men in their decision to undergo prostate cancer screening as compared to White and Hispanics.

Identification of Systematic Evidence Review Articles

A MEDLINE and PsychInfo databases were searched. The MEDLINE search was conducted on March 14, 2007, and the following MeSH terms were used: "African American", "mass screening/psychology", "health knowledge, attitudes, practice", "cultural factors", "social values" and "ethnology". The keyword "values" retrieved articles specifically addressing PSA results and therefore, the MeSH term "social values" was more appropriate. The search was limited to "English" language articles and "Human" subject studies. All studies addressing "Adult", "Middle Age: 45+" and "Male" were also included. Given the recent questions surrounding prostate cancer screening benefits and the new screening guidelines in 2000, it was felt that article that addressed the new screening deadlines would be most appropriate. Therefore, the literature search was limited to articles published since 2000. The final Medline search yielded 29 articles (Figure 2). Qualitative Studies about African American Men, White/Latinos, Prostate Cancer and Screening, Culture or Cultural Factors, Knowledge, Attitudes and Values were included (Figure 1). Non-English articles that had one ethnic/racial group, focused on cancers other than prostate cancer, prostate cancer treatment decisions, genetic testing or prostate cancer study participation were excluded. Quantitative designs, case studies, case series, editorials or reviews were also excluded (Figure 1).

The use of fair dealing and grounded theory was also evaluated. A qualitative study that utilizes grounded theory collects themes and theories from the dataset, rather than using a pre-existing theory⁽⁶⁹⁾. This is thought to contribute to existing knowledge more so than using one existing theory as the foundation of the study. Fair dealing utilizes existing theories. However, it uses different theories to ensure that different viewpoints are incorporated into the study design and interpretation of data⁽⁶⁸⁾.

Sampling and the description of data collection and analysis were also carefully appraised to determine whether selection bias presented a threat to the internal validity. All articles were evaluated to determine whether purposive sampling was utilized to reduce selection bias and increase external validity. The use of multiple coding, a method of assessing agreement of coding between coders, was checked to determine the level of inter-rater reliability⁽⁶⁷⁾. The presence of triangulation, a technique that uses different methods of data collection to answer one focused question, was also assessed. Triangulation is often used to confirm or refute internal validity however this technique is difficult to perform and is more likely to refine study findings⁽⁶⁷⁾.

The study context was also evaluated to determine whether the setting can be generalized to other populations in different settings. To ensure that all ideas were collected from the target population, we checked each study to determine if thematic saturation was achieved. Lastly, the presence of respondent validation was assessed to determine whether the study participants agreed with the researchers' interpretation of their interview responses.

Results

Meade et al (2003)⁵⁴

In 2003, Meade et al conducted a focus group based qualitative study in a community setting in Tampa, Florida. They sought to determine the everyday priorities and concerns, prostate cancer knowledge, attitudes and beliefs and learning preferences. The study included

community based grass roots organizations and other community sites throughout the Tampa area. This served to reduce selection bias and increase the ability to generalize the results across populations. An additional strength of the study was the use of a different cultural group. Although you cannot do head to head comparisons in unstructured interview setting, the inclusion of a different group contributed additional viewpoints.

Although focus group sample sizes are typically small, it serves as a weakness. The recruitment of a small group of men from one region, with a relatively low SES, and low levels of education is not representative of African American and Hispanic men in this country. Further study with larger groups of African Americans and Hispanics from different regions of the US will be necessary to improve the generalizability of the results.

The age range is also problematic given that prostate cancer is a health concern for middle aged and older men. The purpose of including younger men in the study was to determine how health information was obtained and viewed across generations. However, the results were not reported in this manner. Younger men who will not be faced with this decision for another 20 or 30 years may have biased attitudes and beliefs compared to the older men in the study. It was also unclear whether, data saturation, the recruitment of participants until all new ideas are obtained, was achieved.

Finally, three African American men (8.8%) with a history of prostate cancer were included in the study. This is a potential source of bias for a few of reasons. Men who have prostate cancer or have been successfully treated for prostate cancer will have different attitudes and beliefs regarding prostate cancer because they have experienced the disease. So, the reader would need to be made of aware of comments made by these men as their comments will be biased by their personal experiences. Meade et al did not make this differentiation when they reported their results. In addition, the men with histories of prostate cancer were all African American men, so there were no cancer survivors in our comparison group (Hispanic men) to share any potential differences in their attitudes and beliefs. Lastly,

believed that early detection meant that “you have a good chance”. White men agreed, adding that one can also “avoid impotence if you catch it early so they don’t have to do drastic radical surgery”. Hispanic men simply wanted to know. One Hispanic man said, “If I have something, I want the doctor to tell me...then I know in advance”.

All groups seem to have mixed feelings regarding the question of shared decision making. African American men felt as if their doctors “won’t tell you anything that you ask them”. White men felt that “most doctors won’t explain it. They never have time”.

Overall, it appeared that lack of knowledge and unrealistic beliefs surrounding the utility of prostate cancer screening were major themes for all three groups. These misconceptions were prevalent across racial groups. Beliefs, thoughts and opinions regarding the actual prostate cancer screening exams (DRE/PSA) were not discussed or reported.

Quality, Strengths and Weaknesses

The overall quality of the study was good. The internal validity was good, but the external validity was poor. The strengths of the study included recruitment of three racial/ethnic groups, which allowed comparative inference. The focused clinical question was clear and relevant for our systematic review. They utilized grounded theory, increasing the potential for new theory and further insight into existing information obtained from past studies. The design was appropriate and the data collection and analysis was clear and easy to follow. McFall and colleagues utilized multiple coding to improve demonstrate inter-rater reliability. However, triangulation was not utilized to confirm internal validity.

The study weaknesses and limitations include the use of a convenience sample. This reduces external validity and introduces selection bias. Study participants were recruited from a health care setting reducing the generalizability of the study. These men are potentially more knowledgeable of the health care system, prostate cancer screening than the average American man. The use of a female moderator could have affected the validity of responses. Using a female moderator for a sensitive issue such as prostate cancer screening does not promote

African American and Hispanic participants. One African American man said he felt as if “your manhood has been compromised”. There was also concern about homosexual tendency” in the African American group. In addition, some African American participants expressed “fear and embarrassment” regarding prostate cancer screening. Hispanics had similar feelings. One Hispanic man said, “it’s a disgrace”. Some expressed that “it makes us embarrassed”.

The physician-patient relationship was also a recurring theme during the focus group interviews. Non-Hispanic White men and Hispanic men in the study did not like going to the doctor. One White man said, “Guys don’t like to go to the doctor.” A Hispanic man said they “don’t go to doctors”, instead they try to manage their symptoms on their own and may consult community healers (*Curanderas*) prior to consulting Western medicine. Therefore it is important that information regarding prostate cancer and screening be made widely available outside of the traditional health care setting.

All men agreed that they should talk to their doctors about the test. One White man said he had “blind faith in his doctor” but sometimes there is a failure to communicate. One Hispanic man was confused at the notion that “respected doctors disagree [on screening]”. African American participant felt that “there are a lot of myths” and that speaking to your physician was a good solution. However, African American men expressed distrust for physicians. Overall, all men felt that there was a lot of uncertainty and communication should improve.

Hispanic men felt that culturally sensitive brochures should include information about the anatomy of the prostate. In describing the prostate, each group of men preferred different language. African American men preferred “ping pong ball”, Hispanic men preferred “lime”, whereas White men preferred “walnut”. Hispanic and African American men wanted to know more about risk factors and whether diet and exercise played a role. White men felt it was important that men know that early prostate cancer can be asymptomatic. Hispanic men wanted to know the symptoms of advanced disease. African American men felt it was important that

as opposed to the complete strangers (as in the McFall study). Lastly, the study sample size was small.

Researchers used a convenience sample from a health care setting, resulting in two problems. This reduces external validity and therefore the generalizability of the study. Secondly, this introduces selection bias. The men are potentially more knowledgeable of the health care system, and prostate cancer screening than the average American man. Purposive sampling was not utilized, so men from different regions, socioeconomic backgrounds and different settings were not likely represented. This reduces the ability to generalize these results to other men across the country. Lastly, it was unclear from the short study description whether data saturation was achieved.

Nash et al (2002)⁶⁹

Nash and Hall conducted a qualitative study to assess knowledge, attitude and beliefs about prostate cancer in African American and White men. Nash et al conducted open-ended focus group interviews based on the Health Beliefs Model. African American and non-Hispanic White men, ages fifty and over were recruited using purposive sampling from a University setting in Arkansas. A total of 37 total men were recruited for the study (11 urban White men, 10 rural White men, 8 urban African American men and 8 rural African American men). The mean age was 62 years old. By group, mean age was slightly lower for African American men (45.5 for Urban African Americans, 45.7 for rural African Americans, 51 for Urban White men and 54.5 for Rural White men). Most men had at least a high school education (82% of urban white men, 80% of rural white men, and 75% of rural and urban African American men).

Results (Table 3)

In the study, major themes arose when the focus group questions were presented. Knowledge was an important theme. Although most men were familiar with prostate cancer,

and relevant for our systematic review. For their interview guide, they utilized an established theory in the development process, the health beliefs model, increasing the validity of study results. The research design was appropriate. Nash used purposive sampling to reduce selection bias and increase external validity of the results.

The study weaknesses and limitations included the short, non-detailed description of the data collection process and analysis. It was unclear if Nash and Hall performed multiple coding to demonstrate inter-rater reliability. Even so, they did not report the percentage of agreement between coders. Also, the study sample size was small, although purposive sampling was performed to reduce selection bias and increase generalizability. So men from different socioeconomic backgrounds and different settings were likely represented to some extent. Lastly, it was also unclear from the study description, data saturation was achieved.

Conclusions across studies

Overall, a few recurring themes were identified in the study. There were five dominant themes that seem to recur in the majority of articles identified in the systematic evidence review. These five themes described below, were found to influence the prostate cancer screening attitudes, beliefs and health behaviors of all men. Some themes were found to be more influential to a particular racial/ethnic group than others.

Lack of Knowledge

Knowledge was a common theme among the articles identified in the systematic evidence review. Lack of knowledge regarding the prostate, prostate cancer risk factors, the presentation of early and advanced disease, prostate cancer screening methods, prostate cancer treatment and treatment side effects was common among all three racial groups. In the systematic evidence review, African Americans were slightly more knowledgeable about prostate cancer risk factors and their increased risk of developing and dying from the disease. This finding is thought to be secondary to targeted efforts to inform African American men and

access and health care utilization ⁽⁶⁶⁾. However, the impact of baseline cultural differences and use of community healers (Curanderas) cannot be underestimated.

African American men associated prostate cancer with poor prognosis and death. They also feared that they may not have access to treatment if they were to be diagnosed with prostate cancer.

Family and Faith

Family was a common theme in the systematic evidence review for all three groups. Men felt that they were the providers and needed to be there for their families. Men also felt pressure from their social support systems. Men reported that wives were particularly influential in encouraging health behaviors ⁽⁶⁶⁾. Men also felt that they should be screened in order to place the needs of the family first.

Patient Doctor Relationship

Communication between the physician and patient was a common theme. Men felt that they needed to ask the doctor more questions, but the doctor was always rushed and simply did not have time. An African American study participant felt that doctors wouldn't take the time to answer the questions even if you did ask. Lack of trust for the health care system was also a common theme for African American and Hispanic men. All three groups agreed that communication should improve. Hispanics and African Americans felt that community outreach through community leaders, and cancer survivors would more effectively deliver the intended message.

Future decision aids should not only function to improve knowledge for these groups, but to dispel myths. For African American and Hispanics men, decision aids should address these questions of homosexuality, loss of dignity and humiliation. Physicians should better communicate with patients about the screening exams, their purpose and what they entail.

Qualitative methods, such as focus groups and interview methods have other inherent problems. These qualitative methods can also weaken the validity of the study results. They do not allow direct comparison of groups. Sample sizes are typically small, so representative samples are unusual. However, performing purposive sampling and achieving thematic saturation can help researchers avoid these threats to internal validity.

Lastly, quality rating in qualitative studies is a challenging task. Consequently, efforts have been made to apply quantitative measures of quality, such as internal validity, external validity and reliability, to qualitative research. The end result has been the creation of a number of quality checklists, however, these quality checklists have not been validated, ^(68, 69,77, 78). These checklists were not created to confer rigor, but to help improve rigor in qualitative studies ⁽⁶⁸⁾. Hence, satisfying these checklists does not automatically confer validity and rigor upon a qualitative study. Readers must critically appraise the use of these technical methods to ensure that they have been adequately applied. Even then, quality rating must be made and interpreted with caution. The quality rating assigned to the SER articles used in this study are all based on these non validated checklists. Hence, the quality ratings assigned to each study cannot be assured. Overall, this weakens conclusions of the systematic evidence review quality ratings.

Research Design

Introduction

For my research study, I plan to apply the systematic evidence review findings in the development of my interventions. The systematic evidence review was valuable in identifying common themes that resonated among three different racial/ethnic groups. These themes will be used to develop the culturally tailored interventions for the proposed research study. They will be incorporated into study educational videos and values clarification exercises. The ultimate goal will be to effectively increase knowledge, identify important values, attitudes and beliefs, engage men in the decision making process and reduce decisional conflict.

The second category is intuition enhancing strategies. These are also valuable methods of clarifying values and reducing decisional conflict. These exercises attempt to dismantle organized thought and allow for the free flow of ideas and self confrontation⁽⁵³⁾. Social matching could be seen as an exercise in self-confrontation that allows the patient to see a situation from two different perspectives. Values clarification exercises are potentially effective methods of helping patients make their decisions about prostate cancer screening. According to Krist, "Even if a clear benefit to screening was found, value uncertainty would persist-- a trade off versus benefit, the magnitude of each inherently dependent on individual values."⁽⁵⁰⁾ Volk et al, concluded education helps increase knowledge, but does not effectively help clarify values⁽⁶⁴⁾. The ranking and rating exercises used in this study design will serve to present the issues and help men place value on each one.

Focused Clinical Question

Research Design Overview:

Design: Randomized Controlled Trial + Post Trial Focus Group

Focused Question: Do culturally tailored decision aids effectively increase knowledge, reduce decisional conflict and identify values, attitudes, beliefs and preferred role in decision making, compared to neutral decision aids and no decision aid?

Secondary Question: Do culturally tailored decision aids influence intent to have prostate cancer screening, screening behavior at 6 months, satisfaction with screening, and final screening behavior?

Population: African American, White and Latino Men, 40- 80 years of age

Intervention: Culturally Tailored Educational Video + culturally tailored values clarification exercise.

Comparison: Neutral Educational video + neutral values clarification exercise

Comparison 2: No prostate cancer screening related educational video + no prostate cancer screening related values clarification.

Outcome, Primary: (1) Determine whether prostate cancer knowledge improved, (2) determine whether decisional conflict was reduced, (3) determine values, attitudes, and

participants call, their eligibility will be determined. If they are eligible, appointment for study participation will be scheduled.

Administration of the Intervention and Surveys

The study will have three arms. Eligible men who agree to participate will be randomized to (1) the appropriate computer based culturally tailored educational video and ranking and rating values clarification exercise, (2) a computer based neutral educational video on prostate cancer, screening and treatment and a ranking and rating values clarification exercise or (3) computer based "no education" exercise (Figure 5).

The intervention will take place in three parts. First, study participants will complete computer based surveys (pre and post intervention). Second, study participants will review the educational video and complete a values clarification exercise. Finally, study participants will complete post-intervention surveys immediately after the intervention and at follow up 6 months post intervention. This 6 month follow up survey will be mailed to them via US mail. The study interventions and related surveys will be administered at the local library. This site will provide five small rooms with computers, where the participants can complete their surveys, watch their videos and participate in the focus group sessions. Computers and headphones will be available in each room.

At their study visit, participants will first complete their surveys, watch their assigned educational video and complete their values clarification exercise on the computer. Computers will be used in this study to address literacy issues. Headphones will be made available with every computer. Survey questions, values clarifications exercises and instructions will be read aloud through the headphones. Two member of the research team will be available in each room to give instruction and assist study participants.

The educational videos will last about 30 minutes and highlight topics from prostate cancer, screening methods, screening options (DRE and PSA), misconceptions, patient-physician relationships and other culture specific themes that arose in past studies (Table 3). The first portion of the video will consist of narrated information with images and graphs to educate men on anatomy, culturally tailored statistics, and prostate cancer facts (symptoms, screening options, and diagnosis and treatment options). The second portion of the video will feature a dramatization of four men currently in the decision making process, discussing their differing views, attitudes and beliefs regarding prostate cancer, screening and treatment. Their discussion will feature their free flowing thoughts, brainstorming process and the logic surrounding their decision. Men will be instructed to listen carefully and identify which character most represents them and why, a process known as social matching. The question will appear on the screen after the educational video is complete.

After the educational video, study participants will participate in a computer based ranking and rating exercise. Participants will be given four statements corresponding to a particular topic (i.e. health status, religious views, patient-physician relationship status, prostate cancer screening exam, family support etc.). They will then be asked to choose the statements that most represent their opinion or beliefs. They will be given the option adding to this statement in order to further customize the statement to their personal values. This will serve to reduce the limitations of ranking and rating, allowing us to uncover additional value conflicts that we may not have anticipated. They will then be asked to rate the importance of each topic (corresponding to the statement they chose in the first part of the exercise) on a scale from 1 to 10. Finally, participants will be asked to briefly type why they chose the options they chose in the exercise. Upon completion of the exercise, the men will complete the computer based post intervention surveys and participate in a short focus group session to give intervention feedback.

to obtain intervention feedback.

Control Group

No Education Group

The participants in the control group or the “no education” group will watch a neutral video about the history of American football. They will also complete a non-prostate cancer related social matching exercise and a computer based values clarification exercises ranking and rating the importance of family, work, leisure activities and hobbies. Study participants will be given four statements corresponding to a particular topic and asked to choose the statements that most represent their opinion or beliefs. They will then be asked to rate the importance of each topic (corresponding to the statement they chose in the first part of the exercise) on a scale from 1 to 10. To complete the exercise, participants will be asked to briefly write why they chose the options they chose. Lastly, the group will complete the same computer based post-intervention survey completed by the other groups. They will also be asked to participate in a short focus group session conducted by members of the research team to obtain intervention feedback.

Randomization

A computerized random-number generator will be used to randomize subjects in a 3:1:1 fashion to the culturally tailored intervention, neutral education intervention group or the “no education” control group, respectively. Randomization will be done within race strata to ensure that equal numbers of men in each racial group are randomized to each study arm. We will use a computer generated random number scheme with blinded allocation to control (no education) and intervention groups (culturally tailored and neutral education) to ensure adequate randomization. Group assignments will be sealed in a security envelope until the telephone eligibility assessment.

Data Analysis

Sample Size Calculation

The sample size for the pilot research study will draw from calculations performed by Sheridan et al in a pilot study to assess decision making with PSA testing. A conservative average mean difference of 0.40 will be used in the decisional conflict scale. This will be based on the difference between those who made a decision and those who delayed their decision in decisional aid intervention studies for various preventive conditions⁽³³⁾. This effect size is similar to the changes observed in the decisional conflict scales in those who received a decision aid intervention for prostate cancer screening and those who did not in a previous decision aid study, providing validation for this approach⁽³⁴⁾.

A decisional conflict score of 2.0, a standard deviation of 0.6, a two-sided alpha of 0.025 and a power of 90%, will be used to determine the sample size and the number of participants needed in each group to detect a difference in the decisional conflict score between the intervention and control group using a Wilcoxon Rank Sum test.

Statistical Analysis

In order to assess the effects of the values clarification interventions, the intervention and control groups will be compared with respect to decisional conflict score means. If necessary, we will control for any baseline variables that are not similar between groups using linear or logistic regression models when appropriate. Intervention and control groups will also be compared to determine the differences in the proportion of participants who decide to be screened using the intent to be screened instrument in the pre-intervention, post intervention and 6 month follow up survey. We will use an intention to treat analysis.

To determine whether participant characteristics (including age, education, health status, socioeconomic status, preferred role in decision making and patient knowledge etc.) correlate with any of the primary and secondary outcomes, we will create exploratory models to assess

responses, as the educational video may potentially increase knowledge and influence men's decisions to participate in the decision making process.

Knowledge:

I would expect the knowledge score to be low for all groups. I do not expect a statistical difference between groups. Men will likely be more knowledgeable in different areas, based on their experiences. For example, African American men will probably be more likely to know that family history and race are risk factors for prostate cancer because they are directly affected by this fact. However, I do not anticipate a statistically significant difference in knowledge between groups by race, but I do expect the two educational video groups to have significantly higher prostate cancer knowledge in the post-intervention survey as compared to the "no education group". It would be interesting, to look at differences between other characteristics such as level of education, income or insurance status.

Secondary outcomes of interest:

Intent to be screened: A statistically significant difference between the culturally tailored, neutral and no education group is not expected due the weight carried by individual values in this decision. It is difficult to make a prediction, because decision aids can improve knowledge, encourage men to participate in the decision making process without increasing their anxiety⁽³⁶⁾. However, properly constructed decision aids are unbiased and utilize balanced framing in the presentation of the known harms, benefits, uncertainties and limitations. The decision to be screened is utility sensitive and therefore the value placed on the harms, benefits and limitations of screening is personal and will vary from individual to individual based on their values, experiences, preferences for outcome of treatment and preferences for quantity of life versus quality of life^(43, 44). Therefore, the participants' final decisions should not be predictable.

Seven trials have measured screening behavior following administration of decision aids meant to promote informed decision making. Three of these studies reported reduced

Discussion

Prostate Cancer is a disease that affects men of all races and walks of life. However, it affects men of different races to differing degrees. African American men are 2.4 times more like to be affected than White men. Questions regarding the benefit of screening have prevented unified recommendations from medical experts, further increasing the complexity of the screening question. Studies that should give us important answers such as, the European Screening Research Study and the PLCO study, are still underway. Medical experts and the lay public alike are waiting in anticipation for the completion of these studies in hopes of the long awaited answer to the prostate screening debate. As we wait, we must find more effective ways to implement the current recommendation of shared decision making.

Knowledge and the personal awareness of values appear to be important components of the patient's decision making process. With challenges ranging from lack of time, lack of knowledge, poor access to health care to fear of the health care system, it becomes difficult to educate and involve patients in the decision making process. The systematic evidence review (SER) was valuable in elucidating some of the barriers and concerns that men of different races face when they are making decisions regarding prostate cancer screening. The themes that were uncovered in these studies were instrumental in creating our research design. The themes will be incorporated into the values clarification exercises, survey questions, interview guides as well as the educational video.

The SER made us aware that all groups were lacking in prostate cancer knowledge. It also made it clear that prostate cancer is perceived negatively by men of all ethnicities, however White men felt more positively about the possibility of cure. Hispanic men appeared to be more fatalistic, whereas African American men were more negative about prognosis. Screening with DRE was an issue for all groups due to pain and discomfort. However African American and Latino men were also strongly opposed to the screening test due to feeling of violation and questions of homosexuality. Poor relationships with physicians resonated with all groups,

address the individual concerns of each racial group may be an effective strategy. It is also possible that a multicultural intervention that addresses all unique concerns of each ethnic/racial group in one video or pamphlet may be most effective.

Strengths and Limitations

Our research design suggests an effective way of determining whether culturally tailored decision aids that incorporate men's preferences will make a difference in level of prostate cancer knowledge as well as reducing decisional conflict by addressing men's values, attitudes, and beliefs about prostate cancer and screening in an efficient manner. The strengths of this study design include a clear, focused clinical question. Given the growing number of men entering their 40s and 50s, prostate cancer will continue to be an issue of concern among medical experts and the public. Hence, the clinical question is clear and relevant. The design of the research study is appropriate. Men will be randomized and split into groups by race in order to determine if there are any differences in prostate cancer knowledge, values, attitudes, beliefs about prostate cancer and screening and decisional conflict after no education, a neutral intervention or a culturally tailored intervention. The inclusion of men of the three races most affected by prostate cancer will strengthen the study. This study will likely give us insight into culturally based health beliefs and health behavior, which will give us information on which to build on new theories or information to refine and develop existing ones. Lastly, the inclusion of a no education group will help us determine whether any of the educational videos were effective in improving knowledge and reducing decisional conflict.

In our focus group, the use of purposive sampling is a strength. This will serve to reduce selection bias and increase ability to generalize the results to a larger population. Multiple coding, which is used to assess for inter-rater reliability, will also serve to reduce measurement bias and increase internal validity of the study. The use of male moderators will also serve as a strength. Same gender moderators will likely serve to increase the probability of receiving open

curaraderas to address gaps in knowledge. Physician extenders should be trained to assist physicians in educating patients, answering questions and addressing concerns. Images on brochures and educational videos should reflect the intended audience, facilitating the audiences' ability to identify with the characters. Our research study will further elucidate the effectiveness of culturally sensitive decision aids and will help us further refine the content of the ideal prostate cancer decision aid.

Future studies should take a look at age specific concerns. Age specific educational tools may help address some of the concerns younger versus older men face when deciding whether or not to be screened for prostate cancer. In addition, future studies with a larger sample size should look at level of education and prostate cancer knowledge. The challenge with this question is that income and insurance status are difficult to separate, therefore it will be necessary to control for income and other SES markers.

Future studies should also look at the role of literacy and attitudes, beliefs about prostate cancer. Level of education and literacy may play a larger role in lack of prostate cancer knowledge and desire to participate in the decision making process than race and ethnicity.

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Table 1. Focus Group Interview Guides

Author, Title	Focus Group Questions/Interview Themes
<p>Chan EC, Haynes MC et al (2003)^{66*}</p> <p>Cultural Sensitivity and informed decision making about prostate cancer screening</p>	<ol style="list-style-type: none"> 1.) Prostate 2.) Prostate Cancer and risk 3.) Screening for prostate cancer
<p>McFall, Hamm and Volk (2006)^{64*}</p> <p>Exploring beliefs about prostate cancer and early detection in men and women of three ethnic groups.</p>	<ol style="list-style-type: none"> 1.) Risk and causation 2.) Signs and symptoms 3.) Awareness of screening controversy 4.) Shared decision making
<p>Meade, Calvo et al (2003)⁵⁴</p> <p>Focus Groups in the design of Prostate Cancer Screening Information for Hispanic Farm workers and African American Men</p>	<p>Life and Family</p> <ul style="list-style-type: none"> • What are the three most important things in your life <p>Issues, Problems, Concerns</p> <ul style="list-style-type: none"> • What are your biggest problems facing you? <p>Health</p> <ul style="list-style-type: none"> • What should be done to stay healthy? • Where do you go when you are sick? • Do you go to that person when you are healthy? <p>Cancer Screening/Treatment</p> <ul style="list-style-type: none"> • When you think of cancer, what three things come to mind? • Do you know anyone who has ever had cancer? Who? • What do you think can cause cancer? • Where can people go to find out if they have cancer? • Do you think cancer can be cured or treated? • What do you know about prostate cancer? • How do you think people you know would feel about having PSA/DRE done? <p>Sources of Information</p> <ul style="list-style-type: none"> • How did you learn about cancer?
<p>Nash and Hall (2002)⁶⁶</p> <p>Prostate Cancer in Arkansas.</p>	<p>Focus Group Interviews. Interview guide based up the Health Belief Model.</p> <p>Individual Perceptions:</p> <ul style="list-style-type: none"> • General Health • Cancer in General • Prostate Cancer <p>Knowledge:</p> <ul style="list-style-type: none"> • Sign, Symptoms, Prevention • Early detection, Screening • Treatment, Side Effects • Awareness of Social Norms <p>Modifying Factors:</p> <ul style="list-style-type: none"> • Internal Cues to Action • External Cues to Action • Other Barriers <p>Likelihood of Action:</p> <ul style="list-style-type: none"> • Health Maintenance/Promotion

*Themes were addressed. However, focus group interview questions were not included in the article.

Table 2. Quality Rating

Quality Scale: +++ Excellent ++ ^{1/2} Very Good ++ Good + ^{1/2} Fair + Poor	Chan et al⁶⁶	McFall et al⁶⁴	Meade et al⁵⁴	Nash et al⁶⁹
Relevance⁶⁸	+++	+++	++ ^{1/2}	+++
Clarity of Research Question	+++	++ ^{1/2}	+++	++
Design appropriateness	++ ^{1/2}	+++	+++	++ ^{1/2}
Purposive Sampling⁶⁷	NO, Convenience +	NO Convenience +	YES, Purposive +++	YES, Theoretical +++
Clear description of Data Collection and Analysis	+ ^{1/2}	+++	+++	+ ^{1/2}
Triangulation⁶⁸/ Multiple Coding⁶⁷	YES, Multiple Coding ++	YES, Multiple Coding ++	NO +	No triangulation Multiple coding??
Grounded Theory⁶⁷ / Fair Dealing⁶⁸	Grounded Theory +++	Grounded Theory +++	Grounded Theory +++	No, HBM ++
External Validity	+	+	++	++
Respondent Validation⁶⁷	NO +	NO +	YES ++	NO +
Overall Rating*	+ ^{1/2}	+ ^{1/2}	++ ^{1/2}	+ ^{1/2}

Grounded Theory: Alleges that all theories are derived from the dataset rather than using prior theoretical viewpoints.⁶⁷

Fair Dealing: Research design explicitly incorporates a range of different perspectives to avoid having one viewpoint represent any scenario.⁶⁸

Table 3. Descriptive studies that address reasons why African American men do not undergo Prostate Cancer Screening.

Study Authors, Year	Study Design	Source Population/ Study Population	Measurements/ Significant Results	Quality: Strengths/Weaknesses
<p>Chan EC, Haynes MC et al (2003)⁶⁶</p>	<p>Qualitative Focus Group</p>	<p>University Setting, University of Texas- Houston</p> <p>AA Men (n=5) White Men (n=5) Hispanic Men (n=10)</p> <p>(Ages ≥50, married)</p> <p>Mean age: 62 AA: 65 White: 63 Hispanic: 60</p>	<p>Focused Clinical Question: How would African Americans, Caucasians and Hispanics want information regarding Prostate Cancer screening (DRE and PSA) presented in culturally sensitive brochures?</p> <p>Results from Focus Group Interview Guide:</p> <p>Caucasians: Physician-Patient Relationship: “guys don’t like to go to the doctor” “blind faith in any doctor” failure to communicate about details of the DRE: “my doctor doesn’t say a word, just drop your pants” “talk to your doctor about it”</p> <p>African Americans: Machismo “your manhood has been compromised” “fear, embarrassment” “homosexual tendency” Physician-Patient Relationship: “there are a lot of myths” “should discuss this with their doctor”</p> <p>Latinos Machismo: “it’s a disgrace” “makes us embarrassed” Physician-Patient Relationship: “respected doctors disagree” “we don’t believe in screening” “don’t go to doctors”</p> <p>Common themes:</p> <ul style="list-style-type: none"> - Lack to desire to visit the doctor’s office unless acutely sick. - Uncertainty 	<p>Overall Quality: Fair Internal Validity: Fair External Validity: Poor</p> <p>Strengths:</p> <ol style="list-style-type: none"> 1. Recruitment of different racial/ethnic groups-comparative study 2. Inclusion of 3 ethnic groups 3. Multiple Coding <p>Weaknesses:</p> <ol style="list-style-type: none"> 1. Small Sample Size 2. Small geographic region 3. Convenience sample: No purposive sampling 4. Inter-rater Reliability- not reported 5. Poor external validity 6. There was no clear description of data collection and analysis. 7. No mention of whether data/thematic saturation was achieved. 8. Did reflexivity occur?? 9. Did respondent validation occur?

Study Authors, Year	Study Design	Source Population/ Study Population	Measurements/ Significant Results	Quality Strengths/Weaknesses
<p>Meade, Calvo, Rivera, Baer (2003)⁵⁴</p>	<p>Qualitative Study, Focus Group</p>	<p>Community based setting Tampa, Fl</p> <p>African American and Hispanic Men Age ≥18 (n=71)</p> <p>2 Hispanic Focus Groups (n= 37)</p> <p>2 African American Focus Groups (n= 34)</p> <p>Ages: 18-85 Mean Ages: AA: 50 (22-85) Hispanic: 38 (18-67)</p>	<p>Focused Clinical Question: What are the important daily issues, cancer and decisions to get screened?</p> <p>Results from Open ended interview guide: <u>Major Themes:</u></p> <p>Hispanic Men: <u>Knowledge:</u></p> <ul style="list-style-type: none"> • Lack of Knowledge • Anatomy, risk factors, screening options <p>Prostate Cancer:</p> <ul style="list-style-type: none"> • caused by contagious infection, promiscuity, excessive sexual activity, rusty nails • Fear, Death • Denial: "I try not to think [about it].." <p>Prostate Cancer Screening: w/ DRE</p> <ul style="list-style-type: none"> • "I feel embarrassed" • "only if there was no other option" • By a doctor "one who is dignified" • Other barriers: Lack of access to care • Important influences: Religion, Family <p>Health Care Access/Dr.-Pt. relationship:</p> <ul style="list-style-type: none"> • Only go to the doctor if very sick • Lack of trust for the health care system • "I don't believe a lot of what doctors say" • "There are doctors that lie, they're corrupt people" • Who delivers the message: <p>Source of health care information:</p> <ul style="list-style-type: none"> • prefers cancer survivors, patients w/ cancer, physicians, community members, schools, and media (radio, tv, newspaper) 	<p>Overall Quality: Good Internal Validity: Very Good External Validity: Fair</p> <p>Strengths:</p> <ol style="list-style-type: none"> 1. Second Racial/Ethnic group 2. Recruited other racial/ethnic groups 3. Grounded Theory 4. Clear description of data collection and analysis 5. Appropriate design 6. Clear research question 7. Purposive Sampling 8. Respondent Validation through community leaders <p>Weaknesses:</p> <ol style="list-style-type: none"> 1. Age Range (18+) 2. Small sample size 3. Recruited from one region 4. Did not include non-Hispanic White Men 5. Included men with history of prostate cancer (8.8 % of AA study participants, no Hispanic men) 6. Multiple coding not performed 7. Inter-rater reliability not reported 8. No Triangulation 9. No mention of whether data/thematic saturation was achieved. 10. Reflexivity??

Continued on next page

Study Authors, Year	Study Design	Source/ Study Population	Measurements/ Significant Results	Quality Strengths/Weaknesses
<p>Nash C and Hall C. (2002)⁶⁹</p>	<p>Qualitative Study, Focus Groups</p>	<p>Community setting, Arkansas</p> <p>Sample size n=37 Rural White Men (n=10) Urban White Men (n=11) Rural AA Men (n=8) Urban AA Men (n=8)</p> <p>5 focus group (n=8-10) Stratified for ethnicity and rural vs. urban)</p> <p>Ages: ≥ 40 yrs old <i>Mean ages:</i> Urban AA: 45.5 Rural AA 45.7 Urban White: 51 Rural White: 54.5</p>	<p>Focused Clinical Question: What are the attitudes, knowledge, beliefs about prostate cancer of African American and White men in an urban vs. rural setting? Interview guide based up the Health Belief Model</p> <p>Caucasians- Urban <i>Prostate Cancer Knowledge:</i></p> <ul style="list-style-type: none"> Limited <p><i>Prostate Cancer:</i></p> <ul style="list-style-type: none"> Perceived negatively: Once you feel bad, it's too late Genetic Frequent sex prevents prostate cancer <p><i>Screening:</i></p> <ul style="list-style-type: none"> Identified PSA and "finger test" "discomfort" "embarrassment" Fear of test and results <i>Other barriers:</i> Time, opportunity cost, Laziness Influenced by doctors (limited), spouse, media, lay persons <p><i>Treatment:</i></p> <ul style="list-style-type: none"> Alternative medicines (e.g. saw palmetto) Side effects: Incontinence <p><i>Patient Doctor relationship:</i></p> <ul style="list-style-type: none"> Lack of communication "I don't go to the doctor unless I'm dying" <p><i>Source of health care information:</i></p> <ul style="list-style-type: none"> Doctor (limited), spouse media, lay persons <p>Caucasian- Rural <i>Prostate Cancer Knowledge:</i></p> <ul style="list-style-type: none"> Limited <p><i>Prostate Cancer:</i></p> <ul style="list-style-type: none"> Negative perception Identified as major health concern that ↑ with age Possibility of cure: "used to be death. Now it's an ordeal" <p><i>Screening:</i></p> <ul style="list-style-type: none"> Identified PSA and DRE PSA screening inaccuracy Uneasiness with DRE (with joking and laughter) <i>Other barriers:</i> Financial barriers and health insurance coverage Influenced by experience of others <p><i>Treatment:</i></p> <ul style="list-style-type: none"> Alternative medicines (e.g. saw palmetto) Surgery <p><i>Patient Doctor relationship:</i></p> <ul style="list-style-type: none"> No comments 	<p>Overall Quality: Fair Internal Validity: Fair to Poor External Validity: Fair</p> <p>Strengths:</p> <ol style="list-style-type: none"> Comparison Group: included White and African American men Rural vs. Urban group, increases generalizability/transferability. Purposive sampling Focus Group Good description of context and study population. <p>Weaknesses/Limitations:</p> <ol style="list-style-type: none"> Poor description of analysis Unsure if Multiple coding was performed No Triangulation of data No fair dealing: One theory used as foundation (HBM) No grounded theory One Region: difficult to generalize Small sample size Unclear whether thematic saturation was achieved through participant recruitment and focus group sessions. Reflexivity?? Respondent Validation?

Table 4: Descriptive Data

	Culturally Tailored Intervention (n=x)	Neutral Intervention Group (n=x)	Control Group (n=x)
Mean age (range)			
Race: African American White Latino			
Education: Less than high school High school At least some college			
Marital Status: Single Married Divorced/ Widowed			
Household income: <\$25,000/year \$25,000 to \$50,000/year >\$50,000/year			
Insurance Status: No Insurance Medicaid Medicare Private			
Usual Source of Care: Yes No			
Family History of Prostate Cancer Yes No			
Previous Prostate Cancer Screening Counseling Yes No			

Table 5: Results

Primary Outcomes	No Education Group	Neutral Education	Cultural tailored Intervention		
			African American	Latino	White
Knowledge Score <i>(mean)</i>					
Decisional Conflict Score (mean with range)					
Values/Attitudes/Beliefs (Themes)					
Preferred role in Decision Making (%) Active Shared Passive None					

	No Education Group (mean)	Neutral Education Group (mean)	Difference	95% CI
Knowledge Score				
Decisional Conflict				
Intent to be screened (%)				

	No Education Group (mean)	Culturally Tailored Group (mean)	Difference	95% CI
Knowledge Score				
Decisional Conflict				
Intent to be screened (%)				

	Neutral Education Group (mean)	Culturally Tailored Group (mean)	Difference	95% CI
Knowledge Score				
Decisional Conflict				
Intent to be screened (%)				

Figure 1. Inclusion/Exclusion Criteria

Inclusion	Exclusion
<p data-bbox="354 638 607 680"><i>Articles about:</i></p> <ol data-bbox="224 716 753 1520" style="list-style-type: none"><li data-bbox="224 716 586 758">1. African Americans<li data-bbox="224 793 753 835">2. Whites or Latinos/Hispanics<li data-bbox="224 871 354 913">3. Men<li data-bbox="224 949 548 991">4. Prostate Cancer<li data-bbox="224 1026 444 1068">5. Screening<li data-bbox="224 1104 727 1146">6. Culture or Cultural Factors<li data-bbox="224 1182 423 1224">7. Ethnicity<li data-bbox="224 1260 716 1356">8. Knowledge, Attitudes and Values<li data-bbox="224 1392 597 1434">9. Qualitative Studies<li data-bbox="224 1470 516 1512">10. Focus Groups	<p data-bbox="964 638 1256 680"><i>Articles that are:</i></p> <ol data-bbox="850 716 1354 1436" style="list-style-type: none"><li data-bbox="850 716 1110 758">1. Non-English<li data-bbox="850 793 1187 890">2. Related to study participation<li data-bbox="850 926 1321 1022">3. Related to cancers other than prostate cancer<li data-bbox="850 1058 1263 1155">4. Related to treatment decisions<li data-bbox="850 1190 1247 1287">5. Case Studies/Series, Editorials, Reviews<li data-bbox="850 1323 1354 1365">6. Related to Genetic Testing<li data-bbox="850 1400 1273 1442">7. No comparison group

	Author	Article Used?	Comments
1.	Agho et al (2000)	No	Non-Qualitative study
2.	Ashford et al (2001)	No	Non-Qualitative study
3.	Bailey et al. (2004)	No	+Qualitative, + Treatment related
4	Blanchard et al. (2005)	No	+Qualitative, + Women, NOT Men
5.	Blocker et al. (2006)	No	+ Qualitative, No comparison group
6.	Brown et al. (2006)	No	+Qualitative, +Women, NOT Men
7.	Chan EC, Vernon et al. (2003)	No	Non-qualitative study
8.	Clarke-Tasker VA et al (2002)	No	+ Qualitative, No comparison group
9.	Clarke-Tasker VA et al (2005)	No	Non-Qualitative study
10.	Edwards et al. (2002)	No	Non-Qualitative study
11.	Fearing et al. (2000)	No	Non-Qualitative study
12.	Ford et al (2006)	No	Qualitative, no comparison group
13.	Forrester-Anderson et al (2005)	No	Qualitative, no comparison group
14.	Hart et al (2004)	No	Non-qualitative study
15.	Lambert et al. (2002)	No	Non-qualitative study
16.	McFall et al (2006)	YES	Qualitative Study
17.	Meade et al (2003)	YES	Qualitative Study
18.	Nash et al (2002)	YES	Qualitative study
19.	Nivens et al. (2001)	No	Non-qualitative study
20.	Plowden et al (2006)	No	Qualitative, no comparison group
21.	Richardson et al (2004)	No	Qualitative, no comparison group
22.	Ross et al (2005)	No	Non-qualitative
23.	Steele et al (2000)	No	Non-qualitative
24.	Taylor et al (2006)	No	Non-qualitative
25.	Woods et al (2004)	No	Qualitative, no comparison group
26.	Trauth et al. (2005)	No	+Qualitative, + Women, NOT Men
27.	Weinrich et al (2003)	No	Non-qualitative study
28.	Wilkinson et al. (2003)	No	Non-qualitative, + knowledge
29.	Webb et al (2006)	No	+ qualitative, no comparison group

Other Excluded Articles

Agho A, and Lewis MA. Correlates of actual and perceived knowledge of prostate cancer among African Americans. *Cancer Nurs*. 2001 Jun;24(3):165-71.

Ashford AR, Albert SM et al. Prostate carcinoma knowledge, attitudes, and screening behavior among African American men in Central Harlem, New York City. *Cancer*. 2001 Jan 1;91(1):164-72.

Bailey DE, Mishel MH et al. Uncertainty intervention for watchful waiting in prostate cancer. *Cancer Nursing*. 2004 Sep-Oct;27(5):339-46.

Blanchard K, Proverbs-Singh et al. Knowledge, attitudes and beliefs of women about the importance of prostate cancer screening. *J Natl Med Assoc*. 2005 Oct;97(10):1378-85.

Brown M, Davis JL et al. Assessment of preventive health knowledge and behaviors of African-American and Afro-Caribbean women in urban settings. *J Natl Med Assoc*. 2006 Oct;98(10):1644-51.

Chan EC, Vernon SW et al. Informed consent for cancer screening with prostate-specific antigen: how well are men getting the message? *Am J Public Health*. 2003 May;93(5):779-85.

Clarke-Takser VA, Dutta AP. African-American men and their reflections and thoughts on prostate cancer. *J Natl Black Nurses Assoc*. 2005 Jul;16(1):1-7.

Edwards QT, Johnson CG, et al. Differentiation of the health behavior patterns related to prostate cancer screening among African-American men in military settings. *Military Med*. 2002 May;167(5):374-8.

Fearing A, Bell D et al. Prostate screening health beliefs and practices of African American men. *ABNF J*. 2000 Nov-Dec;11(6):141-4

Hart A, Bowen DJ. The feasibility of partnering with African-American barbershops to provide prostate cancer education. *Ethn Dis*. 2004 Spring;14(2):269-73.

Lambert S, Fearing A et al. A comparative study of prostate screening health beliefs and practices between African American and Caucasian men. *ABNF J*. 2002 May-Jun;13(3):61-3.

Nivens AS, Herman J et al. Cues to participation in prostate cancer screening: a theory for practice. *Oncol Nurs Forum*. 2001 Oct;28(9):1449-56.

Ross LE, Uhler RJ et al. Awareness and use of the prostate-specific antigen test among African-American men. *J Natl Med Assoc*. 2005 Jul;97(7):963-71.

Steele CB, Miller DS. Knowledge, attitudes, and screening practices among older men regarding prostate cancer. *Am J Public Health*. 2000 Oct;90(10):1595-600.

Taylor, KL Davis JL et al. Educating African American men about the prostate cancer screening dilemma: a randomized intervention. *Cancer Epidemiol Biomarkers Prev*. 2006 Nov;15(11):2179-88.

Trauth JM, Jernigan JC et al. Factors affecting older African American women's decisions to join the PLCO Cancer Screening Trial. *J Clin Oncol*. 2005 Dec 1;23(34):8730-8.

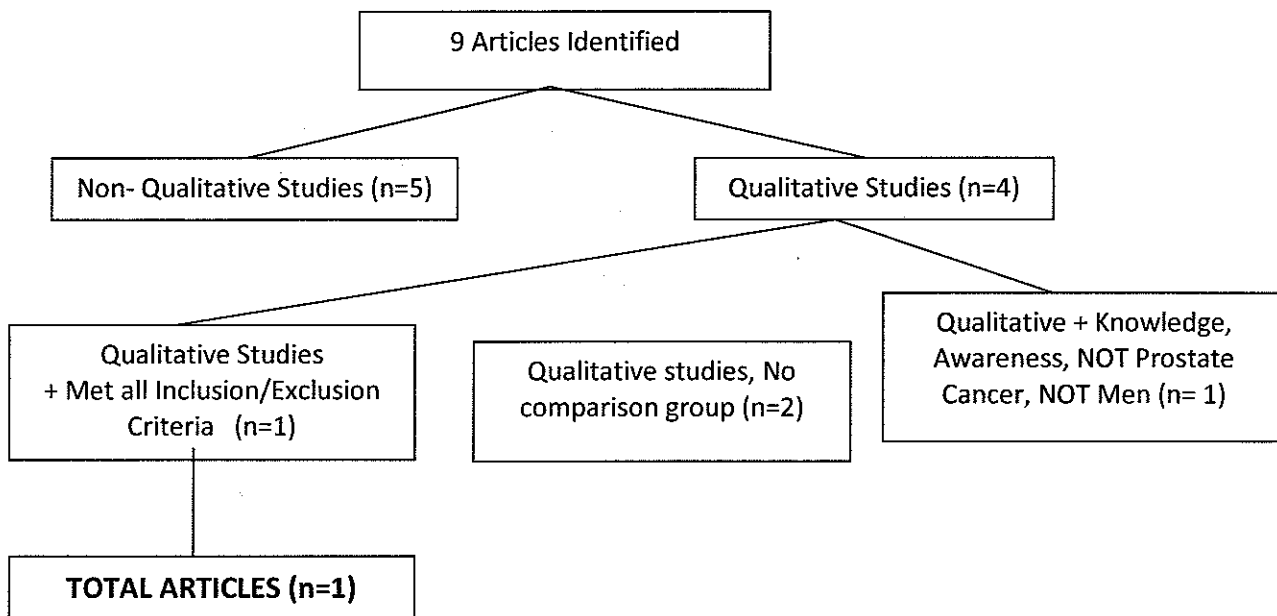
Weinrich SP, Weinrich MC. Self-reported reasons men decide not to participate in free prostate cancer screening. *Oncol Nurs Forum*. 2003 Jan-Feb;30(1):E12-6.

Figure 3. PsychoInfo Search Strategy

Search Date: March 14, 2007

Search terms: (African American* OR Black) AND Screen* AND Prostate Cancer AND (Cultur* or Values) published since 2000.

Results: 9 articles



	Author	Article Used?	Comments
1.	Abernethy et al. (2005)	No	Review article
2.	Belin et al. (2006)	No	Not prostate Cancer, Not Men
3.	Blocker et al. (2006)	No	Qualitative study, no comparison group
4.	Chan EC, Haynes M, et al (2003)	Yes	Qualitative Study, + comparison group
5.	Kim et al (2006)	No	Dissertation
6.	Kudadjie-Gyamfi et al (2006)	No	Quantitative, Coping styles & culture
7.	Lewis (2003)	No	Comment/Reply
8.	Odedina et al (2004)	No	Qualitative Study, no comparison group
9.	Sellars et al (2003)	No	Review article

Figure 4. MEDLINE and Psych Info Searches

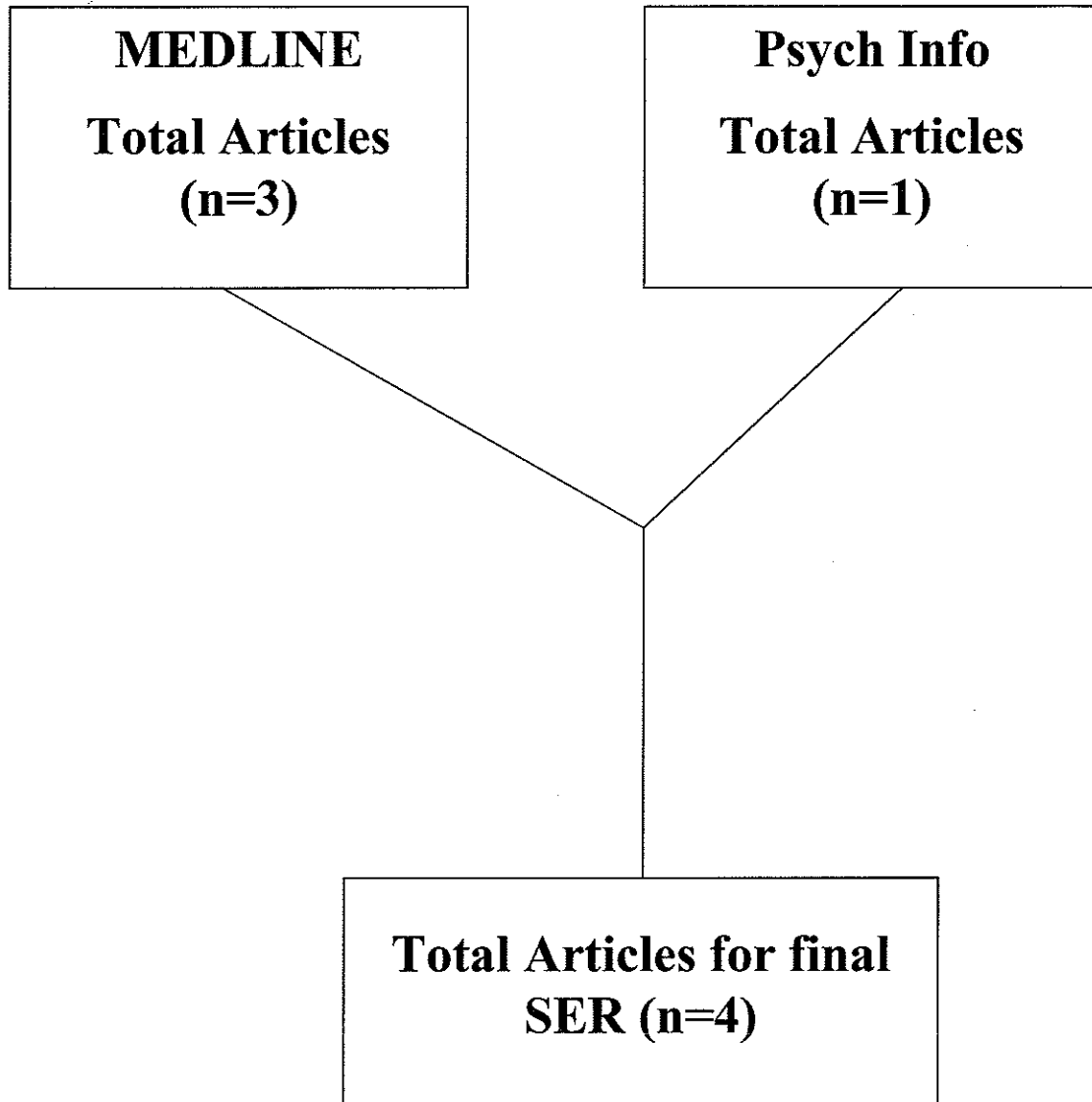


Figure 5: Research Design Methods

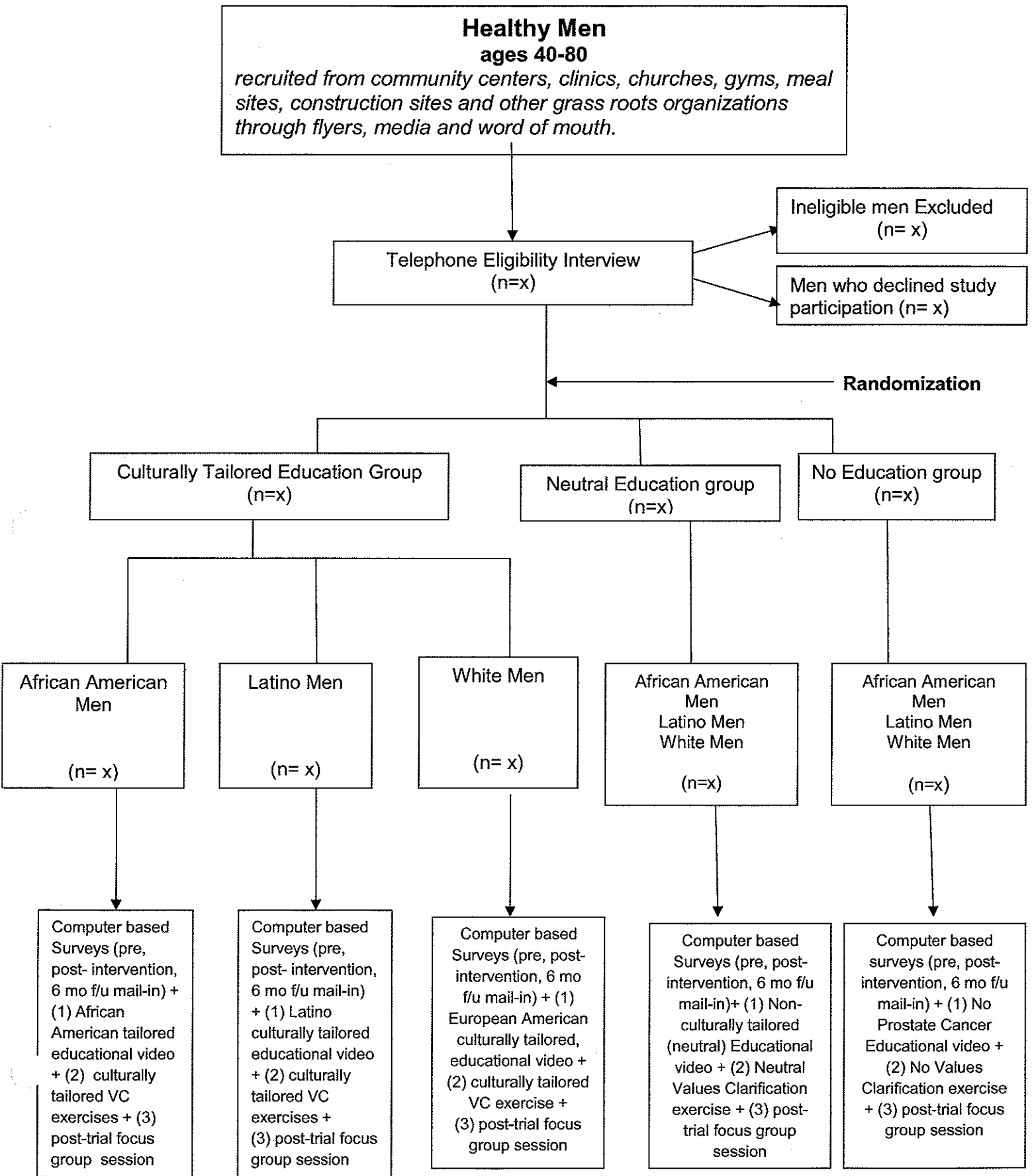
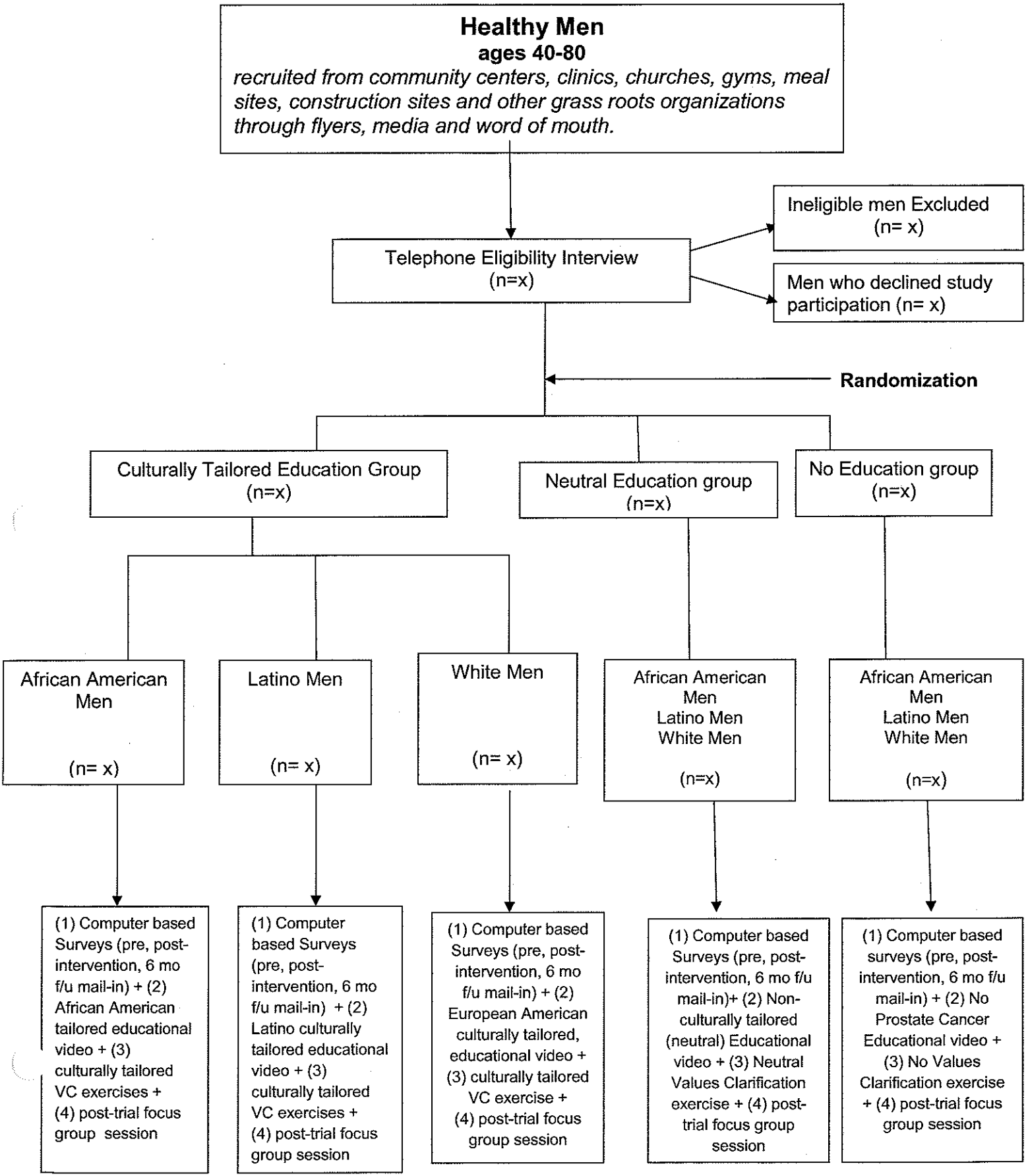


Figure 5: Research Design Methods



Abstract

Objectives: The purpose of this paper is to determine the culturally based values, attitudes and beliefs that influence African American men in their decisions to undergo prostate cancer screening. These beliefs, values and concerns will then be used to create a research design to assess the effectiveness of a culturally tailored intervention (educational video and values clarification exercise) in helping men make decisions that are consistent with their values and beliefs, by increasing knowledge, identifying values, attitudes and beliefs, reducing decisional conflict and identifying preferred role in decision making.

Methods: A systematic evidence review was conducted to determine the culturally specific values, attitudes and beliefs of African American, Latino and White men. The thematic results of the systematic evidence review were used to craft a research design including surveys, educational videos, and values clarification exercises (social matching and ranking and rating).

Results: Important recurring themes were identified in the systematic evidence review. These themes included lack of knowledge, machismo, fear, patient doctor relationship, family and faith. All men reported poor patient doctor relationship, negative perceptions of prostate cancer, lack of knowledge and the importance of family. African American and Latino men were more likely to fear prostate cancer screening methods (DRE). All groups gave specific and unique suggestions for the content, design and themes they would prefer in educational materials.

In the research design, the primary outcomes will be knowledge, decisional conflict and values, attitudes and beliefs and preferred role in decision making. We do not expect a statistically significant difference between groups in intent to screen and knowledge. However, a statistically significant difference in decisional conflict is hypothesized between the culturally tailored, neutral and no education groups. Values, attitudes and beliefs will be assessed through values clarification exercises and survey questions. We expect that importance of support